

High Capacity & Simple Choices

Series SY

5 Port Rubber Seal Solenoid Valve



Series SY 9000 newly released



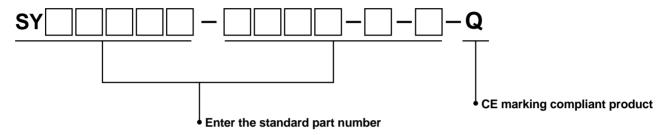


CE Marking Compliant Products

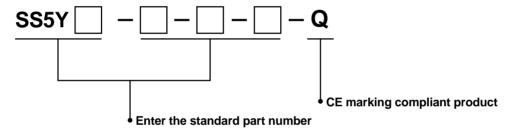
The SY series complies with the EMC Directive and the Low Energy Directive based on approval by TÜV Rheinland, an EC Notified Body (EC authorization No. 0197).

When ordering CE marking compliant products, add "- Q" at the end of the standard part number.

How to order valves



How to order manifolds



Note) Contact SMC for details, as there are limitations on models, voltage specifications and electrical entry, etc.



| | _ | | | |
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High Capacity & Simple Choices

5 Port Solenoid Valves **SY3000/5000/7000/9000**

Low power consumption: 0.5W

(Current value: 21mA at 24VDC)

Low power consumption enables direct operation by a PLC, and cost savings are realized through the use of a smaller power supply and switching elements and the elimination of relay cards.

[An energy saving type [0.22W] is also available. Refer to page 190 for details.]

Compact design with high flow capacity of 1.7 to 3 times the Cv factor with the same body width

The same size cylinder can be driven with a valve one physical size smaller than a conventional type, contributing greatly to both space and cost savings.

Valves to drive cylinders of sizes ø6 to ø200

Pressure: 0.5MPa, Load factor: 50%

| Base | | Cylinder | | | | | | Су | /linde | er bo | re si | ize r | nm | | | | | | |
|-------------|-----|----------|-----|-------|-----|-----|-------|------|--------|-------|-------|-------|------|------|------|------|-------|------|------|
| mounted | Cv | speed | Ser | ies C | J2 | S | eries | s CN | 12 | S | erie | s ME | 3/CA | 1 | | Ser | ies (| CS1 | |
| (sub-plate) | | mm/s | ø6 | ø10 | ø16 | ø20 | ø25 | ø32 | ø40 | ø40 | ø50 | ø63 | ø80 | ø100 | ø125 | ø140 | ø160 | ø180 | ø200 |
| | | 150 | | | | | | | | | | | | | | | | | |
| | | 300 | | | | | | | | | | | | | | | | | |
| SY3000 | 0.3 | 450 | | | | | | | | | | | | | | | | | |
| | | 600 | | | | | | | | | | | | | | | | | |
| | | 750 | | | | | | | | | | | | | | | | | |
| | | 150 | | | | | | | | | | | | | | | | | |
| SY5000 | | 300 | | | | | | | | | | | | | | | | | |
| SY5000 | 0.7 | 450 | | | | | | | | | | | | | | | | | |
| 313000 | | 600 | | | | | | | | | | | | | | | | | |
| | | 750 | | | | | | | | | | | | | | | | | |
| | | 150 | | | | | | | | | | | | | * | * | | | |
| | | 300 | | | | | | | | | | | * | * | | | | | |
| SY7000 | 1.2 | 450 | | | | | | | | | | * | * | | | | | | |
| | | 600 | | | | | | | | | | * | | | | | | | |
| | | 750 | | | | | | | | | * | * | | | | | | | |
| | | 150 | | | | | | | | | | | | | | | * | * | * |
| | | 300 | | | | | | | | | | | | * | * | * | | | |
| SY9000 | 2.8 | 450 | | | | | | | | | | | * | * | | | | | |
| | | 600 | | | | | | | | | | * | * | * | | | | | |
| | | 750 | | | | | | | | | | * | * | | | | | | |



^{*} Cylinder speeds are for extension of the cylinder.

Long life exceeding 50 million cycles

(Based on SMC life test conditions.)

Long life is achieved by a new pilot design, guide rings that prevent main valve eccentricity, and a stronger return force.







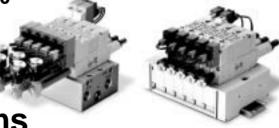
^{*} The "*" symbol indicates conditions with SGP (steel piping).

New

5 port solenoid valve series SY9000
 Cv 2.8 (base mounted type with sub-plate)

 Interface regulator series ARBY3000/5000 (for series SY3000/5000)





High speed response: 10ms

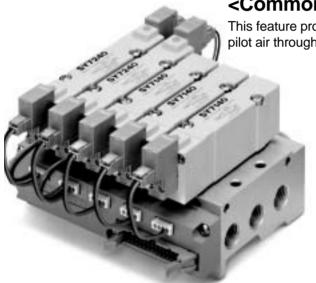
(SY3000 single solenoid, 0.5MPa, 20°C) (representative value)

The innovative design of the pilot valve makes it possible to achieve a short response time of 10ms while consuming only a half watt of power.

Exhaust mist and noise from the pilot valve are eliminated.

<Common exhaust construction for main/pilot valves>

This feature provides for a cleaner and quieter operating environment by exhausting the pilot air through the main valve body rather than directly to the atmosphere.



Interchangeable cylinder port sizes

<Body ported type>

| | | Interd | hang | eat | ole port | sizes |
|--------|----|--------|------|-----|----------|-------|
| SY3000 | C | 4 | | C | 6 | M5 |
| SY5000 | C4 | 6 | | C8 | Rc1/8 | |
| SY7000 | С | 8 | | C1 | 0 | Rc1/4 |
| SY9000 | C8 | C10 | C12 | 2 | Rc1/4 | Rc3/8 |

Port block assembly

(cassette type)

C# = Tube fitting cartridge size

• For SY5000

[SY5000-6A-01]

Port block assemble (threaded type) [SY5000-6A-C6]

Outstanding seal performance

Special rubber seals in the main valve offer improved durability and performance, greatly reducing valve failures under a wide range of operating conditions.



Same valve footprint as series SX

The non-plug-in type manifold base and sub-plate are common with series SX, making it possible to mount both series SX and SY on the same manifold, and also reducing base inventory when both series are being used.

Clean aesthetics and state-of-the-art design

Bright white colors and a clean design have been adopted to complement high-tech operating environments.

Values presented in this catalog are for reference and are not guaranteed.



Pipe fitting assembly

Cylinder Speed Chart

Body ported type

Values in the chart below are for reference.
 Confirm the actual conditions with the SMC sizing program.

| | | | | | | | | | | | | 31 -3 | | | | |
|-----------|----------|---------|-----------|------|---------|-----------|--------|---------|-----------|-----------|------|-------|------|---------|------------|--------|
| | | | | | | | (| Cylinde | r bore si | ze mm | | | | | | |
| | Cylinder | Series | CJ2 | | Series | CM2 | | | Series | MB/CA | 1 | | | Series | CS1 | |
| | speed | Pressu | ire 0.5N | /IPa | Pressu | re 0.5N | ЛРа | | Pressu | ire 0.5N | ИРа | | | Pressu | ire 0.5N | /IPa |
| Series | mm/s | Load fa | actor 50 |)% | | actor 50 | | | Load fa | actor 50 |)% | | | | actor 50 | |
| | 11111/5 | Cylinde | er stroke | 60mm | Cylinde | er stroke | e 300m | m | Cylind | er stroke | 500m | m | | Cylinde | r stroke ' | 1000mm |
| | | ø6 | ø10 | ø16 | ø20 | ø25 | ø32 | ø40 | ø40 | ø50 | ø63 | ø80 | ø100 | ø125 | ø140 | ø160 |
| CV2420 | 150 | | | | | | | | | | | | | | | |
| SY3120 | 300 | | | | | | | | | | | | | | | |
| -C6 | 450 | | | | | | | | | | | | | | | |
| Cv = 0.23 | 600 | | | | | | | | | | | | | | | |
| | 750 | | | | | | | | | | | | | | | |
| 0)/5400 | 150 | | | | | | | | | | | | | | | |
| SY5120 | 300 | | | | | | | | | | | | | | | |
| -01 | 450 | | | | | | | | | | | | | | | |
| Cv = 0.59 | 600 | | | | | | | | | | | | | | | |
| | 750 | | | | | | | | | | | | | | | |
| 0)/7400 | 150 | | | | | | | | | | | | | | | |
| SY7120 | 300 | | | | | | | | | | | | | | | |
| -02 | 450 | | | | | | | | | | | | | | | |
| Cv = 0.87 | 600 | | | | | | | | | | | | | | | |
| OV = 0.07 | 750 | | | | | | | | | | | | | | | |
| CV0420 | 150 | | | | | | | | | | | | | | * | * |
| SY9120 | 300 | | | | | | | | | | | | * | | | |
| -03 | 450 | | | | | | | | | | | * | | | | |
| Cv = 2.1 | 600 | | | | | | | | | | * | * | | | | |
| J 2.1 | 750 | | | | | | | | | | * | | | | | |

Base mounted type (with sub-plate)

The speed of CJ2 and CM2 cylinders is controlled by a fixed orifice built into the cylinder.

* Cylinder speeds are for extension of the cylinder.

* Cylinder speeds are for extension of the cylinder.

* The "*" symbol indicates conditions with SGP (steel piping).

| _ | | | | | | , | , | | Cylinde | r bore s | ize mm | | | | | | , | |
|----------|---------------------------|---------|---------------------|-----|-----|----------------------|-----|-----|-------------------|--|-----------|-----|------|--------|---------------------|------|------|--------|
| Series | Cylinder speed mm/s | Load fa | re 0.5N actor 50 | 0% | | ure 0.5M actor 50 | 0% | m | Pressu Load fa | MB/CA ure 0.5N actor 50 er stroke | MPa 0% | m | | Load f | ire 0.5l actor 5 | | mm | |
| | | ø6 | ø10 | ø16 | ø20 | ø25 | ø32 | ø40 | ø40 | ø50 | ø63 | ø80 | ø100 | ø125 | ø140 | ø160 | ø180 | ø20 |
| SY3140 | 150 | | | | | | | | | | | | | | | | | |
| | 300 | | | | | | | | | | | | | | | | | |
| -01 | 450 | | | | | | | | | | | | | | | | | |
| Cv = 0.3 | 600 | | | | | | | | | | | | | | | | | |
| | 750 | | | | | | | | | | | | | | | | | |
| CVE440 | 150 | | | | | | | | | | | | | | | | | |
| SY5140 | 300 | | | | | | | | | | | | | | | | | |
| -02 | 450 | | | | | | | | | | | | | | | | | |
| Cv=0.7 | 600 | | | | | | | | | | | | | | | | | |
| | 750 | | | | | | | | | | | | | L. | | | | |
| SY7140 | 150 | | | | | | | | | | | | | * | * | | | _ |
| | 300 | | | | | | | | | | | * | * | | | | | |
| -03 | 450 | | | | | | | | | | * | * | | | | | | |
| Cv = 1.2 | 600 | | | | | | | | | | * | | | | | | | - |
| | 750 | | | | | | | | | * | * | | | | | | | |
| CV04.40 | 150 | | | | | | | | | | | | | | | * | * | * |
| SY9140 | 300 | | | | | | | | | | | | * | * | * | | | — |
| -04 | 450 | | | | | | | | | | | * | * | | | | | ــــــ |
| Cv = 2.8 | 600 750 | | | | | | | | | | * | * | * | | | | | |

Conditions

| Body p | orted type | Series CJ2 | Series CM2 | Series MB/CA1 | Series CS1 | | | |
|-------------|--------------------|---------------------------|---------------------------|----------------|-------------------|--|--|--|
| SY3120 | Tube bore x Length | | ø6 x 1m | | _ | | | |
| -C6 | Speed controller | | 51F-06 (S = | | _ | | | |
| (Cv = 0.23) | Silencer | AN12 | 0-M5 (Cv = | : 0.27) | _ | | | |
| SY5120 | Tube bore x Length | ø6 x 1m | ø8 x | c1m | _ | | | |
| -01 | Speed controller | AS3001F-06 (Cv = 0.36) | | | | | | |
| (Cv = 0.59) | Silencer | AN10 | 1-01 (Cv = | 1.11) | _ | | | |
| SY7120 | Tube bore x Length | | | x 1m | _ | | | |
| -02 | Speed controller | AS3001F-06 (Cv = 0.36) | AS4001F-10 | O(Cv = 0.89) | _ | | | |
| (Cv = 0.87) | Silencer | AN110 | 0-01 (Cv = | 1.94) | _ | | | |
| SY9120 | Tube bore x Length | ø6 x 1m | ø10 x 1m | | x 1m | | | |
| -03 | Speed controller | AS3001F-06 (Cv = 0.36) | AS4001F-10 (Cv = 0.89) | AS400 (Cv = | 01F-12 : 1.17) | | | |
| (Cv = 2.1) | Silencer | | AN200-02 | (Cv = 1.94) |) | | | |

Conditions [with SGP (steel tube)]

| | Body p | orted type | Series CS1 |
|---|------------|--------------------------|----------------------|
| ĺ | SY9120 | Steel tube size x Length | SGP3/8 x 1m |
| | -03 | Speed controller | AS420-03 (Cv = 4.11) |
| | (Cv = 2.1) | Silencer | AN400-04 (Cv = 5) |

Conditions

| <u> </u> | | | | | |
|------------|--------------------|---------------------------|---------------------------|---------------|-------------------|
| Base mo | ounted type | Series CJ2 | Series CM2 | Series MB/CA1 | Series CS1 |
| SY3140 | Tube bore x Length | | ø6 x 1m | | _ |
| -01 | Speed controller | AS300 |)1F-06 (S = | = 0.36) | _ |
| (Cv = 0.3) | Silencer | AN11 | 0-01 (Cv = | 1.94) | _ |
| SY5140 | Tube bore x Length | | ø8 > | c1m | _ |
| -02 | Speed controller | AS3001F-06 (Cv = 0.36) | AS3001F-08 | 3 (Cv = 0.56) | _ |
| (Cv = 0.7) | Silencer | AN110 | 0-01 (Cv = | 1.94) | _ |
| SY7140 | Tube bore x Length | | ø10 x 1m | | x 1m |
| -03 | Speed controller | AS3001F-06 (Cv = 0.36) | AS3001F-08 (Cv = 0.56) | | 01F-10 : 1.17) |
| (Cv = 1.2) | Silencer | | AN200-02 | (Cv = 1.94) |) |
| SY9140 | Tube bore x Length | | ø10 x 1m | ø12 | x 1m |
| -04 | Speed controller | AS3001F-06 (Cv = 0.36) | AS4001F-10 (Cv = 0.89) | AS40 (Cv = | 01F-12 : 1.17) |
| (Cv = 2.8) | Silencer | | AN200-02 | (Cv = 1.94) |) |

Conditions [with SGP (steel tube)]

| Base mo | ounted type | Series MB/CA1 | Series CS1 | | | | | |
|------------|--------------------------|-------------------|-------------|--|--|--|--|--|
| SY7140 | Steel tube size x Length | | | | | | | |
| -03 | Speed controller | AS420-03 | (Cv = 4.11) | | | | | |
| (Cv = 1.2) | Silencer | AN300-03 | (Cv = 3.67) | | | | | |
| SY9140 | Steel tube size x Length | SGP1/2 x 1m | | | | | | |
| -04 | Speed controller | AS420-04 (Cv = 5) | | | | | | |
| (Cv = 2.8) | Silencer | AN400-04 | 4 (Cv = 5) | | | | | |



Valve Variations

| | | | | Ту | pe c | of ac | tuati | on | V | oltage | Ele | ctric | al e | ntry | Note 1) |
|-------------------|---------|----------------|-----------------------------------|--------|--------|---------------|----------------|-----------------|------------------------------|--|---------|-----------------------|-----------------------|--------------|--|
| | | | | 2 pos | sition | 3 p | oosit | ion | DC | AC | | ector | ector | _ | age supp |
| | Series | 5 | Effective area mm² (Cv factor) | Single | Double | Closed center | Exhaust center | Pressure center | 24V 12V 6V 5V 3V | 100V 50/60Hz 110V 50/60Hz 200V 50/60Hz 220V 50/60Hz | Grommet | L type plug connector | M type plug connector | DIN terminal | Note 1) Indicator light/Surge voltage suppressor |
| type | Page 1 | SY3□20 | 4.14 (0.23) | • | • | • | • | • | • | • | • | | • | _ | |
| rted 1 | | SY5□20 | 10.6 (0.59) | • | • | • | • | • | • | | • | | • | • | • |
| Body ported type | | SY7 □20 | 16.2 (0.9) | • | • | • | • | • | • | | • | • | • | • | • |
| Boo | | SY9□20 | 38.23 (2.12) | • | • | • | • | • | • | • | • | • | • | • | |
| type | Page 19 | SY3□40 | 5.4 (0.3) | • | • | • | • | • | • | • | • | • | • | _ | • |
| nted | | SY5□40 | 12.6 (0.7) | • | • | • | • | • | • | • | • | • | • | • | • |
| Base mounted type | | SY7□40 | 21.6 (1.2) | • | • | • | • | • | • | • | • | • | • | • | • |
| Base | 100 | SY9□40 | 51.71 (2.87) | • | • | • | • | • | • | • | • | • | • | • | • |

| | | | 1anu verrio | | | P, I | EA, | EΒ | port | size | | | | A, I | Вро | ort s | size | | | | | | 0 | ptio | ns | | _ |
|-------------------|----------------|-----------------------|--------------------------------|------------------------------|---------|------|----------|-----|------|-----------|----|-----|-----|------|-----|-------|-------|------|-------|-----|------------------|----------------------|----------------------|----------------------------|----------------|-------------------|---------------------|
| | Series | Non-locking push type | Push-turn locking slotted type | Push-turn locking lever type | Bracket | M5 | Rc | Rc | Rc | Rc 1/2 | M5 | Rc | Rc | Rc | Rc | | ne-to | ouch | fitti | ng | Exhaust throttle | (except turbine oil) | Vacuum specification | Low pressure specification | bressure | enclosure Note 3) | Interface regulator |
| | | Non-lockir | Push-turn loci | Push-turn loc | | | 1/8 | 1/4 | 3/8 | 1/2 | | 1/8 | 1/4 | 3/8 | | | C6 | C8 | C10 | C12 | Exhau | Oil resistant (e | Vacuum s | Low pressur | Reverse | IP65 e | Interface |
| ype | SY3□20 | • | • | • | • | • | _ | | _ | _ | • | _ | _ | _ | _ | • | • | _ | _ | _ | | | | | | | |
| rted t | SY5□20 | • | • | • | • | _ | • | | _ | _ | _ | • | _ | _ | _ | • | • | • | | | | _ | | | | | |
| Body ported type | SY7 □20 | • | • | • | • | _ | (EA, EB) | (P) | - | _ | _ | _ | • | _ | _ | _ | _ | • | • | | | | External pilot | pilot | External pilot | terminal | |
| Bod | SY9□20 | • | • | • | _ | _ | _ | • | _ | _ | _ | _ | • | • | _ | _ | _ | • | • | • | | | Note 2) | Note 2) | Note 2) | | |
| type | SY3□40 | • | • | • | _ | _ | • | | _ | _ | _ | • | _ | _ | _ | _ | _ | _ | _ | _ | | | | | | | |
| nted | SY5□40 | • | • | • | _ | _ | _ | • | _ | _ | _ | _ | • | _ | _ | _ | _ | _ | _ | _ | | | | | | | |
| Base mounted type | SY7□40 | • | • | • | _ | _ | _ | • | • | _ | _ | - | • | • | _ | _ | _ | _ | _ | _ | Sub-plate | | External pilot | External pilot | External pilot | I DIN terminal | |
| Base | SY9□40 | • | • | • | _ | _ | _ | _ | • | • | _ | _ | _ | • | • | _ | _ | _ | _ | _ | | | | | | | |

Note 1) All AC voltages have built-in surge voltage suppressor as standard.

Note 2) Body ported external pilot type (order made product) is not available for DIN terminal type.

Note 3) Only available for DIN terminal type.

Precautions

3 port Air valve operated

Manifold Variations

| | | | | | | | | Wir | ing | | | | |
|------------------|---|----------------------------|------------------|-------------------|-----------------------------|--|--|--|--|-----------|--------------------------|--------------|----------------|
| | | | | | | | Conne | | | | | Com | mon cations |
| | Manifold variations | | Valve series | Individual wiring | Flat ribbon cable (26 pins) | Connector box (Flat ribbon cable 20 pins) | D-sub connector (25 pins) <plug-in type=""></plug-in> | Flat ribbon cable (26, 20, 10 pins) <plug-in type=""></plug-in> | Terminal block (9, 18 pins) <plug-in type=""></plug-in> | PC wiring | Serial transmission unit | Positive COM | Negative COM |
| | | | 5 port | <u>=</u> | Flat ri | (Flat | D-sut | Flat rib | Term | | Seri | 1 | Ž |
| | Bar stock type Individual wiring | Туре 20 | SY3□20 | | | | | | | | | | |
| - | ■ Direct piping to the main unit of valve. Combination of different fittings is possible. | Page 37 | SY5□20 | | _ | _ | _ | _ | - | _ | | - | — |
| pe' | illungs to possible. | | SY7□20 | | | | | | | | | | |
| d ty | Bar stock type Flat ribbon cable | _{Туре} 20Р | SY3□20 | | | | | | | | | | |
| Te | A 26 pin MIL connector permits one-touch wiring of external cables in a bundle. | Page 47 | SY5□20 | - | | _ | _ | _ | - | | _ | Com | mon |
| od | cables in a bundle. | | SY7□20 | | | | | | | | | | |
| Body ported type | Stacking type Individual wiring Addition/Removal of manifold stations is possible. | Type 23 Page 43 | SY9□20 | • | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| | Stacking type Flat ribbon cable Addition/Removal of manifold stations is possible. | Type 23P Page 53 | SY9□20 | _ | • | _ | _ | _ | _ | | | Com | mon |
| | Compact bar stock type Individual wiring | Type 41 | SY3□40 | | | | | | | | | | |
| | The base mounting facilitates maintenance when valves are changed. | Page 59 | SY5□40 | | _ | | _ | _ | _ | _ | | — | _ |
| | Compact bar stock type | _{Type} 41P | SY3□40 | | | | | | | | | | ı |
| | Flat ribbon cable ■ A 26 pin MIL connector permits one-touch wiring of external cables in a bundle. | Page 75 | SY5□40 | | | _ | _ | _ | _ | _ | | Com | mon |
| | Bar stock type/Common external pilot Individual wiring | Type 42 | SY3□40 | | | | | | | | | | |
| | ■ The base mounting facilitates maintenance when valves are changed. | Page 59 | SY5□40 | | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| 96 | ■ Vacuum/low pressure combination system is possible. | | SY7□40 | | | | | | | | | | |
| | Bar stock type/Common external pilot | 142P | SY3□40 | | | | | | | | | | l |
| eq | Flat ribbon cable ■ A 26 pin MIL connector permits one-touch wiring of external cables in a bundle. | Page 75 | SY5□40 | _ | | _ | _ | _ | _ | _ | _ | | |
| ınţ | wiring or external cables in a bundle. ■ Vacuum/low pressure combination system is possible. | | SY7□40 | | | | | | | | | Com | mon |
| Base mounted ty | Stacking type Individual wiring Addition/Removal of manifold stations is possible. | _{Туре} 43 Page 69 | SY9□40 | • | _ | _ | | _ | _ | _ | | _ | _ |
| Bas | Stacking type Flat ribbon cable Addition/Removal of manifold stations is possible. | Type 43P Page 83 | SY9□40 | - | • | _ | _ | _ | | _ | _ | Com | mon |
| | Stacking type/DIN rail Individual wiring Stations can be changed on the DIN rail. Integral mounting of other parts is possible. | Type 45 Page 95 | SY3□40 SY5□40 | • | _ | _ | _ | _ | _ | _ | | _ | _ |
| | Stacking type/DIN rail | Tyne 45-A | SY3□40 | | | | | | | | | _ | _ |
| | Connector box ■ Stations can be changed on the DIN rail. The provided connector box permits one-touch connection of electric cables. | Page 106 | SY5□40 | | _ | • | | | _ | • | _ | | • |
| | Stacking type/DIN rail Plug-in type Stations can be changed on the DIN rail. | Type 45 Page 115 | SY3□40 | _ | _ | _ | • | • | • | • | • | • | • |
| | A variety of centralized wiring methods are possible. | 1 age 113 | SY5□40 | | | | | | | | | | |

- Standard Option ▲ Order made (See "Order Made Specifications" pages.)

Manifold Variations

| | | | | | | | | | | | | | | | | | | | | | | | | | | | Bla | nking plate | |
|--------------------------------|--------------------|------------|-------------------|-----------------------------|---|----------------|------------|---------------------------------|---------------------------------|-------|------------|---|---------------|------------|---|-----|----------|-------|-----------|-------------------------------|---------------------------------|-----|------------|---------------------|------------|-----------------------------------|----------|--------------------------------------|-----------|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | ual SUP spacer | |
| | | | | | | | | | | | | | | | | | | | | | | | | | Indi | | Individ | ual EXH spacer | Mai |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | SUF | P Block disc | Manifold |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | EXH | l Block disc | options |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | s for block disc | ons |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | S One | ilencer with e-touch fitting | |
| | • | • | | | | | • | | | | | | | | _ | | | | | | | | | | | | Buil | t-in silencer | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | M5 | |
| | | | | | | | | | 1 | | | | | | | | | | | | | 1 | • | | | | | Rc 1/8 | |
| | | | | | | | | | | | | | | | | | | | | | • | | | | | | | Rc 1/4 | <i>+</i> |
| | 1 | | | | | | | | | | | | | | | | | | - | | | | | | | | | Rc 3/8 | A, B |
| | • | • | | | | | | | | | | | | | | | | | | | | | • | | | • | C4 | On | port size |
| | • | | • | | | | • | | | | • | • | | • | • | • | • | | • | | | | • | | | One-touch fitting C4 C6 C8 C10 C | | e-to | size |
| | • | | • | | 1 | • | | • | • | | • | | | • | | • | | • | | • | • | • | • | • | • | | 8 | uch | |
| | 1 | | | | | | | • | • | | | | • | | | | | | | • | • | • | | • | | | C10 | fittir | |
| | | | | | | | | • | • | | | | | | | | | | | • | • | 1 | | | | | C12 | | |
| | | • | | | | | • | | | | | | | | | | | | | | | | | | | | Mix | 000, SY5000 ed mounting | |
| | • | • | | | | | • | • | • | | • | | | • | | ١ | • | ١ | • | • | • | | • | | • | | (except | Oil resistant specified turbine oil) | |
| | External | • | External pilot | | | External pilot | | External pilot | External pilot | | External | | | External | | | | | | External | External pilot | | | | | | Vacuu | ım specification | |
| | External | • | External pilot | | | External | • | External pilot | External | pilot | External | | pilot | External | | | | | | External | External pilot | | | | | | Low pre | essure specification | |
| | spacer or block | Individual | or block disc | Individual SUP spacer | | | Individual | Individual SUP block disc | Individual SUP block disc | SUP | Individual | | SUP spacer | Individual | | SUP | | SUP | Individua | Individua SUP block dis | Individual SUP block disc | SUP | Individual | SUP spacer | Individual | | Differ | ent pressure | Valve |
| | | | | | | | | External pilot | External pilot | pilot | External | | pilot | External | | | | | | c External | External | | | | | | Reve | rse pressure | e opt |
| Note)\ | | | | | | | [| Individual | Individual EXH | | | | | | | | [| | | Individual | Individual | EXH | | spacer | Individual | | Exh | aust throttle | options |
| When | | | | | | | | • | | | | | | | | (| | | | • | | | | | | | Bur | dled wiring | |
| Note) When using DIN terminal. | | | | • | | | | • | • | | | | | | | | | | | | | | | Mixed fitting si | | d fitting sizes | | | |
| JIN ten | | | | | | Note) | | | Note) | | | | Note | Note | | | | Note) | | | Note) | | | ● N IP65 enclosure | | 5 enclosure | | | |
| minal. | | | | | | | | | | | | | | | | | | | | | I | | | Interface regulator | | ace regulator | | | |

SMC

Features 6

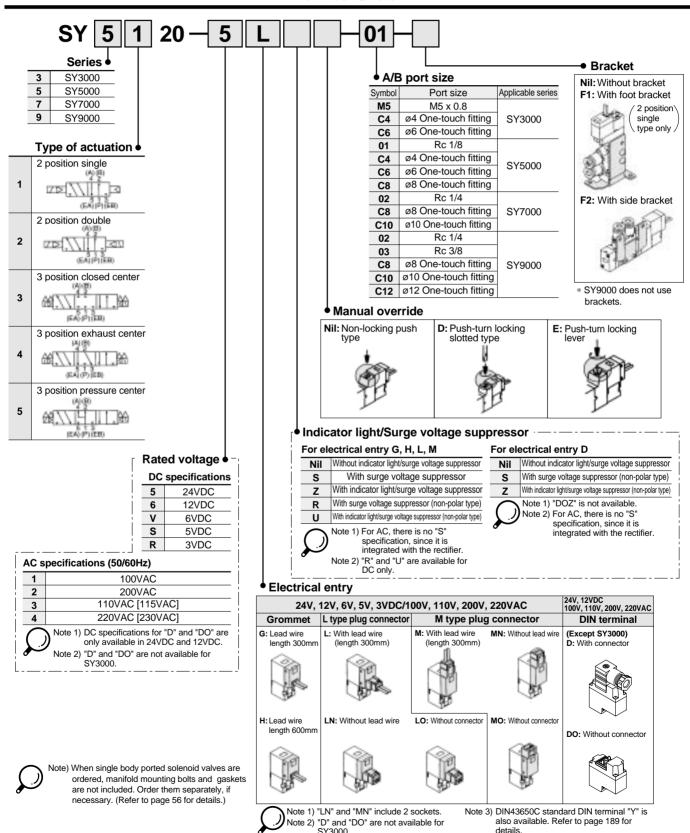
3 port Air Order Manifold spec. Spectavitic and Precautic

Features

SY3000/5000/7000/9000 Body Ported Type Single Valve

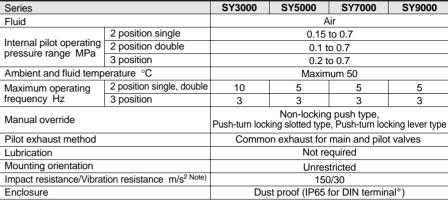


How to Order



Body Ported Type SY3000/5000/7000/9000

Specifications





Pages 177 to 190

In compliance with IEC529 standard.

Note) Impact resistance: No malfunction resulted from the impact test using a drop impact tester. The test was performed one time each in the axial and right angle directions of the main valve and armature, for both energized and de-energized states. (Value in the initial stage)

Vibration resistance: No malfunction occurred in a one-sweep test between 8.3 and 2000Hz. Test was performed for both energized and de-energized states in the axial and right angle directions of the main valve and armature. (Value in the initial stage)

Solenoid specifications

| Electrical entry | | | Grommet (G)/(H), L type plug connector (L), M type plug connector (M), DIN terminal (D) Note 1) | | |
|-------------------------------|-------|--------|--|--|--|
| Detect coil valters V | DC | | 24, 12, 6, 5, 3 | | |
| Rated coil voltage V | AC 5 | 0/60Hz | 100, 110, 200, 220 Note 2) | | |
| Allowable voltage fluctuation | | | ±10% of rated voltage | | |
| Current consumption W DC | | | 0.5 [With indicator light: 0.55 (0.6 for DIN terminal with indicator light)] Note 3) | | |
| | | 100V | 0.9 (With indicator light: 1.0) | | |
| | | 110V | 1.0 (With indicator light: 1.1) | | |
| | AC | [115V] | [1.1 (With indicator light: 1.2)] | | |
| Apparent power VA | AC | 200V | 1.8 (With indicator light: 1.9) | | |
| | | 220V | 1.9 (With indicator light: 2.0) | | |
| | | [230V] | [2.2 (With indicator light: 2.3)] | | |
| Surge voltage suppressor | | | Diodes (ZNR for DIN terminal, Zener diode for G, L or M non-polar type | | |
| Indicator light | | | LED (Neon bulb for AC type DIN terminal) | | |
| Note 4) DINI terresis al | (D) : | . 4 | f CV2000 | | |



Note 1) DIN terminal (D) is not available for SY3000.

Note 2) 110 and 115VAC are common, as are 220 and 230VAC.

Note 3) Energy saving [0.22W] type is also available. Refer to page 190 for details.

Response time



Note) Based on dynamic performance test JISB8375-1981 (at coil temperature of 20°C with rated

SY3000

| | 013000 | | | | | | | | | |
|---|-------------------|------------------------------|--|------------|--|--|--|--|--|--|
| | | Response time ms (at 0.5MPa) | | | | | | | | |
| T | Type of actuation | Without indicator light/ | With indicator light/surge voltage suppresso | | | | | | | |
| | | surge voltage suppressor | S, Z types | R, U types | | | | | | |
| | 2 position single | 12 or less | 15 or less | 12 or less | | | | | | |
| | 2 position double | 10 or less | 13 or less | 10 or less | | | | | | |
| | 3 position | 15 or less | 20 or less | 16 or less | | | | | | |

SY5000

| | Response time ms (at 0.5MPa) | | | | | | | | |
|-------------------|------------------------------|---|------------|--|--|--|--|--|--|
| Type of actuation | Without indicator light/ | With indicator light/surge voltage suppressor | | | | | | | |
| | surge voltage suppressor | S, Z types | R, U types | | | | | | |
| 2 position single | 19 or less | 26 or less | 19 or less | | | | | | |
| 2 position double | 18 or less | 22 or less | 18 or less | | | | | | |
| 3 position | 32 or less | 38 or less | 32 or less | | | | | | |

SY7000

| | Response time ms (at 0.5MPa) | | | | | | | | |
|-------------------|------------------------------|---|------------|--|--|--|--|--|--|
| Type of actuation | Without indicator light/ | With indicator light/surge voltage suppressor | | | | | | | |
| | surge voltage suppressor | S, Z types | R, U types | | | | | | |
| 2 position single | 31 or less | 38 or less | 33 or less | | | | | | |
| 2 position double | 27 or less | 30 or less | 28 or less | | | | | | |
| 3 position | 50 or less | 56 or less | 50 or less | | | | | | |

SVOOO

| 313000 | | | | | | | | | | |
|-------------------|------------------------------|------------|-----------------------|--|--|--|--|--|--|--|
| | Response time ms (at 0.5MPa) | | | | | | | | | |
| Type of actuation | Without indicator light/ | | ge voltage suppressor | | | | | | | |
| | surge voltage suppressor | S, Z types | R, U types | | | | | | | |
| 2 position single | 35 or less | 41 or less | 35 or less | | | | | | | |
| 2 position double | 35 or less | 41 or less | 35 or less | | | | | | | |
| 3 position | 62 or less | 64 or less | 62 or less | | | | | | | |



2

Models/Series SY3000

| .,. | Τ· | Type of | | t size | | ve area v factor) | Weight g | | |
|-------------|----------|-----------------|--------------|----------------------------------|------------------------------|-----------------------------|----------|-------------------------------|--|
| Valve model | | tuation | P, EA, EB | A, B | P to A/B | A/B to EA/EB | Grommet | L/M type plug connector | |
| | pos. | Single | | | 2 C (0.2) | 3.78 (0.21) | 48 | 51 | |
| | 2 p | Double | | | 3.6 (0.2) | 3.70 (0.21) | 62 | 70 | |
| | | Closed center | | | 3.6 (0.2) | 3.42 (0.19) | | | |
| SY3□20-□-M5 | position | Exhaust center | | M5 x 0.8 | 3.6 (0.2) | 3.78 (0.21) [2.7 (0.15)] | 65 | 72 | |
| | 3р | Pressure center | | | 3.96 (0.22) [2.88 (0.16)] | 3.6 (0.2) | | | |
| | pos. | Single | | C4 Ø4 One-touch fitting | 3.42 (0.19) | 2.0 (0.2) | 57 | 61 | |
| | 2р | Double | | | 3.42 (0.19) | 3.6 (0.2) | 72 | 79 | |
| | | Closed center | | | 3.42 (0.19) | 3.42 (0.19) | | | |
| SY3□20-□-C4 | position | Exhaust center | M5 x 0.8 | | 3.42 (0.19) | 3.78 (0.21) [2.7 (0.15)] | 75 | 82 | |
| | 9 D | Pressure center | | | 3.6 (0.2) [2.16 (0.12)] | 3.6 (0.2) | | | |
| | pos. | Single | | | 3.6 (0.2) | 4.44 (0.00) | 53 | 57 | |
| | 2 p | Double | | | 3.6 (0.2) | 4.14 (0.23) | 68 | 75 | |
| | | Closed center | | C6 | 3.6 (0.2) | 3.96 (0.22) | | | |
| SY3□20-□-C6 | position | Exhaust center | | Ø6 One-touch fitting | 3.78 (0.21) | 4.5 (0.25) [3.06 (0.17)] | 71 | 78 | |
| | з Бс | Pressure center | | , 3, | 3.96 (0.22) [2.88 (0.16)] | 3.96 (0.22) | | | |

Note) Values inside [] are for normal position.

Models/Series SY7000

| Valve model | T | ype of | Po | rt size | | ve area v factor) | V | Veight g | |
|--------------|------------|-----------------|----------------------------|-----------------------------|--------------------------------|-------------------------------|---------|-------------------------------|-----------------|
| valve model | | tuation | P, EA, EB | A, B | P to A/B | A/B to EA/EB | Grommet | L/M type plug connector | DIN terminal |
| | pos. | Single | | | 16.2 (0.9) | 15.66 (0.87) | 98 | 102 | 125 |
| | 2 p | Double | | | 10.2 (0.0) | 10.00 (0.01) | 114 | 121 | 167 |
| | | Closed center | | | 12.06 (0.67) | 11.34 (0.63) | | | |
| SY7□20-□-02 | 3 position | Exhaust center | | Rc 1/4 | 11.88 (0.66) | 16.74 (0.93) [11.7 (0.65)] | 122 | 129 | 175 |
| | 3 p | Pressure center | | | 17.1 (0.95) [11.16 (0.62)] | 11.34 (0.63) | | | |
| | pos. | Single | | | 13.86 (0.77) | 13.68 (0.76) | 104 | 108 | 131 |
| | 2 p | Double | P port: | | 13.00 (0.77) | (| 120 | 128 | 174 |
| | | Closed center | EA, EB ports: Rc 1/8 | C8 | 11.52 (0.64) | 10.44 (0.58) | | | |
| SY7□20-□-C8 | 3 position | Exhaust center | | \ fitting / | 11.16 (0.62) | 14.4 (0.8) [10.8 (0.6)] | 128 | 136 | 182 |
| | 3 b(| Pressure center | | (" 37 | 14.58 (0.81) [10.62 (0.59)] | 10.44 (0.58) | | | |
| | pos. | Single | | | 45.04.(0.00) | 44.04.(0.02) | 100 | 103 | 126 |
| | 2 p | Double | | | 15.84 (0.88) | 14.94 (0.83) | 116 | 123 | 169 |
| | | Closed center | | C10 | 12.24 (0.68) | 11.16 (0.62) | | | |
| SY7□20-□-C10 | 3 position | Exhaust center | | Ø10 One-touch fitting | 11.88 (0.66) | 16.2 (0.89) [11.34 (0.63)] | 124 | 131 | 177 |
| | 3 pc | Pressure center | | , 07 | 16.74 (0.93) [11.16 (0.62)] | 11.34 (0.63) | | | |

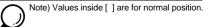
Note) Values inside [] are for normal position.

Models/Series SY5000

| | Τv | pe of | Por | t size | | ve area v factor) | Weight g | | g |
|-------------|----------|-----------------|--------------|----------------------------------|-------------------------------|-------------------------------|-----------|-------------------------------|-----------------|
| Valve model | act | uation | P, EA, EB | A, B | P to A/B | A/B to EA/EB | Grommet | L/M type plug connector | DIN terminal |
| | pos. | Single | | | 9.18 (0.51) | 10.6 (0.59) | 67 | 70 | 93 |
| | 2 p | Double | | | 3.10 (0.31) | 10.0 (0.38) | 82 | 89 | 135 |
| | _ | Closed center | | | 7.38 (0.41) | 7.92 (0.44) | | | |
| SY5□20-□-01 | position | Exhaust center | | Rc 1/8 | 7.56 (0.42) | 12.06 (0.67) [8.28 (0.46)] | 87 | 94 | 140 |
| | 3 6 | Pressure center | | | 10.62 (0.59) [4.32 (0.24)] | 8.46 (0.47) | | | |
| | pos. | Single | | | 5.5 (0.31) | 3.9 (0.22) | 91 | 94 | 117 |
| | 2 5 | Double | | | 3.3 (0.31) | 3.3 (0.22) | 105 | 113 | 159 |
| | _ | Closed center | | C4 | 5.3 (0.29) | 3.9 (0.22) | | | |
| SY5□20-□-C4 | position | Exhaust center | | Ø4 One-touch fitting | 5.3 (0.29) | 3.9 (0.22) | 111 | 118 | 164 |
| | 3 | Pressure center | | (mang) | 5.7 (0.32) | 3.9 (0.22) | | | |
| | pos. | Single | Rc 1/8 | | 9 (0.5) | 9 (0.5) | 85 | 89 | 112 |
| | 2 p | Double | | | 9 (0.5) | 9 (0.5) | 100 | 107 | 153 |
| | position | Closed center | | C6 Ø6 One-touch fitting | 7.2 (0.4) | 7.38 (0.41) | 105 | 112 | 158 |
| SY5□20-□-C6 | | Exhaust center | | | 7.38 (0.41) | 9.72 (0.54) [7.2 (0.4)] | | | |
| | 3 | Pressure center | | , , , | 10.62 (0.59) [4.32 (0.24)] | 7.2 (0.4) | | | |
| | pos. | Single | | | 9.18 (0.51) | 9.9 (0.55) | 77 | 80 | 103 |
| | 2 μ | Double | | | 3.10 (0.31) | 3.3 (0.33) | 92 | 99 | 145 |
| | _ | Closed center | | C8 | 7.38 (0.41) | 7.92 (0.44) | | | |
| SY5□20-□-C8 | position | Exhaust center | | Ø8 One-touch fitting | 7.38 (0.41) | 11.88 (0.66) [7.74 (0.43)] | 97 | 104 | 150 |
| | 3 p | Pressure center | | | 10.62 (0.59) [4.32 (0.24)] | 7.92 (0.44) | | | |
| | | | 5 | Not | e) Values | inside[]a | are for r | normal p | osition. |

Models/Series SY9000

| \/-h | T۱ | pe of | Por | t size | | ve area v factor) | Weight g | | |
|--------------|------------|-----------------|--------------|----------------------------------|--------------|--------------------------------|----------|-------------------------------|-----------------|
| Valve model | | uation | P, EA, EB | A, B | P to A/B | A/B to EA/EB | Grommet | L/M type plug connector | DIN terminal |
| | pos. | Single | | | 35.76 (1.99) | 37.43 (2.08) | 238 | 242 | 265 |
| | 2 p | Double | | | 33.70 (1.33) | 37.43 (2.00) | 254 | 262 | 308 |
| | _ | Closed center | | Rc 1/4 | 34.69 (1.93) | 30.51 (1.70) | | | 332 |
| SY9□20-□-02 | position | Exhaust center | | | 33.63 (1.87) | 41.09 (2.28) [18.96 (1.05)] | 278 | 286 | |
| | 3р | Pressure center | | | 37.99 (2.11) | 31.62 (1.76) [15.22 (0.85)] | | | |
| | pos. | Single | | | 37.90 (2.11) | 38.23 (2.12) | 233 | 237 | 260 |
| | 2р | Double | | | 37.30 (2.11) | 30.23 (2.12) | 249 | 257 | 303 |
| | | Closed center | | | 35.98 (2.00) | 32.37 (1.80) | | | |
| SY9□20-□-03 | 3 position | Exhaust center | | Rc 3/8 | 34.17 (1.90) | 44.76 (2.49) [24.92 (1.38)] | 273 | 281 | 327 |
| | e g | Pressure center | | | 39.94 (2.22) | 32.97 (1.83) [14.67 (0.82)] | | | |
| | pos. | Single | | C8 Ø8 One-touch fitting | 27.34 (1.52) | 40.00 (0.00) | 290 | 294 | 317 |
| | 2 p | Double | | | 21.34 (1.32) | 16.23 (0.90) | 306 | 314 | 360 |
| | | Closed center | Rc 1/4 | | 26.75 (1.49) | 16.55 (0.92) | | | |
| SY9□20-□-C8 | position | Exhaust center | | | 26.17 (1.45) | 16.42 (0.91) [15.68 (0.87)] | 330 | 338 | 384 |
| | 3 pc | Pressure center | | | 27.49 (1.53) | 16.28 (0.90) [16.28 (0.90)] | | | |
| | pos. | Single | | | 31.16 (1.73) | 27 40 (4 52) | 276 | 280 | 303 |
| | 2р | Double | | | 31.10 (1.73) | 27.40 (1.52) | 292 | 300 | 346 |
| | | Closed center | | C10 | 30.74 (1.71) | 26.08 (1.45) | | | |
| SY9□20-□-C10 | 3 position | Exhaust center | | Ø10 One-touch fitting | 30.02 (1.67) | 27.13 (1.51) [18.26 (1.01)] | 316 | 324 | 370 |
| | 3 pc | Pressure center | | (| 32.28 (1.79) | 26.36 (1.46) [15.10 (0.83)] | | | |
| | pos. | Single | | | 22 45 (4 00) | 25 04 /4 00\ | 262 | 266 | 289 |
| | 2 P | Double | | | 33.45 (1.86) | 35.81 (1.99) | 278 | 286 | 332 |
| | | Closed center | | C12 | 32.96 (1.83) | 29.62 (1.65) | | | |
| SY9□20-□-C12 | position | Exhaust center | | Ø12 One-touch fitting | 32.38 (1.80) | 37.77 (2.10) [18.83 (1.05)] | 302 | 310 | 356 |
| | 3 20 | Pressure center | | | 35.41 (1.97) | 30.55 (1.70) [15.23 (0.85)] | | | |





Construction

Series SY



Symbol: 2 position double



Symbol: 3 position closed center

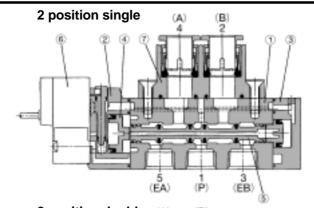


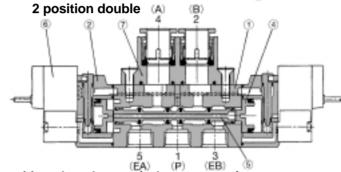
3 position exhaust center



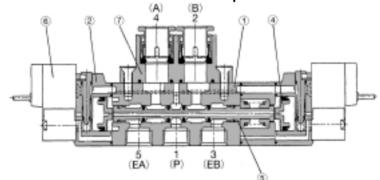
3 position pressure center







3 position closed center/exhaust center/pressure center



(The diagram above shows the closed center type.)

Parts list

| No. | Description | Material | Note |
|-----|----------------------|--|-------------------------|
| 1 | Body | Die-cast aluminum (SY3000 is die-cast zinc.) | White |
| 2 | Adaptor plate | Resin | White (Gray for SY9000) |
| 3 | End plate | Resin | White |
| 4 | Piston | Resin | _ |
| 5 | Spool valve assembly | Aluminum/NBR | _ |

Replacement parts

| N | Description | Part no. |
|----|----------------------|---|
| -6 | Pilot valve assembly | Refer to "How to Order Pilot Valve Assemblies" on page 5. |
| 7 | Port block assembly | Refer to "How to Order Port Block Assemblies" on page 5. |

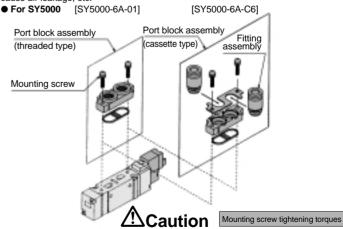
Bracket assembly part nos.

| Description | Part no. |
|-----------------------|---|
| Bracket (for F1 type) | SX 5/000-16-2A (with mounting screws) |
| Bracket (for F2 type) | SX ₅ ³ 000-16-1A (with mounting screws) |

^{*} Brackets are not available for SY9000.

How to Replace Port Block Assembly

With the body ported type, the A/B port size can be changed by replacing the port block assembly mounted on the body. Use appropriate tightening torque when replacing the port block assembly, as insufficient tightening of mounting screws will cause air leakage, etc.



SY3000 (M2): 0.12N·m SY 7000 (M3): 0.6N·m

SY9000 (M4): 1.4N m

* Refer to "How to Order Port Block Assemblies" on page 5 for part numbers.



operated

4

How to Order Pilot Valve Assemblies

SY114 Rated voltage Indicator light/Surge voltage suppressor Without indicator light/surge voltage suppressor 5 24VDC With surge voltage suppressor 6 12VDC With indicator light/surge voltage suppressor V 6VDC S With surge voltage suppressor (non-polar type) 5VDC R 3VDC With indicator light/surge voltage suppressor (non-polar type) 100VAC 50/60Hz Note 1) "S" specification is not available for AC since it is 200VAC 50/60Hz integrated with the rectifier. Note 2) "R" and "U" specifications are only available for DC. 110VAC 50/60Hz [115VAC 50/60Hz] Electrical entry 220VAC 50/60Hz G Grommet (lead wire length: 300mm) [230VAC 50/60Hz] H Grommet (lead wire length: 600mm) With lead wire L type plug

Without lead wire

With lead wire

Without connector

Without lead wire

Without connector

How to Order Connector Assemblies

DC: SY100 - 30 - 4A - 100VAC: SY100 - 30 - 1A - 200VAC: SY100 - 30 - 2A - Other AC: SY100 - 30 - 3A - Without lead wire: SY100 - 30 - A (Connector, socket x 2pcs. only)

Lead wire length

| Nil | 300mm | |
|-----|--------|--|
| 6 | 600mm | |
| 10 | 1000mm | |
| 15 | 1500mm | |
| 20 | 2000mm | |
| 25 | 2500mm | |
| 30 | 3000mm | |
| 50 | 5000mm | |

SY115 — 5

| | Maica Voltage |
|---|------------------|
| 5 | 24VDC |
| 6 | 12VDC |
| 1 | 100VAC 50/60Hz |
| 2 | 200VAC 50/60Hz |
| _ | 110VAC 50/60Hz |
| 3 | [115VAC 50/60Hz] |
| _ | 220VAC 50/60Hz |
| 4 | [230VAC 50/60Hz] |

Indicator light/Surge voltage suppressor

| NII | vilinout indicator light/surge voltage suppressor | | |
|---|--|--|--|
| S | With surge voltage suppressor (non-polar type) | | |
| Z | With indicator light/surge voltage suppressor (non-polar type) | | |
| | Note 1) "DOZ" is not available. | | |
| Note 2) "S" specification is not available for AC since it is | | | |

integrated with the rectifier.

• Electrical entry

| | , | | |
|----|----------|-------------------|--|
| D | DIN | With connector | |
| DO | terminal | Without connector | |



LN

LO

М

MN

MO

D

connector

M type plug

connector

Note) When replacing the pilot valve assembly alone, SY114 (G, H, L, and M) cannot be replaced with SY115 (DIN terminal), or vice versa.

How to Order Port Block Assemblies

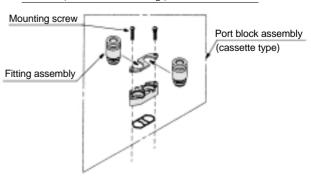


| - 0 | - 001100 | |
|-----|----------|--|
| 3 | SY3000 | |
| 5 | SY5000 | |
| 7 | SY7000 | |
| 9 | SY9000 | |

| ● A/I | 3 port size | |
|--------|-----------------------|-------------------|
| Symbol | Port size | Applicable series |
| M5 | M5 x 0.8 | |
| C4 | ø4 One-touch fitting | SY3000 |
| C6 | ø6 One-touch fitting | |
| 01 | Rc 1/8 | |
| C4 | ø4 One-touch fitting | SY5000 |
| C6 | ø6 One-touch fitting | 515000 |
| C8 | ø8 One-touch fitting | |
| 02 | Rc 1/4 | |
| C8 | ø8 One-touch fitting | SY7000 |
| C10 | ø10 One-touch fitting | |
| 02 | Rc 1/4 | |
| 03 | Rc 3/8 | |
| C8 | ø8 One-touch fitting | SY9000 |
| C10 | ø10 One-touch fitting | |
| C12 | ø12 One-touch fitting | |
| | | |

* Fitting assembly alone can be replaced also.

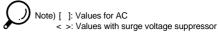
| SY3000 | ø4 One-touch fitting | VVQ1000-50A-C4 |
|--------|-----------------------|-----------------|
| 513000 | ø6 One-touch fitting | VVQ1000-50A-C6 |
| | ø4 One-touch fitting | VVQ1000-51A-C4 |
| SY5000 | ø6 One-touch fitting | VVQ1000-51A-C6 |
| | ø8 One-touch fitting | VVQ1000-51A-C8 |
| SY7000 | ø8 One-touch fitting | VVQ2000-51A-C8 |
| 317000 | ø10 One-touch fitting | VVQ2000-51A-C10 |
| | ø8 One-touch fitting | VVQ4000-50B-C8 |
| SY9000 | ø10 One-touch fitting | VVQ4000-50B-C10 |
| | ø12 One-touch fitting | VVQ4000-50B-C12 |



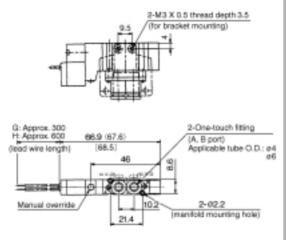
With foot bracket

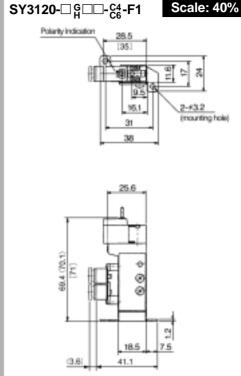
Series SY3000 Dimensions

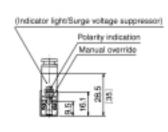


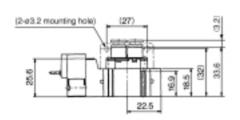


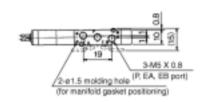
2 position single Grommet (G), (H): SY3120-□^G_H□□-^{C4}_{C6} (-F2)

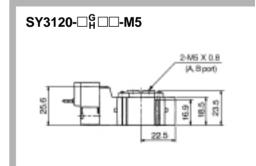


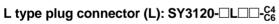


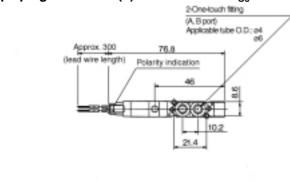


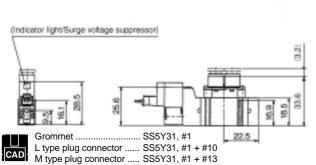




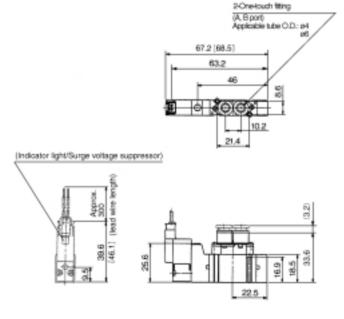








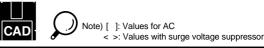
M type plug connector (M): SY3120-□M□□-C4



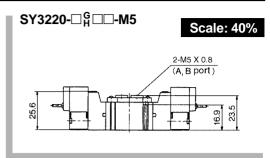
operated

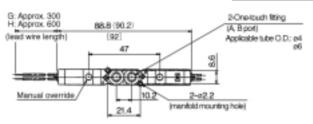
Order made

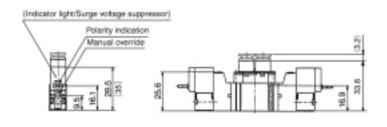
Series SY3000 Dimensions

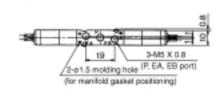


2 position double Grommet (G), (H): SY3220-□ H□□-C6

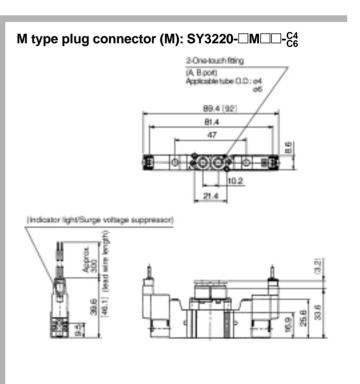




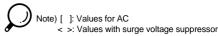




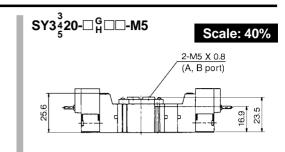
L type plug connector (L): SY3220-\(\subseteq\)L\(\subseteq\)-\(\frac{C4}{C6}\) 2-One-touch fitting (A, B port) Applicable tube O.D.: ø4 ø6 Approx. 300 108.6 (lead wire length) Polarity indication 10.2 21.4 (Indicator light/Surge voltage suppressor) 中 33.6 38.5 16.1 Grommet SS5Y31, #2 L type plug connector SS5Y31, #2 + #11 M type plug connector SS5Y31, #2 + #14

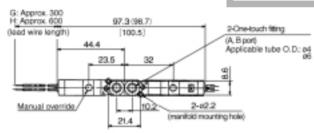


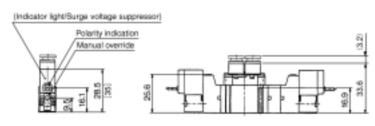


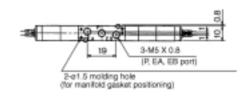


3 position closed center/exhaust center/pressure center Grommet (G), (H): SY3 $\frac{3}{4}$ 20- \square $^G_H\square\square$ - $^{C4}_{C6}$

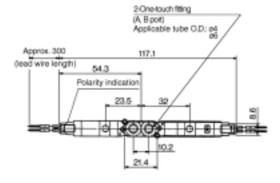


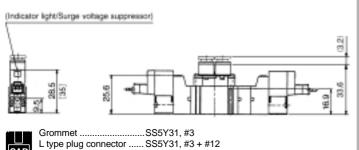






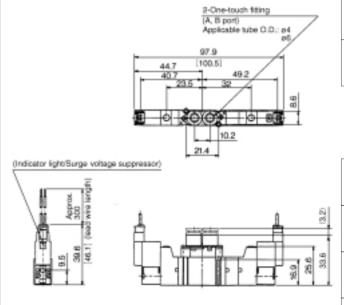
L type plug connector (L): SY3 $\frac{3}{5}$ 20- \Box L \Box - $\frac{C4}{C6}$





M type plug connector SS5Y31, #3 + #15

M type plug connector (M): SY3 $\frac{3}{5}$ 20- \square M \square - $\frac{C4}{C6}$



Single II valve

Гуре Ту<u>|</u> 20 2:

20P 2

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e 41 4;

pe Type Ty 2 43 41

P 42P

Type Type 45 45-

1ype □5

3 port Air valve operated

Order Spe

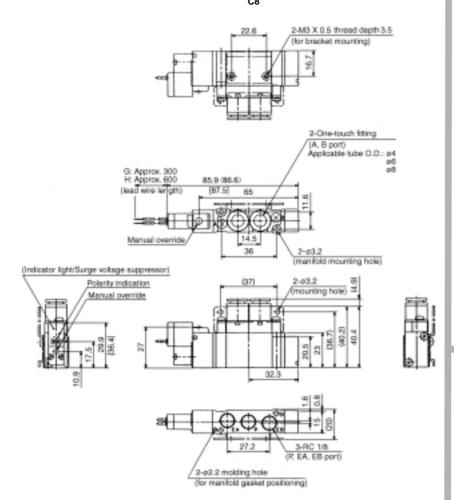
Precautions

Series SY5000 Dimensions



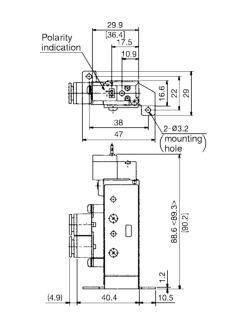
Note) []: Values for AC < >: Values with surge voltage suppressor

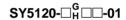
2 position single Grommet (G), (H): SY5120- $\Box_{H}^{G}\Box\Box$ - c_{CR}^{G} (-F2)

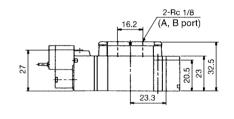


With foot bracket SY5120-□H□□-C6 -F1

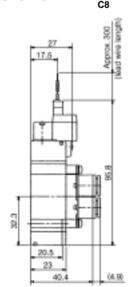
Scale: 40%



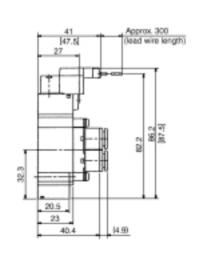




L type plug connector (L): SY5120-□L□□-C6 6

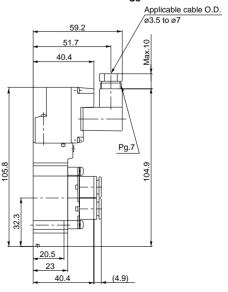


 M type plug connector (M): SY5120-□M□□-Ç6



DIN terminal (D):

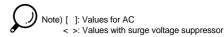
SY5120-□D□□-C8



CAD

Body Ported Type SY3000/5000/7000/9000







e - yp 20

e Type 23

Type T

Single valve

Type Ty

pe Type

41P 4:

45

Applicable cable O.D.

45

3 por valve

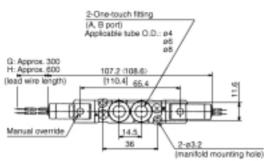
ort Air ve operated

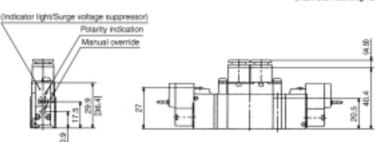
Order made

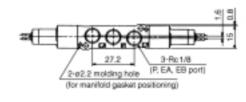
Manifold spec. sheets

Precautions

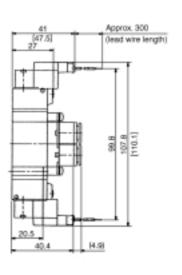
SY5220-- GH--01 Scale: 40%



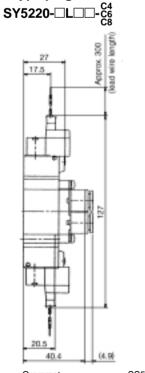




M type plug connector (M): SY5220-□M□□- c6



59.2 51.7 40.4 Pg.7 20.5 40.4 (4.9)



L type plug connector (L):

2 position double

Grommet (G), (H): SY5220-□H□□-C6

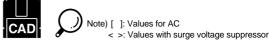
CAD

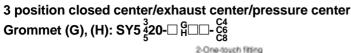
DIN terminal (D):

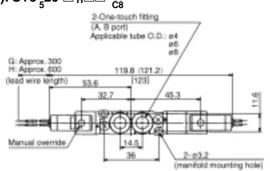
SY5220-□D□□-C6
C8

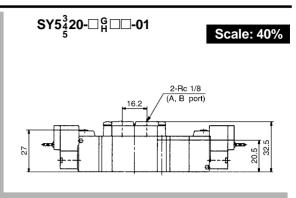


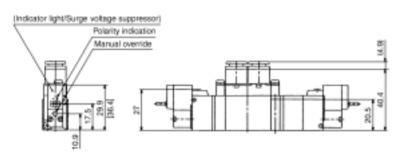
Series SY5000 Dimensions

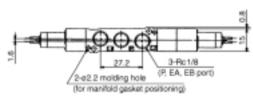






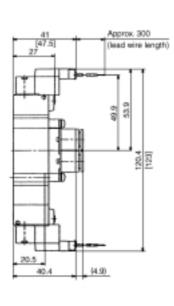




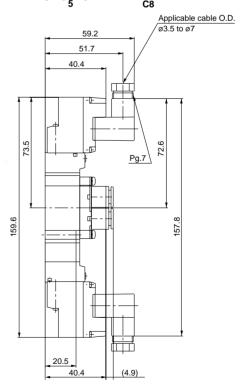


L type plug connector (L): SY5³/₅20-□L□□- ^{C4}/_{C8}

27 17.5 17.5 9781 M type plug connector (M): $SY5\frac{3}{5}20-\Box M\Box\Box - \overset{C4}{\underset{C8}{c6}}$



DIN terminal (D): SY5³/₅20-□D□□- C6 C8



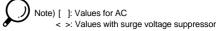
Grommet SS5Y51, #3 L type plug connector SS5Y51, #3 + #13

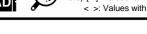
20.5

M type plug connector SS5Y51, #3 + #16

Series SY7000 Dimensions

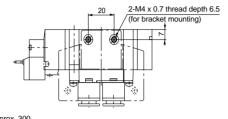


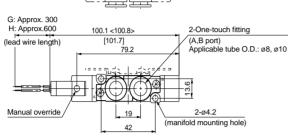


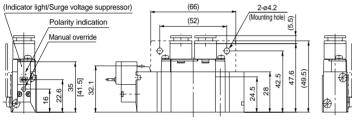


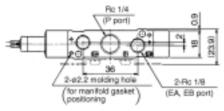
Scale: 40%

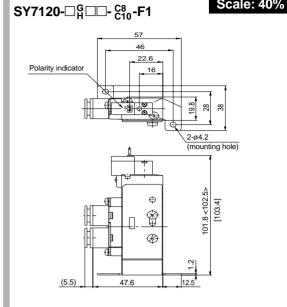


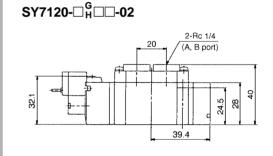




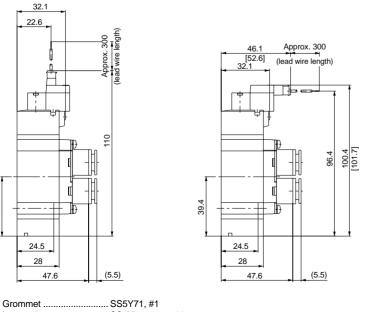




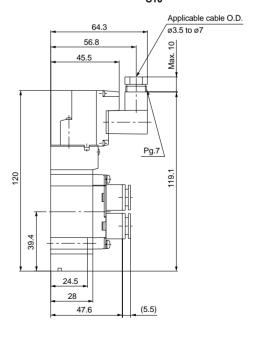




L type plug connector (L): SY7120-\(\subseteq \subseteq \subseteq \colon \subseteq \sub



DIN terminal (D): SY7120-□D□□-C8_{C10}



39.4

L type plug connector SS5Y71, #1 + #10 M type plug connector SS5Y71, #1 + #13 M type plug connector (M):

SY7120-\(\text{M}\)\(\text{C}_{0.0}^{\text{C}_{0.0}^{8}}\)

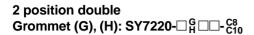
operated

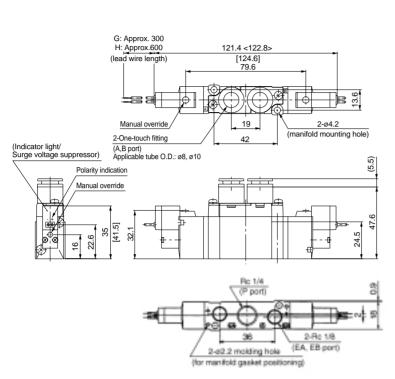
Order made

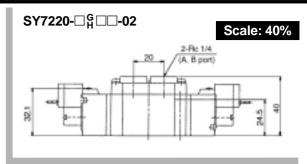
Precautions

Series SY7000 Dimensions

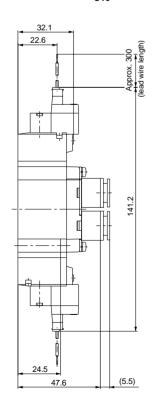




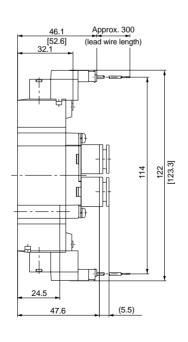


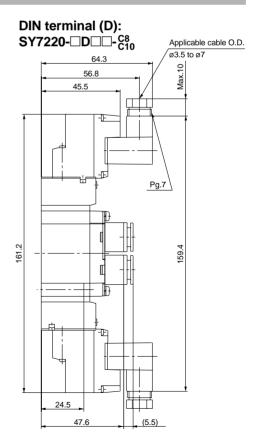


L type plug connector (L): SY7220-□L□□-C8_{C10}



M type plug connector (M): SY7220-□M□□-C8_{C10}







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Type Ty 23 2

pe Type

e Single valve

Type Tyl 4:

41P

/pe | lyp 2P | 43|

Applicable cable O.D.

ø3.5 to ø7

45 4

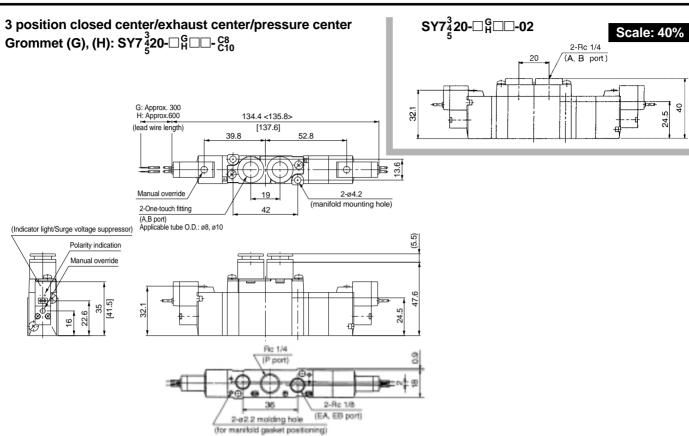
...>e 45<u>...</u>

3 port Air valve operated

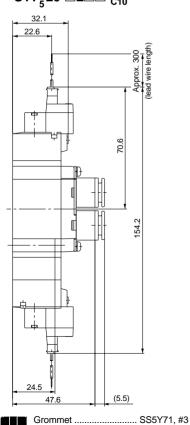
r Order made

spec.





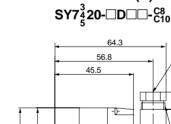
L type plug connector (L): SY7³/₅20-□L□□-C⁸/_{C10}



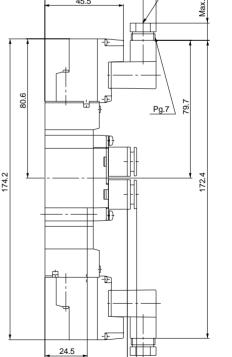
47.6

M type plug connector (M): SY7 $_{5}^{3}$ 20- \square M \square - $_{C10}^{8}$

Approx. 300 (lead wire length)



DIN terminal (D):



47.6

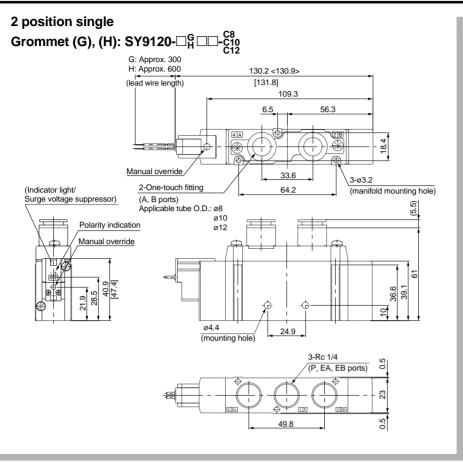
(5.5)

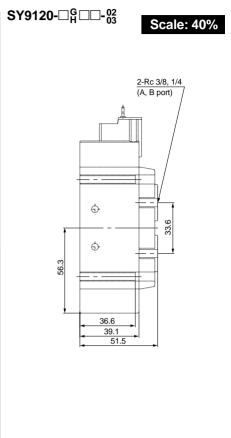
L type plug connector SS5Y71, #3 + #12 M type plug connector SS5Y71, #3 + #15

SMC

(5.5)

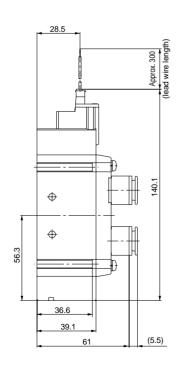
Series SY9000 Dimensions

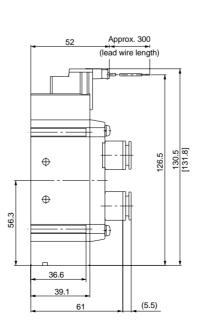


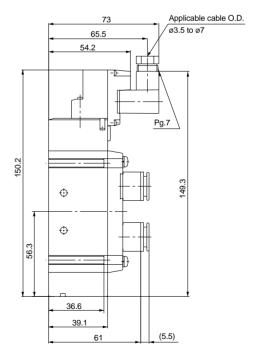


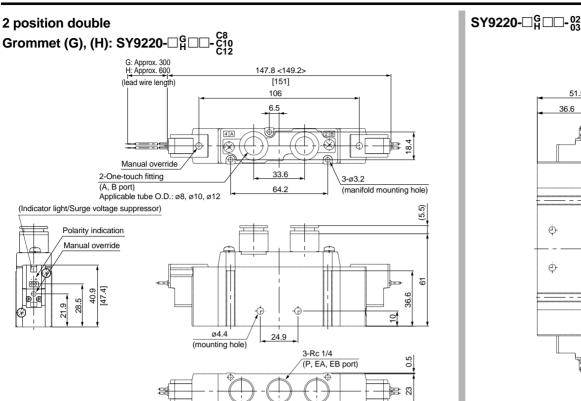
L type plug connector (L): SY9120-□L□□-C10/C12

M type plug connector (M): SY9120-□M□□-C10 C12 DIN terminal (D): SY9120-□D□□-C10 C12









Scale: 40% 51.5 ė Ò 2-Rc 3/8, 1/4 (A, B port)

L type plug connector (L): SY9220-□L□□-C80 C12

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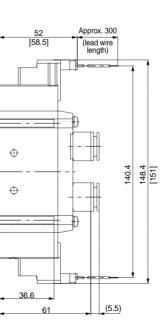
 \oplus

Approx. 300 (lead wire length)

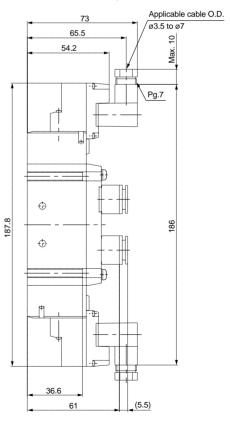
167.6

M type plug connector (M): SY9220-□M□□-C8 C12

Body Ported Type



DIN terminal (D): SY9220-DDD-C810 C8

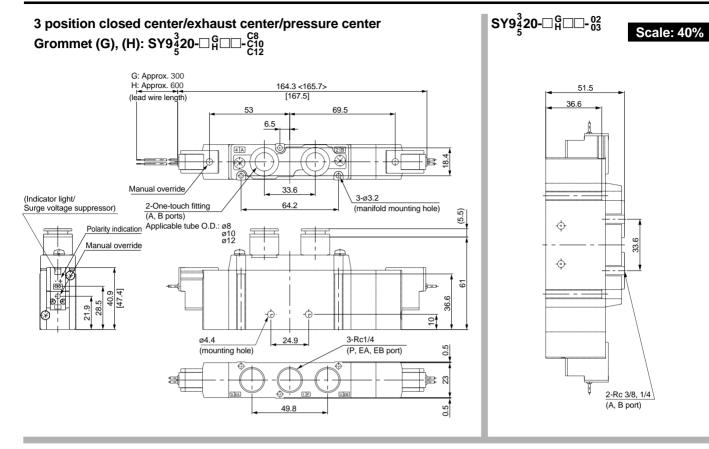


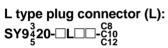
(5.5)

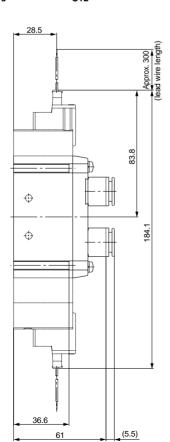
Order made **Precautions**

operated

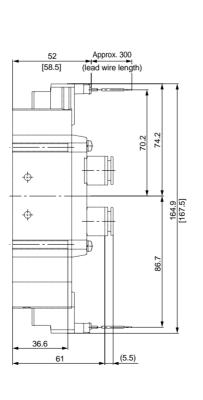
Series SY9000 Dimensions



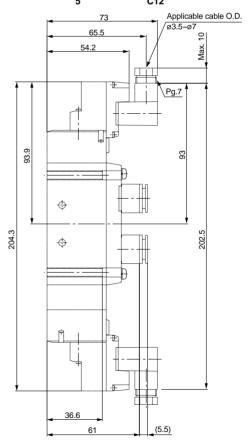




M type plug connector (M): SY9³₅20-□M□□-^{C10}_{C12}



DIN terminal (D): SY9³/₅20-□D□□-^{C8}_{C12}

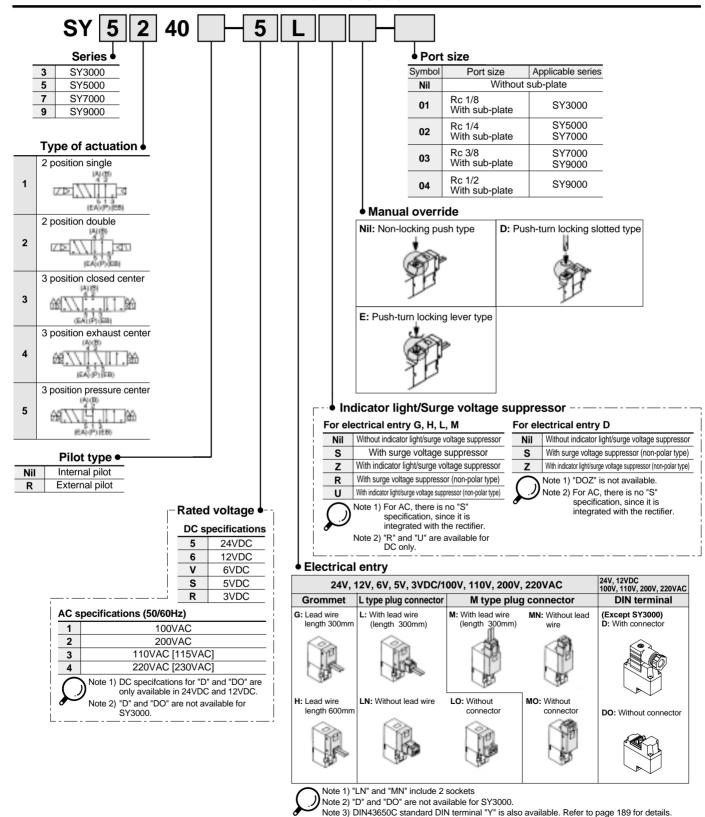




SY3000/5000/7000/9000 Base Mounted Type Single Valve



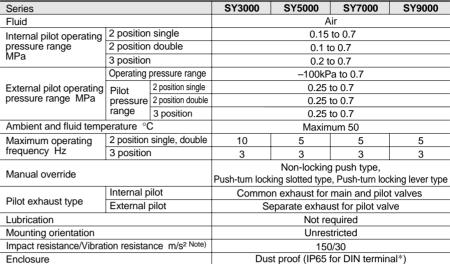
How to Order





Base Mounted Type SY3000/5000/7000/9000

Specifications Series





Pages 177 to 190

* In compliance with IEC529 standard.

Note) Impact resistance: No malfunction resulted from the impact test using a drop impact tester. The test was performed one time each in the axial and right angle directions of the main valve and armature, for both energized and de-energized states. (Value in the initial stage)

Vibration resistance: No malfunction occurred in a one-sweep test between 8.3 and 2000Hz. Test was performed for both energized and de-energized states in the axial and right angle directions of the main valve and armature. (Value in the initial stage)

Solenoid specifications

| Electrical entry | | | Grommet (G)/(H), L type plug connector (L), | |
|---------------------------|-------------------------------|--------|---|--|
| | | | M type plug connector (M), DIN terminal (D) Note 1) | |
| Detect apil veltage V DC | | | 24, 12, 6, 5, 3 | |
| Rated coil voltage V | AC 50/60Hz | | 100, 110, 200, 220 Note 2) | |
| Allowable voltage fluctua | Allowable voltage fluctuation | | ±10% of rated voltage | |
| Current consumption W | DC | | 0.5 [With indicator light: 0.55 (0.6 for DIN terminal with indicator light)] Note 3 | |
| Apparent power VA | AC | 100V | 0.9 (With indicator light: 1.0) | |
| | | 110V | 1.0 (With indicator light: 1.1) | |
| | | [115V] | [1.1 (With indicator light: 1.2)] | |
| | | 200V | 1.8 (With indicator light: 1.9) | |
| | | 220V | 1.9 (With indicator light: 2.0) | |
| | | [230V] | [2.2 (With indicator light: 2.3)] | |
| Surge voltage suppresso | or | | Diodes (ZNR for DIN terminal, Zener diode for G, L or M non-polar type) | |
| Indicator light | | | LED (Neon bulb for AC type DIN terminal) | |
| | | | | |



Note 1) DIN terminal (D) is not available for SY3000.

Note 2) 110 and 115VAC are common, as are 220 and 230VAC.

Note 3) Energy saving [0.22W] type is also available. Refer to page 190 for details.

Response time



Note) Based on dynamic performance test JISB8375-1981 (at coil temperature of 20°C with rated voltage)

SY3000

| Response time ms (at 0.5MPa) | | | |
|------------------------------|--|--|--|
| Without indicator light/ | With indic | ator light/ e suppressor | |
| suppressor | S, Z types | R, U types | |
| 12 or less | 15 or less | 12 or less | |
| 10 or less | 13 or less | 10 or less | |
| 15 or less | 20 or less | 16 or less | |
| | Without indicator light/ surge voltage suppressor 12 or less 10 or less | Without indicator light/ surge voltage suppressor S, Z types 12 or less 15 or less 10 or less 13 or less | |

SY7000

| | Response time ms (at 0.5MPa) | | | |
|-------------------|--|---|------------|--|
| Type of actuation | Without indicator light/ surge voltage | With indicator light/ surge voltage suppressor | | |
| | suppressor | S, Z types | R, U types | |
| 2 position single | 31 or less | 38 or less | 33 or less | |
| 2 position double | 27 or less | 30 or less | 28 or less | |
| 3 position | 50 or less | 56 or less | 50 or less | |
| | | | | |

SY5000

| | Response time ms (at 0.5MPa) | | | |
|-------------------|--|---|------------|--|
| Type of actuation | Without indicator light/ surge voltage | With indicator light/ surge voltage suppressor | | |
| | suppressor | S, Z types | R, U types | |
| 2 position single | 19 or less | 26 or less | 19 or less | |
| 2 position double | 18 or less | 22 or less | 18 or less | |
| 3 position | 32 or less | 38 or less | 32 or less | |

SY9000

| | Response time ms (at 0.5MPa) | | | | |
|-------------------|--|---|------------|--|--|
| Type of actuation | Without indicator light/ surge voltage | With indicator light/ surge voltage suppressor | | | |
| | suppressor | S, Z types | R, U types | | |
| 2 position single | 35 or less | 41 or less | 35 or less | | |
| 2 position double | 35 or less | 41 or less | 35 or less | | |
| 3 position | 62 or less | 64 or less | 62 or less | | |

3 port valve o

ted mad

Manifold spec.



20

Type Type T 23 | 20P | 2

Single I

Type 1

e Type 41P

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Base Mounted Type

Models/Series SY3000

| Valve model | Type of actuation | | Port | Effective area ^{Note1)} mm ² (CV factor) | | Weight g Note 2) | |
|-------------|-------------------|-----------------|--------|---|------------------------------|------------------|----------------------------|
| vaive model | | | size | P to A/B | A/B to EA/EB | Grommet | L/M type plug connector |
| | pos. | Single | Rc 1/8 | 4.86 (0.27) | 5.4 (0.3) | 81 (47) | 85 (51) |
| | 2 p | Double | | 4.86 (0.27) | 5.4 (0.3) | 96 (62) | 103 (69) |
| | 3 position | Closed center | | 4.68 (0.26) | 4.86 (0.27) | 98 (63) | 105 (70) |
| SY3□40-□-01 | | Exhaust center | | 4.86 (0.27) | 5.94 (0.33) [3.24 (0.18)] | | |
| | | Pressure center | | 6.66 (0.37) [3.24 (0.18)] | 5.22 (0.29) | | |

Note 1) Values inside [] are for normal position.

Note 2) Values inside () are for valves without sub-plate.

Models/Series SY5000

| Valve model | Type of actuation | | Port | Effective area ^{Note1)} mm ² (CV factor) | | Weight g Note 2) | | |
|-------------|-------------------|-----------------|--------|---|---------------------------|------------------|----------------------------|--------------|
| valve model | | | size | P to A/B | A/B to EA/EB | Grommet | L/M type plug connector | DIN terminal |
| | 2 pos. | Single | | 12.78 (0.71) | 12.6 (0.7) | 118 (55) | 121 (59) | 154 (82) |
| | | Double | Rc 1/4 | 12.78 (0.71) | 12.6 (0.7) | 133 (70) | 140 (77) | 186 (123) |
| | osition | Closed center | | 7.56 (0.42) | 8.1 (0.45) | 138 (76) | 146 (83) | 192 (129) |
| SY5□40-□-02 | | Exhaust center | | 7.92 (0.44) | 14.4 (0.8) [9.0 (0.5)] | | | |
| | | Pressure center | | 15.84 (0.88) [4.5 (0.25)] | 8.64 (0.48) | | | |



Note 1) Values inside [] are for normal position.

Note 2) Values inside () are for valves without sub-plate.

Models/Series SY7000

| Valve model | | pe of Port | | Effective area ^{Note1)} mm ² (CV factor) | | Weight g Note 2) | | |
|-------------------------|-----------|-----------------|------------------|---|----------------|------------------|-------------------------|--------------|
| valve model | actuation | | size | P to A/B | A/B to EA/EB | Grommet | L/M type plug connector | DIN terminal |
| | pos. | Single | | 23.22 (1.29) | 21.6 (1.2) | 215 (86) | 219 (90) | 242 (113) |
| | 2 p | Double | Rc 1/4 Rc 3/8 | 23.22 (1.29) | 21.6 (1.2) | 231 (102) | 238 (109) | 284 (155) |
| | osition | Closed center | | 14.04 (0.78) | 12.24 (0.68) | | | |
| SY7□40-□- ₀₃ | | Exhaust center | | | [12.96 (0.72)] | 233 (104) | 241 (112) | 287 (158) |
| | | Pressure center | | 24.48 (1.36) [13.5 (0.75)] | 12.42 (0.69) | | | |



Note 1) Values inside [] are for normal position.

Note 1) Values inside () are for valves without sub-plate.

Models/Series SY9000

| 11000010,001100 0 1 0000 | | | | | | | | |
|--------------------------|-------------------|-----------------|--------|---|--------------------------------|------------------|----------------------------|--------------|
| Valve model | Type of actuation | | Port | Effective area ^{Note1)} mm ² (CV factor) | | Weight g Note 2) | | |
| valve model | | | size | P to A/B | A/B to EA/EB | Grommet | L/M type plug connector | DIN terminal |
| | pos. | Single | | 40.00 (0.04) | 47.04.(0.00) | 466 (169) | 470 (173) | 493 (196) |
| | 2 p | Double | | 40.29 (2.24) | 47.94 (2.66) | 482 (185) | 490 (193) | 535 (239) |
| | | Closed center | | 39.57 (2.20) | 36.92 (2.05) | | | 560 (263) |
| SY9□40-□-03 | 3 position | Exhaust center | 1 | 37.56 (2.09) | 62.31 (3.46) [20.64 (1.15)] | 1 | 514 (217) | |
| | | Pressure center | | 57.25 (3.18) | 37.51 (2.08) [16.48 (0.92)] | | | |
| | 2 pos. | Single | | 44.75 (2.49) | 75 (2.49) 51.71 (2.87) | 445 | 449 | 472 |
| | | Double | | | | 461 | 469 | 515 |
| | | Closed center | | 40.24 (2.24) | 37.61 (2.09) | | 493 539 | |
| SY9□40-□-04 | 3 position | Exhaust center | Rc 1/2 | 39.76 (2.21) | 64.12 (3.56) [20.76 (1.15)] | 485 | | 539 |
| | | Pressure center | | 59.21 (3.29) | 37.85 (2.10) [15.23 (0.85)] | | | |



Note 1) Values inside [] are for normal position.

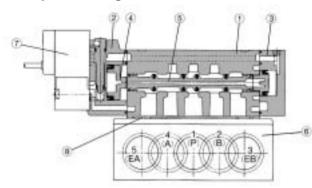
Note 2) Values inside () are for valves without sub-plate.

Construction

Series SY



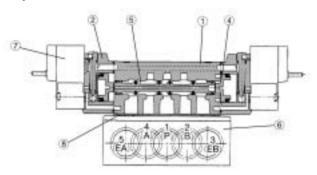
2 position single



Symbol: 2 position double



2 position double



Symbol: 3 position closed center



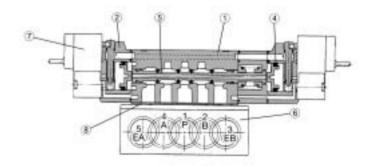
3 position exhaust center



3 position pressure center



3 position closed center/exhaust center/pressure center



(The diagram above shows the closed center type.)

Parts list

| raits list | | | | | | |
|------------|----------------------|--|----------------------------|--|--|--|
| No. | Description | Material | Note | | | |
| 1 | Body | Die-cast aluminum (SY3000 is die-cast zinc.) | White | | | |
| 2 | Adaptor plate | Resin | White (Gray for SY9000) | | | |
| 3 | End plate | Resin | White | | | |
| 4 | Piston | Resin | _ | | | |
| 5 | Spool valve assembly | Aluminum/NBR | _ | | | |

Replacement parts

| No. | Description | | Nata | | | | |
|-----------------|------------------------------|--------------------------|--|--|--|--|--|
| No. Description | Description | SY3□40 | SY5□40 | SY7□40 | SY9□40 | Note | |
| 6 | Sub-plate | SY3000-27-1 | SY5000-27-1 | Rc 1/4: SY7000-27-1 Rc 3/8: SY7000-27-2 | Rc 3/8: SY9000-27-1 Rc 1/2: SY9000-27-2 | Die-cast aluminum | |
| 7 | Pilot valve assembly | | Refer to "How to Order Pilot Valve Assemblies" on page 23. | | | | |
| 8 | Gasket | SY3000-11-25 | SY5000-11-13 | SY7000-11-7 | SY9000-11-2 | NBR | |
| _ | Round head combination screw | SY3000-23-4 (M2 x 21) | M3 x 26 | M4 x 31 | SY9000-18-2 (M3 x 42) | For mounting valves (Flat nickel plated) | |

∆ Caution

| Mounting screw tightening tord | ques |
|--------------------------------|------|
| M2: 0.15N·m | |
| M3: 0.6N·m | |
| M4: 1.4N·m | |

22

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Order made

lanifold spec. sheets

How to Order Pilot Valve Assemblies

L

LN

LO

М

MN

MO

SY114 Indicator light/Surge voltage suppressor Rated voltage Without indicator light/surge voltage suppressor **5** 24VDC 12VDC s With surge voltage suppressor 6 With indicator light/surge voltage suppressor ٧ 6VDC S 5VDC With surge voltage suppressor (non-polar type) R With indicator light/surge voltage suppressor (non-polar type) R 3VDC 1 100VAC 50/60Hz Note 1) "S" specification is not available for AC since it is 200VAC 50/60Hz integrated with the rectifier. Note 2) "R" and U" specifications are only available for DC. 110VAC 50/60Hz 3 [115VAC 50/60Hz] 220VAC 50/60Hz G Grommet (lead wire length: 300mm) [230VAC 50/60Hz] Grommet (lead wire length: 600mm) н

With lead wire

With lead wire

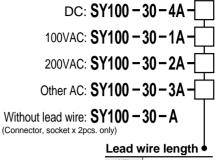
Without lead wire

Without connector

Without lead wire

Without connector

How to Order Connector Assemblies



M3: 0.6N·m

| Nil 300mm 6 600mm 10 1000mm 15 1500mm 20 2000mm 25 2500mm 30 3000mm 50 5000mm | Lead wire length | | | | |
|---|------------------|--------|--|--|--|
| 10 1000mm 15 1500mm 20 2000mm 25 2500mm 30 3000mm | Nil | 300mm | | | |
| 15 1500mm 20 2000mm 25 2500mm 30 3000mm | 6 | 600mm | | | |
| 20 2000mm 25 2500mm 30 3000mm | 10 | 1000mm | | | |
| 25 2500mm 30 3000mm | 15 | 1500mm | | | |
| 30 3000mm | 20 | 2000mm | | | |
| | 25 | 2500mm | | | |
| 50 5000mm | 30 | 3000mm | | | |
| | 50 | 5000mm | | | |

SY115 ח

Rated voltage

| 5 | 24VDC |
|---|------------------------------------|
| 6 | 12VDC |
| 1 | 100VAC 50/60Hz |
| 2 | 200VAC 50/60Hz |
| 3 | 110VAC 50/60Hz |
| 3 | [115VAC 50/60Hz] |
| 4 | 220VAC 50/60Hz [230VAC 50/60Hz] |
| 4 | [230VAC 50/60Hz] |
| | |

| Nil | Without indicator light/surge voltage suppressor | | | |
|-------------------------|--|--|--|--|
| S | With surge voltage suppressor (non-polar type) | | | |
| Z | With indicator light/surge voltage suppressor (non-polar type) | | | |
| * DOZ is not available. | | | | |



L type plug

connector

M type plug

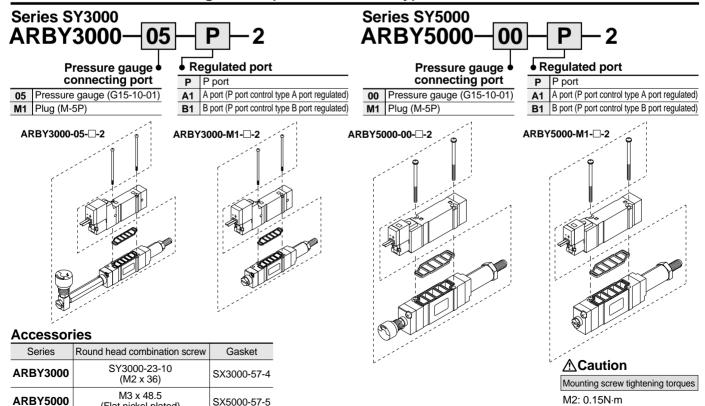
connector

"S" specification is not available for AC since it is integrated with

Electrical entry

| | | <u> </u> |
|----|----------|-------------------|
| D | DIN | With connector |
| DO | terminal | Without connector |

How to Order Interface Regulators (SY3000, 5000 only)





(Flat nickel plated)

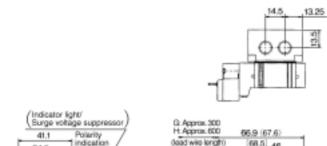
Single valve

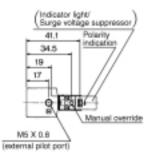


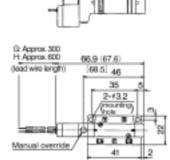


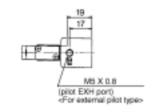
2 position single Grommet (G), (H): SY3140(R) -□G□□-01

Scale: 35%

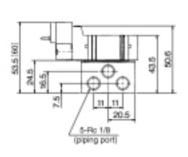


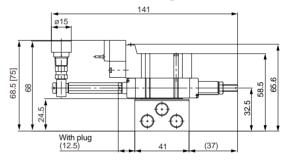




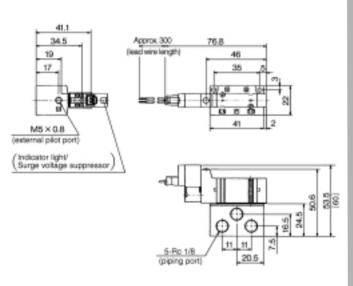


With interface regulator





L type plug connector (L): SY3140(R)-□L□□-01

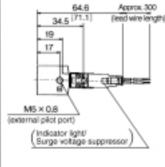


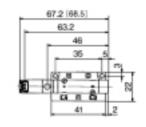
GrommetSS5Y31, #1 + #4 L type plug connector SS5Y31, #1 + #4 + #10

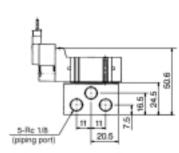
M type plug connector SS5Y31, #1 + #4 + #13

CAD

M type plug connector (M): SY3140(R)-□M□□-01







3 port valve operated

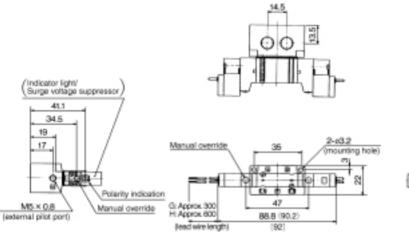
Order made

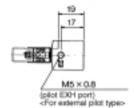
Precautions

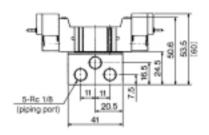


2 position double Grommet (G), (H): SY3240(R)-□GH□□-01

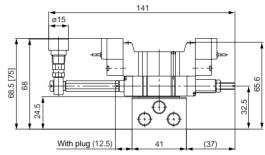
Scale: 35%







With interface regulator



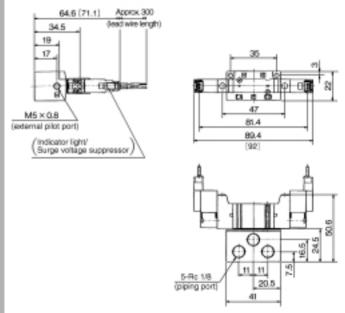
L type plug connector (L): SY3240(R)-□L□□-01

41.1 34.5 19 2-03.2 17 mounting hole) g **(20** a 0 (3)8 47 108.6 (external pilot port) (Indicator light/ Surge voltage suppressor 50.6 16.5 .11 20.5 (piping port) Grommet SS5Y31, #2 + #4

L type plug connector SS5Y31, #2 + #4 + #11

M type plug connector SS5Y31, #2 + #4 + #14

M type plug connector (M): SY3240(R)-□M□□-01



CAD

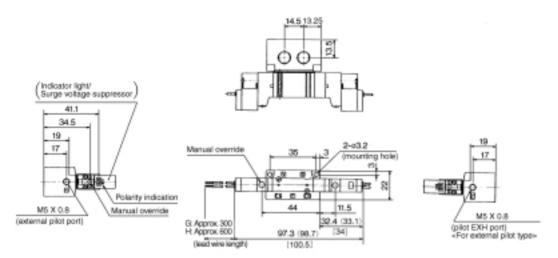
Single valve



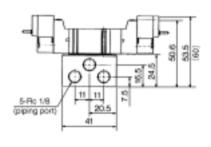


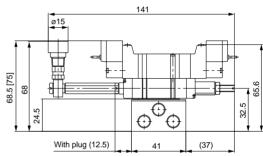
3 position closed center/exhaust center/pressure center Grommet (G), (H): SY3³/₄40(R)-□^G/_H□□-01

Scale: 35%

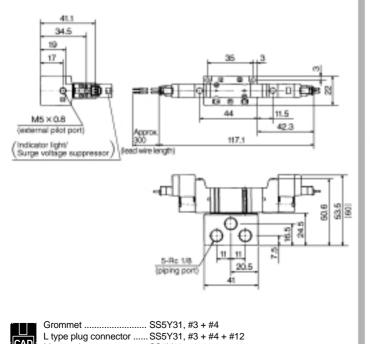


With interface regulator



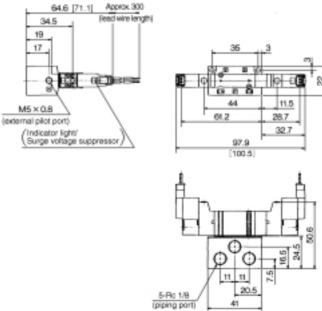


L type plug connector (L): SY3³/₅40(R)-□L□□-01



M type plug connector SS5Y31, #3 + #4 + #15

M type plug connector (M): SY3³/₅40(R)-□M□□-01



operated Order made

SMC

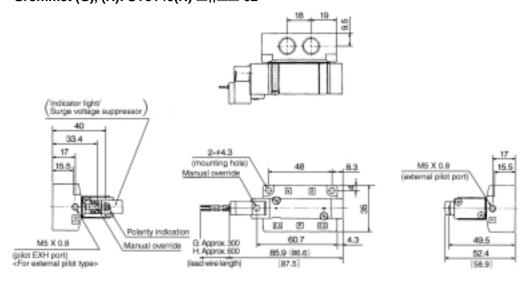


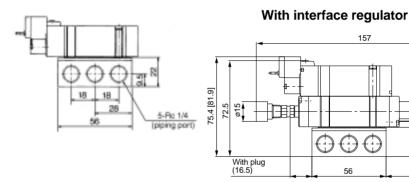
2 position single Grommet (G), (H): SY5140(R)-□^GH□□-02

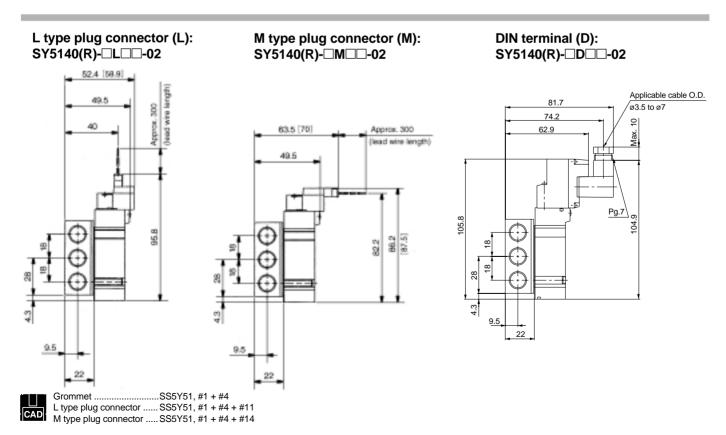
Scale: 35%

22

(59)







Single valve

ype 20

pe Type 3 20P

ype Sing

1ype 1yp 41 42

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ype Type

ype Type 45- 45- №

Applicable cable O.D.

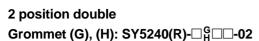
45 □e

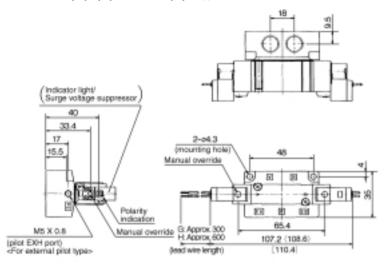
3 port Air valve operated

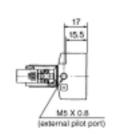
Order made s

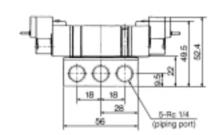
spec. Precautions

Scale: 35%

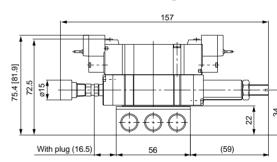








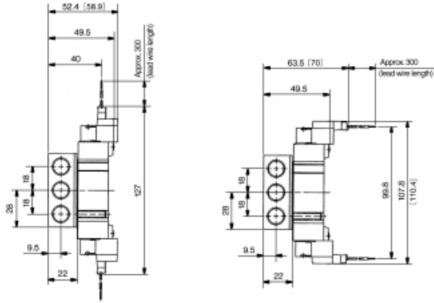
With interface regulator

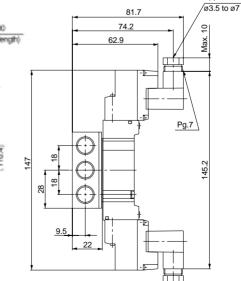


L type plug connector (L): SY5240(R)-□L□□-02

M type plug connector (M): SY5240(R)-□M□□-02

DIN terminal (D): SY5240(R)-□D□□-02



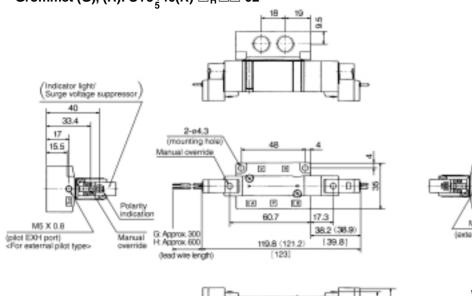


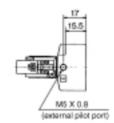
SMC

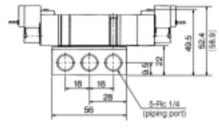


3 position closed center/exhaust center/pressure center Grommet (G), (H): SY5³/₅40(R)-□^G_H□□-02

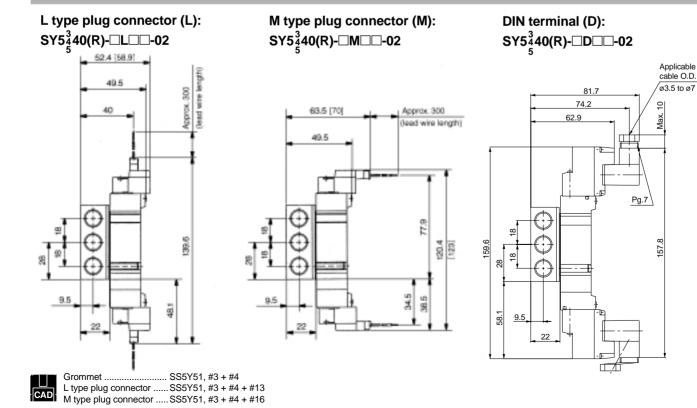
Scale: 35%



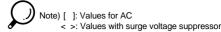


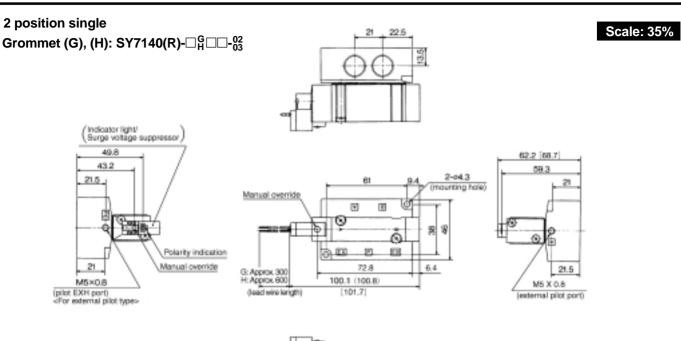


With interface regulator 72.5 22 With plug (16.5) 56 (59)









20.5 20.5

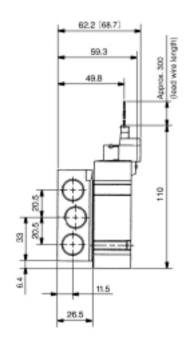
L type plug connector (L): SY7140(R)-□L□□-02

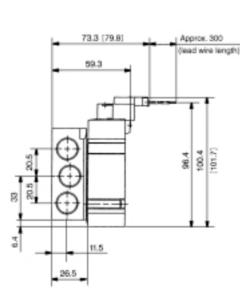
M type plug connector (M): SY7140(R)- \square M \square - $^{02}_{03}$

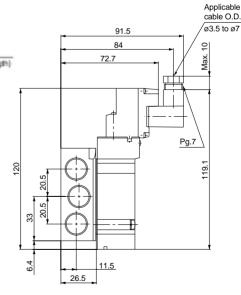
DIN terminal (D): SY7140(R)-□D□□-02

13.5

5-Ro 3/8, 1/4 (piping port)







..SS5Y71, #1 Grommet L type plug connector SS5Y71, #1 + #4 + #10

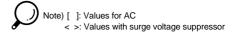
M type plug connector SS5Y71, #1 + #4 + #13

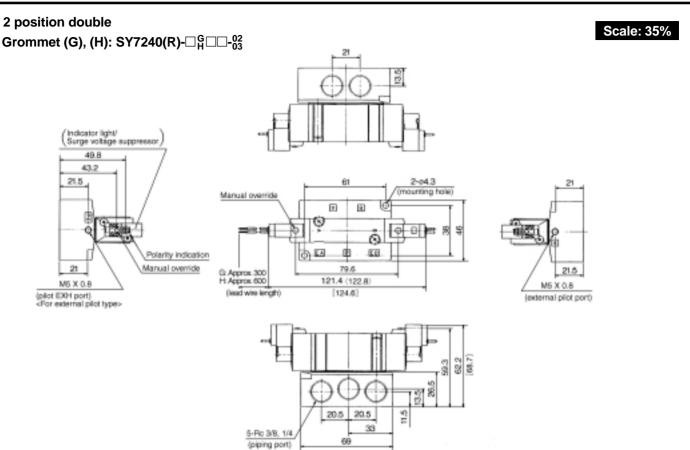
Single valve

operated

Order made



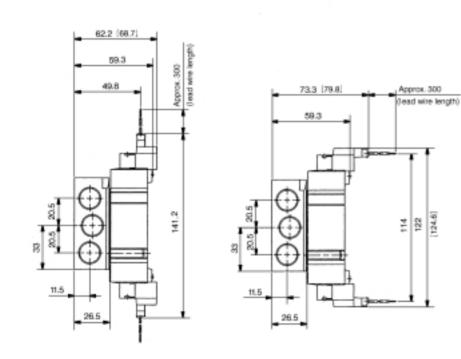


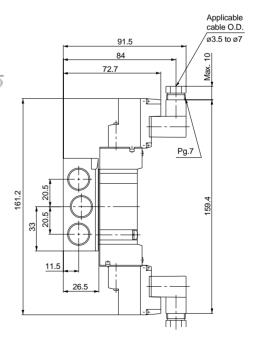


L type plug connector (L): SY7240(R)- \Box L \Box - $_{03}^{02}$

M type plug connector (M): SY7240(R)- \square M \square - $^{02}_{03}$

DIN terminal (D): SY7240(R)-□D□□-02







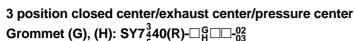
Grommet SS5Y71, #2 + #4
L type plug connector SS5Y71, #2 + #4 + #11
M type plug connector SS5Y71, #2 + #4 + #15



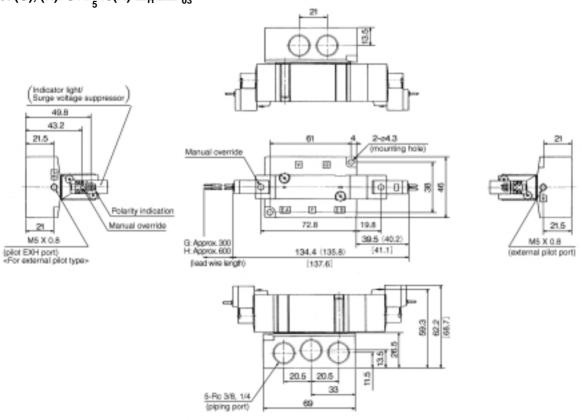
Single valve







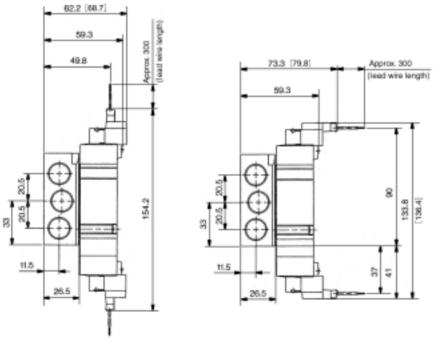
Scale: 35%

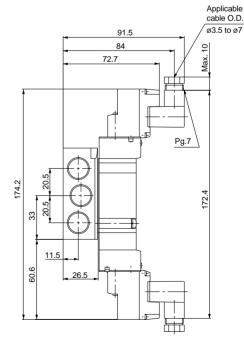


L type plug connector (L): SY7³/₅40(R)-□L□□-⁰²/₀₃

M type plug connector (M): $SY7\frac{3}{5}40(R)-\Box M\Box\Box-\frac{02}{03}$

DIN terminal (D): SY7³/₅40(R)-□D□□-⁰²/₀₃





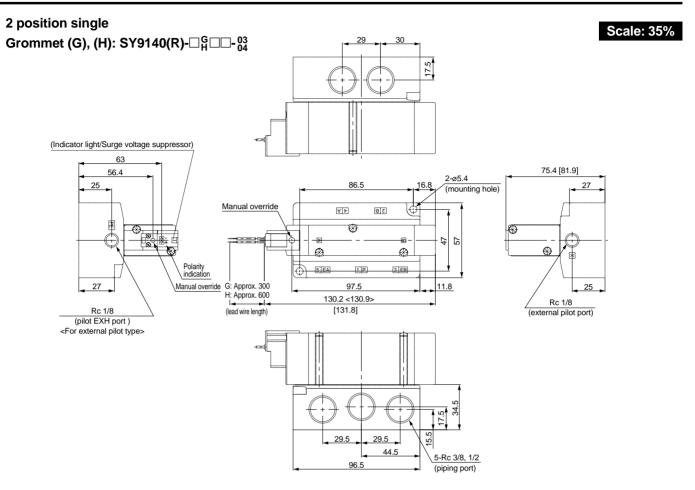
Grommet SS5Y71, #3 + #4 L type plug connector SS5Y71, #3 + #4 + #12 CAD M type plug connector SS5Y71, #3 + #4 + #15

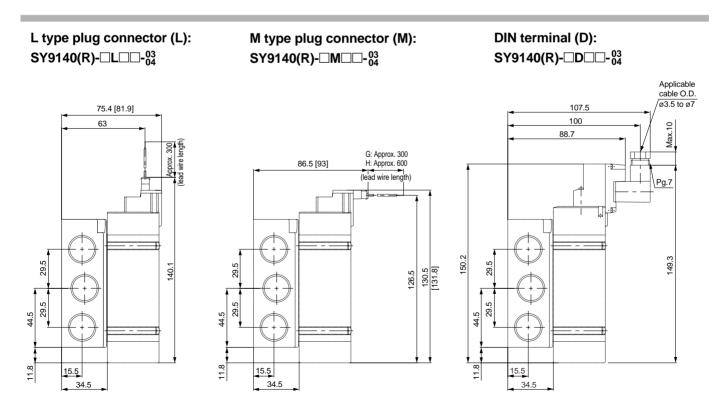
SMC

operated Order made

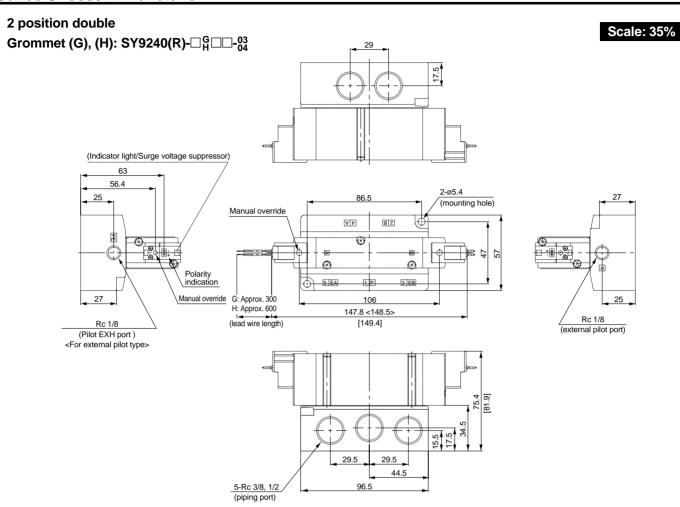
Precautions







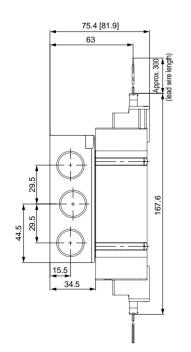
Single valve

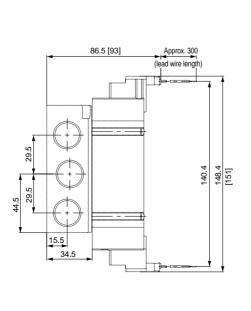


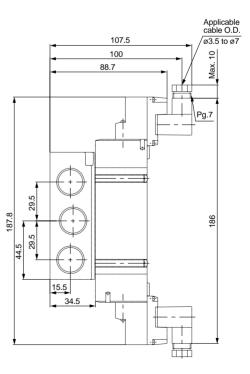
L type plug connector (L): SY9240(R)-□L□□-03

M type plug connector (M): SY9240(R)-□M□□-03

DIN terminal (D): SY9240(R)-□D□□-03



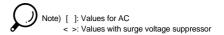


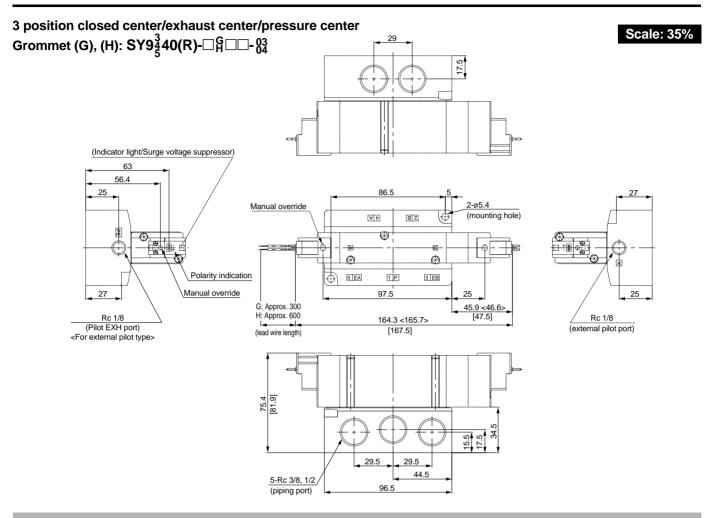


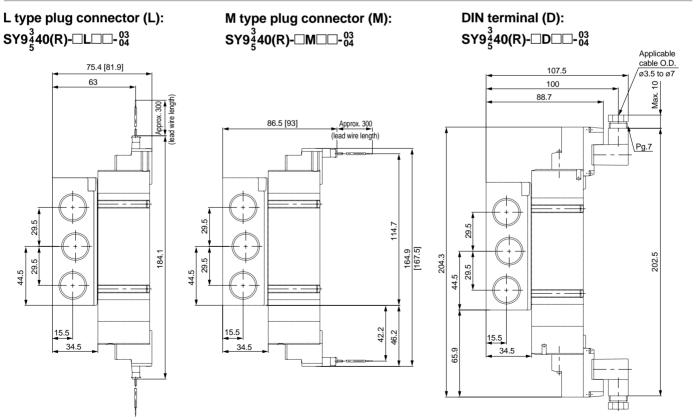
operated

Order made

Precautions





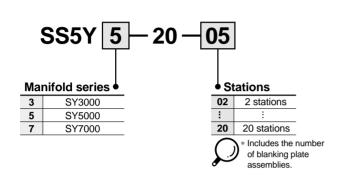




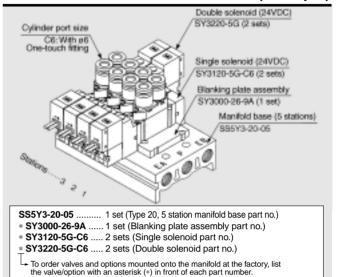
туре 20

SY3000/5000/7000 Body Ported Type Manifold Bar Stock/Individual Wiring

How to Order Manifolds

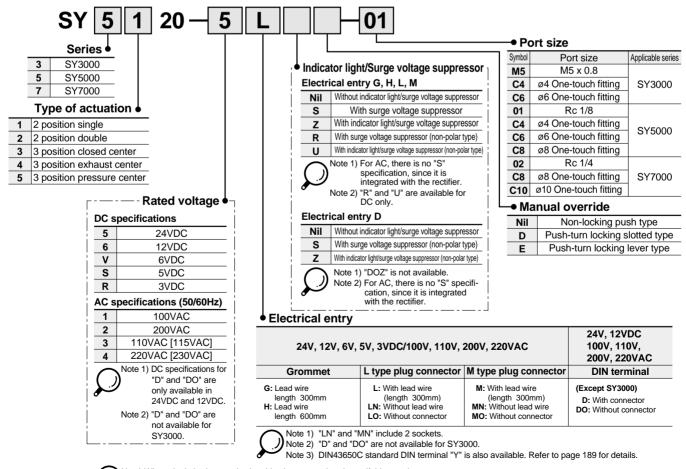


How to Order Manifold Assemblies (Example)



Add the valve and option part numbers in order starting from the first station as shown above. When entry of part numbers becomes complicated, indicate on a manifold specification sheet. (Manifold Specification Sheet on pages 191 to 193)

How to Order Valves



Note) When single body ported solenoid valves are ordered, manifold mounting bolts and gaskets are not included. Order them separately if necessary. (Refer to page 56 for details.)





Manifold specifications

| - | Model | | SS5Y3-20 | SS5Y5-20 | SS5Y7-20 | | | | | | |
|---|--|----------------|--|--|--|--|--|--|--|--|--|
| _ | | | | | | | | | | | |
| | Applicable va | alve | SY3□20 | SY5□20 | SY7□20 | | | | | | |
| | Manifold type | е | | Single base type/B moun | t | | | | | | |
| | P (SUP)/R (E | EXH) method | | Common SUP/EXH | | | | | | | |
| | Valve station | ns | 2 to 20 stations Note 1) | | | | | | | | |
| | A, B port loca | ation | Valve | | | | | | | | |
| | | P, EA, EB port | Rc 1/8 | Rc 1/4 | Rc 1/4 | | | | | | |
| | Port size | A, B port | M5 x 0.8 C4 (ø4 One-touch fitting) C6 (ø6 One-touch fitting) | Rc 1/8 C4 (ø4 One-touch fitting) C6 (ø6 One-touch fitting) C8 (ø8 One-touch fitting) | Rc 1/4 C8 (ø8 One-touch fitting) C10 (ø10 One-touch fitting) | | | | | | |
| | Valve effective area Note mm² (Cv factor) | | P to A/B 3.6 (0.2) C6: A/B to EA/EB 4.14 (0.23) | P to A/B 9.18 (0.51) C8: A/B to EA/EB 9.9 (0.55) | P to A/B 15.84 (0.88) C10: A/B to EA/EB 14.94 (0.83) | | | | | | |
| | Manifold base weight W (g) n: Number of stations | | W = 13n + 35 | W = 36n + 64 | W = 43n + 64 | | | | | | |

Note 1) For 10 stations or more (5 stations or more in case of SS5Y7), supply pressure to P port on both sides and exhaust from EA and EB ports on both sides.

Note 2) Value when manifold base (5 stations) is mounted, with single action 2 position type.

Note 3) Refer to page 56 for manifold options.

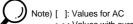
operated





SY3000: SS5Y3-20- Stations

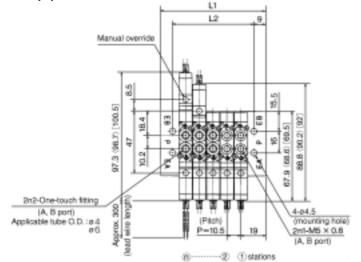


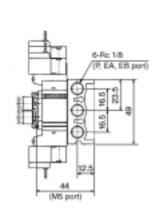


) []: Values for AC< >: Values with surge voltage suppressor

Grommet (G)

Scale: 35%

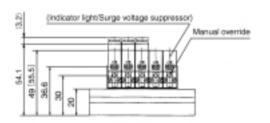


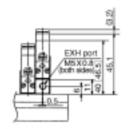


Dimensions when mounting individual EXH spacer

Dimensions when mounting individual SUP spacer

(SUP port is at the end plate side of the single solenoid.)

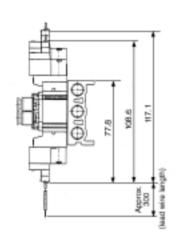


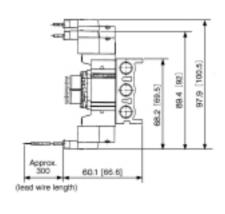




L type plug connector (L)

M type plug connector (M)





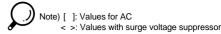
| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|------------|------|----|------|----|------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|
| L1 | 48.5 | 59 | 69.5 | 80 | 90.5 | 101 | 111.5 | 122 | 132.5 | 143 | 153.5 | 164 | 174.5 | 185 | 195.5 | 206 | 216.5 | 227 | 237.5 |
| L2 | 30.5 | 41 | 51.5 | 62 | 72.5 | 83 | 93.5 | 104 | 114.5 | 125 | 135.5 | 146 | 156.5 | 167 | 177.5 | 188 | 198.5 | 209 | 219.5 |





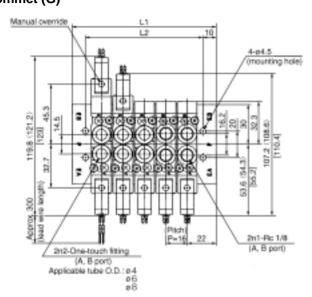


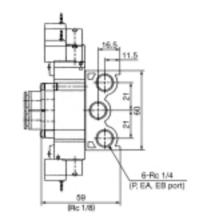




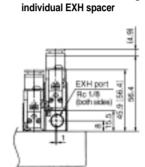
Grommet (G)

Scale: 35%

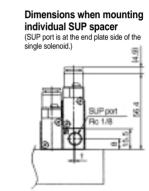




- 0 (f) stations (Indicator light/Surge voltage suppressor) Manual override 58.4 82.9

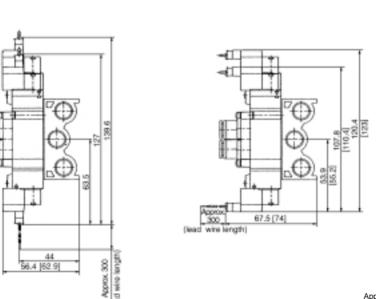


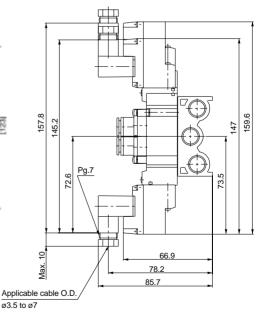
Dimensions when mounting



L type plug connector (L)

M type plug connector (M)





DIN terminal (D)

| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|------------|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| L1 | 60 | 76 | 92 | 108 | 124 | 140 | 156 | 172 | 188 | 204 | 220 | 236 | 252 | 268 | 284 | 300 | 316 | 332 | 348 |
| L2 | 40 | 56 | 72 | 88 | 104 | 120 | 136 | 152 | 168 | 184 | 200 | 216 | 232 | 248 | 264 | 280 | 296 | 312 | 328 |

CAD

Type 20 manifold ... SS5Y52, #1

40

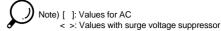
operated Order made

Precautions

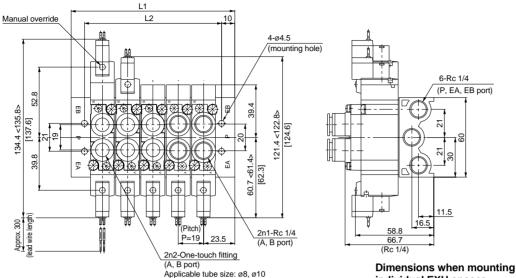


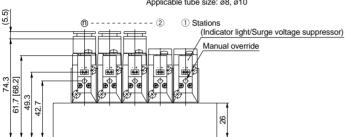
SY7000: SS5Y7-20- Stations

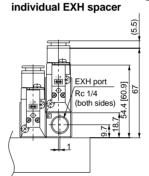


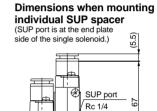






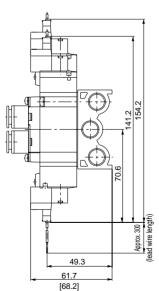


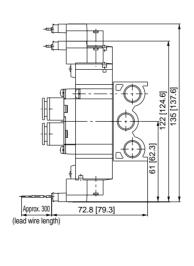


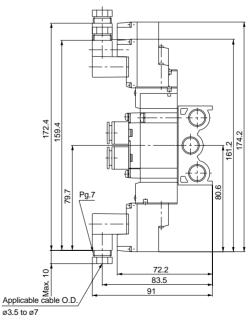


18.5

L type plug connector (L) M type plug connector (M) DIN terminal (D)







| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|------------|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| L1 | 66 | 85 | 104 | 123 | 142 | 161 | 180 | 199 | 218 | 237 | 256 | 275 | 294 | 313 | 332 | 351 | 370 | 389 | 408 |
| L2 | 46 | 65 | 84 | 103 | 122 | 141 | 160 | 179 | 198 | 217 | 236 | 255 | 274 | 293 | 312 | 331 | 350 | 369 | 388 |



Type 20 manifold ... SS5Y72, #1

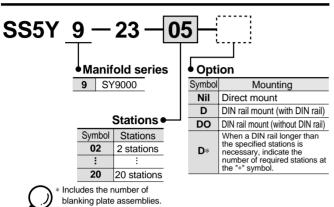




Туре 23

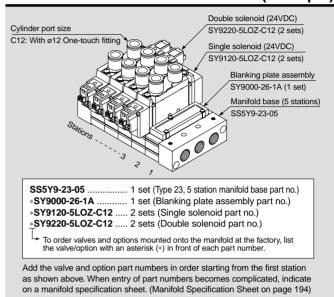
SY9000 Body Ported Type Manifold Stacking Type/Individual Wiring

How to Order Manifolds

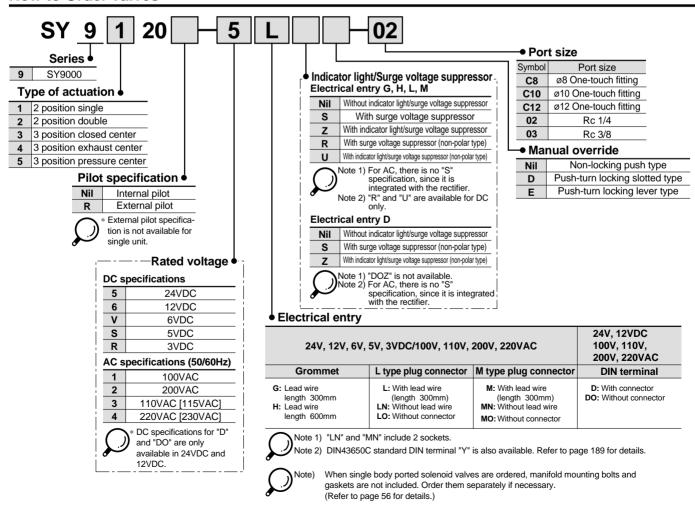


^{*} Type 23 manifolds for SY9000 have common internal and external pilots.

How to Order Manifold Assemblies (Example)



How to Order Valves





Manifold specifications

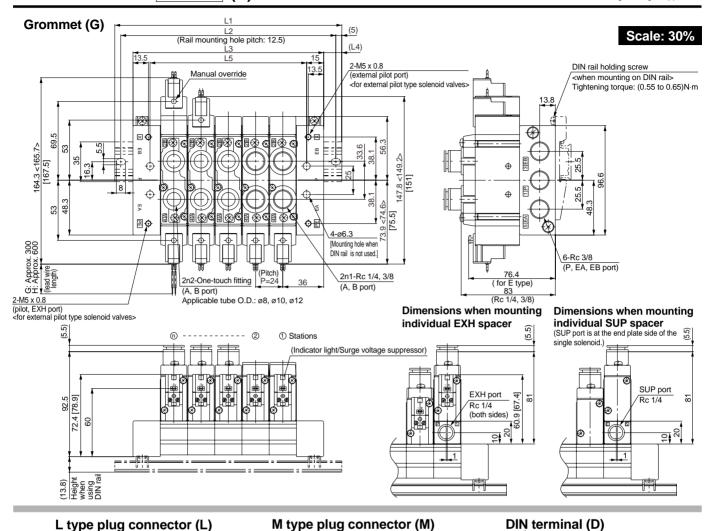
| Model | | SS5Y9-23 |
|--------------|-------------------|--------------------------------|
| Applicable v | valve | SY9□20 |
| Manifold typ | ре | Stacking type |
| P (SUP)/R | (EXH) method | Common SUP/EXH |
| Valve statio | ns | 2 to 20 stations Note 1) |
| A, B port lo | cation | Valve |
| | P, EA, EB port | Rc 3/8 |
| | | Rc 1/4 |
| Port size | | Rc 3/8 |
| 1 011 3126 | A, B port | C8 (ø8 One-touch fitting) |
| | | C10 (ø10 One-touch fitting) |
| | | C12 (ø12 One-touch fitting) |
| Valve effect | tive area Note 2) | P to A/B 35.41 (1.97) |
| mm² (Cv fa | ctor) | C12: A/B to EA/EB 30.55 (1.70) |
| Manifold bas | e weight W (g) | W = 66n + 246 |
| n: Number | of stations | vv = 0011 + 240 |
| _ | | |



Note 1) For 10 stations or more, supply pressure to P port on both sides and exhaust from EA and EB ports on

Note 2) Value when manifold base (5 stations) is mounted, with single action of 2 position type.

Note 3) Refer to page 56 for manifold options.



148.4 [151] 74.2 [75.5] 93.9 lead wire length Approx. 300 83.5[90] (lead wire length) 85.7 Applicable cable O.D ø3.5 to ø7 Stations n 335.5 360.5 385.5 410.5 460.5 510.5 535.5 435.5 485.5 L2 112.5 162.5 187.5 212.5 237.5 262.5 287.5 312.5

560.5 137.5 L3 L4 13.5 14.5 15.5 16.5 17.5 12.5 13.5 14.5 15.5 16.5 L5

Note) The overall manifold width is L3 for direct mounting without DIN rail.

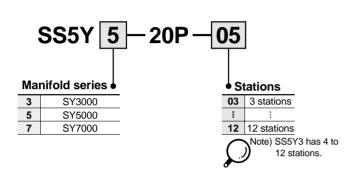




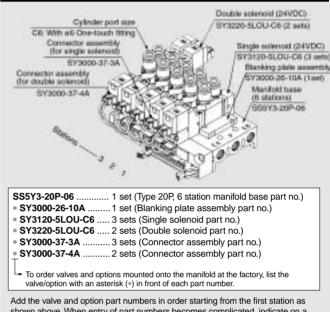


SY3000/5000/7000 Body Ported Type Manifold Bar Stock/Flat Ribbon Cable

How to Order Manifolds

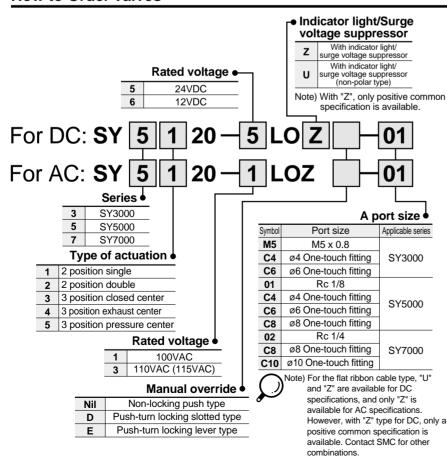


How to Order Manifold Assemblies (Example)



Add the valve and option part numbers in order starting from the first station as shown above. When entry of part numbers becomes complicated, indicate on a manifold specification sheet. (Manifold Specification Sheet on pages 196 to 198)

How to Order Valves



How to Order Connector Assemblies

For 12, 24VDC

| Specification | SY3000 | SY5000/7000 |
|---|--------------|--------------|
| Single solenoid | SY3000-37-3A | SY5000-37-3A |
| Double solenoid/ 3 position | SY3000-37-4A | SY5000-37-4A |
| Single solenoid with spacer assembly | SY5000-37-3A | SY5000-37-5A |
| Double solenoid/3 position with spacer assembly | SY3000-37-6A | SY5000-37-6A |

For 100VAC

| Specification | SY3000 | SY5000/7000 |
|---|---------------|---------------|
| Single solenoid | SY3000-37-32A | SY5000-37-15A |
| Double solenoid/ 3 position | SY3000-37-33A | SY5000-37-16A |
| Single solenoid with spacer assembly | | |
| Double solenoid/3 position with spacer assembly | SY3000-37-34A | SY5000-37-18A |

For 110VAC (115VAC)

| Specification | SY3000 | SY5000/7000 |
|---|---------------|---------------|
| Single solenoid | SY3000-37-35A | SY5000-37-19A |
| Double solenoid/ 3 position | SY3000-37-36A | SY5000-37-20A |
| Single solenoid with spacer assembly | | |
| Double solenoid/3 position with spacer assembly | SY3000-37-37A | SY5000-37-22A |



Note) When single body ported solenoid valves are ordered, manifold mounting bolts and gaskets are not included. Order them separately if necessary. (Refer to page 56 for details.)



External wiring is bundled for one-touch wiring

Clean appearance

With the flat ribbon cable type, each valve is wired to the printed circuit board of the manifold base to allow the external wiring to be bundled with a 26 pin MIL connector for one-touch wiring.



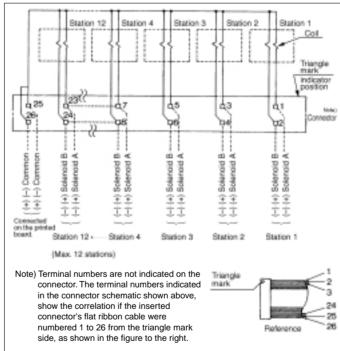
Manifold Specifications

| Model | | SS5Y3-20P | SS5Y5-20P | SS5Y7-20P | | | | |
|----------------------------|-----------------------------|--|--|--|--|--|--|--|
| Applicable | valve | SY3□20 | SY5□20 | SY7□20 | | | | |
| Manifold ty | <i>r</i> ре | | Single base type/B moun | t | | | | |
| P (SUP)/R | (EXH) method | | Common SUP/EXH | | | | | |
| Valve stati | ons | 4 to 12 stations Note 1) | 3 to 12 sta | tions Note 1) | | | | |
| A, B port lo | ocation | Valve | | | | | | |
| | P, EA, EB port | Rc 1/8 | Rc 1/4 | Rc 1/4 | | | | |
| Port size | A, B port | M5 x 0.8 C4 (ø4 One-touch fitting) C6 (ø6 One-touch fitting) | Rc 1/8 C4 (ø4 One-touch fitting) C6 (ø6 One-touch fitting) C8 (ø8 One-touch fitting) | Rc 1/4 C8 (ø8 One-touch fitting) C10 (ø10 One-touch fitting) | | | | |
| Valve effection mm² (Cv fa | ctive area Note 2) | P to A/B 3.6 (0.2) C6: A/B to EA/EB 4.14 (0.23) | P to A/B 9.18 (0.51) C8: A/B to EA/EB 9.9 (0.55) | P to A/B 15.84 (0.88) C10: A/B to EA/EB 14.94 (0.83) | | | | |
| | se weight W (g) of stations | W = 19n + 45 | W = 43n + 77 | W = 51n + 81 | | | | |
| Applicable cable conn | | Flat ribbon cable connector, Socket: 26 pin MIL, With strain relief, MIL-C-83503 conformity | | | | | | |
| Internal wir | ring | Common positive and negative COM (Only positive COM for "Z" type) | | | | | | |
| Rated volta | age | 12, 24VDC/100, 110VAC | | | | | | |



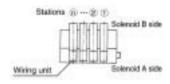
- Note 1) For 10 stations or more (5 stations or more in case of SS5Y7), supply pressure to P port on both sides and exhaust from EA and EB ports on both sides.
- Note 2) Value when manifold base (5 stations) is mounted, with single action 2 position type.
- Note 3) The withstand voltage specification for the wiring unit is equivalent to JIS C0704, Class 1.
- Note 4) Refer to page 56 for manifold options.

Manifold Internal Wiring (non-polar type)





- Note 1) For 10 stations or more, wire both of the common poles.
- Note 2) For single solenoids, connect to the solenoid A side.
- Note 3) The maximum number of stations is 12. Contact SMC if more than 12 stations are required



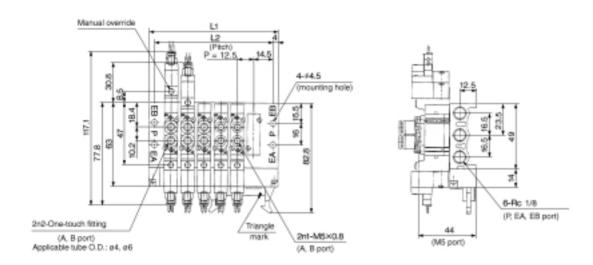
$oldsymbol{\Delta}$ Caution

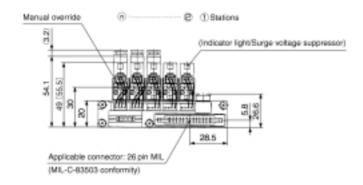
Non-polar type (U) valves with DC electrical connection can be used for both negative and positive COM. However, always use positive COM with the "Z" type, since valves will not be actuated when negative COM is used.





Scale: 35%





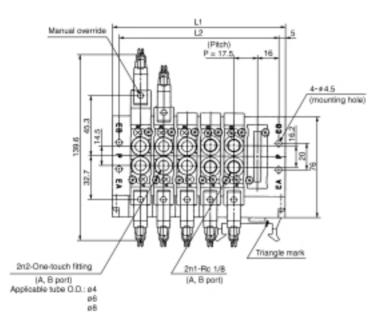
| Stations n | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|------------|------|----|------|-----|-------|-----|-------|-----|-------|
| L1 | 72.5 | 85 | 97.5 | 110 | 122.5 | 135 | 147.5 | 160 | 172.5 |
| L2 | 64.5 | 77 | 89.5 | 102 | 114.5 | 127 | 139.5 | 152 | 164.5 |

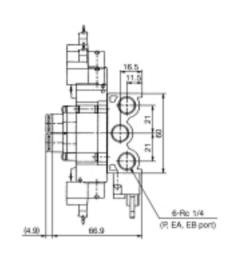


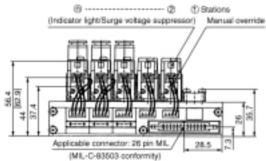
Type 20P manifold SS5Y32, #2



Scale: 35%







| Stations n | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|------------|----|------|-----|-------|-----|-------|-----|-------|-----|-------|
| L1 | 77 | 94.5 | 112 | 129.5 | 147 | 164.5 | 182 | 199.5 | 217 | 234.5 |
| L2 | 67 | 84.5 | 102 | 119.5 | 137 | 154.5 | 172 | 189.5 | 207 | 224.5 |

CAD

Type 20P manifold SS5Y52, #2

SMC

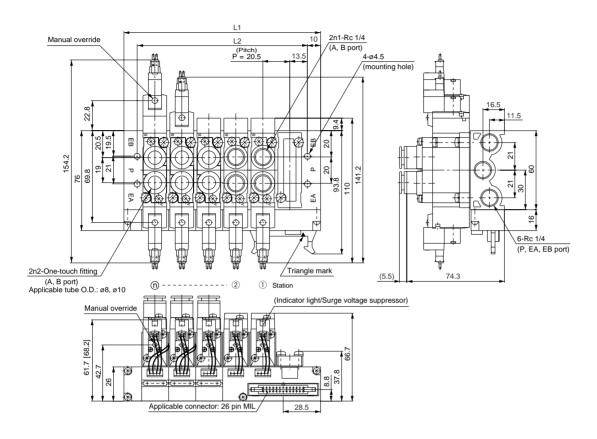
operated Order made

Precautions





Scale: 35%



| Stations n | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|------------|----|-------|-----|-------|-----|-------|-----|-------|-----|-------|
| L1 | 88 | 108.5 | 129 | 149.5 | 170 | 190.5 | 211 | 231.5 | 252 | 272.5 |
| L2 | 68 | 88.5 | 109 | 129.5 | 150 | 170.5 | 191 | 211.5 | 232 | 252.5 |



Type 20P manifold SS5Y72, #2

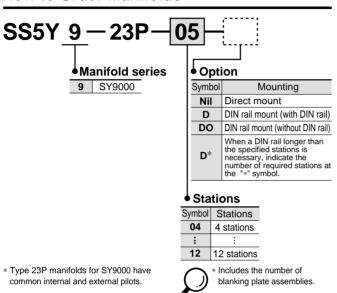




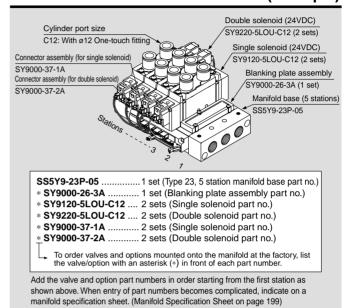


SY9000 Body Ported Type Manifold Stacking Type/Flat Ribbon Cable

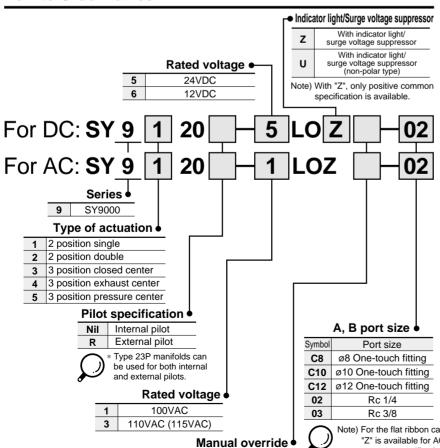
How to Order Manifolds



How to Order Manifold Assemblies (Example)



How to Order Valves



Non-locking push type

Push-turn locking slotted type

Push-turn locking lever type

How to Order Connector Assemblies

| For 12, 24VDC | | | | | |
|---|--------------|--|--|--|--|
| Specification | SY9000 | | | | |
| Single solenoid | SY9000-37-1A | | | | |
| Double solenoid/ 3 position | SY9000-37-2A | | | | |
| Single solenoid with spacer assembly | SY9000-37-3A | | | | |
| Double solenoid/3 position with spacer assembly | SY9000-37-4A | | | | |

For 100VAC

| Specification | SY9000 |
|---|--------------|
| Single solenoid | SY9000-37-1B |
| Double solenoid/ 3 position | SY9000-37-2B |
| Single solenoid with spacer assembly | SY9000-37-3B |
| Double solenoid/3 position with spacer assembly | SY9000-37-4B |

For 110VAC (115VAC)

| Specification | SY9000 | | | |
|---|--------------|--|--|--|
| Single solenoid | SY9000-37-1C | | | |
| Double solenoid/ 3 position | SY9000-37-2C | | | |
| Single solenoid with spacer assembly | SY9000-37-3C | | | |
| Double solenoid/3 position with spacer assembly | SY9000-37-4C | | | |

Note) For the flat ribbon cable type, "U" and "Z" are available for DC specifications, and only
"Z" is available for AC specifications. However, with "Z" type for DC, only a positive
common specification is available. Contact SMC for other combinations.

Note) When single body ported solenoid valves are ordered, manifold mounting bolts and gaskets are not included. Order them separately if necessary.

(Refer to page 56 for details.)



Nil

D

Ε

External wiring is bundled for one-touch wiring

Clean appearance

With the flat ribbon cable type, each valve is wired to the printed circuit board of the manifold base to allow the external wiring to be bundled with a 26 pin MIL connector for one-touch wiring.

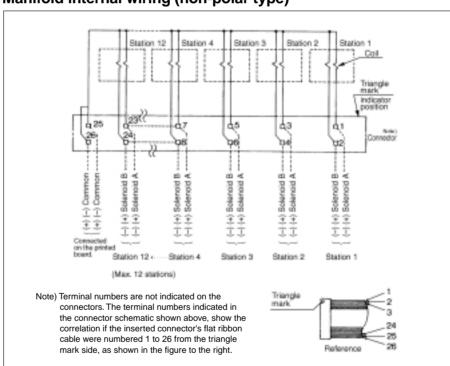


Manifold specifications

| Model | | SS5Y9-23P | |
|------------------------|-------------------|---|--|
| Applicable valve | | SY9□20 | |
| Manifold typ | ре | Stacking type | |
| P (SUP)/R | (EXH) method | Common SUP/EXH | |
| Valve static | ons | 4 to 12 stations Note 1) | |
| A, B port lo | cation | Valve | |
| | P, EA, EB port | Rc 3/8 | |
| | | Rc 1/4 | |
| Port size | A, B port | Rc 3/8 | |
| Port Size | | C8 (ø8 One-touch fitting) | |
| | | C10 (ø10 One-touch fitting) | |
| | | C12 (ø12 One-touch fitting) | |
| Valve effec | tive area Note 2) | P to A/B 35.41 (1.97) | |
| mm² (Cv factor) | | C: A/B to EA/EB 30.55 (1.70) | |
| | se weight W (g) | W = 73n + 259 | |
| n: Number of stations | | VV = 73H + 259 | |
| Applicable flat ribbon | | Flat ribbon cable connector, | |
| cable connector | | Socket: 26 pin MIL, With strain relief, MIL-C-83503 conformity | |
| Internal wiri | ing | Common positive and negative COM (Only positive COM for "Z" type) | |
| Rated volta | ige | 12, 24VDC/100, 110VAC | |
| | | | |

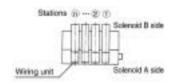
- Note 1) For 10 stations or more, supply pressure to P port on both sides and exhaust from EA and EB ports on both sides.
- Note 2) Value when manifold base (5 stations) is mounted, with single action 2 position type.
- Note 3) The withstand voltage specification for the wiring unit is equivalent to JIS C0704, class 1.
- Note 4) Refer to page 56 for manifold options.

Manifold internal wiring (non-polar type)





- Note 1) For 10 stations or more, wire both of the common poles.
- Note 2) For single solenoids, connect to the solenoid A side.
- Note 3) The maximum number of stations is 12. Contact SMC if more than 12 stations are required.





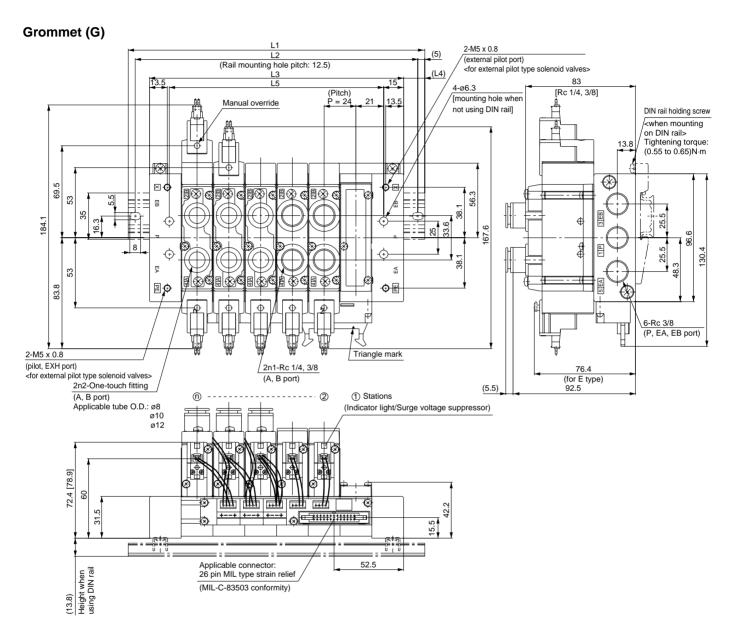
Non-polar type (U) valves with DC electrical connection can be used for both negative and positive COM. However, always use positive COM with the "Z" type, since valves will not be actuated when negative COM is used.

operated

Order made



Scale: 30%



| Stations n | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 173 | 198 | 223 | 248 | 273 | 298 | 323 | 335.5 | 360.5 |
| L2 | 162.5 | 187.5 | 212.5 | 237.5 | 262.5 | 287.5 | 312.5 | 325 | 350 |
| L3 | 144 | 168 | 192 | 216 | 240 | 264 | 288 | 312 | 336 |
| L4 | 14.5 | 15 | 15.5 | 16 | 16.5 | 17 | 17.5 | 12 | 12.5 |
| L5 | 114 | 138 | 162 | 186 | 210 | 234 | 258 | 282 | 306 |



Note) The overall manifold width is L3 for direct mounting without DIN rail.



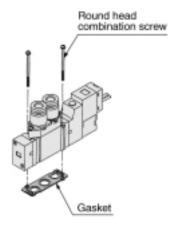
Manifold Options

■ For types 20, 23 Blanking plate assembly



| Series | Assembly part no. |
|--------|-------------------|
| SY3000 | SY3000-26-9A |
| SY5000 | SY5000-26-18A |
| SY7000 | SY7000-26-20A |
| SY9000 | SY9000-26-1A |

■ Bolt, Gasket part numbers



| Series | Round head combination screw | Gasket | |
|--------|---------------------------------|--------------|--|
| SY3000 | SY3000-23-4 (M2 x 21) | SY3000-11-24 | |
| SY5000 | M3 x 26 (Flat nickel plated) | SY5000-11-10 | |
| SY7000 | M4 x 31 (Flat nickel plated) | SY7000-11-9 | |
| SY9000 | SY9000-18-2 (M3 x 42) | SY9000-11-1 | |

⚠ Caution

Mounting screw tightening torque

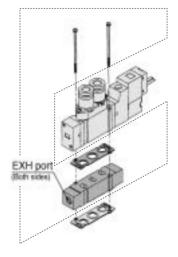
M2: 0.15N·m M3: 0.6N·m M4: 1.4N·m

■ For types 20P, 23P Blanking plate assembly



| Series | Assembly part no. |
|--------|-------------------|
| SY3000 | SY3000-26-10A |
| SY5000 | SY5000-26-19A |
| SY7000 | SY7000-26-21A |
| SY9000 | SY9000-26-3A |

■ Individual EXH spacer assembly

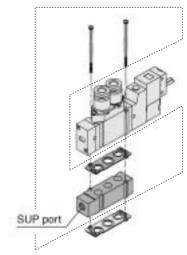


| Series | Assembly part no. | Port size |
|--------|-------------------|-----------|
| SY3000 | SY3000-39-20A | M5 x 0.8 |
| SY5000 | SY5000-39-1A | Rc 1/8 |
| SY7000 | SY7000-39-1A | Rc 1/4 |
| SY9000 | SY9000-39-1A | Rc 1/4 |



Note) In case of types 20P and 23P, to protect from drainage, arrange the piping on the EA port (wiring unit side) so that the wiring unit will not be exposed to the direct exhaust from the

■ Individual SUP spacer assembly



| Series | Assembly part no. | Port size |
|--------|-------------------|-----------|
| SY3000 | SY3000-38-20A | M5 x 0.8 |
| SY5000 | SY5000-38-1A | Rc 1/8 |
| SY7000 | SY7000-38-1A | Rc 1/4 |
| SY9000 | SY9000-38-1A | Rc 1/4 |

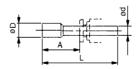


Note 1) The SUP port can be on the lead wire side or end plate side for SY3000/5000/7000. (The SUP port direction is as shown above when shipped already assembled.)

Note 2) For SY9000, the SUP port is only available on the end plate side.

■ Plug (white)

Insert into unused cylinder ports and SUP/EXH ports. The minimum order quantity is 10 pieces. Order in multiples of 10.



Dimensions

| Applicable fitting size ød | Model | А | L | D |
|----------------------------|---------|------|------|----|
| 4 | KQ2P-04 | 16 | 32 | 6 |
| 6 | KQ2P-06 | 18 | 35 | 8 |
| 8 | KQ2P-08 | 20.5 | 39 | 10 |
| 10 | KQ2P-10 | 22 | 43 | 12 |
| 12 | KQ2P-12 | 24 | 45.5 | 14 |



Manifold Options

■ SUP block disc (SY9000)

By installing a SUP block disc in the pressure supply passage of the manifold valve, two or more different pressures, high or low, can be supplied to one manifold.



| Series | Part no. |
|--------|--------------|
| SY9000 | SY9000-61-2A |

■ EXH block disc (SY9000)

By installing an EXH block disc in the exhaust passage of the manifold valve, the passage can be divided so that the exhaust from one valve will not affect another valve. (Two block discs are required to block both EXH ports.)



| Series | Part no. |
|--------|--------------|
| SY9000 | SY9000-61-2A |

■ Labels for block disc (SY9000)

Labels are applied to valves with SUP and EXH block discs for external confirmation of blocked passages. (3 labels per package)

VZ3000-123-1A

SUP block disc label

EXH block disc label

SUP/EXH block disc label









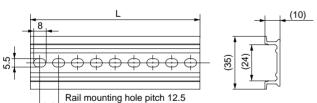
* When block discs are ordered with manifolds using a manifold specification sheet, block disc labels are already applied if the block discs are installed at the time of shipment.

■ SY9000 DIN rail dimensions and weights

VZ1000 - 11 - 4 - □

Refer to the table below for dimension L.

 \ast Specify a number inside \square from the DIN rail dimensions table below.



| No. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|-------------|------|-------|------|-------|-------|-------|------|-------|-------|-------|
| Dimension L | 98 | 110.5 | 123 | 135.5 | 148 | 160.5 | 173 | 185.5 | 198 | 210.5 |
| Weight (g) | 24.8 | 28 | 31.1 | 34.3 | 37.4 | 40.6 | 43.8 | 46.9 | 50.1 | 53.3 |
| No. | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| Dimension L | 223 | 235.5 | 248 | 260.5 | 273 | 285.5 | 298 | 310.5 | 323 | 335.5 |
| Weight (g) | 56.4 | 59.6 | 62.7 | 65.9 | 69.1 | 72.2 | 75.4 | 78.6 | 81.7 | 84.9 |
| No. | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| Dimension L | 348 | 360.5 | 373 | 385.5 | 398 | 410.5 | 423 | 435.5 | 448 | 460.5 |
| Weight (g) | 88 | 91.2 | 94.4 | 97.5 | 100.7 | 103.9 | 107 | 110.2 | 113.3 | 116.5 |

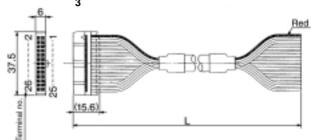


Note) Refer to page 236 regarding DIN rails.

Refer to dimension L1 on page 55 for lengths that correspond to the number of manifold stations.

■ Cable assembly (20P, 23P)

AXT100-FC26-2



Flat ribbon cable connector assembly

| Cable length (L) | Assembly part no. | Note |
|------------------|-------------------|-----------------------|
| 1.5m | AXT100-FC26-1 | |
| 3m | AXT100-FC26-2 | 26 core cable x 28AWG |
| 5m | AXT100-FC26-3 | |



 For other commercial connectors, use a 26 pin type with strain relief conforming with MIL-C-83503.

Connector manufacturer examples

- Hirose Electric Company
- Sumitomo/3-M Limited
- Fujitsu, Ltd.
- Japan Aviation Electronics Industry, Ltd.
- J.S.T. Mfg. Co., Ltd.

assemblies for any additional stations.)

the expanded (or reduced) manifold base. (Changes in the number of stations for type 23P manifolds require wiring units and lead wire

Loosen the two tension bolts 5 that connect the manifold base and remove them.

(In case of a DIN rail type, also loosen the DIN rail holding screw on either the U side or D side.)

Manifold Base Expansion (for SY9000 Only) Stations can be added in a desired location.

Separate the blocks at the location where a new station is to be added.

For type 23 manifold base expansion, tension bolts are required as well

as a manifold block assembly. Tension bolts vary in length depending on

the number of stations; therefore, order the appropriate tension bolts for

- Mount the manifold block assembly to be added.
- 4 Hold the blocks so that there is no space between them, insert the appropriate tensions bolts into the expanded manifold base and tighten them.

△ Caution (Tightening torque: 2.9N m)

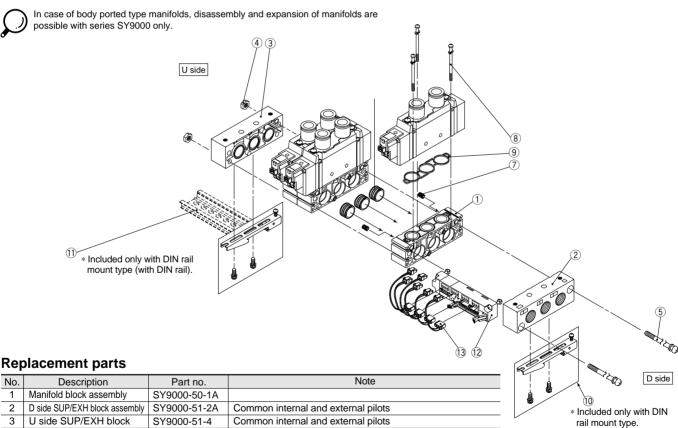
(With the DIN rail type, be sure to tighten the tension bolts first, and then tighten the DIN rail holding screws. Tightening torque: 1.4N·m)

/!\ Caution

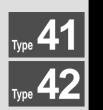
1

- 1. Be sure to turn off the power supply and air supply before disassembling. Furthermore, confirm that the air is completely exhausted before beginning disassembly, since residual air may be present inside the actuator, piping, and manifold.
- 2. When disassembly and assembly are performed, insufficient tightening of the tension bolts will cause air leakage.
- 3. Type 23 manifold can be changed into a type 23P manifold by adding a wiring unit assembly.

23 **Exploded View of Body Ported Type Manifold 23P Common**



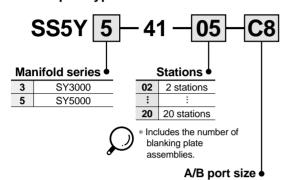
| • | | |
|-------------------------------|---|--|
| o. Description | Part no. | Note |
| 1 Manifold block assembly | SY9000-50-1A | |
| D side SUP/EXH block assembly | SY9000-51-2A | Common internal and external pilots |
| 3 U side SUP/EXH block | SY9000-51-4 | Common internal and external pilots |
| 4 Hexagon nut | SY9000-25-1 | M5 x 0.8 |
| 5 Tension bolt | SY9000-23-□ | Specify the number of stations inside \square at the end of the part number. |
| Bushing assembly | SY9000-61-1A | Included with the manifold block assembly and D side SUP/EXH block assembly |
| 7 Bushing assembly | SY9000-61-3A | Included with the manifold block assembly and D side SUP/EXH block assembly |
| Round head combination screw | SY9000-18-2 | Included with the manifold block assembly. |
| 9 Manifold gasket | SY9000-11-1 | Included with the manifold block assembly. |
| O Clamp bracket sub-assembly | SY9000-29-1A | |
| 1 DIN rail | VZ1000-11-4-□ | Refer to page 57. |
| 2 Wiring unit assembly | SY9000-36-□A | Specify the number of stations (4 to 12) inside □ in the part number. |
| 3 Connector assembly | SY9000-37-□□ | Refer to page 53. |
| | Manifold block assembly D side SUP/EXH block assembly U side SUP/EXH block Hexagon nut Tension bolt Bushing assembly Bushing assembly Round head combination screw Manifold gasket Clamp bracket sub-assembly DIN rail Wiring unit assembly | Manifold block assembly SY9000-50-1A D side SUP/EXH block assembly SY9000-51-2A U side SUP/EXH block SY9000-51-4 Hexagon nut SY9000-25-1 Tension bolt SY9000-23-□ Bushing assembly SY9000-61-1A Bushing assembly SY9000-61-3A Round head combination screw SY9000-18-2 Manifold gasket SY9000-11-1 Clamp bracket sub-assembly SY9000-29-1A DIN rail VZ1000-11-4-□ Wiring unit assembly SY9000-36-□A |



SY3000/5000/7000 Base Mounted Type Manifold Bar Stock/Individual Wiring

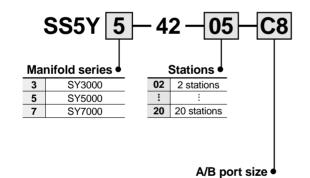
How to Order Manifolds

Type 41/Compact type



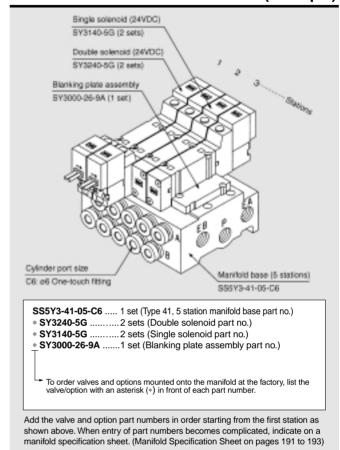
| Symbol | Port size | Applicable series |
|--------|----------------------|-------------------|
| M5 | M5 x 0.8 | |
| C4 | ø4 One-touch fitting | SY3000 |
| C6 | ø6 One-touch fitting | |
| 01 | Rc 1/8 | |
| C6 | ø6 One-touch fitting | SY5000 |
| C8 | ø8 One-touch fitting | |

Type 42/Common external pilot type

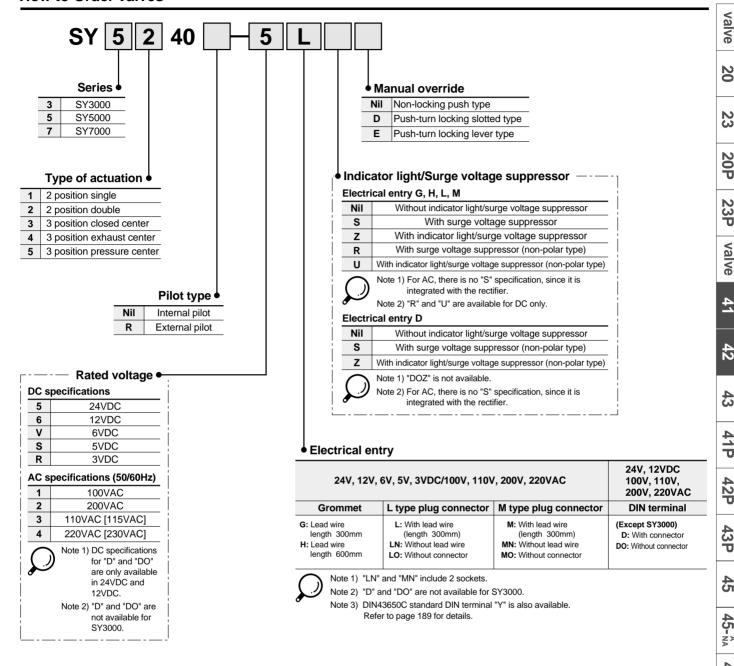


| Symbol | Port size | Applicable series | | | | |
|--------|-----------------------|-------------------|--|--|--|--|
| 01 | Rc 1/8 | | | | | |
| C4 | ø4 One-touch fitting | SY3000 | | | | |
| C6 | ø6 One-touch fitting | | | | | |
| 02 | Rc 1/4 | | | | | |
| C6 | ø6 One-touch fitting | SY5000 | | | | |
| C8 | ø8 One-touch fitting | | | | | |
| 02 | Rc 1/4 | CV7000 | | | | |
| C10 | ø10 One-touch fitting | SY7000 | | | | |

How to Order Manifold Assemblies (Example)



How to Order Valves



operated



Manifold specifications

| Model | | | SS5Y3-41 | SS5Y3-42 | SS5Y5-41 | SS5Y5-42 | SS5Y7-42 | | | | | | | |
|--|----------------|-------------------------|---------------------------------|-------------------------------|--|----------------------------|---|--|--|--|--|--|--|--|
| Applica | able | valve | SY3 | | SY5 | Y5□40 SY7□40 | | | | | | | | |
| Manifo | old ty | ре | Single base type/B mount | | | | | | | | | | | |
| P (SUP) | /R (EX | (H) method | | C | ommon SUP/EX | H | | | | | | | | |
| Valve | statio | ons | | to 20 stations ^{Not} | e 1) | | | | | | | | | |
| A, B port | t | Location | | Base | | | | | | | | | | |
| specifica | itions | Direction | Side | | | | | | | | | | | |
| | P, EA, EB port | | Rc | Rc 1/8 Rc 1/4 | | | | | | | | | | |
| Port | | | M5 x 0.8 | Rc 1/8 | Rc 1/8 | Rc 1/4 | Rc 1/4 | | | | | | | |
| size | A, E | 3 port | (0/ | (| C6 (ø6 One-touch fitting) C8 (ø8 One-touch fitting) | , o, | C10 (ø10 One-touch fitting) | | | | | | | |
| Valve eff mm² (Cv | | area ^{Note 2)} | C6: P to A/B 3.9 A/B to EA/B | 96 (0.22) EB 4.14 (0.23) | C8: P to A/B 9 A/B to EA | .54 (0.53) EB 9.0 (0.5) | C10: P to A/B 16.2 (0.9) A/B to EA/EB 16.2 (0.9) | | | | | | | |
| Manifold base weight W (g) n: Number of stations | | | W = 30n + 50 | W = 37n + 63 | W = 61n + 101 | W = 79n + 127 | W = 100n + 151 | | | | | | | |



Note 1) For 10 stations or more (5 stations or more in case of SS5Y7), supply pressure to P port on both sides and exhaust from EA and EB ports on both sides.

Note 2) Value when manifold base (5 stations) is mounted, with single action 2 position type.

Note 3) Refer to page 89 for manifold options.



SY3000: SS5Y3-41- Stations -M5, C4, C6

Grommet (G)

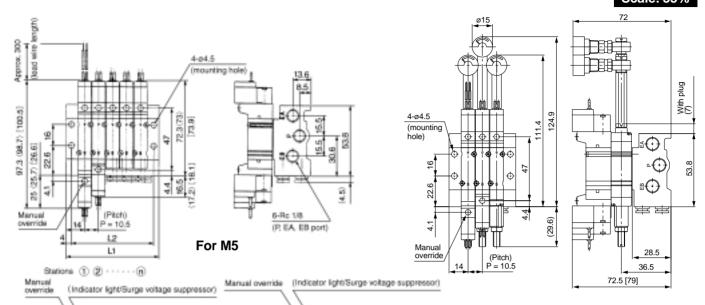




Note) []: Values for AC < >: Values with surge voltage suppressor

With interface regulator (with gauge)

Scale: 35%



L type plug connector (L)

68.1

> 10.5 P = 10.5 (Pitch)

Approx. 300 **≥**⊕ 112 -⊕ :⊕

2n-One-touch fitting

(A, B port) Applicable tube O.D.: e4

57.5 (64)

5

10.5

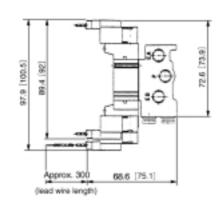
P = 10.5

M type plug connector (M)

80.7

2n-M5 x 0.8

(A, B port)



| | | | | | | | | | _ | | | | | | | | | | |
|------------|------|----|------|----|------|----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|
| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| L1 | 38.5 | 49 | 59.5 | 70 | 80.5 | 91 | 101.5 | 112 | 122.5 | 133 | 143.5 | 154 | 164.5 | 175 | 185.5 | 196 | 206.5 | 217 | 227.5 |
| L2 | 30.5 | 41 | 51.5 | 62 | 72.5 | 83 | 93.5 | 104 | 114.5 | 125 | 135.5 | 146 | 156.5 | 167 | 177.5 | 188 | 198.5 | 209 | 219.5 |

Type 41 manifold ... SS5Y32, #3 CAD

Single valve

Type 45□

3 port valve operated

Order made

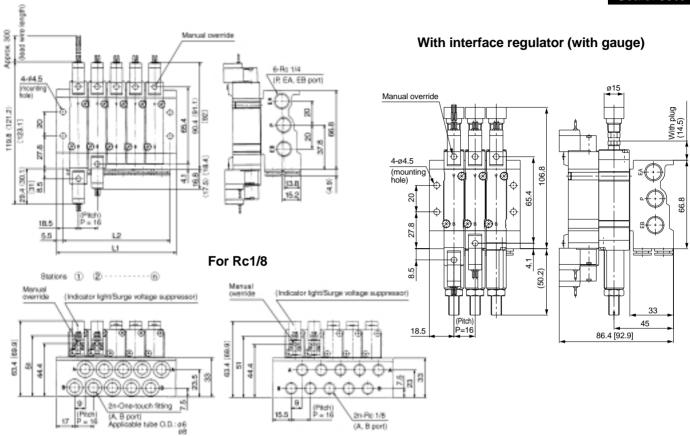
Precautions



SY5000: SS5Y5-41- Stations -01, C6, C8



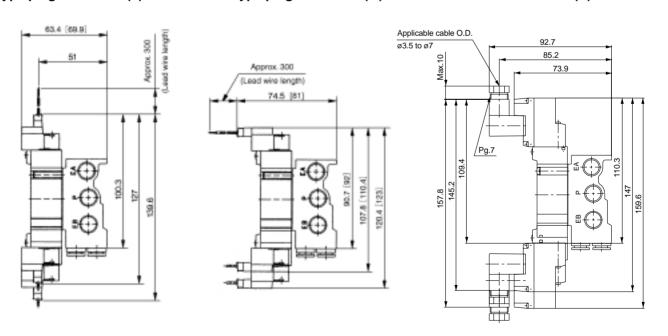




L type plug connector (L)

M type plug connector (M)

DIN terminal (D)



| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|------------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 52.5 | 68.5 | 84.5 | 100.5 | 116.5 | 132.5 | 148.5 | 164.5 | 180.5 | 196.5 | 212.5 | 228.5 | 244.5 | 260.5 | 276.5 | 292.5 | 308.5 | 324.5 | 340.5 |
| L2 | 42 | 58 | 74 | 90 | 106 | 122 | 138 | 154 | 170 | 186 | 202 | 218 | 234 | 250 | 266 | 282 | 298 | 314 | 330 |



Type 41 manifold ... SS5Y52, #3



Scale: 35%

40

76 [82.5]

Order made

Precautions

< >: Values with surge voltage suppressor

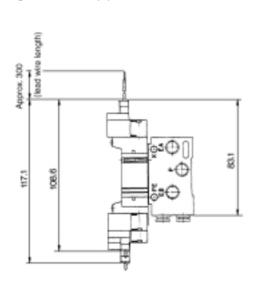
Grommet (G)

6-Rc 1/8 (P, EA, EB port) 2-M5 x 0.8 8 (external pilot port) Approx. peag With interface regulator (with gauge) 4-04.5 (mounti hale) 97.3 (98.7) [100.5] 3 25.8 콗 24.7 With plug (6) ä 4-ø4.5 125.9 112.4 Manual (mounting 2-M5 x 0.8 (pěot EXH port) **|**∳≦⊕N clor external pilot type solenoid valves> ٠ Stations ① ② · · · · · · · · · · · · · · · · Manual override 24.6 (Indicator light/Surge voltage suppressor) 串串

L type plug connector (L)

61 [67.5]

약



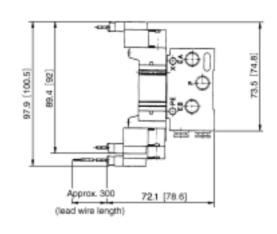
Si 2n-One-touch fitting (A, B port) Applicable tube O.D.: e4 e6

M type plug connector (M)

(Pitch) P = 10.5

3.1

Manual override



| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|------------|------|----|------|----|------|----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|
| L1 | 38.5 | 49 | 59.5 | 70 | 80.5 | 91 | 101.5 | 112 | 122.5 | 133 | 143.5 | 154 | 164.5 | 175 | 185.5 | 196 | 206.5 | 217 | 227.5 |
| L2 | 30.5 | 41 | 51.5 | 62 | 72.5 | 83 | 93.5 | 104 | 114.5 | 125 | 135.5 | 146 | 156.5 | 167 | 177.5 | 188 | 198.5 | 209 | 219.5 |

CAD

Type 42 manifold ... SS5Y32, #5



SY3000: SS5Y3-42- Stations -01

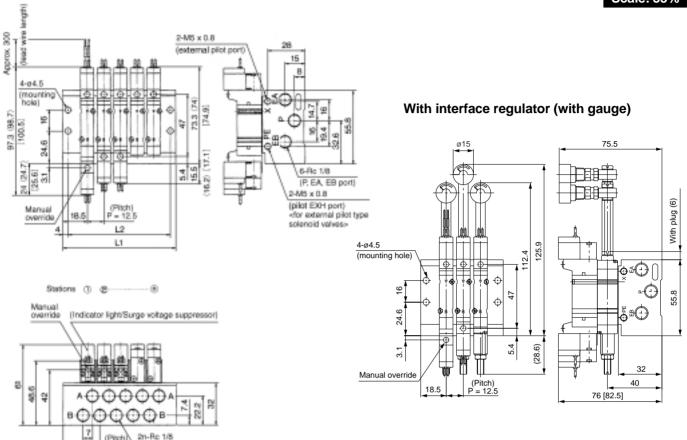




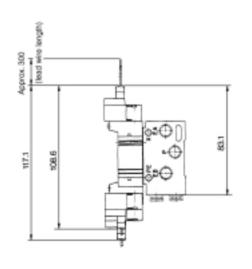
(e) []. Values for AC
< >: Values with surge voltage suppressor

Grommet (G)

Scale: 35%

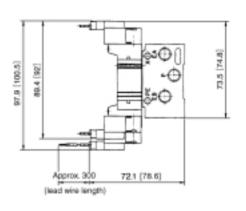


L type plug connector (L)



(A, B port)

M type plug connector (M)



| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|------------|------|----|------|----|------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|
| L1 | 47.5 | 60 | 72.5 | 85 | 97.5 | 110 | 122.5 | 135 | 147.5 | 160 | 172.5 | 185 | 197.5 | 210 | 222.5 | 235 | 247.5 | 260 | 272.5 |
| L2 | 39.5 | 52 | 64.5 | 77 | 89.5 | 102 | 114.5 | 127 | 139.5 | 152 | 164.5 | 177 | 189.5 | 202 | 214.5 | 227 | 239.5 | 252 | 264.5 |



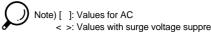
Type 42 manifold ... SS5Y32, #4



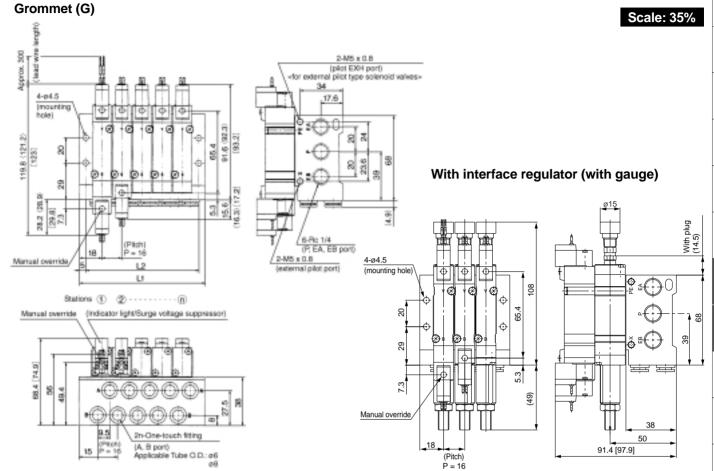


SY5000: SS5Y5-42- Stations -C6, C8





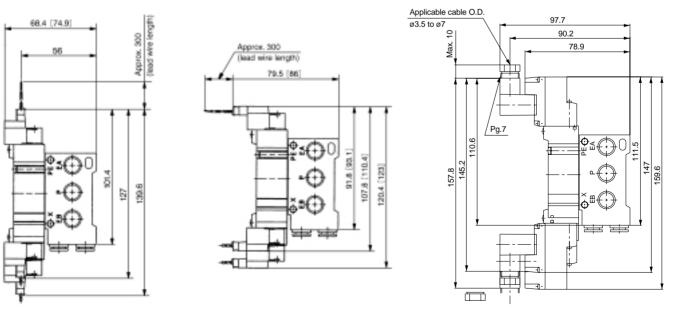
< >: Values with surge voltage suppressor



L type plug connector (L)

M type plug connector (M)

DIN terminal (D)



| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|------------|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| L1 | 52 | 68 | 84 | 100 | 116 | 132 | 148 | 164 | 180 | 196 | 212 | 228 | 244 | 260 | 276 | 292 | 308 | 324 | 340 |
| L2 | 42 | 58 | 74 | 90 | 106 | 122 | 138 | 154 | 170 | 186 | 202 | 218 | 234 | 250 | 266 | 282 | 298 | 314 | 330 |

CAD

Type 42 manifold ... SS5Y52, #5

Single valve

Type Type Type Type Single 20 23 20P 23P valve

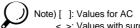
3 port valve

operated Order made



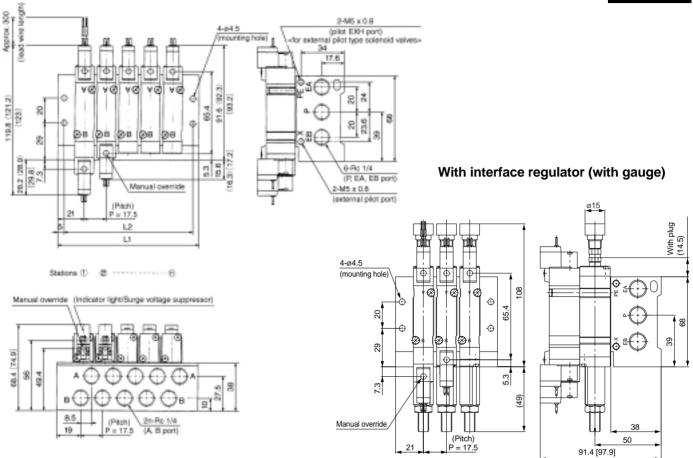
SY5000: SS5Y5-42- Stations -02





(): Values for AC
< >: Values with surge voltage suppressor

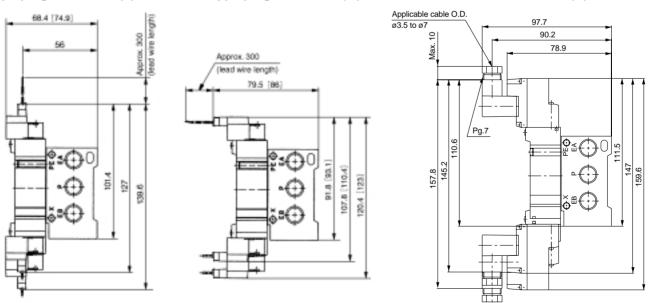
Grommet (G) Scale: 35%



L type plug connector (L)

M type plug connector (M)

DIN terminal (D)



| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|------------|------|----|------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|
| L1 | 59.5 | 77 | 94.5 | 112 | 129.5 | 147 | 164.5 | 182 | 199.5 | 217 | 234.5 | 252 | 269.5 | 287 | 304.5 | 322 | 339.5 | 357 | 374.5 |
| L2 | 49.5 | 67 | 84.5 | 102 | 119.5 | 137 | 154.5 | 172 | 189.5 | 207 | 224.5 | 242 | 259.5 | 277 | 294.5 | 312 | 329.5 | 347 | 364.5 |



Type 42 manifold ... SS5Y52, #4



SY7000: SS5Y7-42- Stations -02, C10





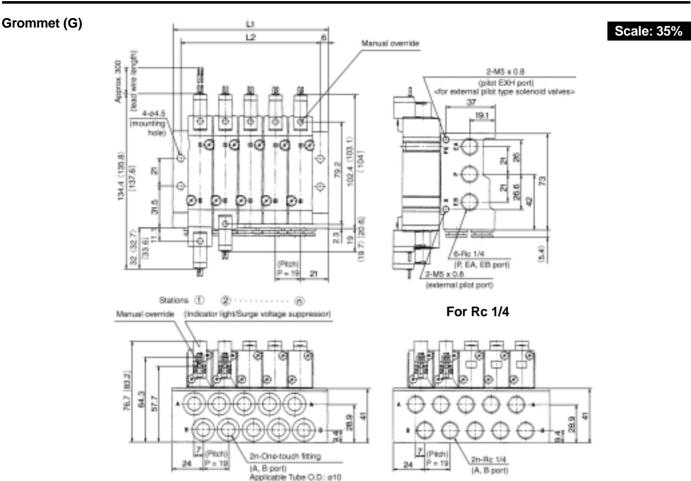
Note) []: Values for AC

< >: Values with surge voltage suppressor

Single valve

3 port valve

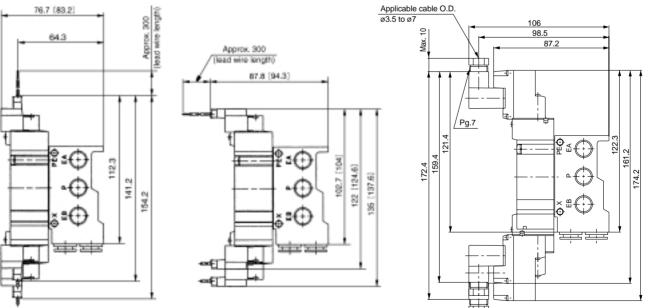
operated Order made



L type plug connector (L)

M type plug connector (M)

DIN terminal (D)



| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|------------|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| L1 | 61 | 80 | 99 | 118 | 137 | 156 | 175 | 194 | 213 | 232 | 251 | 270 | 289 | 308 | 327 | 346 | 365 | 384 | 403 |
| L2 | 49 | 68 | 87 | 106 | 125 | 144 | 163 | 182 | 201 | 220 | 239 | 258 | 277 | 296 | 315 | 334 | 353 | 372 | 391 |

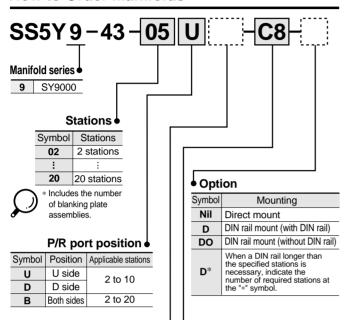






SY9000 **Base Mounted Type Manifold** Stacking Type/Individual Wiring

How to Order Manifolds



| SUP/EXH block assembly | specification |
|------------------------|---------------|
|------------------------|---------------|

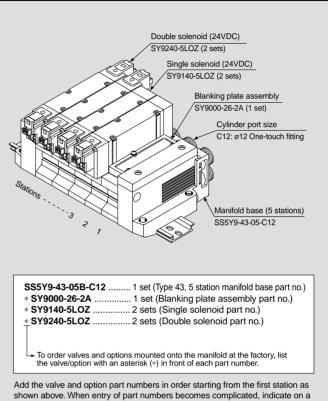
| Symbol | Specification |
|--------|---------------------------------------|
| Nil | Standard/Internal pilot |
| R | External pilot |
| S | Internal pilot with built-in silencer |
| RS | External pilot with built-in silencer |

A/B port size

| Symbol | Specification |
|--------|-----------------------|
| C8 | ø8 One-touch fitting |
| C10 | ø10 One-touch fitting |
| C12 | ø12 One-touch fitting |
| 02 | Rc 1/4 |
| 03 | Rc 3/8 |
| M | Mixed |

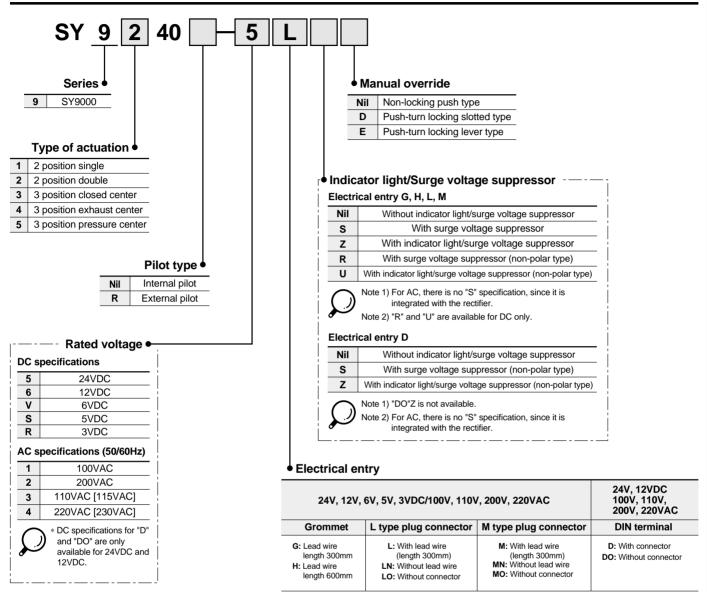
^{*} For mixed specifications, order separately on a manifold specification sheet.

How to Order Manifold Assemblies (Example)



shown above. When entry of part numbers becomes complicated, indicate on a manifold specification sheet. (Manifold Specification Sheet on page 195)

How to Order Valves



Note 1) "LN" and "MN" include 2 sockets.

Note 2) DIN43650C standard DIN terminal "Y" is also available. Refer to page 189 for details

operated



Manifold specifications

| Model | | | SS5Y9-43 |
|--------------|-----------------------------------|------------------------|---|
| Applic | able valv | ⁄e | SY9□40 |
| Manifo | old type | | Stacking type |
| P (SU | IP)/R (EX | (H) method | Common SUP/EXH |
| Valve | stations | | 2 to 20 stations Note 1) |
| A, B p | port Location fications Direction | | Base |
| specif | ications | Direction | Side |
| | P, EA, | EB port | C12 (ø12 One-touch fitting) |
| Port size | A, B po | ort | Rc 1/4 Rc 3/8 C8 (ø8 One-touch fitting) C10 (ø10 One-touch fitting) C12 (ø12 One-touch fitting) |
| | effective a | area Note 2) | C12: P to A/B 30.46 (1.69) A/B to EA/EB 32.98 (1.83) |
| | old base w | veight W (g) ations | W = 107n + 330 |



Note 1) For 10 stations or more, supply pressure to P port on both sides and exhaust from EA and EB ports on both sides.

Note 2) Value when manifold base (5 stations) is mounted, with single action 2 position type. Note 3) Refer to page 89 for manifold options.



Applicable tube O.D.: ø6



2n2-Rc 1/4, 3/8

[4 (A), 2 (B) port]

0

Manual overrio

(Station 1)

section

(5.4)

3/8]

For Rc 1/4,

Silencer (air outlet)

(5)

(for built-in silencer specification)

D side

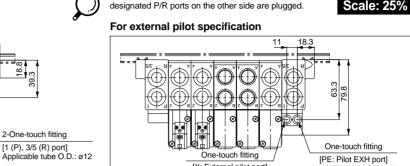


When P/R ports are located on the D side, the

Note) []: Values for AC

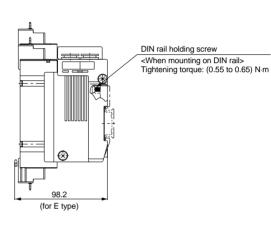
>: Values with surge voltage suppressor

Scale: 25%



[X: External pilot port]

 \ast The air outlet and external pilot locations for the built-in silencer type are on the D side.



| | | (lı | ndicator light/s | Surge voltage | e suppresso | or) | |
|--------------|--------------------|---|------------------|---------------|-------------|-------|-------------------------------|
| 94.2 [100.7] | 81.8 66.8 20 | ======================================= | | | | (6.7) | Height when using DIN rail |

(Rail mounting hole pitch: 12.5)

Manual override

(Station n) ..

(Press down and turn for a locking type.)

| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 148 | 173 | 198 | 223 | 248 | 260.5 | 285.5 | 310.5 | 335.5 |
| L2 | 137.5 | 162.5 | 187.5 | 212.5 | 237.5 | 250 | 275 | 300 | 325 |
| L3 | 117 | 141 | 165 | 189 | 213 | 237 | 261 | 285 | 309 |
| L4 | 15.5 | 16 | 16.5 | 17 | 17.5 | 12 | 12.5 | 13 | 13.5 |
| L5 | 103 | 127 | 151 | 175 | 199 | 223 | 247 | 271 | 295 |

L type plug connector (L)

[1 (P), 3/5 (R) port] 2n1-One-touch fitting

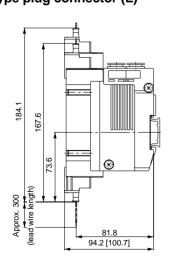
G: Approx. 300 H: Approx. 600 (lead wire length)

164.3 <165.7> 79.7

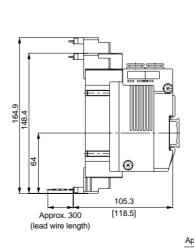
DIN rail

U side

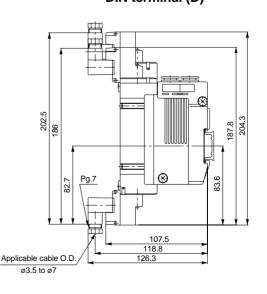
[4 (A), 2 (B) port] Applicable tube O.D.: Ø8



M type plug connector (M)



DIN terminal (D)



SMC

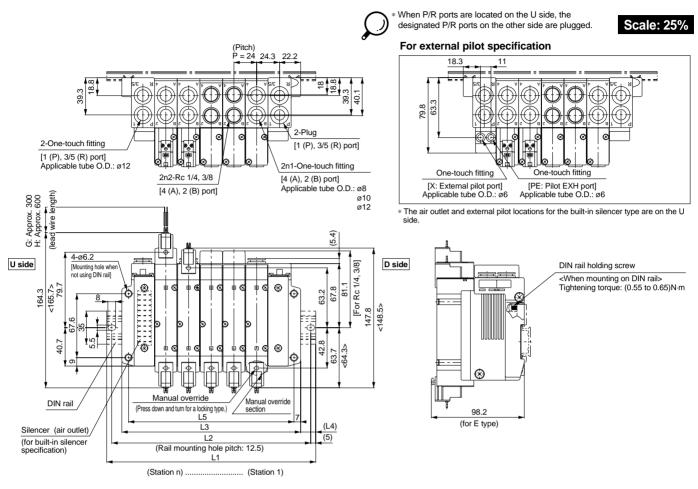
operated Order made

Precautions



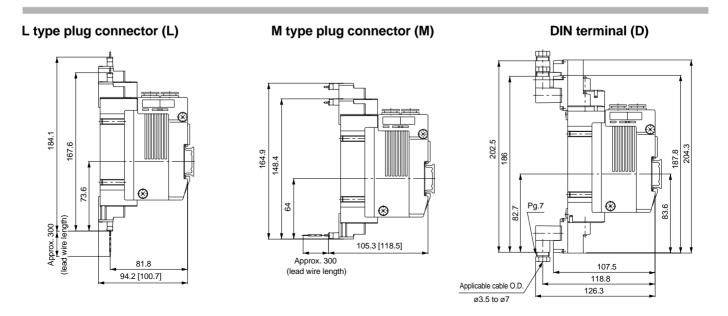






| (Indicator light/Surge voltage suppressor) | |
|--|--------|
| 81.8 66.8 20 20 20 20 20 20 20 20 20 20 20 20 20 | N rail |

| Stations r | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 148 | 173 | 198 | 223 | 248 | 260.5 | 285.5 | 310.5 | 335.5 |
| L2 | 137.5 | 162.5 | 187.5 | 212.5 | 237.5 | 250 | 275 | 300 | 325 |
| L3 | 117 | 141 | 165 | 189 | 213 | 237 | 261 | 285 | 309 |
| L4 | 15.5 | 16 | 16.5 | 17 | 17.5 | 12 | 12.5 | 13 | 13.5 |
| L5 | 103 | 127 | 151 | 175 | 199 | 223 | 247 | 271 | 295 |



Single valve

Type Type Single Type 20P 23P valve 41

SY9000: SS5Y9-43- Stations B -02, 03, C8, C10, C12-(D)

(Pitch) P = 24

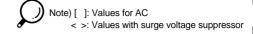
2n2-Rc 1/4, 3/8

[4 (A), 2 (B) port]

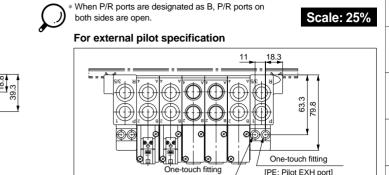
8

Manual override

section



Applicable tube O.D.: ø6



[X: External pilot port] Applicable tube O.D.: ø6

* The air outlet and external pilot locations for the built-in silencer type are on the B side (both sides) .

DIN rail holding screw <When mounting on DIN rail> Tightening torque: (0.55 to 0.65)N·m 垂垂 ⊗ (for built-in silencer specification) 98.2 (for E type)

| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 148 | 173 | 198 | 223 | 248 | 260.5 | 285.5 | 310.5 | 335.5 |
| L2 | 137.5 | 162.5 | 187.5 | 212.5 | 237.5 | 250 | 275 | 300 | 325 |
| L3 | 117 | 141 | 165 | 189 | 213 | 237 | 261 | 285 | 309 |
| L4 | 15.5 | 16 | 16.5 | 17 | 17.5 | 12 | 12.5 | 13 | 13.5 |
| L5 | 103 | 127 | 151 | 175 | 199 | 223 | 247 | 271 | 295 |

| Stations n | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 360.5 | 385.5 | 410.5 | 435.5 | 460.5 | 485.5 | 510.5 | 535.5 | 560.5 | 573 |
| L2 | 350 | 375 | 400 | 425 | 450 | 475 | 500 | 525 | 550 | 562.5 |
| L3 | 333 | 357 | 381 | 405 | 429 | 453 | 477 | 501 | 525 | 549 |
| L4 | 14 | 14.5 | 15 | 15.5 | 16 | 16.5 | 17 | 17.5 | 18 | 12 |
| L5 | 319 | 343 | 367 | 391 | 415 | 439 | 463 | 487 | 511 | 535 |

Height when using DIN rail 94.2 [100.7] 8.99 (6.7)

Manual override

(Press down and turn for a locking type.)

(Rail mounting hole pitch: 12.5)

L type plug connector (L)

(Indicator light/Surge voltage suppressor)

[1(P), 3/5 (R) port] Applicable tube O.D.: ø12 2n1-One-touch fitting

300

Approx. 3 Approx. 6

U side

(lead üΞ

<165.7> 79.7

40.7

DIN rail

164.3

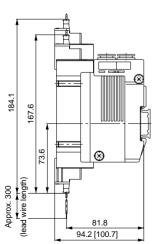
[4 (A), 2 (B) port] Applicable tube O.D.: ø8

4-ø6.2

ø10 ø12

#

⊗



M type plug connector (M)

(5.4)

67.8

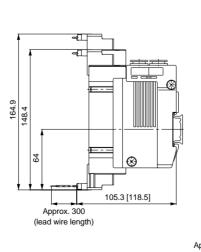
(L4) (5)

63.2

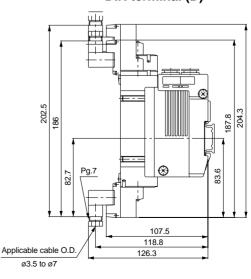
81.1 Rc 1/4,

Silencer (air outlet)

D side



DIN terminal (D)



operated Order made

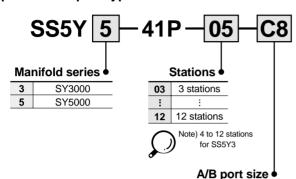
74



SY3000/5000/7000 Base Mounted Type Manifold Bar Stock/Flat Ribbon Cable

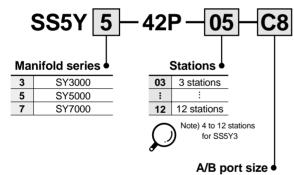
How to Order Manifolds





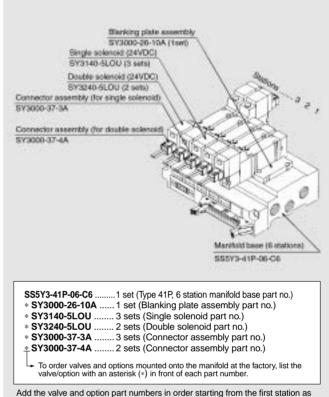
| Symbol | Port size | Applicable series |
|--------|----------------------|-------------------|
| M5 | M5 x 0.8 | |
| C4 | ø4 One-touch fitting | SY3000 |
| C6 | ø6 One-touch fitting | |
| 01 | Rc 1/8 | |
| C6 | ø6 One-touch fitting | SY5000 |
| C8 | ø8 One-touch fitting | |

Type 42P/Common external pilot type



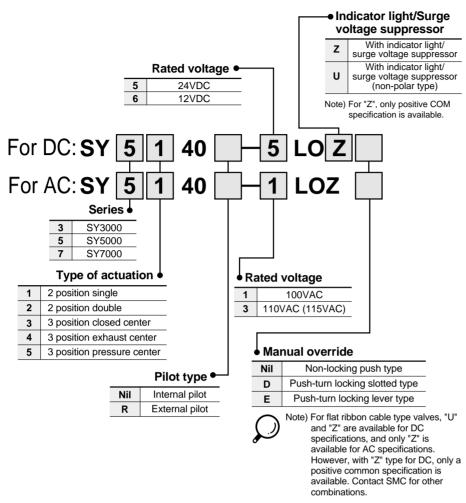
| Symbol | Port size | Applicable series | | |
|--------|-----------------------|-------------------|--|--|
| 01 | Rc 1/8 | | | |
| C4 | ø4 One-touch fitting | SY3000 | | |
| C6 | ø6 One-touch fitting | | | |
| 02 | Rc 1/4 | SY5000 | | |
| C6 | ø6 One-touch fitting | | | |
| C8 | ø8 One-touch fitting | | | |
| 02 | Rc 1/4 | SY7000 | | |
| C10 | ø10 One-touch fitting | 317000 | | |

How to Order Manifold Assemblies (Example)



Add the valve and option part numbers in order starting from the first station as shown above. When entry of part numbers becomes complicated, indicate on a manifold specification sheet. (Manifold Specification Sheet on pages 196 to 198)

How to Order Valves



How to Order Connector Assemblies

For 12, 24VDC

| Specification | SY3000 | SY5000/7000 |
|---|--------------|--------------|
| Single solenoid | SY3000-37-3A | SY5000-37-3A |
| Double solenoid/ 3 position | SY3000-37-4A | SY5000-37-4A |
| Single solenoid with spacer assembly | SY5000-37-3A | SY5000-37-5A |
| Double solenoid/3 position with spacer assembly | SY3000-37-6A | SY5000-37-6A |

For 100VAC

| Specification | SY3000 | SY5000/7000 |
|---|---------------|---------------|
| Single solenoid | SY3000-37-32A | SY5000-37-15A |
| Double solenoid/ 3 position | SY3000-37-33A | SY5000-37-16A |
| Single solenoid with spacer assembly | SY5000-37-15A | SY5000-37-17A |
| Double solenoid/3 position with spacer assembly | SY3000-37-34A | SY5000-37-18A |

For 110VAC (115VAC)

| | , | |
|---|---------------|---------------|
| Specification | SY3000 | SY5000/7000 |
| Single solenoid | SY3000-37-35A | SY5000-37-19A |
| Double solenoid/ 3 position | SY3000-37-36A | SY5000-37-20A |
| Single solenoid with spacer assembly | SY5000-37-19A | SY5000-37-21A |
| Double solenoid/3 position with spacer assembly | SY3000-37-37A | SY5000-37-22A |

SMC



External wiring is bundled for one-touch wiring

Clean appearance

With the flat ribbon cable type, each valve is wired to the printed circuit board of the manifold base to allow the external wiring to be bundled with a 26 pin MIL connector for one-touch wiring.



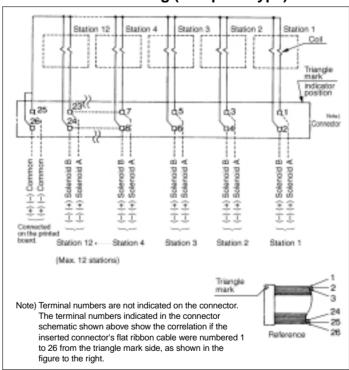
Flat cable manifold specifications

| Mode | el | | SS5Y3-41P | SS5Y3-42P | SS5Y5-41P | SS5Y5-42P | SS5Y7-42P | | | | |
|--|------------------------|---------------------------|-----------------------------|--|--|---|---------------------------------------|--|--|--|--|
| Appli | cable | valve | SY3 | □40 | SY5 | □40 | SY7□40 | | | | |
| Manif | fold ty | ре | Single base type/B mount | | | | | | | | |
| P (SUP)/R (EXH) method | | | Common SUP/EXH | | | | | | | | |
| Valve | statio | ons | 4 to 12 sta | tions Note 1) | 31 | o 12 stations Note | e 1) | | | | |
| A, B p | ort | Location | | | | | | | | | |
| specifi | ication | Direction | Side | | | | | | | | |
| | P, EA, EB port | | Rc | 1/8 | Rc | Rc 1/4 | | | | | |
| Port size | | | | | Rc 1/8 C6 (ø6 One-touch fitting) C8 (ø8 One-touch fitting) | | Rc 1/4 C10 (ø10 One-touch fitting) | | | | |
| | effective Ov factor | area Note 2) | C6: P to A/B 3 A/B to EA | .96 (0.22) /EB 4.14 (0.23) | C8: P to A/B A/B to E/ | C10: P to A/B 16.2 (0.9) A/B to EA/EB 16.2 (0.9) | | | | | |
| | | eight W (g) f stations | W = 39n + 83 | W = 48n + 99 | W = 67n + 118 W = 88n + 151 | | W = 109n + 174 | | | | |
| Applicable flat ribbon cable connector | | | Socke | Flat ribbon cable connector, Socket: 26 pin MIL, With strain relief, MIL-C-83503 conformity | | | | | | | |
| Intern | nal wir | ing | Common | Common positive and negative COM (Only positive COM for "Z" type) | | | | | | | |
| Rated voltage | | | | 12, | 24VDC/100, 110 | VAC | | | | | |



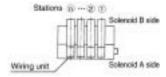
- Note 1) For 10 stations or more (5 stations or more in case of SS5Y7), supply pressure to P port on both sides and exhaust from EA and EB ports on both sides.
- Note 2) Value when manifold base (5 stations) is mounted, with single action 2 position type.
- Note 3) The withstand voltage specification for the wiring unit is equivalent to JIS C0704, class 1.
- Note 4) Refer to page 89 for manifold options.

Manifold internal wiring (non-polar type)





- Note 1) For 10 stations or more, wire both of the common poles.
- Note 2) For single solenoids, connect to the solenoid A side.
- Note 3) The maximum number of stations is 12. Contact SMC if more than 12 stations are required.



∆ Caution

Non-polar type (U) valves with DC electrical connection can be used for both negative and positive COM. However, always use the positive COM with the "Z" type, since valves will not be actuated when the negative COM is used.

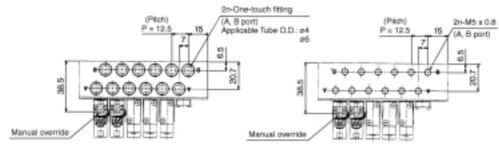


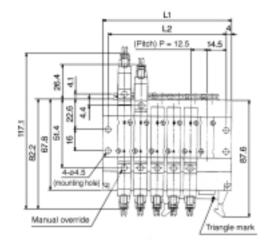
Single valve

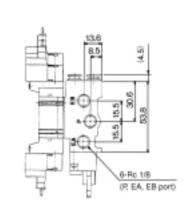




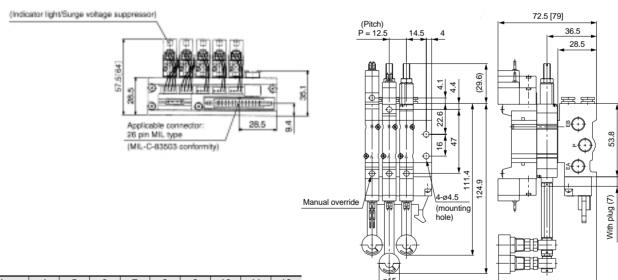
Scale: 35%







With interface regulator (with gauge)



| Stations | า 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|----------|------|----|------|-----|-------|-----|-------|-----|-------|
| L1 | 72.5 | 85 | 97.5 | 110 | 122.5 | 135 | 147.5 | 160 | 172.5 |
| L2 | 64.5 | 77 | 89.5 | 102 | 114.5 | 127 | 139.5 | 152 | 164.5 |

CAD

Type 41P manifold ... SS5Y32, #6



operated Order made

78

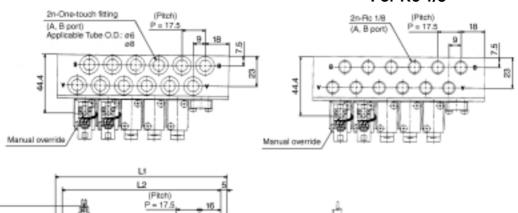


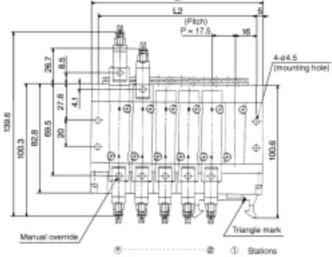
SY5000: SS5Y5-41P- Stations -01, C6, C8

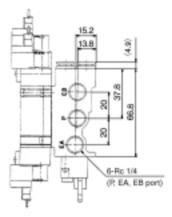


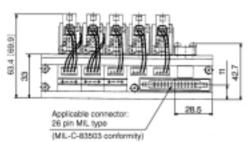
For Rc 1/8



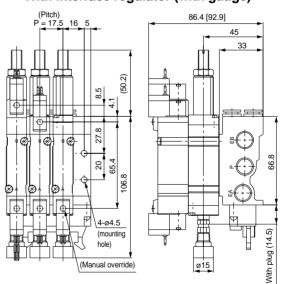








With interface regulator (with gauge)



| Stations n | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|------------|----|------|-----|-------|-----|-------|-----|-------|-----|-------|
| L1 | 77 | 94.5 | 112 | 129.5 | 147 | 164.5 | 182 | 199.5 | 217 | 234.5 |
| L2 | 67 | 84.5 | 102 | 119.5 | 137 | 154.5 | 172 | 189.5 | 207 | 224.5 |



79

Type 41P manifold ... SS5Y52, #6

SMC

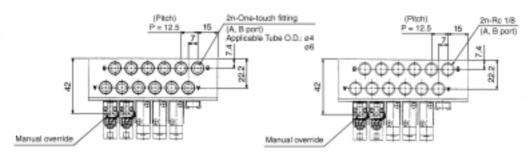
SY3000: SS5Y3-42P- Stations -01, C4, C6

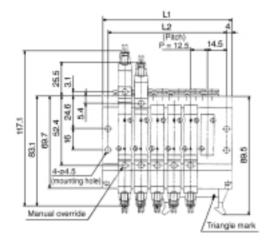


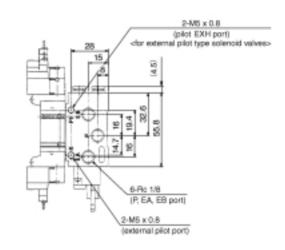


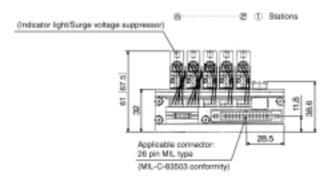
For Rc 1/8

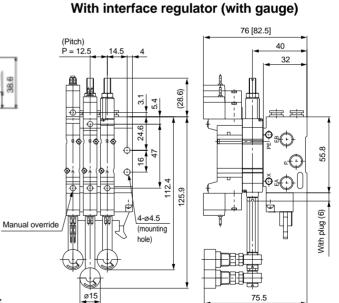
Scale: 35%











| Stations n | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|------------|------|----|------|-----|-------|-----|-------|-----|-------|
| L1 | 72.5 | 85 | 97.5 | 110 | 122.5 | 135 | 147.5 | 160 | 172.5 |
| L2 | 64.5 | 77 | 89.5 | 102 | 114.5 | 127 | 139.5 | 152 | 164.5 |

CAD

Type 42P manifold ... SS5Y32, #7



Single valve

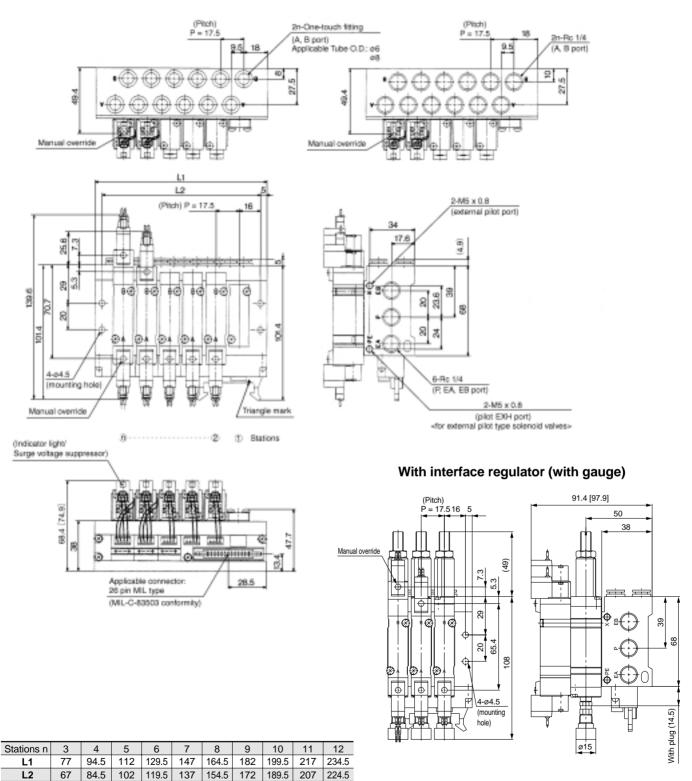


SY5000: SS5Y5-42P- Stations -02, C6, C8



For Rc 1/4

Scale: 35%





Type 42P manifold ... SS5Y52, #7



Single valve

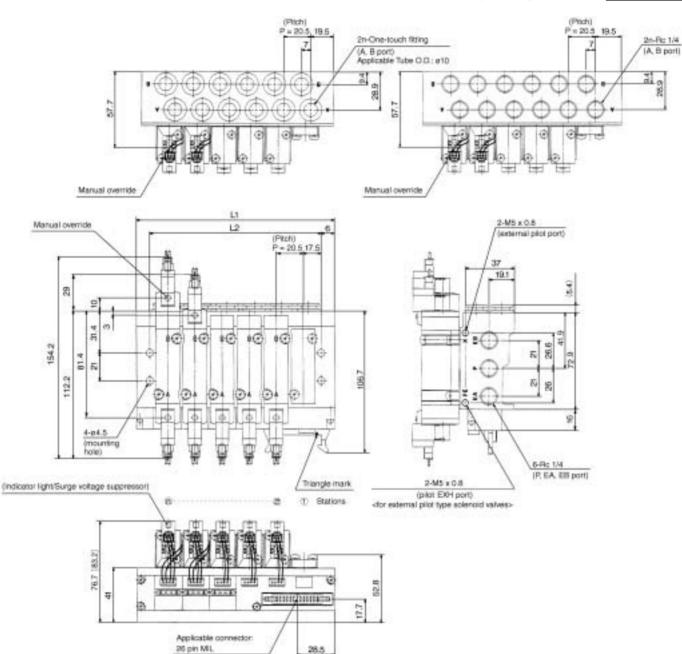
SY7000: SS5Y7-42P- Stations -02, C10







Scale: 35%



| Stations n | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|------------|----|-------|-----|-------|-----|-------|-----|-------|-----|-------|
| L1 | 88 | 108.5 | 129 | 149.5 | 170 | 190.5 | 211 | 231.5 | 252 | 272.5 |
| L2 | 76 | 96.5 | 117 | 137.5 | 158 | 178.5 | 199 | 219.5 | 240 | 260.5 |

(MIL-C-83509 conformity)

CAD

Type 42P manifold ... SS5Y72, #4

operated

Order made





SY9000 **Base Mounted Type Manifold** Stacking Type/Flat Ribbon Cable

How to Order Manifolds

External pilot

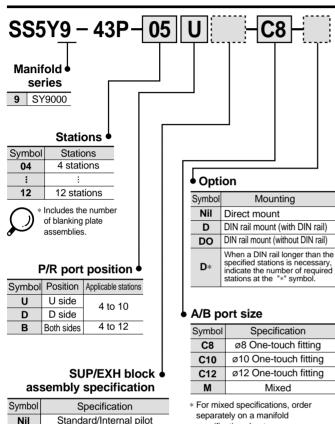
Internal pilot with built-in silencer

External pilot with built-in silencer

R

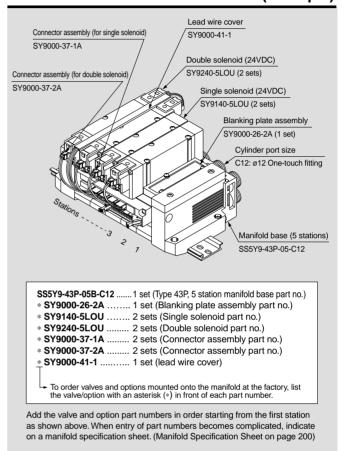
s

RS

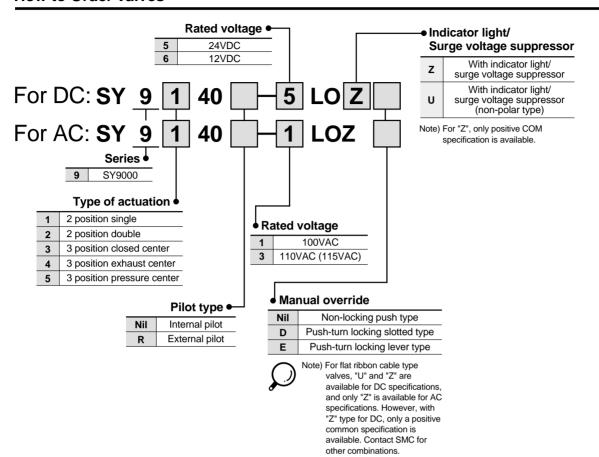


separately on a manifold specification sheet.

How to Order Manifold Assemblies (Example)







How to Order Connector Assemblies

For 12, 24VDC

| Specification | SY9000 |
|---|--------------|
| Single solenoid | SY9000-37-1A |
| Double solenoid/ 3 position | SY9000-37-2A |
| Single solenoid with spacer assembly | SY9000-37-3A |
| Double solenoid/3 position with spacer assembly | SY9000-37-4A |

For 100VAC

| Specification | SY9000 |
|---|--------------|
| Single solenoid | SY9000-37-1B |
| Double solenoid/ 3 position | SY9000-37-2B |
| Single solenoid with spacer assembly | SY9000-37-3B |
| Double solenoid/3 position with spacer assembly | SY9000-37-4B |

For 110VAC (115VAC)

| | •, |
|---|--------------|
| Specification | SY9000 |
| Single solenoid | SY9000-37-1C |
| Double solenoid/ 3 position | SY9000-37-2C |
| Single solenoid with spacer assembly | SY9000-37-3C |
| Double solenoid/3 position with spacer assembly | SY9000-37-4C |





• External wiring is bundled for one-touch wiring

Clean appearance

With the flat ribbon cable type, each valve is wired to the printed circuit board of the manifold base to allow the external wiring to be bundled with a 26 pin MIL connector for one-touch wiring.



Flat cable manifold specifications

| Model | | SS5Y9-43P | | | | |
|--|----------------|---|--|--|--|--|
| Applicable valve | | SY9□40 | | | | |
| Manifold type | е | Stacking type | | | | |
| P (SUP)/R (E | EXH) method | Common SUP/EXH | | | | |
| Valve station | ns | 4 to 12 stations Note 1) | | | | |
| A, B port | Location | Base | | | | |
| specifications | Direction | Side | | | | |
| | P, EA, EB port | C12 (ø12 One-touch fitting) | | | | |
| Port size | A, B port | Rc 1/4 Rc 3/8 C8 (ø8 One-touch fitting) C10 (ø10 One-touch fitting) C12 (ø12 One-touch fitting) | | | | |
| Valve effective area Note 2) mm² (Cv factor) | | C12: P to A/B 30.46 (1.69) A/B to EA/EB 32.98 (1.83) | | | | |
| Manifold base weight W (g) n: Number of stations | | W = 114n + 343 | | | | |
| Applicable flat ribbon cable connector | | Flat ribbon cable connector, Socket: 26 pin MIL, With strain relief, MIL-C-83503 conformity | | | | |
| Internal wiring | | Common positive and negative COM (Only positive COM for "Z" type) | | | | |
| Rated voltage | | 12, 24VDC/100, 110VAC | | | | |



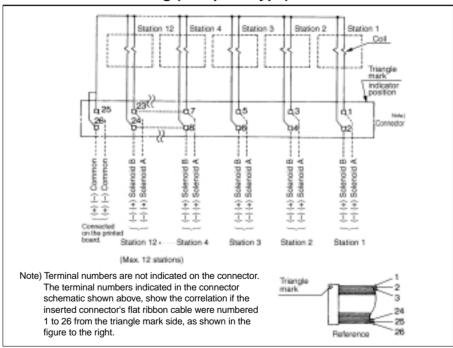
Note 1) For 10 stations or more, supply pressure to P port on both sides and exhaust from EA and EB ports on both sides.

Note 2) Value when manifold base (5 stations) is mounted, with single action 2 position type.

Note 3) The withstand voltage specification for the wiring unit is equivalent to JIS C0704, class 1.

Note 4) Refer to page 89 for manifold options.

Manifold internal wiring (non-polar type)

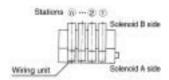




Note 1) For 10 stations or more, wire both of the common poles.

Note 2) For single solenoids, connect to the solenoid A side.

Note 3) The maximum number of stations is 12. Contact SMC if more than 12 stations are required.





Non-polar type (U) valves with DC electrical connection can be used for both negative and positive COM. However, always use the positive COM with the "Z" type, since valves will not be actuated when the negative COM is used.



40.1

[1 (P), 3/5 (R) port]

2n1-One-touch fitting

2-One-touch fitting

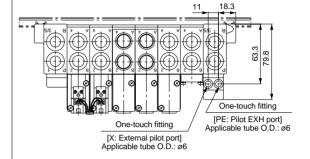
Note) []: Values for AC



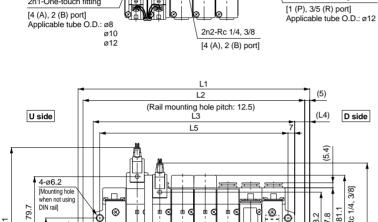
When P/R ports are located on the D side. the designated P/R ports on the other side are plugged.

Scale: 25%

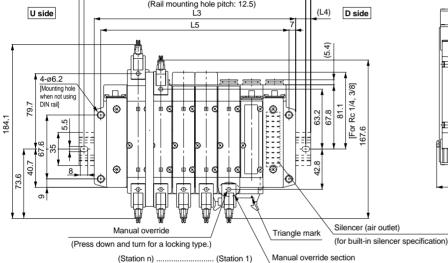
For external pilot specification

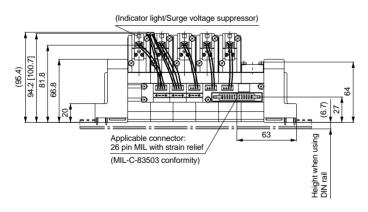


* The air outlet and external pilot locations for the built-in silencer type are on the D



DIN rail holding screw <When mounting on DIN rail> Tightening torque: (0.55 to 0.65)N·m ⊗ (for E type)





| Stations n | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 198 | 223 | 248 | 260.5 | 285.5 | 310.5 | 335.5 |
| L2 | 187.5 | 212.5 | 237.5 | 250 | 275 | 300 | 325 |
| L3 | 165 | 189 | 213 | 237 | 261 | 285 | 309 |
| L4 | 16.5 | 17 | 17.5 | 12 | 12.5 | 13 | 13.5 |
| L5 | 151 | 175 | 199 | 223 | 247 | 271 | 295 |

operated

Order made

86



Precautions

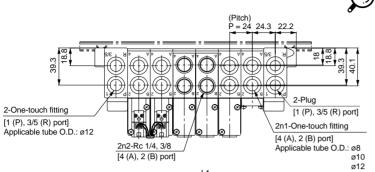
Single valve

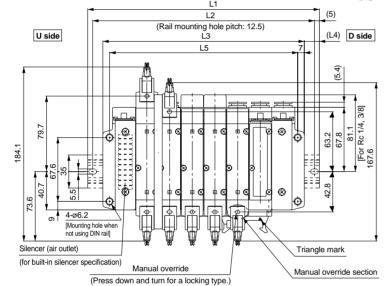
Type Type Single Type Type Type Type Type Type 20P 23P valve 41 42 43 41P 42P

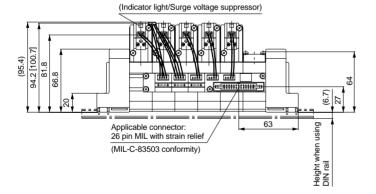


SY9000: SS5Y9-43P-Stations U -02, 03, C8, C10, C12-(D)









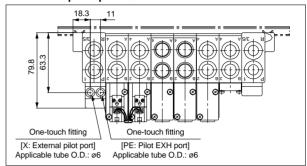
(Station n)

| Stations n | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 198 | 223 | 248 | 260.5 | 285.5 | 310.5 | 335.5 |
| L2 | 187.5 | 212.5 | 237.5 | 250 | 275 | 300 | 325 |
| L3 | 165 | 189 | 213 | 237 | 261 | 285 | 309 |
| L4 | 16.5 | 17 | 17.5 | 12 | 12.5 | 13 | 13.5 |
| L5 | 151 | 175 | 199 | 223 | 247 | 271 | 295 |

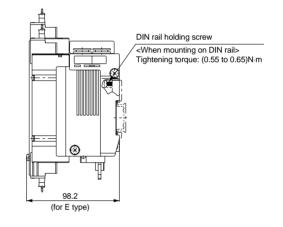
* When P/R ports are located on the U side, the designated P/R ports on the other side are plugged.

Scale: 25%

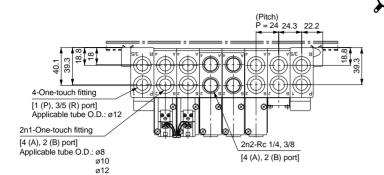
For external pilot specification

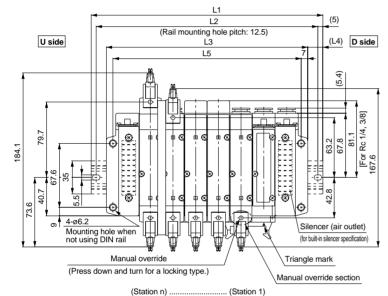


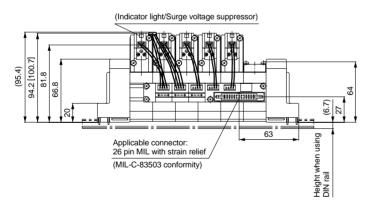
* The air outlet and external pilot locations for the built-in silencer type are on the U side.



Scale: 25%



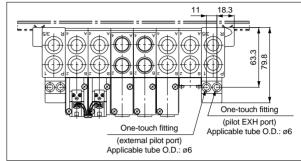




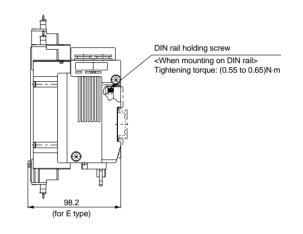
| Staions n | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 198 | 223 | 248 | 260.5 | 285.5 | 310.5 | 335.5 | 360.5 | 385.5 |
| L2 | 187.5 | 212.5 | 237.5 | 250 | 275 | 300 | 325 | 350 | 375 |
| L3 | 165 | 189 | 213 | 237 | 261 | 285 | 309 | 333 | 357 |
| L4 | 16.5 | 17 | 17.5 | 12 | 12.5 | 13 | 13.5 | 14 | 14.5 |
| L5 | 151 | 175 | 199 | 223 | 247 | 271 | 295 | 319 | 343 |

When P/R ports are designated as B, P/R ports on both sides are open.

For external pilot specification



* The air outlet and external pilot locations for the built-in silencer type are on the B side (both sides) .



Type Type Single Type Type Type Type Type Type 20P 23P valve 41 42 43 41P 42P

operated

Order made

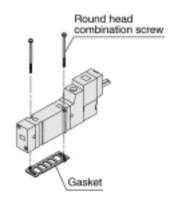


■ For types 41, 42, 43 Blanking plate assembly



| Series | Assembly part no. | |
|--------|-------------------|--|
| SY3000 | SY3000-26-9A | |
| SY5000 | SY5000-26-18A | |
| SY7000 | SY7000-26-20A | |
| SY9000 | SY9000-26-2A | |

■ Bolt & gasket part numbers



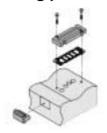
| Series | Round head combination screw | Gasket |
|--------|---------------------------------|--------------|
| SY3000 | SY3000-23-4 (M2 x 21) | SY3000-11-25 |
| SY5000 | M3 x 26 (Flat nickel plated) | SY5000-11-13 |
| SY7000 | M4 x 31 (Flat nickel plated) | SY7000-11-7 |
| SY9000 | SY9000-18-2 (M3 x 42) | SY9000-11-2 |

∆ Caution

Mounting screw tightening torques

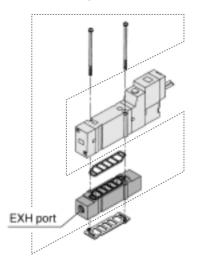
M2: 0.15N·m M3: 0.6N·m M4: 1.4N·m

■ For types 41P, 42P, 43P Blanking plate assembly



| Series | Assembly part no. | |
|--------|-------------------|--|
| SY3000 | SY3000-26-10A | |
| SY5000 | SY5000-26-19A | |
| SY7000 | SY7000-26-21A | |
| SY9000 | SY9000-26-4A | |

■ Individual EXH spacer assembly

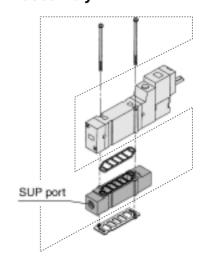


| Series | Assembly part no. | Port size |
|--------|-------------------|-----------|
| SY3000 | SY3000-39-2A | M5 x 0.8 |
| SY5000 | SY5000-39-2A | Rc 1/8 |
| SY7000 | SY7000-39-2A | Rc 1/4 |
| SY9000 | SY9000-39-2A | Rc 1/4 |
| | | |



Note) In case of types 41P, 42P, and 43P, to protect from drainage, arrange the piping on the EA port (wiring unit side) so that the wiring unit will not be exposed to the direct exhaust from the valve.

■ Individual SUP spacer assembly



| Series | Assembly part no. | Port size | |
|--------|-------------------|-----------|--|
| SY3000 | SY3000-38-2A | M5 x 0.8 | |
| SY5000 | SY5000-38-2A | Rc 1/8 | |
| SY7000 | SY7000-38-2A | Rc 1/4 | |
| SY9000 | SY9000-38-2A | Rc 1/4 | |

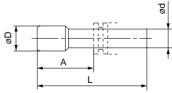


Note 1) The SUP port can be on the lead wire side or end plate side for SY3000/5000/7000. (The SUP port direction is as shown above when shipped already assembled.)

Note 2) For SY9000, the SUP port is only available on the end plate side.

■ Plug (white)

Insert into unused cylinder ports and SUP/EXH ports.
The minimum order quantity is 10 pieces. Order in multiples of 10.



Dimensions

| Applicable fitting size ød | Model | А | L | D |
|----------------------------|---------|------|------|----|
| 4 | KQ2P-04 | 16 | 32 | 6 |
| 6 | KQ2P-06 | 18 | 35 | 8 |
| 8 | KQ2P-08 | 20.5 | 39 | 10 |
| 10 | KQ2P-10 | 22 | 43 | 12 |
| 12 | KQ2P-12 | 24 | 45.5 | 14 |



■ SUP block disc (SY9000)

By installing a SUP block disc in the pressure supply passage of the manifold base, two or more different pressures, high or low, can be supplied to one manifold.



| Series | Part no. |
|--------|--------------|
| SY9000 | SY9000-57-1A |

■ EXH block disc (SY9000)

By installing an EXH block disc in the exhaust passage of the manifold base, the passage can be divided so that the exhaust from one valve will not affect another valve. (Two block discs are required to block both EXH ports.)



| Series | Part no. |
|--------|--------------|
| SY9000 | SY9000-57-1A |

■ Labels for block disc (SY9000)

Labels are applied to blocks with SUP and EXH block discs for external confirmation of blocked passages. (3 labels per package)

VZ3000-123-1A

SUP block disc label

EXH block disc label

SUP/EXH block disc label





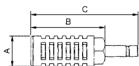




Note) When block discs are ordered with manifolds using a manifold specification sheet, block disc labels are already applied if the block discs are installed at the time of shipment.

■ Silencer with One-touch fitting (SY9000)

Can be attached with one touch to the R (EXH) port of the manifold.



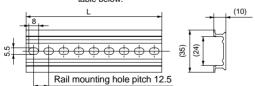
| Series | Model | Effective area | Α | В | С |
|------------------|------------|-------------------|-----|----|----|
| For SY9000 (ø12) | AN300-KM12 | 41mm ² | ø25 | 70 | 98 |

■ SY9000 DIN rail dimensions and weights

VZ1000-11-4-

Refer to the table below for dimension L.

* Specify a number inside ☐ from the DIN rail dimension table below.



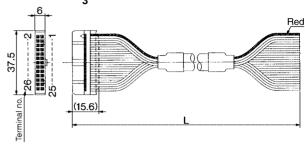
| No. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|-------------|------|-------|------|-------|-------|-------|------|-------|-------|-------|
| Dimension L | 98 | 110.5 | 123 | 135.5 | 148 | 160.5 | 173 | 185.5 | 198 | 210.5 |
| Weight (g) | 24.8 | 28 | 31.1 | 34.3 | 37.4 | 40.6 | 43.8 | 46.9 | 50.1 | 53.3 |
| No. | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| Dimension L | 223 | 235.5 | 248 | 260.5 | 273 | 285.5 | 298 | 310.5 | 323 | 335.5 |
| Weight (g) | 56.4 | 59.6 | 62.7 | 65.9 | 69.1 | 72.2 | 75.4 | 78.6 | 81.7 | 84.9 |
| No. | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| Dimension L | 348 | 360.5 | 373 | 385.5 | 398 | 410.5 | 423 | 435.5 | 448 | 460.5 |
| Weight (g) | 88 | 91.2 | 94.4 | 97.5 | 100.7 | 103.9 | 107 | 110.2 | 113.3 | 116.5 |



Note) Refer to page 236 regarding DIN rails. Refer to dimension L1 on pages 86 through 88 for lengths that correspond to the number of manifold stations.

■ Cable assembly

AXT100-FC26-2



Flat ribbon cable connector assembly

| Cable length (L) | Assembly part no. | Note |
|------------------|-------------------|-----------------------|
| 1.5m | AXT100-FC26-1 | |
| 3m | AXT100-FC26-2 | 26 core cable x 28AWG |
| 5m | AXT100-FC26-3 | |



* For other commercial connectors, use a 26 pin type with strain relief conforming to MIL-C-83503.

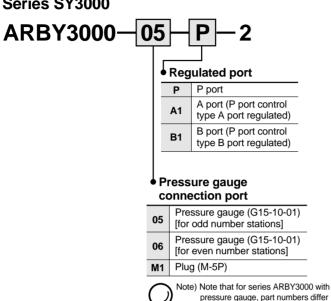
Connector manufacturer examples

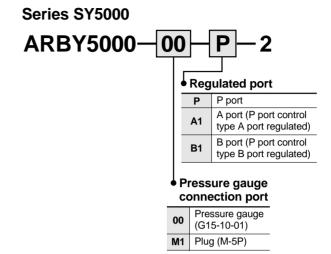
- Hirose Electric Company
- Japan Aviation Electronics Industry, Ltd.
- Sumitomo/3-M Limited
- J.S.T. Mfg. Co., Ltd.
- Fujitsu, Ltd.



■ How to order interface regulators (SY3000/5000 only)

Series SY3000





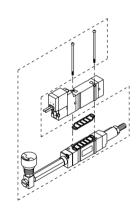
ARBY3000-05-□-2 (for mounting on odd number stations) ARBY3000-06-□-2 (for mounting on even number stations)

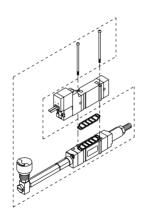
for odd number and even number stations to prevent interference between the pressure gauges when mounted on the manifold.

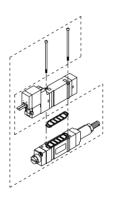
ARBY3000-M1-□-2

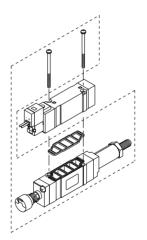
ARBY5000-00-□-2

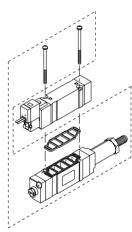
ARBY5000-M1-□-2











Accessories

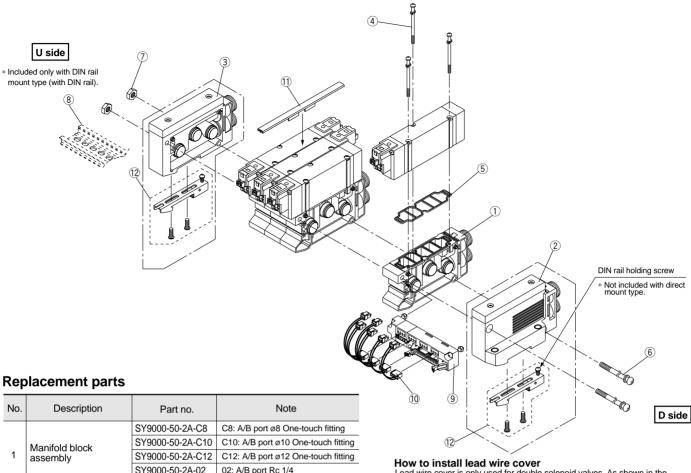
| Accessories | | | | | |
|-------------|-----------------------------------|-------------|--|--|--|
| Series | Round head combination screw | Gasket | | | |
| ARBY3000 | SY3000-23-10 (M2 x 36) | SX3000-57-4 | | | |
| ARBY5000 | M3 x 48.5 (Flat nickel plated) | SX5000-57-5 | | | |

⚠ Caution

Mounting screw tightening torques

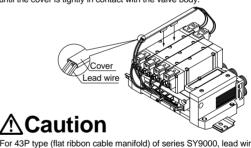
M2: 0.15N·m M3: 0.6N·m

Exploded View of Base Mounted Type Manifold



How to install lead wire cover

Lead wire cover is only used for double solenoid valves. As shown in the expanded view below, insert lead wires inside the lead wire cover and push until the cover is tightly in contact with the valve body



For 43P type (flat ribbon cable manifold) of series SY9000, lead wire cover to bundle lead wire of each solenoid is available.

When double solenoid valves are added, order lead wire covers separately.

SUP/EXH Block Assembly 2 Part Nos. (D Side Mount Type)

SY9000-50-2A-03

SY9000-18-2

SY9000-11-2

SY9000-23-

SY9000-25-1

VZ1000-11-4-□

SY9000-36-□A

SY9000-37-□□

SY9000-41-1

Round head combination screw

Wiring unit assembly

Connector assembly

Clamp bracket sub-assembly SY9000-30-1A

Lead wire cover

5

6

7

8

9

10

11

Gasket

DIN rail

Tension bolt

Hexagon nut

03: A/B port Rc 3/8

Refer to page 90. Specify the number of stations

Refer to page 84

M3 x 42 (Flat nickel plated)

Specify the number of stations

(4 to 12) inside □ in the part number.

Included with the DIN rail mount type.

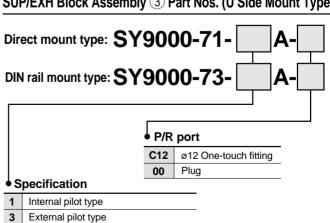
inside \square in the part number.



| | P/R | port |
|---------------|-----|-----------------------|
| | C12 | ø12 One-touch fitting |
| | 00 | Plug |
| Specification | | |

| | • |
|---|--|
| 1 | Internal pilot type |
| 3 | External pilot type |
| 4 | Internal pilot with built-in silencer type |
| 5 | External pilot with built-in silencer type |

SUP/EXH Block Assembly (3) Part Nos. (U Side Mount Type)



Internal pilot with built-in silencer type External pilot with built-in silencer type

operated

Manifold Base Expansion (for SY9000 Only) Stations can be added in a desired location.

For type 43 manifold base expansion, tension bolts are required as well as a manifold block assembly. Tension bolts vary in length depending on the number of stations; therefore, order the appropriate tension bolts for the

expanded (or reduced) manifold base. (Changes in the number of stations for type 43P manifolds require wiring units and lead wire assemblies for any additional stations.)

1 Loosen the two tension bolts 6 that connect the manifold base and remove them.

(In case of a DIN rail type, also loosen the DIN rail holding screw on either the U side or D side.)

Separate the blocks at the location where a new station is to be added.

Mount the manifold block assembly to be added.

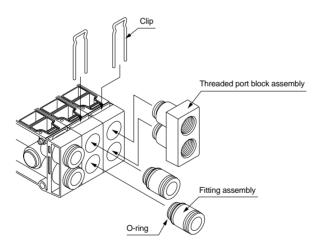
4 Hold the blocks so that there is no space between them, insert the appropriate tension bolts into the expanded manifold base and tighten them.

(With the DIN rail type, be sure to tighten the tension bolts first, and then tighten the DIN rail holding screws. Tightening torque: 1.4N·m)

- Be sure to turn off the power supply and air supply before disassembling. Furthermore, confirm that the air is completely exhausted before beginning disassembly, since residual air may be present inside the actuator, piping, and manifold.
- 2. When disassembly and assembly are performed, insufficient tightening of the tension bolts will cause air leakage.
- A type 43 manifold can be changed into a type 43P manifold by adding a wiring unit assembly.

Replacement of A/B Port Fitting Assembly

By replacing manifold block fitting assemblies or the threaded port block assembly of a type 43(P) manifold, the port size of the A and B ports can be changed. To replace these parts, remove the clip with a flat head screw driver after the valve has been removed. Insert the fitting assemblies or threaded port block assembly, and then reinsert the clip so that it does not protrude from the manifold block.



Fitting assembly part nos.

| Connection port size | Part no. |
|-------------------------------------|-----------------|
| ø8 One-touch fitting assembly | VVQ4000-50B-C8 |
| ø10 One-touch fitting assembly | VVQ4000-50B-C10 |
| ø12 One-touch fitting assembly | VVQ4000-50B-C12 |
| Rc 1/4 Threaded port block assembly | SY9000-58A-02 |
| Rc 3/8 Threaded port block assembly | SY9000-58A-03 |
| Plug assembly | SY9000-62-1A |

Note 1) Do not scratch or put foreign matter on the O-ring, as this will cause air leakage.

Note 2) One-touch fittings for P/R ports can be replaced also. However, if a fitting smaller than the standard size (ø12) is used, air supply and exhaust may be insufficient when there is frequent simultaneous operation of solenoid valves. Also, the fittings used are the same as those used for the A/B ports, however, threaded port block assemblies cannot be used.



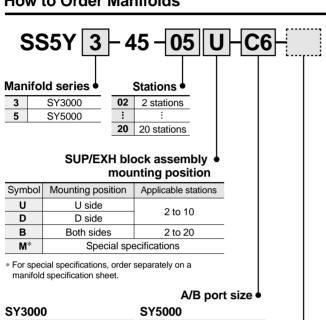




SY3000/5000 Base Mounted Type Manifold Stacking Type/DIN Rail Mount Individual Wiring



How to Order Manifolds

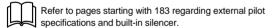


| Symbol | Port size | Symbol | Port size |
|-------------------------|----------------------|--------|----------------------|
| C4 Ø4 One-touch fitting | | C4 | ø4 One-touch fitting |
| C6 | ø6 One-touch fitting | C6 | ø6 One-touch fitting |
| M* Mixed | | C8 | ø8 One-touch fitting |
| | | M* | Mixed |

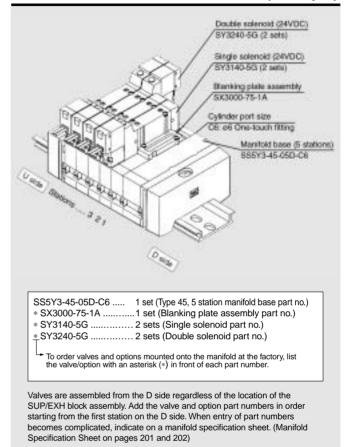
For mixed specifications, order separately on a manifold specification sheet.

Option •

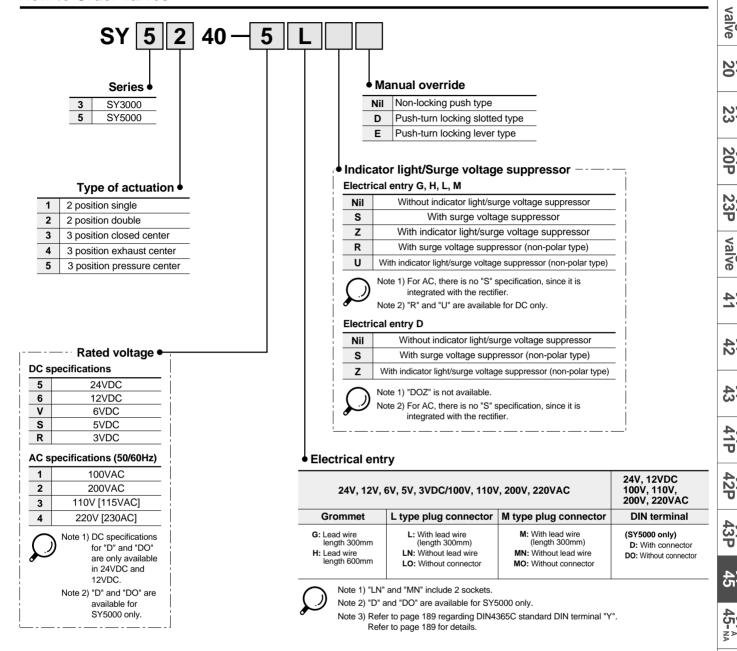
When a DIN rail longer than the specified stations is necessary, indicate the number of required stations. (Max. 20 stations)

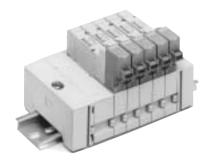


How to Order Manifold Assemblies (Example)



How to Order Valves





Manifold specifications

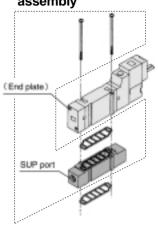
| Model | | SS5Y3-45 | SS5Y5-45 | | | |
|--|-----------|---|---|--|--|--|
| Applicable valve | | SY3□40 | SY5 □ 40 | | | |
| Manifold type | | Stacking type/DIN rail | | | | |
| P (SUP)/R (EXH |) method | Common SUP/EXH | | | | |
| Valve stations | | 2 to 20 stations Note 1) | | | | |
| A, B port | Location | Base | | | | |
| specifications | Direction | Side | | | | |
| | P, R port | C8 (ø8 One-touch fitting) | C10 (ø10 One-touch fitting) | | | |
| Port size A, B port | | C4 (ø4 One-touch fitting) C6 (ø6 One-touch fitting) | C4 (ø4 One-touch fitting) C6 (ø6 One-touch fitting) C8 (ø8 One-touch fitting) | | | |
| Valve effective area Note 2) mm² (Cv factor) | | C6: P to A/B 4.68 (0.26) A/B to R 4.68 (0.26) | C8: P to A/B 12.6 (0.7) A/B to R 12.6 (0.7) | | | |
| Manifold base weight W (g) n: Number of stations | | For 2 to 10 stations: W = 22n + 118 For 11 to 20 stations: W = 22n + 140 | For 2 to 10 stations: W = 47n + 156 For 11 to 20 stations: W = 47n + 190 | | | |



Note 1) For 11 stations or more, supply pressure to P port on both sides and exhaust from R port on both sides.

Note 2) Value when manifold base (5 stations) is mounted, with single action 2 position type.

■ Individual SUP spacer assembly



| Series | Assembly part no. | Port size | | |
|--------|-------------------|-----------|--|--|
| SY3000 | SY3000-38-2A | M5 x 0.8 | | |
| SY5000 | SY5000-38-2A | Rc 1/8 | | |



Note) The SUP port can be on the lead wire side or end plate side. (It is as shown above when shipped already assembled.)

■ Blanking plate assembly



| Series | Assembly part no. | |
|--------|-------------------|--|
| SY3000 | SX3000-75-1A | |
| SY5000 | SX5000-76-1A | |

■ DIN rail dimensions

VZ1000-11-1-

Refer to the table below for dimension L.

■ Individual EXH spacer

Series Assembly part no. Port size SY3000 SY3000-39-2A M5 x 0.8

SY5000 SY5000-39-2A Rc 1/8

sembled.)

⊈\Caution Mounting screw tightening torques

M2: 0.15N·m

M3: 0.6N·m M4: 1.4N·m

Note) The EXH port can be on the lead wire side

or end plate side. (It is

as shown above when

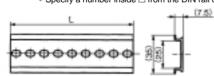
shipped already as-

assembly

(End plate)

EXH port

* Specify a number inside □ from the DIN rail dimension table



| | | | | | | | | _ | | | |
|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| No. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Dimension L | 98 | 110.5 | 123 | 135.5 | 148 | 160.5 | 173 | 185.5 | 198 | 210.5 | 223 |
| No. | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| Dimension L | 235.5 | 248 | 260.5 | 273 | 285.5 | 298 | 310.5 | 323 | 335.5 | 348 | 360.5 |
| No. | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
| Dimension L | 373 | 385.5 | 398 | 410.5 | 423 | 435.5 | 448 | 460.5 | 473 | 485.5 | 498 |
| No. | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 |
| Dimension L | 510.5 | 523 | 535.5 | 548 | 560.5 | 573 | 585.5 | 598 | 610.5 | 623 | 635.5 |
| No. | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 |
| Dimension L | 648 | 660.5 | 673 | 685.5 | 698 | 710.5 | 723 | 735.5 | 748 | 760.5 | 773 |
| No. | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 |
| Dimension L | 785.5 | 798 | 810.5 | 823 | 835.5 | 848 | 860.5 | 873 | 885.5 | 898 | 910.5 |
| No. | 66 | 67 | 68 | 69 | 70 | 71 | | | | | |
| Dimension L | 923 | 935.5 | 948 | 960.5 | 973 | 985.5 | | | | | |

Note) Refer to dimension L1 on pages starting with 101 for lengths that correspond to the number of manifold stations.

■ SUP block disc

By installing a SUP block disc in the pressure supply passage of the manifold base, two or more different pressures, high or low, can be supplied to one manifold.



| Series | Part no. | |
|--------|--------------|--|
| SY3000 | SX3000-77-1A | |
| SY5000 | SX5000-77-1A | |

■ EXH block disc

By installing an EXH block disc in the exhaust passage of the manifold base, the passage can be divided so that the exhaust from one valve will not affect other valves. (Two block discs are required to block both EXH ports.)



| Series | Part no. | | |
|--------|--------------|--|--|
| SY3000 | SX3000-77-1A | | |
| SY5000 | SX5000-77-1A | | |

■ Labels for block disc

Labels are applied to blocks with SUP and EXH block discs for external confirmation of blocked passages. (3 labels per package)

VZ3000-123-1A

SUP block disc label





EXH block disc label



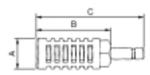
SUP/EXH block disc label



* When block discs are ordered with manifolds using a manifold specification sheet, block disc labels are already applied where block discs are installed at the time of shipment.

■ Silencer with One-touch fitting

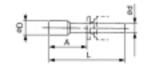
Can be attached with one touch to the R (EXH) port of the manifold.



| Series | Model | Effective area | Α | В | С |
|---------------------|------------|----------------|-----|------|------|
| SY3000 (Ø8) | AN203-KM8 | 14mm² | ø16 | 26 | 51 |
| SY5000 (Ø10) | AN200-KM10 | 26mm² | ø22 | 53.8 | 80.8 |
| 313000 (Ø10) | AN300-KM10 | 30mm² | ø25 | 70 | 97 |

■ Plug (white)

Insert into unused cylinder ports and SUP/EXH ports. The minimum order quantity is 10 pieces. Order in multiples of 10.



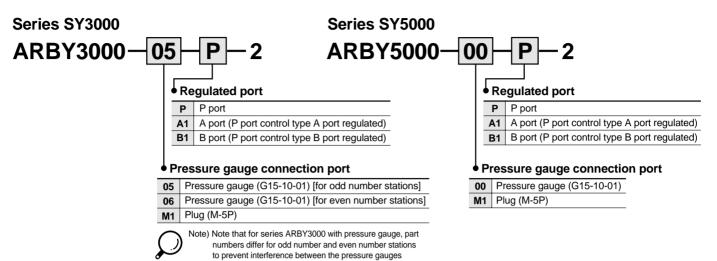
Dimensions

| Applicable fitting size ød | Model | А | L | D |
|----------------------------|---------|------|----|----|
| 4 | KQ2P-04 | 16 | 32 | 6 |
| 6 | KQ2P-06 | 18 | 35 | 8 |
| 8 | KQ2P-08 | 20.5 | 39 | 10 |
| 10 | KQ2P-10 | 22 | 43 | 12 |

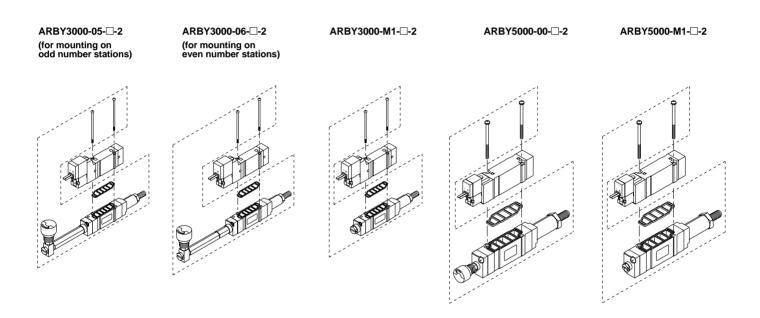




■ How to order interface regulators (SY3000/5000 only)



when mounted on the manifold.



Accessories

| Series Round head combination screw | | Gasket | |
|-------------------------------------|--------------------------------|-------------|--|
| ARBY3000 | SY3000-23-10 (M2 x 36) | SX3000-57-4 | |
| ARBY5000 | M3 x 48.5 (Flat nickel plated) | SX5000-57-5 | |



Mounting screw tightening torques

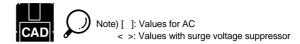
M2: 0.15N·m M3: 0.6N·m



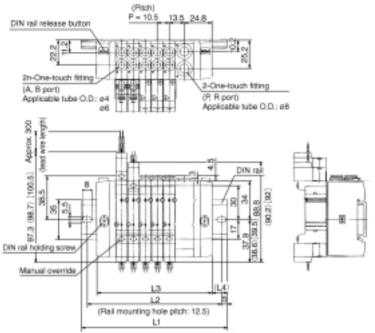


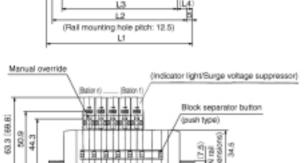


Series SY3000 Dimensions

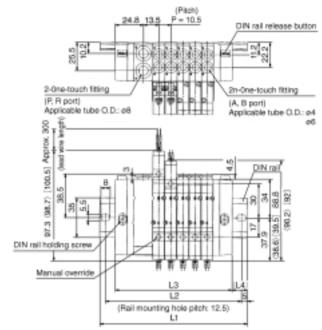


SS5Y3-45- Stations D- C4



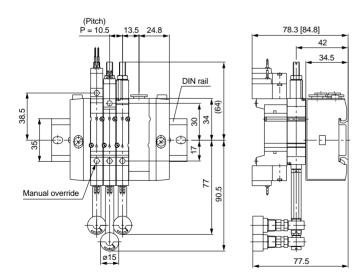


SS5Y3-45- Stations U-C4



| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 98 | 110.5 | 123 | 135.5 | 148 | 148 | 160.5 | 173 | 185.5 |
| L2 | 87.5 | 100 | 112.5 | 125 | 137.5 | 137.5 | 150 | 162.5 | 175 |
| L3 | 70.5 | 81 | 91.5 | 102 | 112.5 | 123 | 133.5 | 144 | 154.5 |
| L4 | 13.5 | 14.5 | 15.5 | 16.5 | 17.5 | 12.5 | 13.5 | 14.5 | 15.5 |

With interface regulator (with gauge)





SS5Y3-45-\(D \) SS5Y33, #1 (#1 + #7 + #8 + #9)







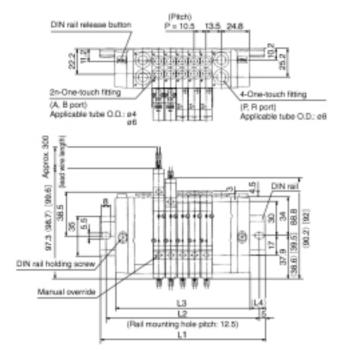
Note) []: Values for AC

< >: Values with surge voltage suppressor

Scale: 30%

SS5Y3-45-Stations B-C4

CAD



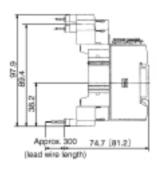
| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 110.5 | 123 | 135.5 | 148 | 160.5 | 173 | 185.5 | 185.5 | 198 | |
| L2 | 100 | 112.5 | 125 | 137.5 | 150 | 162.5 | 175 | 175 | 187.5 | |
| L3 | 87 | 97.5 | 108 | 118.5 | 129 | 139.5 | 150 | 160.5 | 171 | |
| L4 | 11.5 | 12.5 | 13.5 | 14.5 | 15.5 | 16.5 | 17.5 | 12.5 | 13.5 | |
| Stations n | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| L1 | 210.5 | 223 | 235.5 | 248 | 248 | 260.5 | 273 | 285.5 | 298 | 310.5 |
| L2 | 200 | 212.5 | 225 | 237.5 | 237.5 | 250 | 262.5 | 275 | 287.5 | 300 |
| L3 | 181.5 | 192 | 202.5 | 213 | 223.5 | 234 | 244.5 | 255 | 265.5 | 276 |
| L4 | 14.5 | 15.5 | 16.5 | 17.5 | 12 | 13 | 14 | 15 | 16 | 17 |

SS5Y3-45-\(\B \) SS5Y33, #2 (#2 + #8 + #9 + #10)

L type plug connector



M type plug connector



SMC

3 port valve

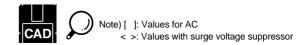
operated

Order made

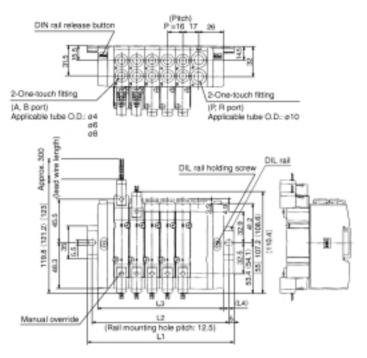
Precautions

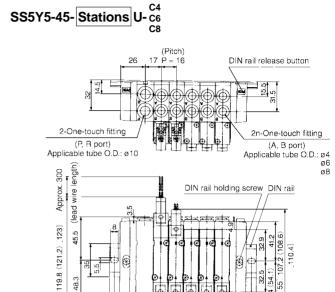


Series SY5000 Dimensions



SS5Y5-45-Stations D-C4 C8

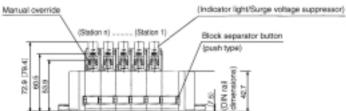




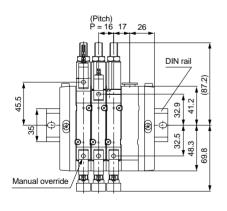
48.3

| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 110.5 | 135.5 | 148 | 160.5 | 173 | 198 | 210.5 | 223 | 235.5 |
| L2 | 100 | 125 | 137.5 | 150 | 162.5 | 187.5 | 200 | 212.5 | 225 |
| L3 | 84 | 100 | 116 | 132 | 148 | 164 | 180 | 196 | 212 |
| L4 | 13 | 17.5 | 16 | 14 | 12.5 | 17 | 15 | 13.5 | 11.5 |
| | | | | | | | | | |

(Rail mounting hole pitch: 12.5)



With interface regulator (with gauge)



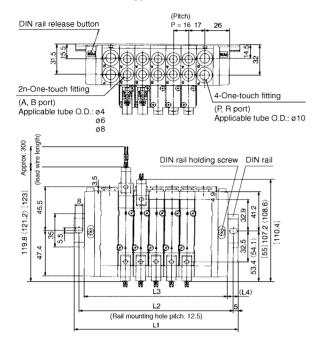




SS5Y5-45-\(\subseteq D \) SS5Y53, #1 (#1 + #8 + #9 + #10 + #11)

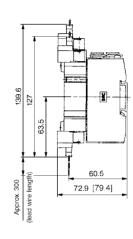


SS5Y5-45-Stations B- C6

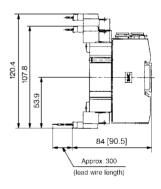


| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 135.5 | 148 | 160.5 | 185.5 | 198 | 210.5 | 223 | 248 | 260.5 | |
| L2 | 125 | 137.5 | 150 | 175 | 187.5 | 200 | 212.5 | 237.5 | 250 | |
| L3 | 102 | 118 | 134 | 150 | 166 | 182 | 198 | 214 | 230 | |
| L4 | 16.5 | 15 | 13 | 17.5 | 16 | 14 | 12.5 | 17 | 15 | |
| Stations n | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| L1 | 273 | 285.5 | 310.5 | 323 | 335.5 | 360.5 | 373 | 385.5 | 398 | 423 |
| L2 | 262.5 | 275 | 300 | 312.5 | 325 | 350 | 362.5 | 375 | 387.5 | 412.5 |
| L3 | 246 | 262 | 278 | 294 | 310 | 326 | 342 | 358 | 374 | 390 |
| L4 | 13.5 | 11.5 | | 14.5 | 12.5 | 17 | | 13.5 | | 16.5 |

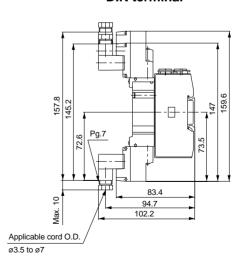
L type plug connector



M type plug connector



DIN terminal

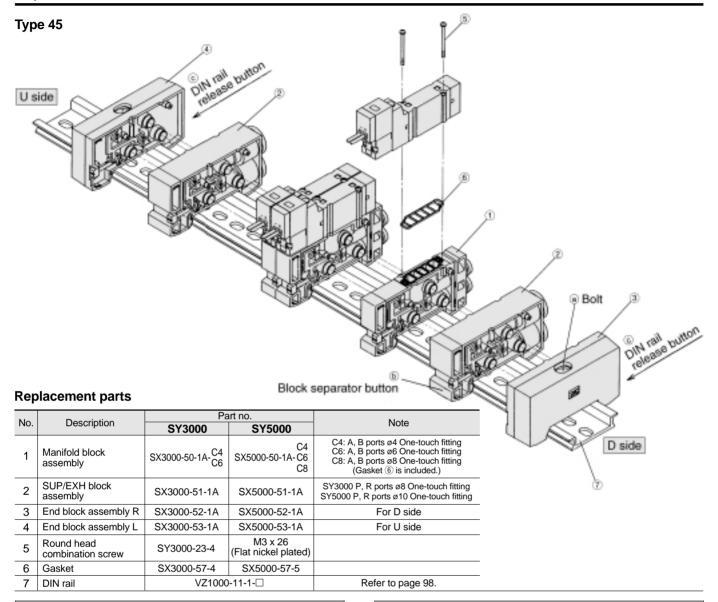


CAD

SS5Y5-45-\(\B-SS5Y53\), #2 (#2 + #9 + #10 + #11 + #12)

104

Exploded View of DIN Rail Manifold



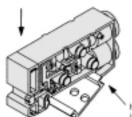
Manifold Base Expansion Stations can be added in a desired location.

- Loosen bolts (a) which hold the manifold base until it begins to turn idly. (While pressing down the DIN rail release buttons (c) at two locations, remove the manifold base from the DIN rail.)
- Press the manifold block assembly separator button (b) at the desired location until it locks, and then break the connection between block assemblies
- Mount the manifold block assembly to be added onto the DIN rail as shown in Figure 1.
- Connect the manifold block assemblies by pressing them together until a click is heard, and secure them to the DIN rail with bolts (a).

 Caution (Tightening torque: 1.4N·m)

(To improve the sealing, after one end block has been secured, hold the block assemblies lightly while tightening the other end block.)

Figure 1. Block mounting



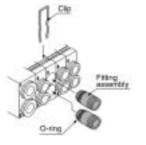


Note 1) When 10 or less stations are increased to 11 or more stations, add SUP/EXP block assemblies also.

Note 2) When disassembly and assembly are performed, insufficient connection of blocks or tightening of bolts (a) will cause air leakage. Be sure to confirm that there is no space between the manifold blocks and they are firmly secured on the DIN rail before supplying air. After supplying air, confirm that there is no air leakage.

Hook this part on the DIN rail and then press in the direction of the arrow until a click is heard.

How to Replace Fitting Assemblies



By replacing manifold block fitting assemblies on a type 45 manifold, the port size of the A and B ports can be changed.

To replace these parts, remove the clip with a flat head screw driver after the valve has been removed. Insert the fitting assemblies, and then reinsert the clip so that it does not protrude from the manifold block.

Fitting assembly part nos.

| Port size | SY3000 | SY5000 |
|----------------------|----------------|----------------|
| ø4 One-touch fitting | VVQ1000-50A-C4 | VVQ1000-51A-C4 |
| ø6 One-touch fitting | VVQ1000-50A-C6 | VVQ1000-51A-C6 |
| ø8 One-touch fitting | | VVQ1000-51A-C8 |



Note 1) Fitting assemblies for P and R ports cannot be changed.

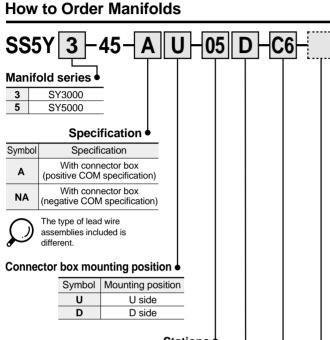
Note 2) Do not scratch or put foreign matter on the O-ring, as this will cause air leakage.





SY3000/5000 **Base Mounted Type Manifold** Stacking Type/DÍN Rail Mount **Connector Box**





Stations •

| Symbol | Stations | Note | | |
|--------|-------------|-------------------------------|--|--|
| 02 | 2 stations | Lin to 4C polonoido | | |
| : | : | Up to 16 solenoids applicable | | |
| 16 | 16 stations | applicable | | |

SUP/EXH block assembly mounting position

| Symbol | Mounting position | Applicable stations | |
|--------|-----------------------|---------------------|--|
| U | U side | 2 to 10 | |
| D | D side | 21010 | |
| В | Both sides | 2 to 16 | |
| M* | Special specification | | |

* For special specifications, order separately on a manifold specification sheet.

A/B port size

SY3000

| | <u> </u> |
|--------|----------------------|
| Symbol | Port size |
| C4 | ø4 One-touch fitting |
| C6 | ø6 One-touch fitting |
| M* | Mixed |

SY5000

| Symbol | Port size |
|--------|----------------------|
| C4 | ø4 One-touch fitting |
| C6 | ø6 One-touch fitting |
| C8 | ø8 One-touch fitting |
| M* | Mixed |
| | |

* For mixed specifications, order separately on a manifold specification sheet.

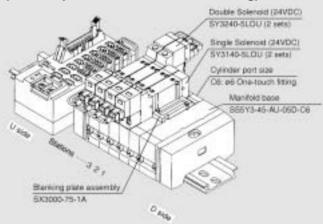
Option •

When a DIN rail longer than the specified stations is necessary, indicate the number of required stations. (Max. 20 stations)

Refer to page 183 regarding external pilot specifications and built-in silencer types.

How to Order Manifold Assemblies (Example)

(SY3000, positive COM, U side mounting)



| SS5Y3-45-AU-05D-C61 set (Type 45, 5 station manifold base part no.) |
|---|
| * SX3000-75-1A 1 set (Blanking plate assembly part no.) |
| * SY3140-5LOU 2 sets (Single solenoid part no.) |
| * SY3240-5LOU 2 sets (Double solenoid part no.) |
| T |

To order valves and options mounted onto the manifold at the factory, list the valve/option with an asterisk (*) in front of each part number.

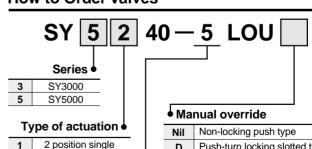
Valves are assembled from the D side regardless of the mounting position of the connector box. Add the valve and option part numbers in order starting from the first station on the D side.

When entry of part numbers becomes complicated, indicate on a manifold specification sheet

Also, SS5Y \(^2_3-45-A^0_b\) - \(\subseteq \s solenoid valves. When only the base unit is required, by listing the manifold part number on page 95 (specify the number which is 3 stations more than the required stations for the option at the end of S5Y 5-45- □ □-C□-□), the connector box part number VZ3000-106-1A, and the rail stopper part number TXE1-SMC, the connector box can be mounted on the U side. (In this case, please note that dimensions L1 and L2 on pages 111 and 112 may vary.) Refer to page 113 regarding other parts.

(Manifold Specification Sheet on pages 203 and 204)

How to Order Valves



| 2 position single |
|----------------------------|
| 2 position double |
| 3 position closed center |
| 3 position exhaust center |
| 3 position pressure center |
| |

5

Rated voltage 24VDC

| Nil | Non-locking push type |
|-----|--------------------------------|
| D | Push-turn locking slotted type |
| E | Push-turn locking lever type |
| | |







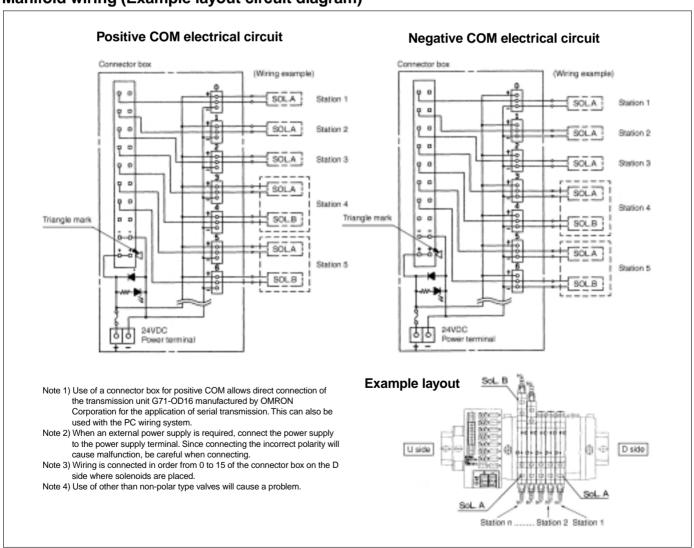
Manifold specifications

| Model | | SS5Y3-45-A | SS5Y5-45- ^A _{NA} | | | |
|-------------------------------------|------------|---|---|--|--|--|
| Applicable valve | | SY3□40 | SY5□40 | | | |
| Manifold type | | Stacking type/DIN rail | | | | |
| P (SUP)/R (EXH |) method | Common | SUP/EXH | | | |
| Valve stations | | 2 to 16 stati | ons Notes 1, 2) | | | |
| A, B port | Location | Ba | se | | | |
| specifications | Direction | Si | de | | | |
| | P, R port | C8 (ø8 One-touch fitting) | C10 (ø10 One-touch fitting) | | | |
| Port size | A, B port | C4 (ø4 One-touch fitting) C6 (ø6 One-touch fitting) | C4 (ø4 One-touch fitting) C6 (ø6 One-touch fitting) C8 (ø8 One-touch fitting) | | | |
| Valve effective are mm² (Cv factor) | ea Note 3) | P to A/B 4.68 (0.26) C6: A/B to R 4.68 (0.26) C8: P to A/B 12.6 (0.26) C8: A/B to R 12.6 (0.26) | | | | |
| Manifold base wei | | For 2 to 10 stations: W = 26n + 207 For 11 to 20 stations: W = 26n + 229 For 11 to 20 stations: W = 52n + 229 For 11 to 16 stations: W = 52n + 229 | | | | |
| Applicable flat ribbon cable | connector | Flat ribbon cable connector, Socket: 20 pin MIL type With strain relief, MIL-C-83503 conformity | | | | |
| Wiring specificati | ons | Positive COM specification (type 45-A), Negative COM specification (type 45-NA) | | | | |



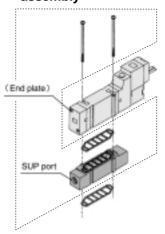
- Note 1) For 11 stations or more, supply pressure to P port on both sides and exhaust from R port on both sides.
- Note 2) Due to restrictions depending on the number of solenoids, refer to the ordering procedures.
- Note 3) Value when manifold base (5 stations) is mounted, with single action 2 position type.

Manifold wiring (Example layout circuit diagram)



Manifold Options

Individual SUP spacer assembly

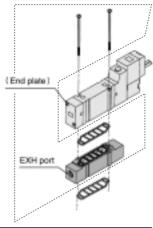


| Series | Assembly part no. | Port size | | |
|--------|-------------------|-----------|--|--|
| SY3000 | SY3000-38-2A | M5 x 0.8 | | |
| SY5000 | SY5000-38-2A | Rc 1/8 | | |



Note) The SUP port can be on the lead wire side or end plate side. (It is as shown above when shipped already assembled.)

■ Individual EXH spacer assembly



| Series | Assembly part no. | Port size | |
|--------|-------------------|-----------|--|
| SY3000 | SY3000-39-2A | M5 x 0.8 | |
| SY5000 | SY5000-39-2A | Rc 1/8 | |



Note) The EXH port can be on the lead wire side or end plate side. (It is as shown above when shipped already assembled.)

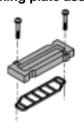
⊈\Caution

M2: 0.15N·m

M3: 0.6N·m M4: 1.4N·m

Mounting screw tightening torques

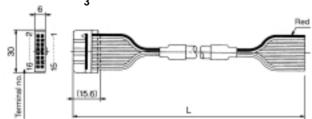
■ Blanking plate assembly



| Series | Assembly part no. |
|--------|-------------------|
| SY3000 | SX3000-75-1A |
| SY5000 | SX5000-76-1A |

■ Cable assembly





Flat ribbon cable connector assembly

| Cable length (L) | Assembly part no. | Note | | |
|------------------|-------------------|--------------------------|--|--|
| 1.5m | AXT100-FC20-1 | 20 | | |
| 3m | AXT100-FC20-2 | 20 core cable x 22AWG | | |
| 5m | AXT100-FC20-3 | X ZZAVVG | | |



* For other commercial connectors, use a 20 pin type with strain relief conforming to MIL-C-83503.

Connector manufacturer examples

- Sumitomo/3-M Limited
- Fujitsu, Ltd.
- Japan Aviation Electronics Industry, Ltd.
- J.S.T. Mfg. Co., Ltd.

■ SUP block disc

By installing a SUP block disc in the pressure supply passage of the manifold base, two or more different pressures, high or low, can be supplied to one manifold.



| Series | Part no. | | | |
|--------|--------------|--|--|--|
| SY3000 | SX3000-77-1A | | | |
| SY5000 | SX5000-77-1A | | | |

■ EXH block disc

By installing an EXH block disc in the exhaust passage of the manifold base, the passage can be divided so that the exhaust from one valve will not affect other valves. (Two block discs are required to block both EXH



| Series | Part no. | | |
|--------|--------------|--|--|
| SY3000 | SX3000-77-1A | | |
| SY5000 | SX5000-77-1A | | |

■ Labels for block disc

Labels are applied to blocks with SUP and EXH block discs for external confirmation of blocked passages. (3 labels per package)

VZ3000-123-1A

SUP block disc label





EXH block disc label



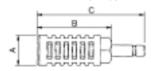
SUP/EXH block disc label



* When block discs are ordered with manifolds using a manifold specification sheet, block disc labels are already applied where block discs are installed at the time of shipment.

■ Silencer with One-touch fitting

Can be attached with one touch to the R (EXH) port of the manifold.

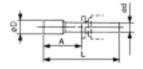


| Series | Model | Effective area | tive area A | | С | |
|---------------------|------------|----------------|-------------|------|------|--|
| SY3000 (Ø8) | AN203-KM8 | 14mm² | ø16 | 26 | 51 | |
| SVE000 (~10) | AN200-KM10 | 26mm² | ø22 | 53.8 | 80.8 | |
| SY5000 (Ø10) | AN300-KM10 | 30mm² | ø25 | 70 | 97 | |

■ Plug (white)

Insert into unused cylinder ports and SUP/EXH ports.

The minimum order quantity is 10 pieces. Order in multiples of 10.



Dimensions

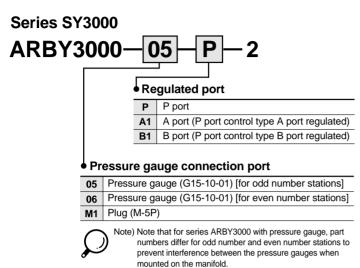
SMC

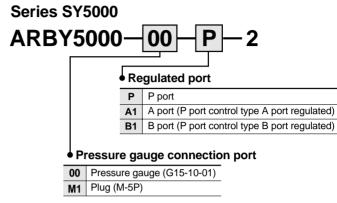
| Applicable fitting size ød | Model | А | L | D |
|----------------------------|---------|------|----|----|
| 4 | KQ2P-04 | 16 | 32 | 6 |
| 6 | KQ2P-06 | 18 | 35 | 8 |
| 8 | KQ2P-08 | 20.5 | 39 | 10 |
| 10 | KQ2P-10 | 22 | 43 | 12 |

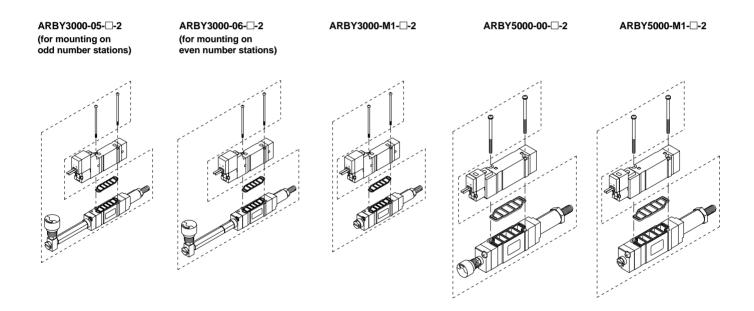


Manifold Options

■ How to order interface regulators (SY3000/5000 only)







Accessories

| Series | Round head combination screw | Gasket | | |
|----------|--------------------------------|-------------|--|--|
| ARBY3000 | SY3000-23-10 (M2 x 36) | SX3000-57-4 | | |
| ARBY5000 | M3 x 48.5 (Flat nickel plated) | SX5000-57-5 | | |



Mounting screw tightening torques

M2: 0.15N·m M3: 0.6N·m



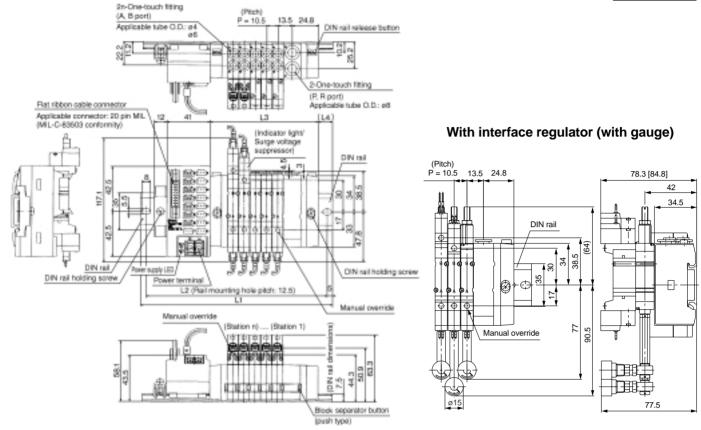


Series SY3000 Dimensions CAD

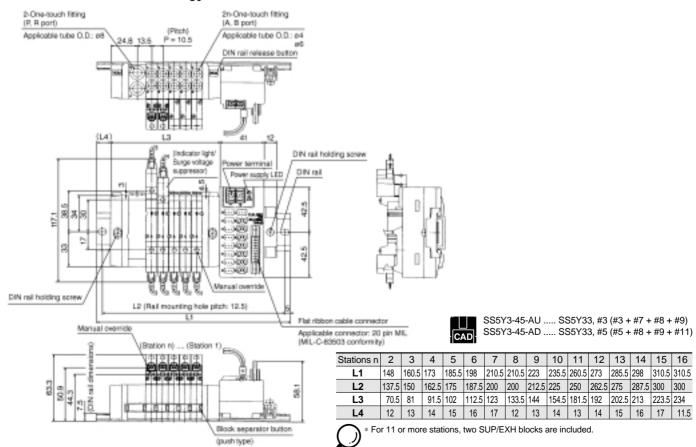


SS5Y3-45-AU-Stations D-C4

Scale: 30%



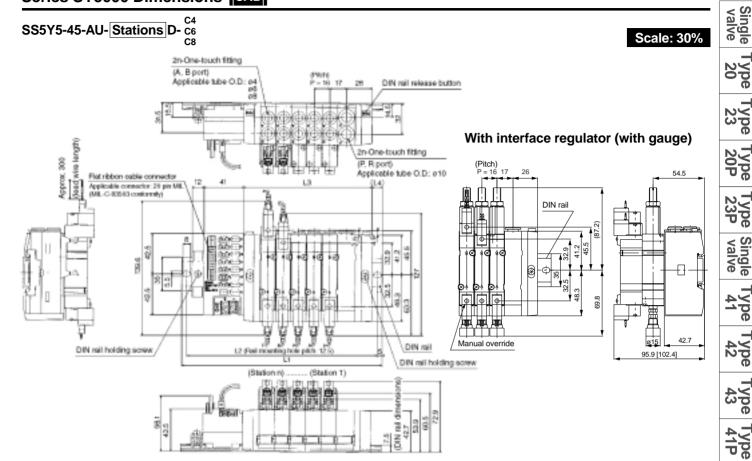
SS5Y3-45-AD-Stations U-C4



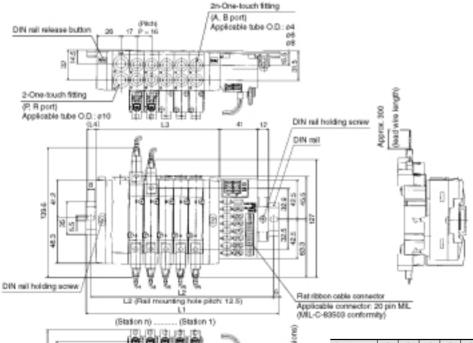




Scale: 30%



SS5Y5-45-AD-Stations U-C4 C8 C8



DIN IN

| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 160.5 | 185.5 | 198 | 210.5 | 235.5 | 248 | 260.5 | 273 | 298 | 323 | 348 | 360.5 | 373 | 398 | 410.5 |
| L2 | 150 | 175 | 187.5 | 200 | 225 | 237.5 | 250 | 262.5 | 287.5 | 312.5 | 337.5 | 350 | 362.5 | 387.5 | 400 |
| L3 | 84 | 100 | 116 | 132 | 148 | 164 | 180 | 196 | 212 | 246 | 262 | 278 | 294 | 310 | 326 |
| L4 | 11.5 | 16 | 14.5 | 12.5 | 17 | 15.5 | 13.5 | 12 | 16.5 | 12 | 16.5 | 14.5 | 13 | 17.5 | 15.5 |

SS5Y5-45-AU SS5Y53, #3 (#3 + #5 + #9 + #10 + #11) SS5Y5-45-AD SS5Y53, #5 (#5 + #9 + #10 + #11 + #13)



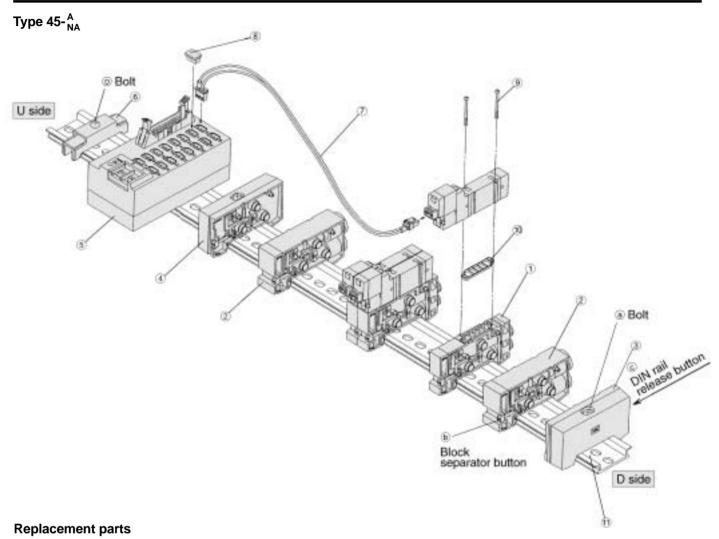
For 11 or more stations, two SUP/EXH blocks are included.

SMC

Precautions



Exploded View of DIN Rail Manifold



| Nia | Description | Par | no. | Note |
|-----|------------------------------|-----------------|---------------------------------|--|
| No. | Description | SY3000 | SY5000 | Note |
| 1 | Manifold block assembly | SX3000-50-1A-C4 | C4 SX5000-50-1A-C6 C8 | C4: A, B ports ø4 One-touch fitting C6: A, B ports ø6 One-touch fitting C8: A, B ports ø8 One-touch fitting (Gasket ® is included.) |
| 2 | SUP/EXH block assembly | SX3000-51-1A | SX5000-51-1A | P, R ports SY3000 Ø8 One-touch fitting P, R ports SY5000 Ø10 One-touch fitting |
| 3 | End block assembly R | SX3000-52-1A | SX5000-52-1A | For D side |
| 4 | End block assembly L | SX3000-53-1A | SX5000-53-1A | For U side |
| 5 | Connector box | VZ3000 | -106-1A | 24VDC only |
| 6 | Rail stopper | TXE1 | -SMC | Made by Kasuga Electronic Works, Ltd. |
| | | SY3000-43-1A-□ | SY3000-43-2A-□ | Positive COM Type D, 2 to 8 stations Type U, 9 to 16 stations |
| 7 | Connector assembly | SY3000-43-2A-□ | SY3000-43-3A-□ | Positive COM Type D, 9 to 16 stations Type U, 2 to 8 stations |
| , | | SY3000-43-1NA-□ | SY3000-43-2NA-□ | Negative COM Type D, 2 to 8 stations Type U, 9 to 16 stations |
| | | SY3000-43-2NA-□ | SY3000-43-3NA-□ | Negative COM Type D, 9 to 16 stations Type U, 2 to 8 stations |
| 8 | Dust cap | VZ300 | 0-63-2 | |
| 9 | Round head combination screw | SY3000-23-4 | M3 x 26 (Flat nickel plated) | |
| 10 | Gasket | SX3000-57-4 | SX5000-57-5 | |
| 11 | DIN rail | VZ1000 | -11-1-□ | Refer to page 98. |

Manifold Base Expansion

Stations can be added in a desired location.

Loosen bolts (a) which hold the manifold base until it begins to turn idly. (While pressing down the DIN rail release buttons (c) at two locations, remove the manifold base from the DIN rail.)

Press the manifold block assembly separator button (b) at the desired location until it locks, and then break the connection between block assemblies.

Mount the manifold block assembly to be added onto the DIN rail as 3 shown in Figure 1.

Connect the manifold block assemblies by pressing them together until a click is heard, and secure them to the DIN rail with bolts (a). **△ Caution** (Tightening torque: 1.4N·m)

(To improve the sealing, after one end block has been secured, hold the block assemblies lightly while tightening the other end block.)

To remove the connector box from the DIN rail, loosen the rail stopper bolt (D) and remove it. To remount it, press it against the connector block and tighten bolt (D).



Note 1) When 10 or less stations are increased to 11 or more stations, add SUP/EXP block assemblies also

Note 2) When disassembly and assembly are performed, insufficient connection of blocks or tightening of bolts (a) will cause air leakage. Be sure to confirm that there is no space between the manifold blocks and they are firmly secured on the DIN rail before supplying air. After supplying air, confirm that there is no air leakage.

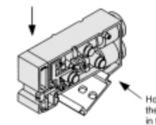
Note 3) One connector assembly is required for each solenoid.

Also, if a number is required for the connector assembly mark tube, indicate the number at the end of the part number. (Numbers 0 to 15 are available for mark tube numbering.)

Example) Positive COM specification, type D for 2 to 8 stations, with number 10 SY3000-43-1A-10

Figure 1. Block mounting

Base Mounted Type



Hook this part on the DIN rail and press in the direction of the arrow until a click is heard.

How to Replace Fitting Assembly

By replacing manifold block fitting assemblies on a type 45 manifold, the port size of the A and B ports can be changed.

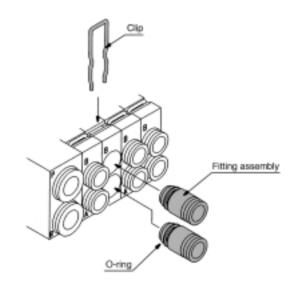
To replace these parts, remove the clip with a flat head screw driver after the valve has been removed. Insert the fitting assemblies, and then reinsert the clip so that it does not protrude from the manifold block.

Fitting assembly part nos.

| Port size | SY3000 | SY5000 |
|----------------------|----------------|----------------|
| ø4 One-touch fitting | VVQ1000-50A-C4 | VVQ1000-51A-C4 |
| ø6 One-touch fitting | VVQ1000-50A-C6 | VVQ1000-51A-C6 |
| ø8 One-touch fitting | | VVQ1000-51A-C8 |

Note 1) Fitting assemblies for P and R ports cannot be changed.

Note 2) Do not scratch or put foreign matter on the O-ring, as this will cause air



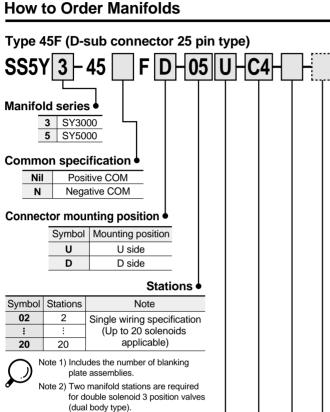






SY3000/5000 **Base Mounted Type Manifold** Stacking Type/DIN Rail Mount Plug-in





SUP/EXH block assembly mounting position

SY5000

| Symbol | Mounting position | Applicable stations | |
|--------|------------------------|---------------------|--|
| U | U side | 2 to 10 | |
| D | D side | 2 to 10 | |
| В | Both sides 2 to 20 | | |
| M* | Special specifications | | |

^{*} For special specifications, order separately on a manifold specification sheet.

A/B port size

SY3000

| Symbol | Port size |
|--------|----------------------|
| C4 | ø4 One-touch fitting |
| C6 | ø6 One-touch fitting |
| M* | Mixed |

| Symbol | Port size | |
|--------|----------------------|--|
| C4 | ø4 One-touch fitting | |
| C6 | ø6 One-touch fitting | |
| C8 | ø8 One-touch fitting | |
| M* | Mixed | |

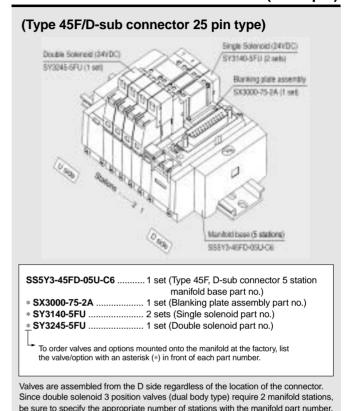
^{*} For mixed specifications, order separately on a manifold specification sheet.

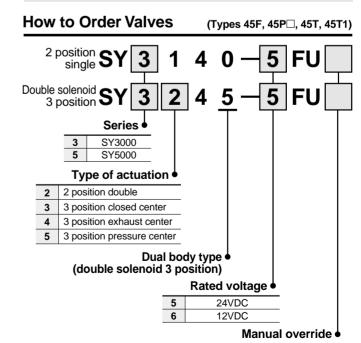
| Nil | 24VDC |
|-----|-------|
| 12V | 12VDC |
| | |

When a DIN rail longer than the specified stations is necessary, indicate the number of required stations. (Max. 20 stations)



How to Order Manifold Assemblies (Example)





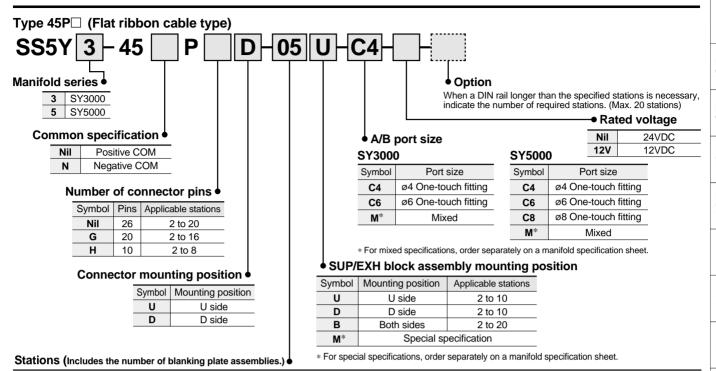
(Manifold Specification Sheet on pages 205 to 218)

| Nil | Non-locking push type | |
|-----|--------------------------------|--|
| D | Push-turn locking slotted type | |
| E | Push-turn locking lever type | |
| | | |



Type Type Type

How to Order Manifolds



| 26 | nin | connector | (P) |
|----|------|-----------|------|
| 20 | DILL | COLLICTOR | LF / |

| Symbol | Stations | Note |
|--------|----------|---|
| 02 | 2 | Cinale wiring apositiontion |
| : | : | Single wiring specification (Up to 20 solenoids applicable) |
| 20 | 20 | (Op to 20 soleriolds applicable) |

20 pin connector (PG)

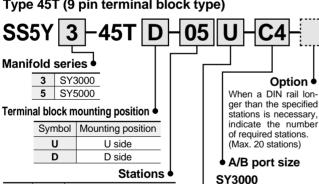
| Symbol | Stations | Note |
|--------|----------|---|
| 02 | 2 | Cinale wiring appoification |
| : | : | Single wiring specification (Up to 16 solenoids applicable) |
| 20 | 16 | (Op to 10 soleriolds applicable) |

10 pin connector (PH)

| _ | | | • • |
|---|--------|----------|--|
| | Symbol | Stations | Note |
| | 02 | 2 | Single wiring appoification |
| | : | : | Single wiring specification (Up to 8 solenoids applicable) |
| | 08 | 8 | (Op to o soleriolds applicable) |

Note) Two manifold stations are required for double solenoid 3 position valves (dual body type).

Type 45T (9 pin terminal block type)



| Symbol | Stations | Note |
|--------|----------|-----------------------------|
| 02 | 2 | Single wiring specification |
| : | : | (Up to 8 solenoids |
| 08 | 8 | applicable) |

Note 1) Includes the number of blanking plate assemblies Note 2) Two manifold stations are required

valves (dual body type). SUP/EXH block assembly mounting position

for double solenoid 3 position

| S | vmhol | Mounting position | Applicable stations | |
|---|-------|------------------------|-----------------------|--|
| | y | mounting position | 7 tppiloabio diationo | |
| | U | U side | 2 to 8 | |
| | D | D side | 2 to 8 | |
| | В | Both sides | 2 to 8 | |
| | M* | Special specifications | | |

C6 ø6 One-touch fitting M* Mixed SY5000

Port size

ø4 One-touch fitting

Symbol

C4

Symbol Port size C4 ø4 One-touch fitting C6 ø6 One-touch fitting C8 ø8 One-touch fitting M* Mixed

Type 45T1 (18 pin terminal block type)

| | SS5Y 3 - 45T1 D - 15 B - C4 - Manifold series | | | | | | | | |
|-----|---|------------------|-------------------------|---|--|--|--|--------------------------|--------|
| Tei | 3 5 rmina | SY3000 SY5000 | ounting position | | | | When a DI ger than the stations is | e specified necessary | - 1 |
| | | Symbo | Mounting positio U side | n | | | indicate the required sta (Max. 20 sta | tions. | F |

| | | Stations | |
|---|-------|--------------------|--|
| | D | D side | |
| | U | U side | |
| 0 | ymboi | Modriting position | |

| Symbol | Stations | Note | | | |
|--------|----------|----------------------------------|--|--|--|
| 02 | 2 | Single wiring specification | | | |
| : | : | (Up to 17 solenoids applicable) | | | |
| 17 | 17 | (Op to 17 soleriolds applicable) | | | |

S Note 1) Includes the number of blanking plate assemblies Note 2) Two manifold stations are required for double solenoid

3 position valves (dual body

SUP/EXH block assembly mounting position

| Symbol | Mounting position | Applicable stations |
|--------|-------------------|---------------------|
| U | U side | 2 to 10 |
| D | D side | 2 to 10 |
| В | Both sides | 2 to 17 |
| M* | Special sp | ecifications |

^{*} For special specifications, order separately on a manifold specification sheet.

A/B port size SY3000

| Symbol | Port size |
|--------|----------------------|
| C4 | ø4 One-touch fitting |
| C6 | ø6 One-touch fitting |
| M* | Mixed |

SY5000

| Symbol | Port size | | |
|--------|----------------------|--|--|
| C4 | ø4 One-touch fitting | | |
| C6 | ø6 One-touch fitting | | |
| C8 | ø8 One-touch fitting | | |
| M* | Mixed | | |

For mixed specifications, order separately on a manifold specification sheet.

* For special specifications, order separately on a manifold specification sheet.



Note) The terminal block (type 45T) manifold has no common polarity. It can be used for both positive and negative COM.



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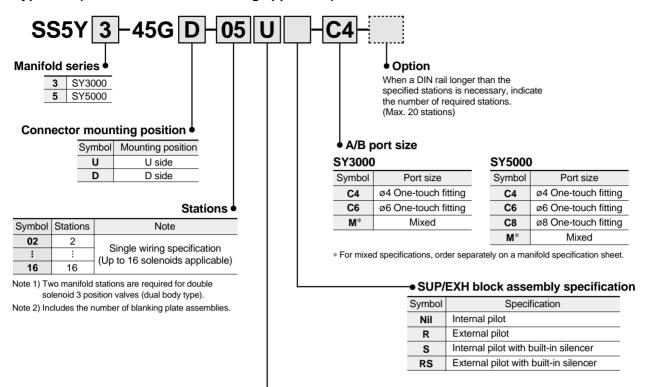
Precautions

For mixed specifications, order separately on a manifold specifica tion sheet



How to Order Manifolds

Type 45G (Flat ribbon cable/PC wiring applicable)

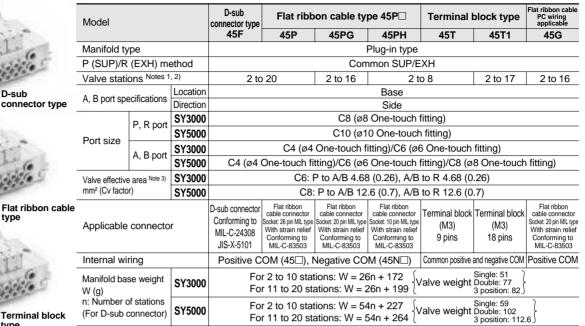


SUP/EXH block assembly mounting position

| Symbol | Mounting position | Applicable stations | |
|-----------------|------------------------|---------------------|--|
| U U side 2 to 1 | | 2 to 10 | |
| D | D side | 2 to 10 | |
| В | B Both sides 2 to 16 | | |
| M* | Special specifications | | |

^{*} For special specifications, order separately on a manifold specification sheet.

Manifold specifications





Note 1) For 11 stations or more, supply pressure to P port on both sides and exhaust from R port on both sides

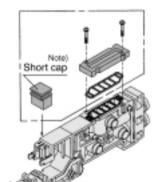
Note 2) Due to restrictions depending on the number of solenoids, refer to the ordering procedures.

Note 3) Value when manifold base (5 stations) is mounted, with single action 2 position type.

Manifold Options

■ Blanking plate assembly ■ SUP block disc

D-sub



Assembly part no.

SX3000-75-2A

SX5000-76-2A

are required for double

Note 1) When mounting a blanking plate, be sure to mount a short cap Note 2) Two manifold stations

| Series | Part no. |
|--------|--------------|
| SY3000 | SX3000-77-1A |
| SY5000 | SX5000-77-1A |
| | |

■ EXH block disc

By installing an EXH block disc in the exhaust passage of the manifold base, the passage can be divided so that the exhaust from one valve will not affect another valve. (Two block discs are required to block both EXH ports.)



| Series | Part no. |
|--------|--------------|
| SY3000 | SX3000-77-1A |
| SY5000 | SX5000-77-1A |

By installing a SUP block disc in the

pressure supply passage of the manifold base, two or more different

pressures, high or low, can be sup-

plied to one manifold.



| Series Part no. | |
|-----------------|--------------|
| SY3000 | SX3000-77-1A |
| SY5000 | SX5000-77-1A |

■ Labels for block disc

Labels are applied to blocks with SUP and EXH block discs for external confirmation of blocked passages. (3 labels per package)

VZ3000-123-1A (SY3000/5000 common)

SUP block disc label EXH block disc label

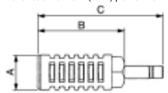








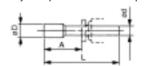
Can be attached with one touch to the R (EXH) port of the manifold.



| Series | Model | Effective area | Α | В | С |
|---------------------|------------|----------------|-----|------|------|
| SY3000 (Ø8) | AN203-KM8 | 14mm² | ø16 | 26 | 51 |
| SY5000 (Ø10) | AN200-KM10 | 26mm² | ø22 | 53.8 | 80.8 |
| 313000 (Ø10) | AN300-KM10 | 30mm² | ø25 | 70 | 97 |

■ Plug (white)

Insert into unused cylinder ports and SUP/EXH ports. The minimum order quantity is 10 pieces. Order in multiples of 10.



Dimensions

| | • | | | |
|----------------------------|---------|------|----|----|
| Applicable fitting size ød | Model | А | L | D |
| 4 | KQ2P-04 | 16 | 32 | 6 |
| 6 | KQ2P-06 | 18 | 35 | 8 |
| 8 | KQ2P-08 | 20.5 | 39 | 10 |
| 10 | KQ2P-10 | 22 | 43 | 12 |

solenoid 3 position valves (dual body type).

Series

SY3000

SY5000

Caution

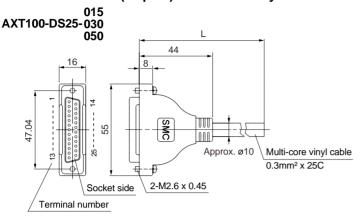
Mounting screw tightening torques

M2: 0.15N·m M3: 0.6N·m M4: 1.4N·m

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Manifold Options

■ D-sub connector (25 pins)/Cable assembly



D-sub connector cable assembly

| Cable length (L) | Assembly part no. | Note |
|------------------|-------------------|---------------|
| 1.5m | AXT100-DS25-015 | 25 core cable |
| 3m | AXT100-DS25-030 | x 24AWG |
| 5m | AXT100-DS25-050 | A ZHAVVG |



* For other commercial connectors, use a 25 pin type female connector conforming to MIL-C-24308.

Electrical characteristics

| Item | Characteristics |
|-------------------------------------|-----------------|
| Conductor resistance Ω/km, 20°C | 65 or less |
| Withstand voltage V, 1min., AC | 1000 |
| Insulation resistance MΩkm, 20°C | 5 or more |

Note) The minimum bending radius for D-sub connector is 20mm.

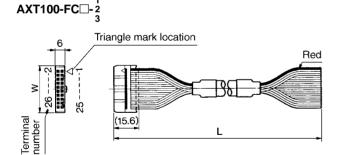
D-sub connector cable assembly wire color by terminal number

| Terminal no. | Lead wire color | Dot marking |
|--------------|-----------------|-------------|
| 1 | Black | None |
| 2 | Brown | None |
| 3 | Red | None |
| 4 | Orange | None |
| 5 | Yellow | None |
| 6 | Pink | None |
| 7 | Blue | None |
| 8 | Purple | White |
| 9 | Gray | Black |
| 10 | White | Black |
| 11 | White | Red |
| 12 | Yellow | Red |
| 13 | Orange | Red |
| 14 | Yellow | Black |
| 15 | Pink | Black |
| 16 | Blue | White |
| 17 | Purple | None |
| 18 | Gray | None |
| 19 | Orange | Black |
| 20 | Red | White |
| 21 | Brown | White |
| 22 | Pink | Red |
| 23 | Gray | Red |
| 24 | Black | White |
| 25 | White | None |

Connector manufacturer examples

- Hirose Electric Company
- Fujitsu, Ltd.
- Japan Aviation Electronics Industry, Ltd.
- J.S.T. Mfg. Co., Ltd.

■ Flat ribbon cable type/Cable assembly



Flat ribon cable assembly

| Cable length (L) | 10 pins | 20 pins | 26 pins | | |
|---------------------|---------------|---------------|---------------|--|--|
| 1.5m | AXT100-FC10-1 | AXT100-FC20-1 | AXT100-FC26-1 | | |
| 3m | AXT100-FC10-2 | AXT100-FC20-2 | AXT100-FC26-2 | | |
| 5m | AXT100-FC10-3 | AXT100-FC20-3 | AXT100-FC26-3 | | |
| Connector width (W) | 17.2 | 30 | 37.5 | | |



* For other commercial connectors, use a type with strain relief conforming to MIL-C-83503.

Connector manufacturer examples

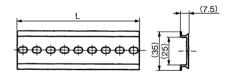
- Hirose Electric Company
- Sumitomo/3-M Limited
- Fujitsu, Ltd.
- Japan Aviation Electronics Industry, Ltd.
- J.S.T. Mfg. Co., Ltd.

■ DIN rail dimensions

VZ1000-11-1-

Refer to the table below for dimension L.

* Specify a number inside ☐ from the DIN rail dimension table below.

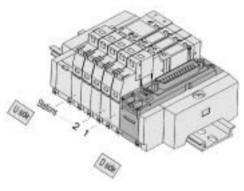


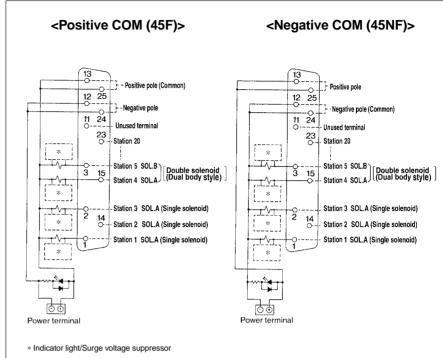
| No. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Dimension L | 98 | 110.5 | 123 | 135.5 | 148 | 160.5 | 173 | 185.5 | 198 | 210.5 | 223 |
| No. | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| Dimension L | 235.5 | 248 | 260.5 | 273 | 285.5 | 298 | 310.5 | 323 | 335.5 | 348 | 360.5 |
| No. | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
| Dimension L | 373 | 385.5 | 398 | 410.5 | 423 | 435.5 | 448 | 460.5 | 473 | 485.5 | 498 |
| No. | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 |
| Dimension L | 510.5 | 523 | 535.5 | 548 | 560.5 | 573 | 585.5 | 598 | 610.5 | 623 | 635.5 |
| No. | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 |
| Dimension L | 648 | 660.5 | 673 | 685.5 | 698 | 710.5 | 723 | 735.5 | 748 | 760.5 | 773 |
| No. | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 |
| Dimension L | 785.5 | 798 | 810.5 | 823 | 835.5 | 848 | 860.5 | 873 | 885.5 | 898 | 910.5 |
| No. | 66 | 67 | 68 | 69 | 70 | 71 | | | | | |
| Dimension L | 923 | 935.5 | 948 | 960.5 | 973 | 985.5 | | | | | |



Note) Refer to dimension L1 on pages starting with 125 for lengths that correspond to the number of manifold stations.

Use of a D-sub connector for electrical connection helps to achieve simplification and labor savings in connection procedures. Also, connectors conforming to MIL standards are used for wide interchangeability.





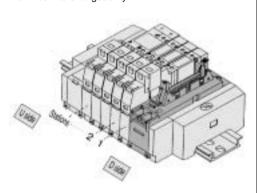
Note 1) When an external power supply is required, connect the power supply to the power terminal.

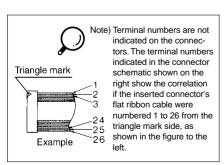
Note 2) A maximum of 20 manifold stations and 20 solenoids can be used. (Contact SMC if more than these quantities are required.)

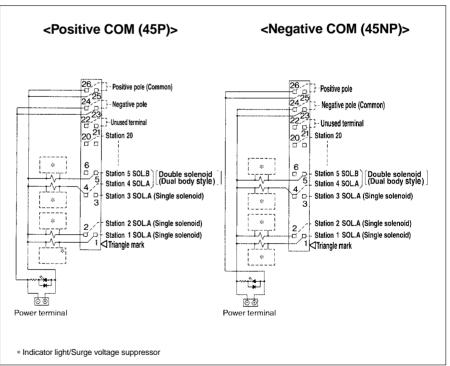
Note 3) Valves are numbered from the D side regardless of the mounting position of the connector.

45(N)P/Flat Ribbon Cable Type (26 Pins)

Use of a flat ribbon cable connector for electrical connection helps to achieve simplification and labor savings in connection procedures. Also, connectors conforming to MIL standards are used for wide interchangeability.







Note 1) When an external power supply is required, connect the power supply to the power terminal.

Note 2) A maximum of 20 manifold stations and 20 solenoids can be used. (Contact SMC if more than these quantities are required.)

Note 3) Valves are numbered from the D side regardless of the mounting position of the connector.

operated

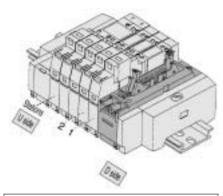
Order made

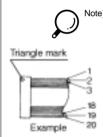
Precautions



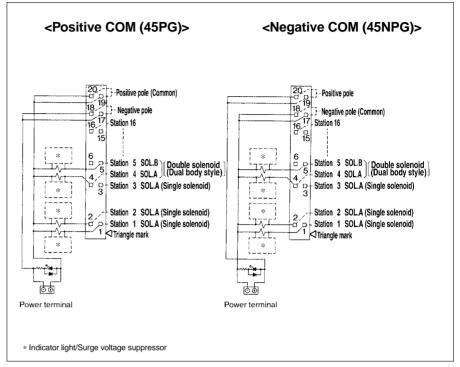
45(N)PG/Flat Ribbon Cable Type (20 Pins)

Use of a flat ribbon cable connector for electrical connection helps to achieve simplification and labor savings in connection procedures. Also, connectors conforming to MIL standards are used for wide interchangeability.





Note) Terminal numbers are not indicated on the connectors. The terminal numbers indicated in the connector schematic shown on the right show the correlation if the inserted connector's flat ribbon cable were numbered 1 to 20 from the triangle mark side, as shown in the figure to the left.



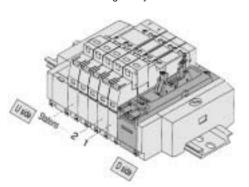
Note 1) When an external power supply is required, connect the power supply to the power terminal

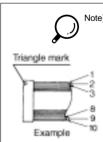
Note 2) A maximum of 16 manifold stations and 16 solenoids can be used. (Contact SMC if more than these quantities are required.)

Note 3) Valves are numbered from the D side regardless of the mounting position of the connector.

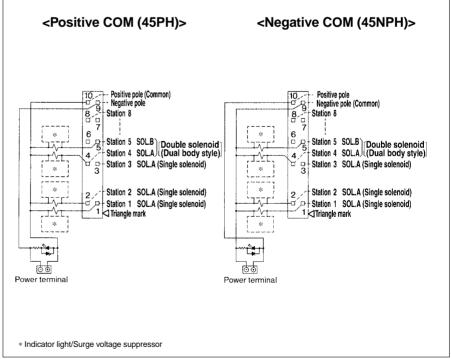
45(N)PH/Flat Ribbon Cable Type (10 Pins)

Use of a flat ribbon cable connector for electrical connection helps to achieve simplification and labor savings in connection procedures. Also, connectors conforming to MIL standards are used for wide interchangeability.





Note) Terminal numbers are not indicated on the connectors. The terminal numbers indicated in the connector schematic shown on the right show the correlation if the inserted connector's flat ribbon cable were numbered 1 to 10 from the triangle mark side, as shown in the figure to the left.



Note 1) When an external power supply is required, connect the power supply to the power terminal.

Note 2) A maximum of 8 manifold stations and 8 solenoids can be used. (Contact SMC if more than these quantities are required.)

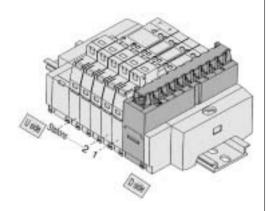
Note 3) Valves are numbered from the D side regardless of the mounting position of the connector.

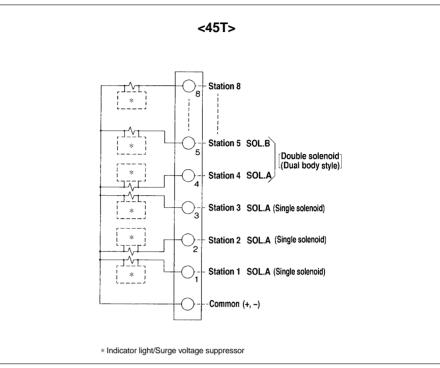


Manifold Internal Wiring

45T/Terminal Block Type

Use of a terminal block type for electrical connection allows direct connection without lead wire work.



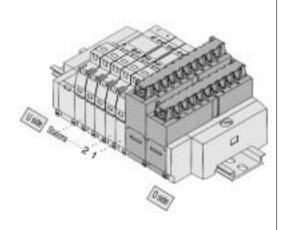


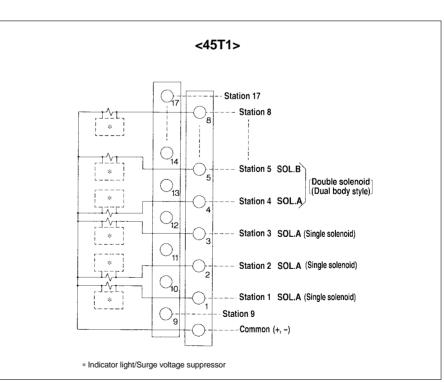
Note 1) A maximum of 8 manifold stations and 8 solenoids can be used. (Contact SMC if more than these quantities are required.)

Note 2) Valves are numbered from the D side regardless of the mounting position of the connector.

Note 3) Since the COM wiring does not have polarity, use a positive power supply for the positive COM specification and a negative power supply for the negative COM specification.

45T1/Terminal Block Type





Note 1) A maximum of 17 manifold stations and 17 solenoids can be used. (Contact SMC if more than these quantities are required.)

Note 2) Valves are numbered from the D side regardless of the mounting position of the connector.

Note 3) Since the COM wiring does not have polarity, use a positive power supply for the positive COM specification and a negative power supply for the negative COM specification.

operated

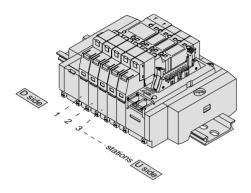


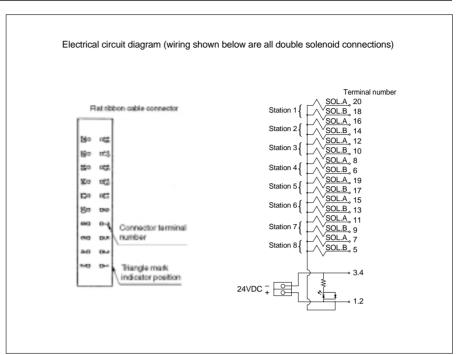


Manifold Internal Wiring

45G/Flat Ribbon Cable Type (PC wiring applicable)

A 20 pin flat ribbon cable connector type manifold that can be used with the PC wiring system.





Note 1) A maximum of 16 manifold stations and 16 solenoids can be used. (Contact SMC if more than these quantities are required.)

Note 2) Valves are numbered from the D side regardless of the mounting position of the connector.

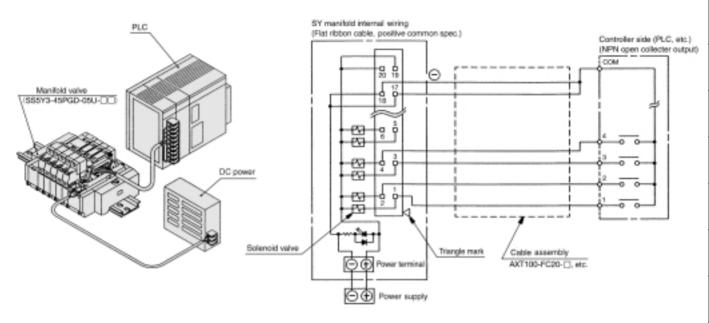
Refer to the separate catalog CAT.ES02-20A for details regarding the PC wiring system.



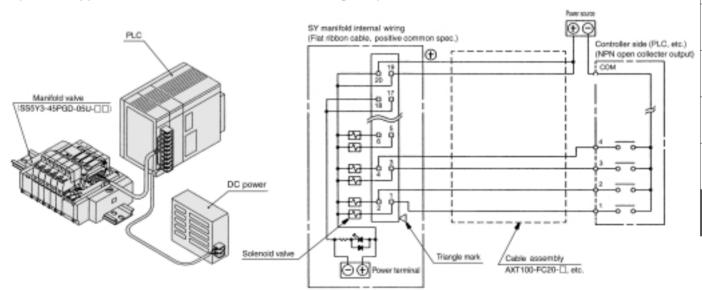
Wiring of Plug-in Type SS5Y□-45□

Series SY plug-in type manifolds are equipped with a power terminal as standard. The power terminal enables power supply to valves from either the controller side or manifold side. Refer to wiring examples below for either connection.

1. Wiring example with manifold power terminal



2. Wiring example without manifold power terminal (Power supplied to the controller side or to the wiring, etc.)



When connecting to a PLC, etc., the connection method for the signal lines and COM positions are different for each manufacturer. Carefully study the electrical circuits in in each catalog before connecting. Incorrect connection may cause malfunction in the PLC (control side) and power supply, etc., as well as in manifolds and valves.

operated



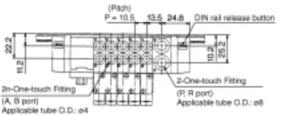


SY3000: D-sub Connector Type/Plug-in CAD



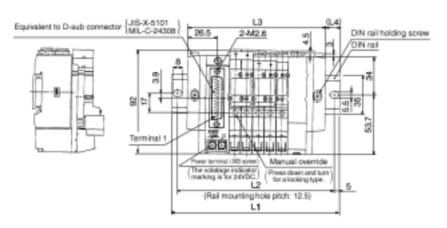
SS5Y3-45FU-Stations D - C4

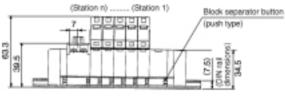
Scale: 30%





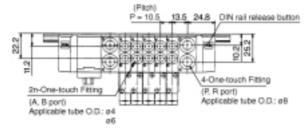
Note) Dimensions L1 to L4 of SS5Y3-45FU- $\overline{\text{Stations}}$ U- $^{\text{C4}}_{\text{C6}}$ are the same as SS5Y3-45FU- $\overline{\text{Stations}}$ D- $^{\text{C4}}_{\text{C6}}$.

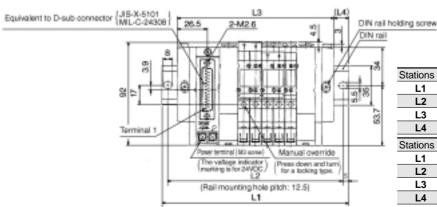




| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 123 | 135.5 | 148 | 148 | 160.5 | 173 | 185.5 | 198 | 210.5 |
| L2 | 112.5 | 125 | 137.5 | 137.5 | 150 | 162.5 | 175 | 187.5 | 200 |
| L3 | 91.5 | 102 | 112.5 | 123 | 133.5 | 144 | 154.5 | 165 | 175.5 |
| L4 | 15.5 | 16.5 | 17.5 | 12.5 | 13.5 | 14.5 | 15.5 | 16.5 | 17.5 |

SS5Y3-45FU-Stations B-C4



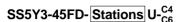


| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 135.5 | 148 | 160.5 | 173 | 185.5 | 185.5 | 198 | 210.5 | 223 | |
| L2 | 125 | 137.5 | 150 | 162.5 | 175 | 175 | 187.5 | 200 | 212.5 | |
| L3 | 108 | 118.5 | 129 | 139.5 | 150 | 160.5 | 171 | 181.5 | 192 | |
| L4 | 13.5 | 14.5 | 15.5 | 16.5 | 17.5 | 12.5 | 13.5 | 14.5 | 15.5 | |
| Stations n | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| L1 | 235.5 | 248 | 248 | 260.5 | 273 | 285.5 | 298 | 310.5 | 310.5 | 323 |
| L2 | 225 | 237.5 | 237.5 | 250 | 262.5 | 275 | 287.5 | 300 | 300 | 312.5 |
| L3 | 202.5 | 213 | 223.5 | 234 | 244.5 | 255 | 265.5 | 276 | 286.5 | 297 |
| | | | | | | | | | | |

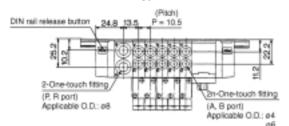


SS5Y3-45FU- \Box D SS5Y34, #1 (#1 + #5 + #6 + #7 + #17) SS5Y3-45FU- \Box B SS5Y34, #2 (#2 + #6 + #7 + #18)



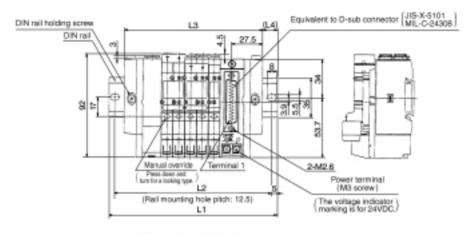


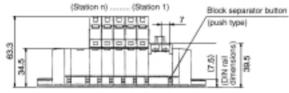
Scale: 30%





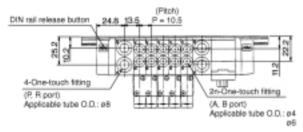
Note) Dimensions L1 to L4 of SS5Y3-45FD-Stations D-C4 are the same as SS5Y3-45FD-Stations U-C4.

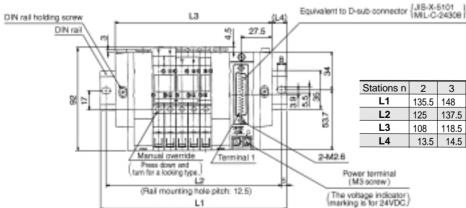




| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 123 | 135.5 | 148 | 148 | 160.5 | 173 | 185.5 | 198 | 210.5 |
| L2 | 112.5 | 125 | 137.5 | 137.5 | 150 | 162.5 | 175 | 187.5 | 200 |
| L3 | 91.5 | 102 | 112.5 | 123 | 133.5 | 144 | 154.5 | 165 | 175.5 |
| L4 | 15.5 | 16.5 | 17.5 | 12.5 | 13.5 | 14.5 | 15.5 | 16.5 | 17.5 |

SS5Y3-45FD-Stations B-C4





| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 135.5 | 148 | 160.5 | 173 | 185.5 | 185.5 | 198 | 210.5 | 223 |
| L2 | 125 | 137.5 | 150 | 162.5 | 175 | 175 | 187.5 | 200 | 212.5 |
| L3 | 108 | 118.5 | 129 | 139.5 | 150 | 160.5 | 171 | 181.5 | 192 |
| L4 | 13.5 | 14.5 | 15.5 | 16.5 | 17.5 | 12.5 | 13.5 | 14.5 | 15.5 |

| ١, | (M3 screw) |
|----|---|
| | (The voltage indicator) marking is for 24VDC.) |

| Stations n | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 235.5 | 248 | 248 | 260.5 | 273 | 285.5 | 298 | 310.5 | 310.5 | 323 |
| L2 | 225 | 237.5 | 237.5 | 250 | 262.5 | 275 | 287.5 | 300 | 300 | 312.5 |
| L3 | 202.5 | 213 | 223.5 | 234 | 244.5 | 255 | 265.5 | 276 | 286.5 | 297 |
| L4 | 16.5 | 17.5 | 12 | 13 | 14 | 15 | 16 | 17 | 12 | 13 |

SS5Y3-45FD-□U SS5Y34, #3 (#3 + #6 + #7 + #19) SS5Y3-45FD-□B SS5Y34, #4 (#4 + #6 + #7 + #20)



126

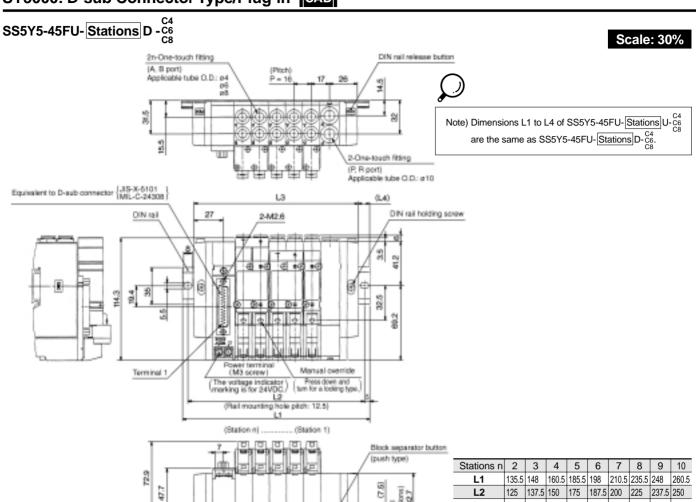
Single valve

operated

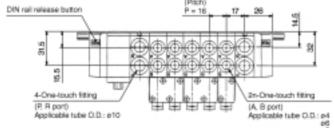


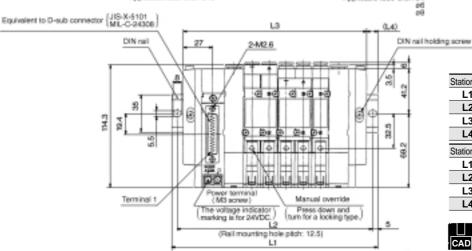
SY5000: D-sub Connector Type/Plug-in





SS5Y5-45FU-Stations B-C6





| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 148 | 173 | 185.5 | 198 | 210.5 | 235.5 | 248 | 260.5 | 285.5 | |
| L2 | 137.5 | 162.5 | 175 | 187.5 | 200 | 225 | 237.5 | 250 | 275 | |
| L3 | 123 | 139 | 155 | 171 | 187 | 203 | 219 | 235 | 251 | |
| L4 | 12.5 | 17 | 15 | 13.5 | 11.5 | 16 | 14.5 | 12.5 | 17 | |
| Stations n | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| L1 | 298 | 310.5 | 323 | 348 | 360.5 | 373 | 398 | 410.5 | 423 | 435.5 |
| L2 | 287.5 | 300 | 312.5 | 337.5 | 350 | 362.5 | 387.5 | 400 | 412.5 | 425 |
| L3 | 267 | 283 | 299 | 315 | 331 | 347 | 363 | 379 | 395 | 411 |
| L4 | 15.5 | 13.5 | 12 | 16.5 | 14.5 | 13 | 17.5 | 15.5 | 14 | 12 |

105 | 121 | 137 | 153 | 169 | 185 | 201 | 217 | 233

 15
 13.5
 11.5
 16
 14.5
 12.5
 17
 15.5
 13.5

L4

SS5Y5-45FU-□D SS5Y54, #1 (#1 + #6 + #7 + #8 + #18)

CAD SS5Y5-45FU-□B SS5Y54, #2 (#2 + #6 + #7 + #8 + #19)

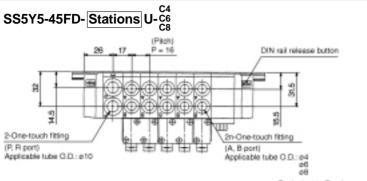


Single valve



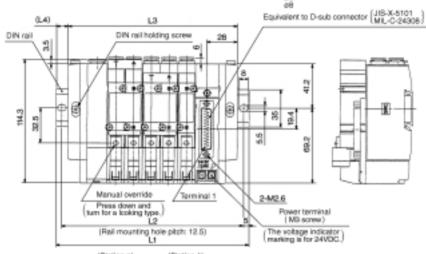








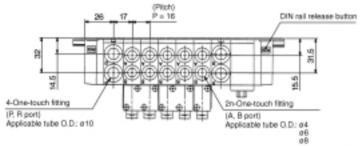
Note) Dimensions L1 to L4 of SS5Y5-45FD-Stations D-C6 are the same as SS5Y5-45FD-Stations U-C4

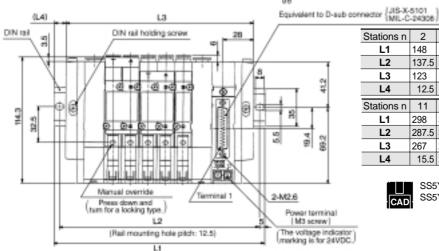


| D D D 7 Block separator button (push type) | | | (Station n) | (Station | (1) | |
|---|------|------|-------------|----------|-----|--|
| 728 (7.78) (7.78) (3.78) (4.7.7 | 72.8 | 42.7 | 22 | | Í | |

| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 135.5 | 148 | 160.5 | 185.5 | 198 | 210.5 | 235.5 | 248 | 260.5 |
| L2 | 125 | 137.5 | 150 | 175 | 187.5 | 200 | 225 | 237.5 | 250 |
| L3 | 105 | 121 | 137 | 153 | 169 | 185 | 201 | 217 | 233 |
| L4 | 15 | 13.5 | 11.5 | 16 | 14.5 | 12.5 | 17 | 15.5 | 13.5 |

SS5Y5-45FD-Stations B-C6





| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| L1 | 148 | 173 | 185.5 | 198 | 210.5 | 235.5 | 248 | 260.5 | 285.5 | |
| L2 | 137.5 | 162.5 | 175 | 187.5 | 200 | 225 | 237.5 | 250 | 275 | |
| L3 | 123 | 139 | 155 | 171 | 187 | 203 | 219 | 235 | 251 | |
| L4 | 12.5 | 17 | 15 | 13.5 | 11.5 | 16 | 14.5 | 12.5 | 17 | |
| Stations n | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| L1 | 298 | 310.5 | 323 | 348 | 360.5 | 373 | 398 | 410.5 | 423 | 435. |
| L2 | 287.5 | 300 | 312.5 | 337.5 | 350 | 362.5 | 387.5 | 400 | 412.5 | 425 |
| L3 | 267 | 283 | 299 | 315 | 331 | 347 | 363 | 379 | 395 | 411 |
| L4 | 15.5 | 13.5 | 12 | 16.5 | 14.5 | 13 | 17.5 | 15.5 | 14 | 12 |

SS5Y5-45FD-□U SS5Y54, #3 (#3 + #6 + #7 + #8 + #20) SS5Y5-45FD-□B SS5Y54, #4 (#4 + #6 + #7 + #8 + #21) operated Order made

Precautions

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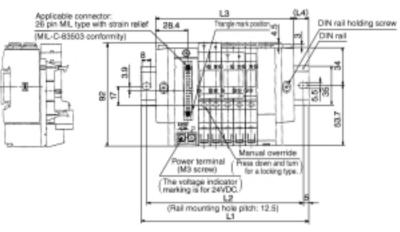
SY3000: Flat Ribbon Cable Type/Plug-in

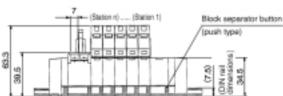
SS5Y3-45PU-Stations D-C4 (26 pins)

2n-One-touch fitting
(A. B port)
Applicable tube O.D.: #4

P = 10.5 13.5 24.8 DIN rail release button

Research

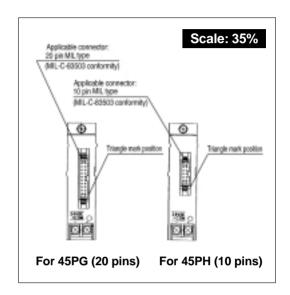




Scale: 30%

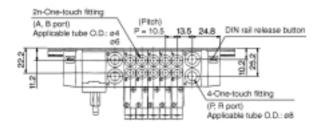


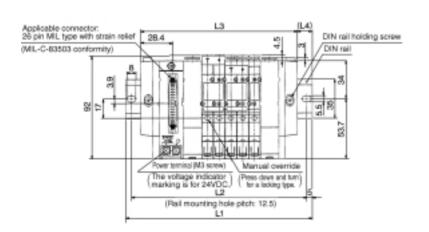
Note) Dimensions L1 to L4 of SS5Y3-45P \square U-Stations U- $^{\text{C4}}_{\text{C6}}$ are the same as SS5Y3-45P \square U-Stations D- $^{\text{C4}}_{\text{C6}}$.



| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 123 | 135.5 | 148 | 148 | 160.5 | 173 | 185.5 | 198 | 210.5 |
| L2 | 112.5 | 125 | 137.5 | 137.5 | 150 | 162.5 | 175 | 187.5 | 200 |
| L3 | 91.5 | 102 | 112.5 | 123 | 133.5 | 144 | 154.5 | 165 | 175.5 |
| L4 | 15.5 | 16.5 | 17.5 | 12.5 | 13.5 | 14.5 | 15.5 | 16.5 | 17.5 |

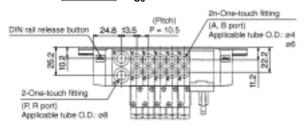
SS5Y3-45PU-Stations B-C4 (26 pins)





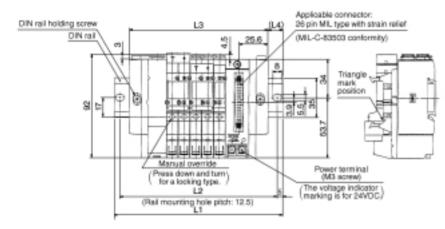
| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
|------------|-------------|--------------|-----------|--------------|-------|--------------|-------|--------------|--------------|-----|
| L1 | 135.5 | 148 | 160.5 | 173 | 185.5 | 185.5 | 198 | 210.5 | 223 | |
| L2 | 125 | 137.5 | 150 | 162.5 | 175 | 175 | 187.5 | 200 | 212.5 | |
| L3 | 108 | 118.5 | 129 | 139.5 | 150 | 160.5 | 171 | 181.5 | 192 | |
| L4 | 13.5 | 14.5 | 15.5 | 16.5 | 17.5 | 12.5 | 13.5 | 14.5 | 15.5 | |
| | | | | | | | | | | |
| Stations n | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| Stations n | 11 235.5 | | 13 248 | 14 260.5 | | 16 285.5 | | | 19 310.5 | |
| | | 248 | - | 260.5 | | 285.5 | | 310.5 | | |
| L1 | 235.5 | 248 237.5 | 248 | 260.5 250 | 273 | 285.5 275 | 298 | 310.5 300 | 310.5 300 | 323 |

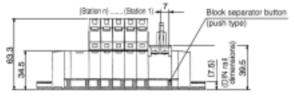






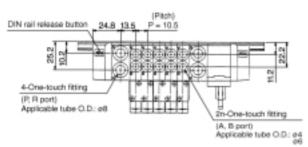
Note) Dimensions L1 to L4 of SS5Y3-45P□D-Stations D-C4 C6 are the same as SS5Y3-45P□D-Stations U-C4.



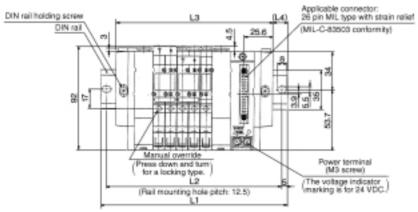


| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 123 | 135.5 | 148 | 148 | 160.5 | 173 | 185.5 | 198 | 210.5 |
| L2 | 112.5 | 125 | 137.5 | 137.5 | 150 | 162.5 | 175 | 187.5 | 200 |
| L3 | 91.5 | 102 | 112.5 | 123 | 133.5 | 144 | 154.5 | 165 | 175.5 |
| L4 | 15.5 | 16.5 | 17.5 | 12.5 | 13.5 | 14.5 | 15.5 | 16.5 | 17.5 |

SS5Y3-45PD-Stations B-C4 (26 pins)



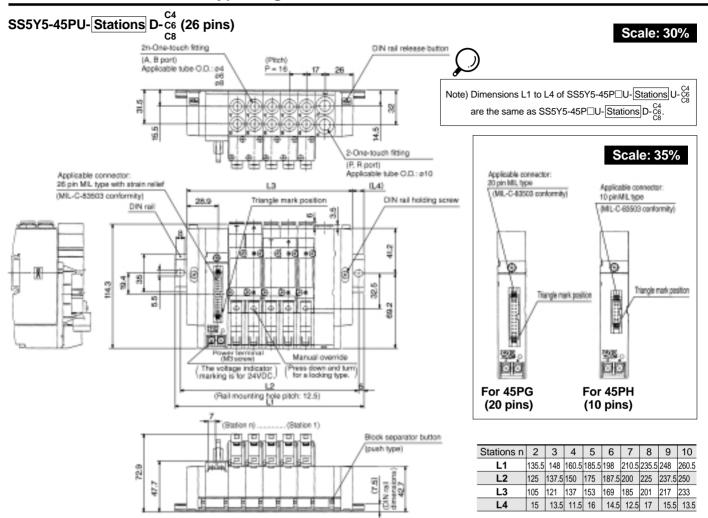
| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 135.5 | 148 | 160.5 | 173 | 185.5 | 185.5 | 198 | 210.5 | 223 | |
| L2 | 125 | 137.5 | 150 | 162.5 | 175 | 175 | 187.5 | 200 | 212.5 | |
| L3 | 108 | 118.5 | 129 | 139.5 | 150 | 160.5 | 171 | 181.5 | 192 | |
| L4 | 13.5 | 14.5 | 15.5 | 16.5 | 17.5 | 12.5 | 13.5 | 14.5 | 15.5 | |
| Stations n | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| L1 | 235.5 | 248 | 248 | 260.5 | 273 | 285.5 | 298 | 310.5 | 310.5 | 323 |
| L2 | 225 | 237.5 | 237.5 | 250 | 262.5 | 275 | 287.5 | 300 | 300 | 312.5 |
| L3 | 202.5 | 213 | 223.5 | 234 | 244.5 | 255 | 265.5 | 276 | 286.5 | 297 |
| L4 | 16.5 | 17.5 | 12 | 13 | 14 | 15 | 16 | 17 | 12 | 13 |



operated Order made



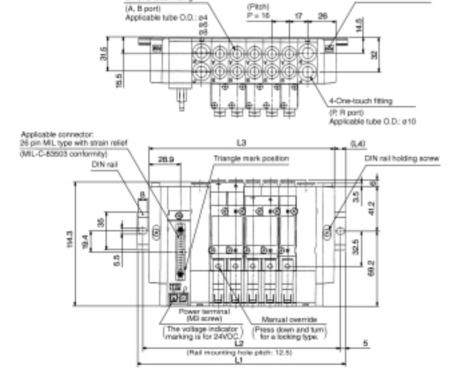
SY5000: Flat Ribbon Cable Type/Plug-in



DIN rail release button

SS5Y5-45PU-<u>Stations</u> B-^{C4}_{C8} (26 pins)

2n-One-touch fitting



| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 148 | 173 | 185.5 | 198 | 210.5 | 235.5 | 248 | 260.5 | 285.5 | |
| L2 | 137.5 | 162.5 | 175 | 187.5 | 200 | 225 | 237.5 | 250 | 275 | |
| L3 | 123 | 139 | 155 | 171 | 187 | 203 | 219 | 235 | 251 | |
| L4 | 12.5 | 17 | 15 | 13.5 | 11.5 | 16 | 14.5 | 12.5 | 17 | |
| Stations n | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| L1 | 298 | 310.5 | 323 | 348 | 360.5 | 373 | 398 | 410.5 | 423 | 435.5 |
| L2 | 287.5 | 300 | 312.5 | 337.5 | 350 | 362.5 | 387.5 | 400 | 412.5 | 425 |
| L3 | 267 | 283 | 299 | 315 | 331 | 347 | 363 | 379 | 395 | 411 |
| L4 | 15.5 | 13.5 | 12 | 16.5 | 14.5 | 13 | 17.5 | 15.5 | 14 | 12 |

Scale: 30%



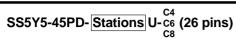
Type Type Type Type Single Type 20 23 20P 23P valve 41

operated

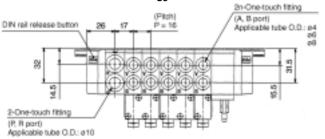
Order made

Precautions

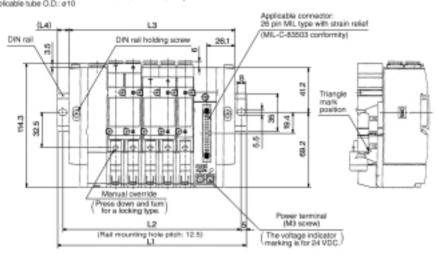








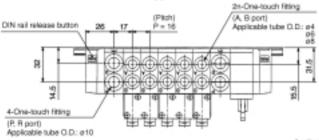
Note) Dimensions L1 to L4 of SS5Y5-45P□D-Stations D-C6 are the same as SS5Y5-45P \square D-Stations U- $^{C4}_{-C6}$.

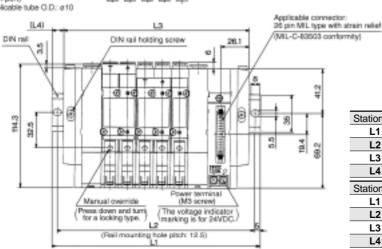


| | (Station ri) | |
|------|--------------|---------------------------------------|
| | | Block separator button (push type) |
| 72.9 | | (7.5) N mil nonsides) 47.7 |

| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 135.5 | 148 | 160.5 | 185.5 | 198 | 210.5 | 235.5 | 248 | 260.5 |
| L2 | 125 | 137.5 | 150 | 175 | 187.5 | 200 | 225 | 237.5 | 250 |
| L3 | 105 | 121 | 137 | 153 | 169 | 185 | 201 | 217 | 233 |
| 1.4 | 15 | 13.5 | 115 | 16 | 1/15 | 12.5 | 17 | 15.5 | 13.5 |

SS5Y5-45PD-Stations B-C6(26 pins)





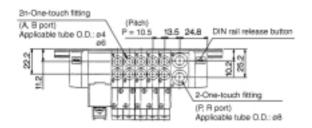
| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 148 | 173 | 185.5 | 198 | 210.5 | 235.5 | 248 | 260.5 | 285.5 | |
| L2 | 137.5 | 162.5 | 175 | 187.5 | 200 | 225 | 237.5 | 250 | 275 | |
| L3 | 123 | 139 | 155 | 171 | 187 | 203 | 219 | 235 | 251 | |
| L4 | 12.5 | 17 | 15 | 13.5 | 11.5 | 16 | 14.5 | 12.5 | 17 | |
| Stations n | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| L1 | 298 | 310.5 | 323 | 348 | 360.5 | 373 | 398 | 410.5 | 423 | 435.5 |
| L2 | 287.5 | 300 | 312.5 | 337.5 | 350 | 362.5 | 387.5 | 400 | 412.5 | 425 |
| L3 | 267 | 283 | 299 | 315 | 331 | 347 | 363 | 379 | 395 | 411 |
| L4 | 15.5 | 13.5 | 12 | 16.5 | 14.5 | 13 | 17.5 | 15.5 | 14 | 12 |



SY3000: Terminal Block 9 Pin Type/Plug-in

SS5Y3-45TU-Stations D-C4 (9 pins)

Scale: 30%



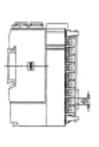


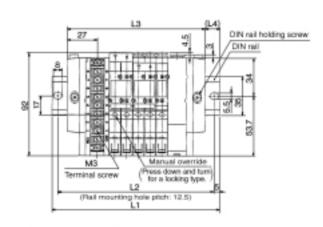
Note) Dimensions L1 to L4 of SS5Y3-45TU- $\overline{\text{Stations}}$ U- $^{\text{C4}}_{\text{C6}}$,

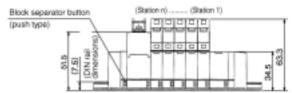
SS5Y3-45TD-Stations U-C4_{C6}, and

SS5Y3-45TD-Stations D-C4

are the same as SS5Y3-45TU-Stations D-C4

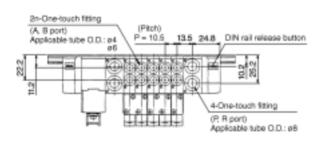




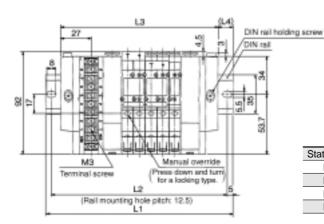


| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|------------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 123 | 135.5 | 148 | 148 | 160.5 | 173 | 185.5 |
| L2 | 112.5 | 125 | 137.5 | 137.5 | 150 | 162.5 | 175 |
| L3 | 91.5 | 102 | 112.5 | 123 | 133.5 | 144 | 154.5 |
| L4 | 15.5 | 16.5 | 17.5 | 12.5 | 13.5 | 14.5 | 15.5 |

SS5Y3-45TU-Stations B-C4 (9 pins)

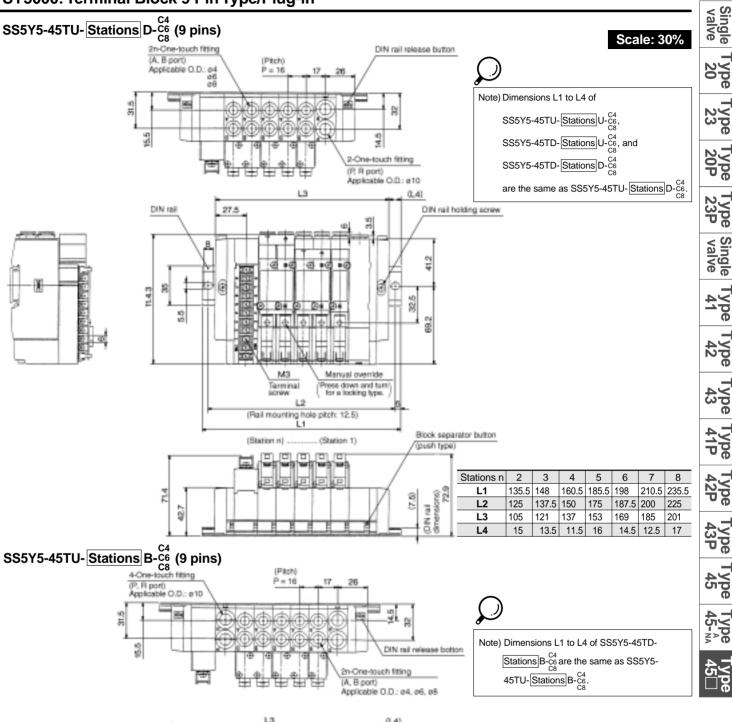


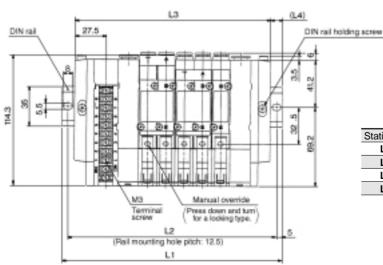




| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|------------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 135.5 | 148 | 160.5 | 173 | 185.5 | 185.5 | 198 |
| L2 | 125 | 137.5 | 150 | 162.5 | 175 | 175 | 187.5 |
| L3 | 108 | 118.5 | 129 | 139.5 | 150 | 160.5 | 171 |
| L4 | 13.5 | 14.5 | 15.5 | 16.5 | 17.5 | 12.5 | 13.5 |

SY5000: Terminal Block 9 Pin Type/Plug-in





SMC

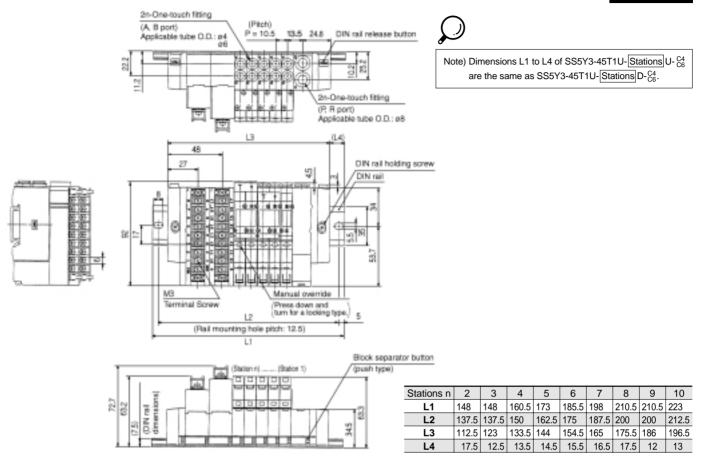
| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|------------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 148 | 173 | 185.5 | 198 | 210.5 | 235.5 | 248 |
| L2 | 137.5 | 162.5 | 175 | 187.5 | 200 | 225 | 237.5 |
| L3 | 123 | 139 | 155 | 171 | 187 | 203 | 219 |
| L4 | 12.5 | 17 | 15 | 13.5 | 11.5 | 16 | 14.5 |



SY3000: Terminal Block 18 Pin Type/Plug-in

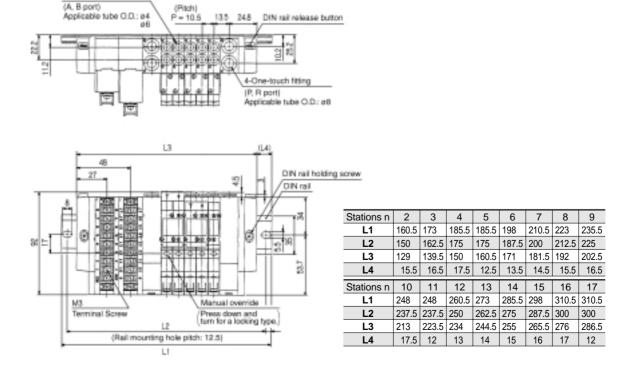
SS5Y3-45T1U-Stations D-C4 (18 pins)

Scale: 30%



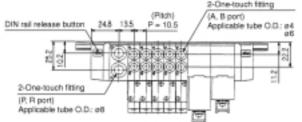
SS5Y3-45T1U-Stations B-C4 (18 pins)

2n-One-touch fitting



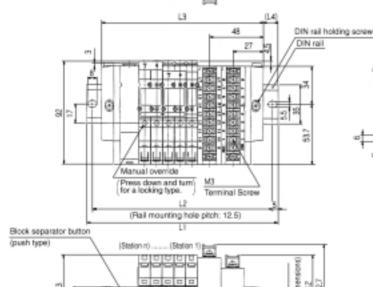
SS5Y3-45T1D-Stations U-C4 (18 pins)

Scale: 30%



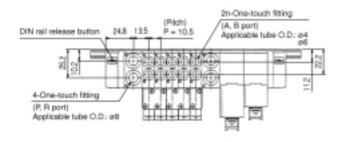


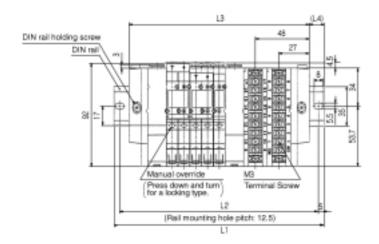
Note) Dimensions L1 to L4 of SS5Y3-45T1D- $\overline{\text{Stations}}$ D- $^{\text{C4}}_{\text{C6}}$ are the same as SS5Y3-45T1D-Stations U-C4.



| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 148 | 148 | 160.5 | 173 | 185.5 | 198 | 210.5 | 210.5 | 223 |
| L2 | 137.5 | 137.5 | 150 | 162.5 | 175 | 187.5 | 200 | 200 | 212.5 |
| L3 | 112.5 | 123 | 133.5 | 144 | 154.5 | 165 | 175.5 | 186 | 196.5 |
| L4 | 17.5 | 12.5 | 13.5 | 14.5 | 15.5 | 16.5 | 17.5 | 12 | 13 |

SS5Y3-45T1D-Stations B-C4 (18 pins)





| 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|-------|--|---|---|---|---|---|---|
| 160.5 | 173 | 185.5 | 185.5 | 198 | 210.5 | 223 | 235.5 |
| 150 | 162.5 | 175 | 175 | 187.5 | 200 | 212.5 | 225 |
| 129 | 139.5 | 150 | 160.5 | 171 | 181.5 | 192 | 202.5 |
| 15.5 | 16.5 | 17.5 | 12.5 | 13.5 | 14.5 | 15.5 | 16.5 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 248 | 248 | 260.5 | 273 | 285.5 | 298 | 310.5 | 310.5 |
| 237.5 | 237.5 | 250 | 262.5 | 275 | 287.5 | 300 | 300 |
| 213 | 223.5 | 234 | 244.5 | 255 | 265.5 | 276 | 286.5 |
| 17.5 | 12 | 13 | 14 | 15 | 16 | 17 | 12 |
| | 160.5 150 129 15.5 10 248 237.5 213 | 160.5 173 150 162.5 129 139.5 15.5 16.5 10 11 248 248 237.5 237.5 213 223.5 | 160.5 173 185.5 150 162.5 175 129 139.5 150 15.5 16.5 17.5 10 11 12 248 248 260.5 237.5 237.5 250 213 223.5 234 | 160.5 173 185.5 185.5 150 162.5 175 175 129 139.5 150 160.5 15.5 16.5 17.5 12.5 10 11 12 13 248 248 260.5 273 237.5 237.5 250 262.5 213 223.5 234 244.5 | 160.5 173 185.5 185.5 198 150 162.5 175 175 187.5 129 139.5 150 160.5 171 15.5 16.5 17.5 12.5 13.5 10 11 12 13 14 248 248 260.5 273 285.5 237.5 237.5 250 262.5 275 213 223.5 234 244.5 255 | 160.5 173 185.5 185.5 198 210.5 150 162.5 175 175 187.5 200 129 139.5 150 160.5 171 181.5 15.5 16.5 17.5 12.5 13.5 14.5 10 11 12 13 14 15 248 248 260.5 273 285.5 298 237.5 237.5 250 262.5 275 287.5 213 223.5 234 244.5 255 265.5 | 160.5 173 185.5 185.5 198 210.5 223 150 162.5 175 175 187.5 200 212.5 129 139.5 150 160.5 171 181.5 192 15.5 16.5 17.5 12.5 13.5 14.5 15.5 10 11 12 13 14 15 16 248 248 260.5 273 285.5 298 310.5 237.5 237.5 250 262.5 275 287.5 300 213 223.5 234 244.5 255 265.5 276 |

SMC

Order made

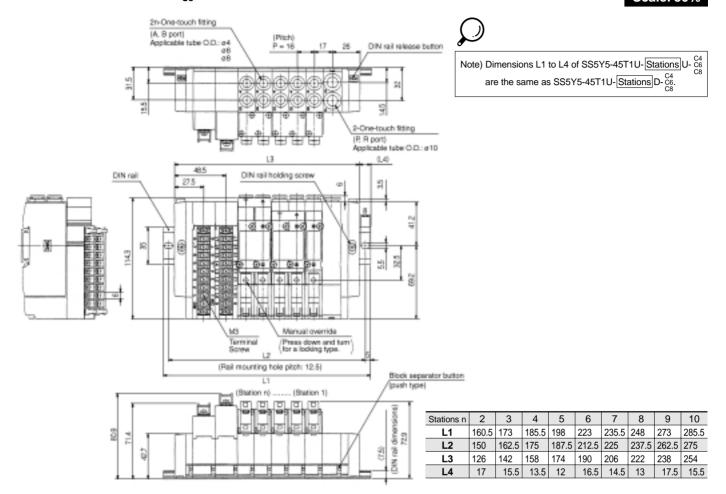
Precautions



SY5000: Terminal Block 18 Pin Type/Plug-in

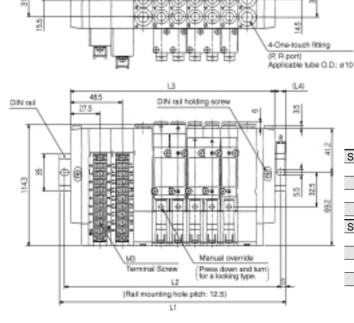
SS5Y5-45T1U-Stations D-C4 (18 pins)

Scale: 30%

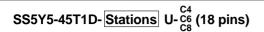


SS5Y5-45T1U-Stations B-C6 (18 pins)

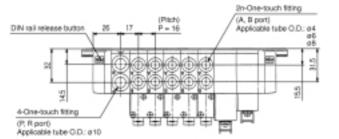
2n-One-touch fitting (A, B part) Applicable tube O.D.: p4 p5



| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 173 | 185.5 | 210.5 | 223 | 235.5 | 248 | 273 | 285.5 |
| L2 | 162.5 | 175 | 200 | 212.5 | 225 | 237.5 | 262.5 | 275 |
| L3 | 144 | 160 | 176 | 192 | 208 | 224 | 240 | 256 |
| L4 | 14.5 | 12.5 | 17 | 15.5 | 13.5 | 12 | 16.5 | 14.5 |
| Stations n | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| L1 | 298 | 323 | 335.5 | 348 | 360.5 | 385.5 | 398 | 410.5 |
| L2 | 287.5 | 312.5 | 325 | 337.5 | 350 | 375 | 387.5 | 400 |
| L3 | 272 | 288 | 304 | 320 | 336 | 352 | 368 | 384 |
| L4 | 13 | 17.5 | 15.5 | 14 | 12 | 16.5 | 15 | 13 |

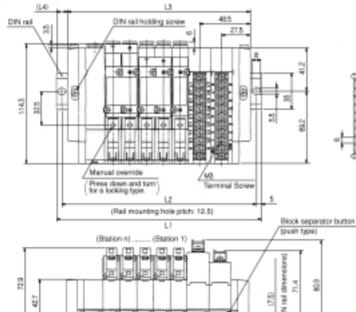


Scale: 30%



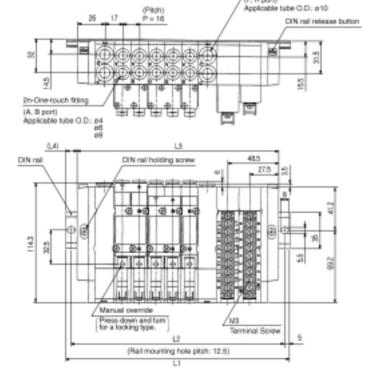


Note) Dimensions L1 to L4 of SS5Y5-45T1D-Stations D-C6 are the same as SS5Y5-45T1D-Stations U- $\overset{C4}{\underline{c6}}$.



| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 160.5 | 173 | 185.5 | 198 | 223 | 235.5 | 248 | 273 | 285.5 |
| L2 | 150 | 162.5 | 175 | 187.5 | 212.5 | 225 | 237.5 | 262.5 | 275 |
| L3 | 126 | 142 | 158 | 174 | 190 | 206 | 222 | 238 | 254 |
| L4 | 17 | 15.5 | 13.5 | 12 | 16.5 | 14.5 | 13 | 17.5 | 15.5 |

SS5Y5-45T1D-<u>Stations</u> B-C_{C8} (18 pins)



| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 173 | 185.5 | 210.5 | 223 | 235.5 | 248 | 273 | 285.5 |
| L2 | 162.5 | 175 | 200 | 212.5 | 225 | 237.5 | 262.5 | 275 |
| L3 | 144 | 160 | 176 | 192 | 208 | 224 | 240 | 256 |
| L4 | 14.5 | 12.5 | 17 | 15.5 | 13.5 | 12 | 16.5 | 14.5 |
| Stations n | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| L1 | 298 | 323 | 335.5 | 348 | 360.5 | 385.5 | 398 | 410.5 |
| L2 | 287.5 | 312.5 | 325 | 337.5 | 350 | 375 | 387.5 | 400 |
| L3 | 272 | 288 | 304 | 320 | 336 | 352 | 368 | 384 |
| L4 | 13 | 17.5 | 15.5 | 14 | 12 | 16.5 | 15 | 13 |

Order made

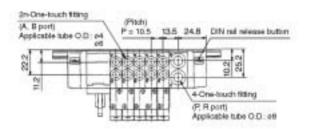
138



SY3000: PC Wiring System Compatible (Flat Ribbon Cable Type/Plug-in)

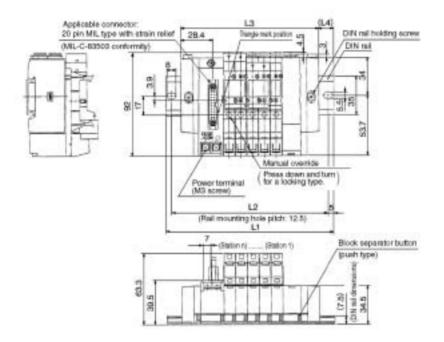
SS5Y3-45GU-Stations D-C4

Scale: 30%



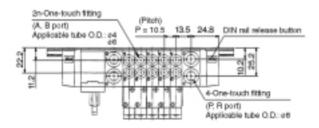


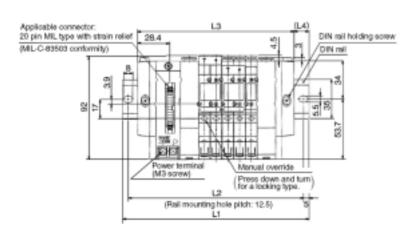
Note) Dimensions L1 to L4 of SS5Y3-45GU- $\overline{\text{Stations}}$ U- $\frac{\text{C4}}{\text{C6}}$ are the same as SS5Y3-45GU- $\overline{\text{Stations}}$ D- $\frac{\text{C4}}{\text{C6}}$.



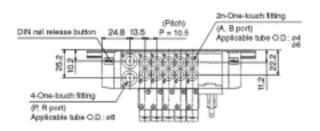
| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 123 | 135.5 | 148 | 148 | 160.5 | 173 | 185.5 | 198 | 210.5 |
| L2 | 112.5 | 125 | 137.5 | 137.5 | 150 | 162.5 | 175 | 187.5 | 200 |
| L3 | 91.5 | 102 | 112.5 | 123 | 133.5 | 144 | 154.5 | 165 | 175.5 |
| L4 | 15.5 | 16.5 | 17.5 | 12.5 | 13.5 | 14.5 | 15.5 | 16.5 | 17.5 |

SS5Y3-45GU-Stations B-C4



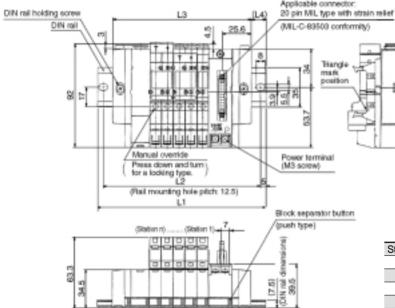


| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|-------|--------------|-------|--------------|-------|--------------|-------|-------|-------|
| L1 | 135.5 | 148 | 160.5 | 173 | 185.5 | 185.5 | 198 | 210.5 | 223 |
| L2 | 125 | 137.5 | 150 | 162.5 | 175 | 175 | 187.5 | 200 | 212.5 |
| L3 | 108 | 118.5 | 129 | 139.5 | 150 | 160.5 | 171 | 181.5 | 192 |
| L4 | 13.5 | 14.5 | 15.5 | 16.5 | 17.5 | 12.5 | 13.5 | 14.5 | 15.5 |
| Stations n | 11 | 12 | 13 | 14 | 15 | 16 | | | |
| | | | 10 | 17 | 10 | 10 | | | |
| L1 | 235.5 | | 248 | 260.5 | - | 285.5 | | | |
| L1 L2 | | 248 | _ | 260.5 | - | 285.5 | | | |
| | 235.5 | 248 237.5 | 248 | 260.5 250 | 273 | 285.5 275 | | | |



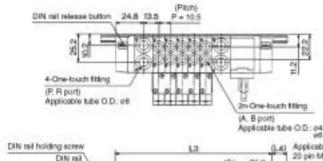


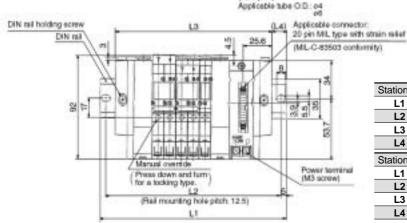
Note) Dimensions L1 to L4 of SS5Y3-45GD-Stations D-C4 are the same as SS5Y3-45GD-Stations U-C4-C6-



| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 123 | 135.5 | 148 | 148 | 160.5 | 173 | 185.5 | 198 | 210.5 |
| L2 | 112.5 | 125 | 137.5 | 137.5 | 150 | 162.5 | 175 | 187.5 | 200 |
| L3 | 91.5 | 102 | 112.5 | 123 | 133.5 | 144 | 154.5 | 165 | 175.5 |
| L4 | 15.5 | 16.5 | 17.5 | 12.5 | 13.5 | 14.5 | 15.5 | 16.5 | 17.5 |

SS5Y3-45GD-Stations B-C4





| 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|-------|--|---|---|---|---|---|--|---|
| 135.5 | 148 | 160.5 | 173 | 185.5 | 185.5 | 198 | 210.5 | 223 |
| 125 | 137.5 | 150 | 162.5 | 175 | 175 | 187.5 | 200 | 212.5 |
| 108 | 118.5 | 129 | 139.5 | 150 | 160.5 | 171 | 181.5 | 192 |
| 13.5 | 14.5 | 15.5 | 16.5 | 17.5 | 12.5 | 13.5 | 14.5 | 15.5 |
| 11 | 12 | 13 | 14 | 15 | 16 | | | |
| 235.5 | 248 | 248 | 260.5 | 273 | 285.5 | | | |
| 225 | 237.5 | 237.5 | 250 | 262.5 | 275 | | | |
| 202.5 | 213 | 223.5 | 234 | 244.5 | 255 | | | |
| 16.5 | 17.5 | 12 | 13 | 14 | 15 | | | |
| | 135.5 125 108 13.5 11 235.5 225 202.5 | 135.5 148 125 137.5 108 118.5 13.5 14.5 11 12 235.5 248 225 237.5 202.5 213 | 135.5 148 160.5 125 137.5 150 108 118.5 129 13.5 14.5 15.5 11 12 13 235.5 248 248 225 237.5 202.5 202.5 213 223.5 | 135.5 148 160.5 173 125 137.5 150 162.5 108 118.5 129 139.5 13.5 14.5 15.5 16.5 11 12 13 14 235.5 248 248 260.5 225 237.5 237.5 250 202.5 213 223.5 234 | 135.5 148 160.5 173 185.5 125 137.5 150 162.5 175 108 118.5 129 139.5 150 13.5 14.5 15.5 16.5 17.5 11 12 13 14 15 235.5 248 248 260.5 273 225 237.5 237.5 250 262.5 202.5 213 223.5 234 244.5 | 135.5 148 160.5 173 185.5 185.5 125 137.5 150 162.5 175 175 108 118.5 129 139.5 150 160.5 13.5 14.5 15.5 16.5 17.5 12.5 11 12 13 14 15 16 235.5 248 248 260.5 273 285.5 225 237.5 237.5 250 262.5 275 202.5 213 223.5 234 244.5 255 | 135.5 148 160.5 173 185.5 185.5 198 125 137.5 150 162.5 175 175 187.5 108 118.5 129 139.5 150 160.5 171 13.5 14.5 15.5 16.5 17.5 12.5 13.5 11 12 13 14 15 16 235.5 248 248 260.5 273 285.5 225 237.5 237.5 250 262.5 275 202.5 213 223.5 234 244.5 255 | 135.5 148 160.5 173 185.5 185.5 198 210.5 125 137.5 150 162.5 175 175 187.5 200 108 118.5 129 139.5 150 160.5 171 181.5 13.5 14.5 15.5 16.5 17.5 12.5 13.5 14.5 11 12 13 14 15 16 235.5 248 248 260.5 273 285.5 225 237.5 237.5 250 262.5 275 202.5 213 223.5 234 244.5 255 |

Single valve

Order made



SY5000: PC Wiring System Compatible (Flat Ribbon Cable Type/Plug-in)

(Station n).....

(Station 1)

SS5Y5-45GU-Stations D-C6 **Scale: 30%** (A, Il port) Applicable tube O.D.: 04 Note) Dimensions L1 to L4 of SS5Y5-45GU-Stations U-C6 are the same as SS5Y5-45GU-Stations D-C6 2-One-touch fitting (P. R port) Applicable tube O.O.: ø10 Applicable connector: 20 pin MIL type with strain relief (44) (NEL-C-80500 conformity) 26.9 Triangle track position DIN rail holding screw DIN rail 5 8 5 5 5 5 6 0 0 0 0 2 Power terminal (M3 screw)

Block separator button

Stations n

L1 L2

L3

3

4 5 6 7

135.5 148 160.5 185.5 198 210.5 235.5 248 260.5

125 | 137.5 | 150 | 175 | 187.5 | 200 | 225 | 237.5 | 250

105 | 121 | 137 | 153 | 169 | 185 | 201 | 217 | 233

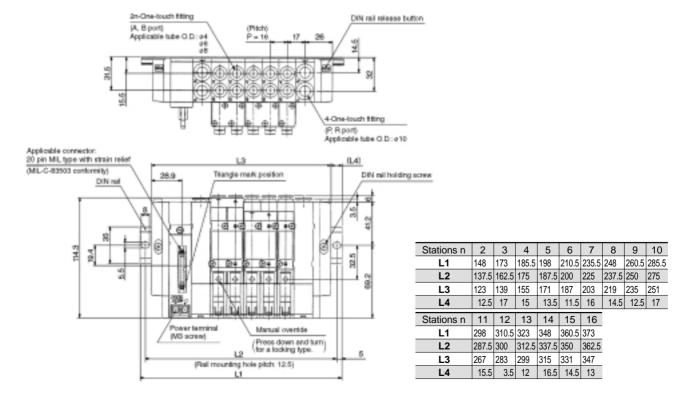
15 13.5 11.5 16 14.5 12.5 17 15.5 13.5

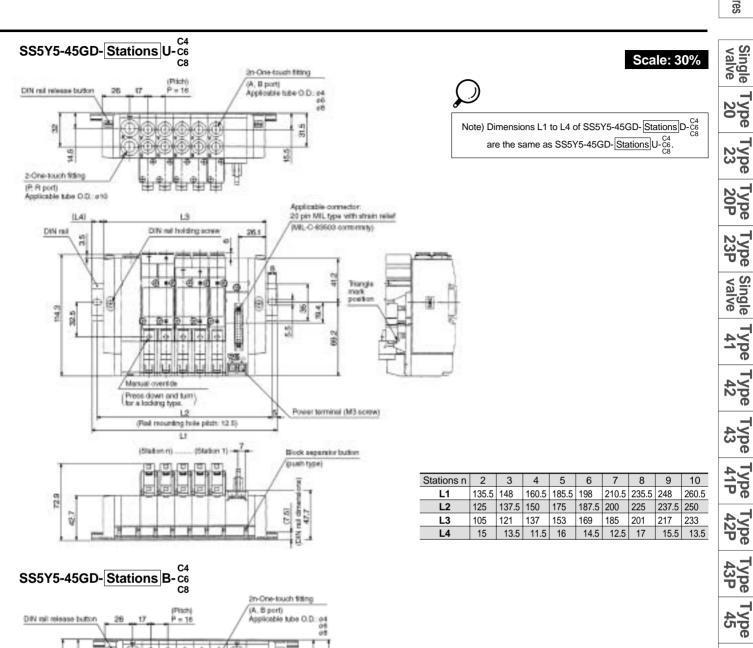
8 9 10

bush type

427







L4

15

13.5 11.5

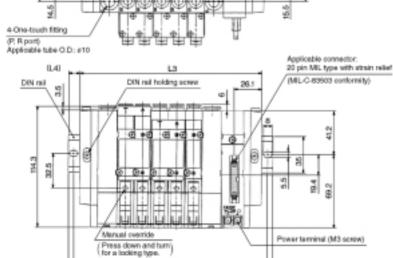
16

14.5

12.5 17

15.5 13.5

| | | C4 |
|-------------|-----------------|-------|
| SS5Y5-45GD- | Stations | B- C6 |
| | | Co |



(Rail mounting hole pitch: 12.5)

2n-One-touch fitting (A, B port) Applicable tube O.D:

| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 148 | 173 | 185.5 | 198 | 210.5 | 235.5 | 248 | 260.5 | 285.5 |
| L2 | 137.5 | 162.5 | 175 | 187.5 | 200 | 225 | 237.5 | 250 | 275 |
| L3 | 123 | 139 | 155 | 171 | 187 | 203 | 219 | 235 | 251 |
| L4 | 12.5 | 17 | 15 | 13.5 | 11.5 | 16 | 14.5 | 12.5 | 17 |
| Stations n | 11 | 12 | 13 | 14 | 15 | 16 | | | |
| L1 | 298 | 310.5 | 323 | 348 | 360.5 | 373 | | | |
| L2 | 287.5 | 300 | 312.5 | 337.5 | 350 | 362.5 | | | |
| L3 | 267 | 283 | 299 | 315 | 331 | 347 | | | |
| | | | | | | | | | |

SMC

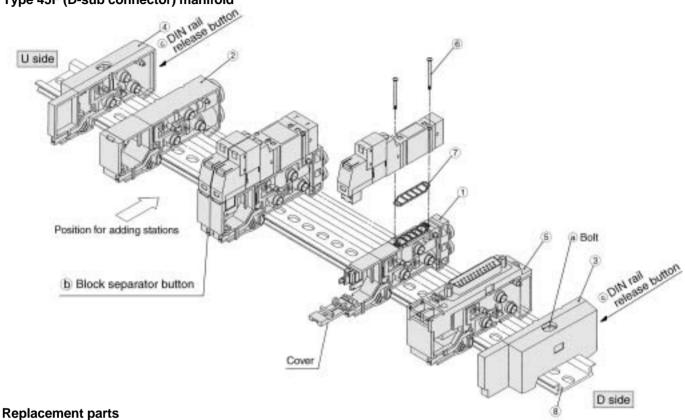
Precautions

operated Order made



Exploded View of DIN Rail Manifold

Type 45F (D-sub connector) manifold



| | | Par | t no. | | | |
|-----|---|---|---|---|---|--|
| No. | Description | SY3000 | SY5000 | N | ote | |
| 1 | Manifold block assembly | | | ers depending on the connector sp mbly part number from the table be | | |
| 2 | SUP/EXH block assembly | SX3000-51-2A | SX5000-51-2A | | ø8 One-touch fitting ø10 One-touch fitting | |
| 3 | End block assembly | SX3000-52-2A | SX5000-52-2A | For [| O side | |
| 4 | End block assembly | SX3000-53-2A | SX5000-53-2A | For l | J side | |
| 5-1 | Connector block assembly (for D-sub connector) | SX3000-64-1A | SX5000-64-1A | -1A: Positive COM -1NA: Negative COM | | |
| 5-2 | Connector block assembly (for flat ribbon cable 26 pins) | SX3000-64- ^{2A} _{2NA} -26 | SX5000-64- ^{2A} _{2NA} -26 | | 24VDC specification Note) | |
| 5-3 | Connector block assembly (for flat ribbon cable 20 pins) | SX3000-64- ^{2A} _{2NA} -20 | SX5000-64- ^{2A} _{2NA} -20 | -2A: Positive COM -2NA: Negative COM | · | |
| 5-4 | Connector block assembly (for flat ribbon cable10 pins) | SX3000-64- ^{2A} _{2NA} -10 | SX5000-64- ^{2A} _{2NA} -10 | | | |
| 5-5 | Connector block assembly (for terminal block 2 to 8 stations [T, T1]) | SX3000-64-3A | SX5000-64-3A | Docitive COM non | ative COM common | |
| 5-6 | Connector block assembly (for terminal block 9 to 17 stations [T1]) | SX3000-64-8A | SX5000-64-8A | Positive COM, neg | ative COM common | |
| 6 | Round head combination screw | SY3000-23-4 | M3 x 26 (Flat nickel plated) | | | |
| 7 | Gasket | SX3000-57-4 | SX5000-57-5 | | | |
| 8 | DIN rail | VZ1000 |)-11-1-□ | Refer to page 98. | | |

Note 2) Two m

Note 1) The numbers 5-1 through 5-4 are 24VDC specification. For 12VDC specification, add -12V at the end of the part number. Example: SX3000-64-1A-12V Note 2) Two manifold block assemblies are required for a double solenoid 3 position (dual body type).

Manifold block assembly part nos.

| Manifold type | Manifold block assembly part no. | Note | | |
|--------------------------------------|---|--|--|--|
| 45(N)F (D-sub connector type) | SX ₅ ³ 000-50-3A-□□ | □□: • For SY3000 C4: ø4 One-touch fitting C6: ø6 One-touch fitting | | |
| 45(N) FG (Flat ribbon cable type) | SX ³ 000-50-5A-□□ | | | |
| 45G PC wiring compatible | 5∧ ₅ 000-50-5A-∟∟ | • For SY5000 C4: Ø4 One-touch fitting | | |
| 45 T (Terminal block type) | SX ₅ ³ 000-50-7A-□□ | C6: Ø6 One-touch fitting C8: Ø8 One-touch fitting | | |



Manifold Base Expansion

Loosen bolts (a) which hold the manifold block until it begins to turn idly. (While pressing down the DIN rail release buttons (c), remove the manifold base from the DIN rail.)

Since stations are added on the U side, press the manifold block assembly separator button (b) on the U side until it locks, and then break the connection between block assemblies.

Separate the connector block assembly in the same manner as step 2, and remove the connector mounting screw as shown in

Loosen the valve mounting screw on the U side, remove the valve, and then take out the receptacle housing. (See Figure 2.)

Insert the common wire (red), of the manifold block assembly to be added, into the pin insertion section (N mark) of the receptacle housing, which was taken out in step 4. Mount this to the manifold block and remount the removed valve.

On the U side, mount the manifold block assembly to be added onto the DIN rail as shown in Figure 3. Refer to the circuit diagram and insert the lead wire (black) as shown in Figure 4.

Connect the manifold block assemblies by pressing them together until a click is heard. Put the lead wire inside the manifold block and close the lid, making sure that the lead wire does not get caught.

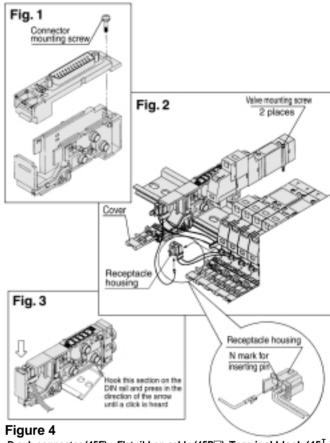
Hold the block assemblies lightly so that there is no space between them and secure them on the DIN rail by tightening bolts (a). **△ Caution** (Tightening torque: 1.4N·m)

⚠ Caution

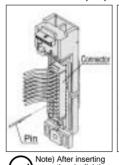
3

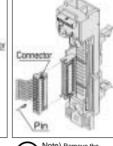
6

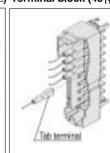
- Note 1) Depending on the connector type, there is a limit to the number of solenoids that be used with this manifold. Manifold stations that can be added cannot exceed the number of usable solenoids
- Note 2) Note that manifold block assemblies are always added on the U side since the wiring to each connector is made sequentially from the D side.
- Note 3) When disassembly and assembly are performed, insufficient connection of blocks or tightening of bolts (a) will cause air leakage. Be sure to confirm that there is no space between the manifold blocks and they are firmly secured on the DIN rail before supplying air. After supplying air, confirm that there is no air



D-sub connector (45F) Flat ribbon cable (45P \square) Terminal block (45 $^{\text{T}}_{11}$)







the pin, lightly pull the lead wire to confirm that the pins are locked.

Note) Remove the connector before pins, lightly pull the that the pins are

Note) Insert tab terminals completely to the end.

How to Replace Fitting Assemblies

By replacing manifold block fitting assemblies on a type 45 manifold, the port size of the A and B ports can be changed.

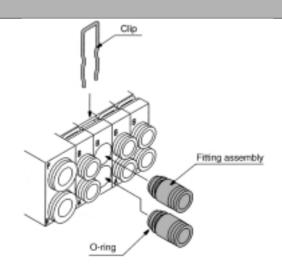
To replace these parts, remove the clip with a flat head screw driver after the valve has been removed. Insert the fitting assemblies, and then reinsert the clip so that it does not protrude from the manifold block.

Fitting assembly part nos.

| Port size Series | SY3000 | SY5000 |
|----------------------|----------------|----------------|
| ø4 One-touch fitting | VVQ1000-50A-C4 | VVQ1000-51A-C4 |
| ø6 One-touch fitting | VVQ1000-50A-C6 | VVQ1000-51A-C6 |
| ø8 One-touch fitting | | VVQ1000-51A-C8 |

Note 1) Fitting assemblies for P and R ports cannot be changed.

Note 2) Do not scratch or put foreign matter on the O-ring, as this will cause air leakage



operateo

made



SY3000/5000 Base Mounted Type Manifold **Stacking Type/DIN Rail Mount Serial Transmission** (Integrated)

How to Order Manifolds

SS5Y 3 Manifold series **3** SY3000 **5** SY5000 SI unit type Symbol Specification

| 0 | Without SI unit |
|----|------------------------------------|
| Α | General purpose type: Series EX300 |
| В | MELSECNET/MINI-S3 |
| С | SYSBUS |
| D | Satellite I/O Link |
| E | MEWNET-F |
| F1 | Uni-wire (16 output) |
| G | Allen-Bradley Remote I/O |
| Н | Uni-wire H system |
| J1 | S-Link (16 outputs) |
| J2 | S-Link (8 outputs) |
| K | T Link Mini |
| Q | DeviceNet |
| R1 | CompoBus/S (16 outputs) |
| R2 | CompoBus/S (8 outputs) |
| U | JEMANET |
| V | CC-Link |
| | *** |



Note 1) With general purpose types, a transmission unit is required on the CPU side.

Note 2) Even without an SI unit, the length of the DIN rail can accommodate an SI

SI unit part nos.

Note) Refer to page 148 for the full descriptions and part numbers of SI units.

Stations •

| Symbol | Stations | Note |
|--------|-------------|-----------------------------|
| 02 | 2 stations | Single wiring specification |
| : | : | (Up to 16 solenoids |
| 16 | 16 stations | applicable) |



Note 1) Includes the number of blanking plate

Note 2) Two manifold stations are required for double solenoid 3 position valves (dual body type).

SUP/EXH block assembly mounting position

| Symbol | Mounting position | Applicable stations | | | |
|--------|------------------------|---------------------|--|--|--|
| U | U side | 2 to 10 stations | | | |
| D | D side | 2 to 10 stations | | | |
| В | Both sides | 2 to 16 stations | | | |
| М* | Special specifications | | | | |

* For special specifications, order separately on a manifold

A/B port size ●

| SY3000 | | | | | | |
|--------|----------------------|--|--|--|--|--|
| Symbol | Port size | | | | | |
| C4 | ø4 One-touch fitting | | | | | |
| C6 | ø6 One-touch fitting | | | | | |
| M* | Mixed | | | | | |

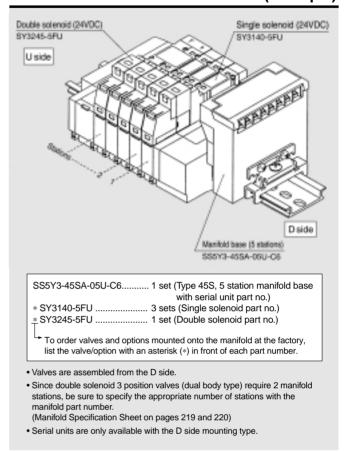
| SY5000 | | | | | |
|--------|----------------------|--|--|--|--|
| Symbol | Port size | | | | |
| C4 | ø4 One-touch fitting | | | | |
| C6 | ø6 One-touch fitting | | | | |
| C8 | ø8 One-touch fitting | | | | |
| | | | | | |

Mixed

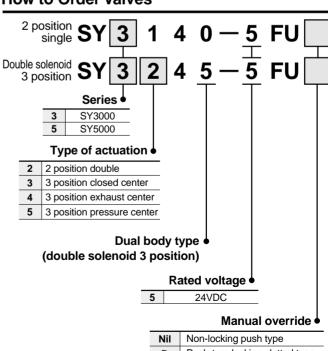
 M^*

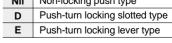
When a DIN rail longer than the specified stations is necessary, indicate the number of required stations. (Max. 20 stations)

How to Order Manifold Assemblies (Example)



How to Order Valves







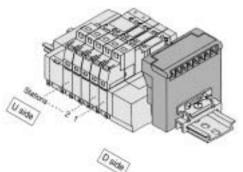
^{*} For mixed specifications, order separately on a manifold specification sheet.

Type SB compatible with

Mitsubishi Electric Corporation

MELSECNET/MINI-S3 Data Link System

- The serial transmission system minimizes the number of wire connections and saves space.
- 16 stations maximum (For 9 stations or more, indicate on a manifold specification sheet.)

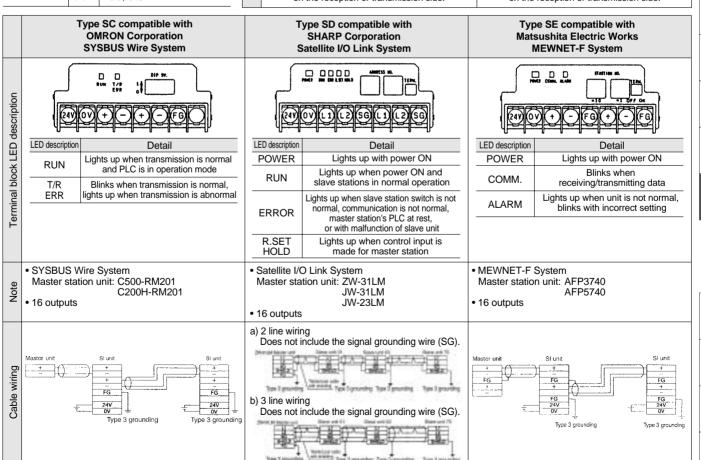


- V
- A

| (Vers) | 1 | |) description | | | [av | 0) (0) (0) (0) (0) (0) (0) | |
|-----------------------------------|---------|---|----------------|---|---|-----------------|--|--|
| ~ | | A COMPANY | LED | LED description | Detail | LED description | Detail | |
| | 53 | 4- | | TRD | Lights up when receiving data | POWER | Lights up with power input | |
| | 4 | 2000 | Terminal block | RUN/ERR | Blinks when receiving normal data, lights up when receiving | RUN | Lights up when normally transmitting data with master station | |
| | | | ni Lie | | abnormal data | RD | Lights up when receiving data | |
| • Valves are n | umhere | ed from the D side. | Lell | | | SD | Lights up when receiving data | |
| | of 16 s | olenoids (16 stations with | | | | ERR. | Lights up when error occurs during data reception, OFF when normal | |
| | | | Note | manufactu EX300-TM EX300-TT EX300-TF EX300-T0 | o the I/O card of transmission PLC rers to enable serial transmission. IB1for Mitsubishi Electric Corporation A1for OMRON corporation U1for Fuji Electric Co., Ltd. D1 General purpose points controlled per transmission unit. | Master uni | IET/MINI-S3 Data Link System t: AJ71PT32-S3 AJ71T32-S3 A1SJ71PT32-S3 , 2 occupied stations | |
| | | | | T unit | OB unit SI unit SI unit | SI | I manifold solenoid valves | |
| Item | | Specification | D | S1 - 0 | S1 S2 S2 S2 | 390 | 86 896 896 | |
| External power supply 24VDC±10% | | 24VDC±10% | wirin | SG - 0V | R1 R1 R2 | | | |
| Current consumption (Inside unit) | 0.1A | SA, SB, SD, SE, SF1, SG, SJ1, SJ2, SK, SR1, SR2, SH, SU, SV | Cable wiring | . 6. | FG 34V # 24V # 24V # 24V | I L | n -len len | |
| (maide unit) | 0.3A | SC, SQ | | * Groun on the | d the shielding of the shield wire reception or transmission side. | | nd the shielding of the shield wire reception or transmission side. | |
| | Туре | SC compatible with | | Туре | SD compatible with | Тур | pe SE compatible with | |

Type SA compatible with

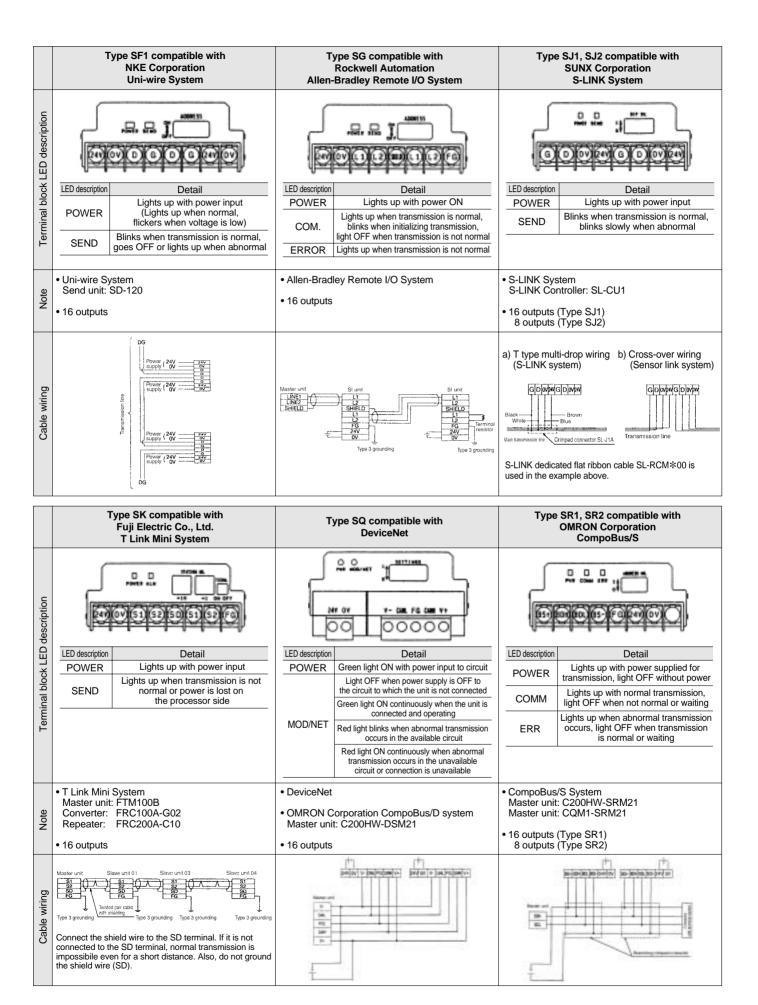
Series EX300



operated

Precautions





SI unit part nos.

Cable wiring

Terminal block LED description

| Symbol | Specification | SS5Y□-45S | Symbol | Specification | SS5Y□-45S |
|--------|--|------------|--------|--|------------|
| Α | General purpose type: Series EX300 | EX322-S001 | J1 | SUNX Corporation: S-LINK System (16 outputs) compatible | EX122-SSL1 |
| В | Mitsubishi Electric Corporation: MELSECNET/MINI-S3 Data Link System compatible | EX122-SMB1 | J2 | SUNX Corporation: S-LINK System (8 outputs) compatible | EX122-SSL2 |
| С | OMRON Corporation: SYSBUS Wire System compatible | EX122-STA1 | K | Fuji Electric Co., Ltd: T Link Mini System compatible | EX122-SFU1 |
| D | SHARP Corporation: Satellite I/O Link System compatible | EX122-SSH1 | Q | DeviceNet, OMRON Corporation: CompoBus/D compatible | EX122-SDN1 |
| E | Matsushita Electric Works: MEWNET-F System compatible | EX122-SPA1 | R1 | OMRON Corporation: CompoBus/S (16 outputs) compatible | EX122-SCS1 |
| F1 | NKE Corporation: Uni-wire System (16 outputs) compatible | EX122-SUW1 | R2 | OMRON Corporation: CompoBus/S (8 outputs) compatible | EX122-SCS2 |
| G | Rockwell Automation: Allen-Bradley Remote I/O System compatible | EX122-SAB1 | U | JEMANET (JPCN-1) compatible | EX122-SJN1 |
| Н | NKE Corporation: Uni-wire H System compatible | EX122-SUH1 | ٧ | Mitsubishi Electric Corporation: CC-LINK System compatible | EX122-SMJ1 |

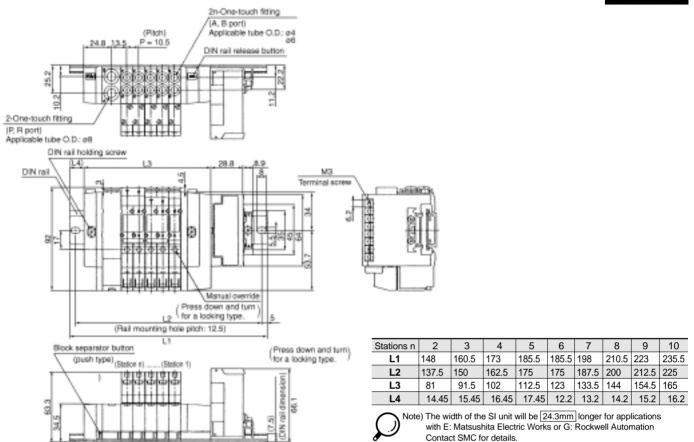
SMC



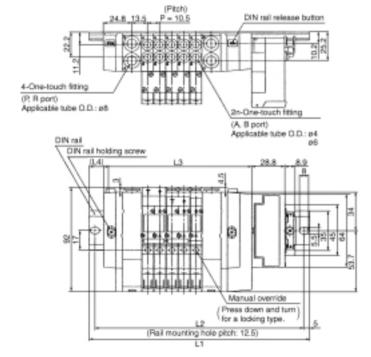
Series SY3000: Serial Transmission/Plug-in

SS5Y3-45S□-Stations U-C4

Scale: 30%



SS5Y3-45S□-Stations B-C4

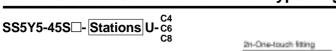


| | _ | | | | _ | _ | _ | _ | |
|------------|--------------|--------------|--------------|--------------|--------------|--------------|-------|-------|-------|
| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| L1 | 160.5 | 173 | 185.5 | 198 | 210.5 | 223 | 223 | 235.5 | 248 |
| L2 | 150 | 162.5 | 175 | 187.5 | 200 | 212.5 | 212.5 | 225 | 237.5 |
| L3 | 97.5 | 108 | 118.5 | 129 | 139.5 | 150 | 160.5 | 171 | 181.5 |
| L4 | 12.45 | 13.45 | 14.45 | 15.45 | 16.45 | 17.45 | 12.2 | 13.2 | 14.2 |
| | | | | | | | | | |
| Stations n | 11 | 12 | 13 | 14 | 15 | 16 | | | |
| Stations n | 11 260.5 | 12 273 | 13 285.5 | 14 285.5 | 15 298 | 16 310.5 | | | |
| | | | - | | - | | | | |
| L1 | 260.5 | 273 | 285.5 | 285.5 | 298 | 310.5 | | | |
| L1 L2 | 260.5 250 | 273 262.5 | 285.5 275 | 285.5 275 | 298 287.5 | 310.5 300 | | | |

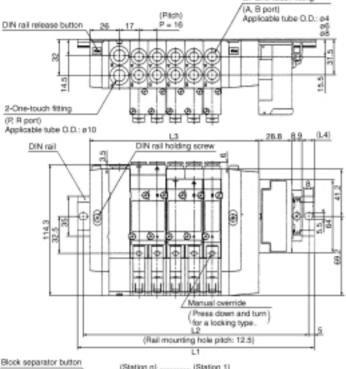


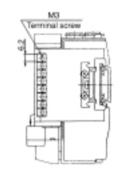
Note) The width of the SI unit will be 24.3mm longer for applications with E: Matsushita Electric Works or G: Rockwell Automation Contact SMC for details.

Series SY5000: Serial Transmission Type/Plug-in



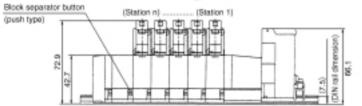
Scale: 30%

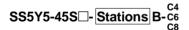


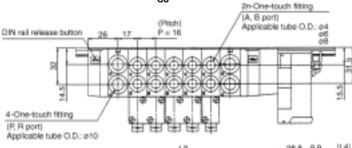


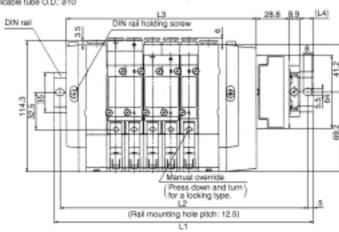
| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 173 | 185.5 | 198 | 210.5 | 235.5 | 248 | 260.5 | 285.5 | 298 |
| L2 | 162.5 | 175 | 187.5 | 200 | 225 | 237.5 | 250 | 275 | 287.5 |
| L3 | 100 | 116 | 132 | 148 | 164 | 180 | 196 | 212 | 228 |
| L4 | 17.45 | 15.7 | 13.95 | 12.2 | 16.7 | 14.95 | 13.2 | 17.7 | 15.95 |

Note) The width of the SI unit will be 24.3mm longer for applications with E: Matsushita Electric Works or G: Rockwell Automation Contact SMC for details.









| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 185.5 | 198 | 223 | 235.5 | 248 | 260.5 | 285.5 | 298 | 310.5 |
| L2 | 175 | 187.5 | 212.5 | 225 | 237.5 | 250 | 275 | 287.5 | 300 |
| L3 | 118 | 134 | 150 | 166 | 182 | 198 | 214 | 230 | 246 |
| L4 | 14.7 | 12.95 | 17.45 | 15.7 | 13.95 | 12 | 16.5 | 14.95 | 13.2 |
| Stations n | 11 | 12 | 13 | 14 | 15 | 16 | | | |
| L1 | 335.5 | 348 | 360.5 | 373 | 398 | 410.5 | | | |
| L2 | 325 | 337.5 | 350 | 362.5 | 387.5 | 400 | | | |
| L3 | 262 | 278 | 294 | 310 | 326 | 342 | | | |
| | | | 14.2 | 12.45 | 16.95 | 15.2 | | | |

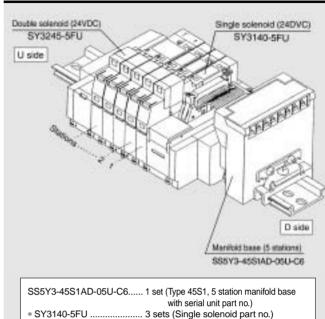
Note) The width of the SI unit will be 24.3mm longer for applications with E: Matsushita Electric Works or G: Rockwell Automation Contact SMC for details.

SMC

operated

Order made

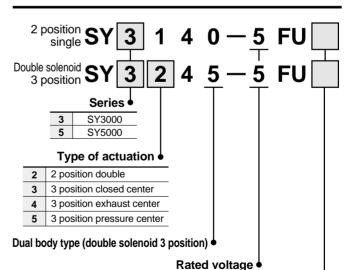
How to Order Manifold Assemblies (Example)



To order valves and options mounted onto the manifold at the factory, list the valve/option with an asterisk (*) in front of each part number.

- Valves are assembled from the D side regardless of the mounting position of the SI unit.
- Since double solenoid 3 position valves (dual body type) require 2 manifold stations, be sure to specify the appropriate number of stations with the manifold part number.
 (Manifold Specification Sheet on pages 221 and 222)

How to Order Valves

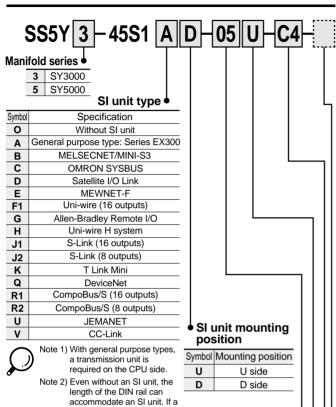


5

24VDC Manual override

| Nil | Non-locking push type |
|-----|--------------------------------|
| D | Push-turn locking slotted type |
| E | Push-turn locking lever type |

How to Order Manifolds



Stations •

| Symbol | Stations | Note |
|--------|----------|-----------------------------|
| 02 | 2 | Single wiring specification |
| | : | (Up to 16 solenoids |
| 16 | 16 | applicable) |



Note 1) Includes the number of blanking plate assemblies

shorter length for the DIN rail

is desired (same as type

45□), add "0" for option at

the end of the part number.

Note 3) Refer to pages 146 through 148 for SI unit specifications.

Note 2) Two manifold stations are required for double solenoid 3 position valves (dual body type).

SUP/EXH block assembly mounting position

| ı | Symbol | Mounting position | Applicable stations |
|---|--------|-------------------|---------------------|
| | U | U side | 2 to 10 stations |
| | D | D side | 2 to 10 stations |
| | В | Both sides | 2 to 16 stations |
| | M* | Special s | pecifications |

For special specifications, order separately on a manifold specification sheet.

A/B port size •

SY3000

| 0.000 | • |
|--------|----------------------|
| Symbol | Port size |
| C4 | ø4 One-touch fitting |
| C6 | ø6 One-touch fitting |
| M* | Mixed |
| | |

Symbol Port size C4 Ø4 One-touch fitting C6 Ø6 One-touch fitting C8 Ø8 One-touch fitting

Option 6

When a DIN rail longer than the specified stations is necessary, indicate the number of required stations. (Max. 20 stations)

Mixed

SI unit part nos.

Note) Refer to page 148 for the full descriptions and part numbers of SI units.

SY5000

M*



Note) For terminal block LED descriptions and cable wiring of SI units, refer to pages 146 through 148.



For external pilot specifications and built-in silencer, refer to page 184.

ie Type Type

Type Type 7

Single valve

ype Typ 41 42

Type 1

/pe Typ 1P 42

1ype 43P

15 Ty

Type 45□

^{*} For mixed specifications, order separately on a manifold specification sheet.

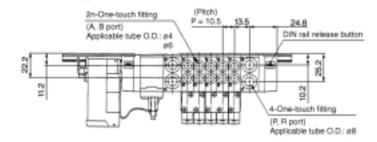


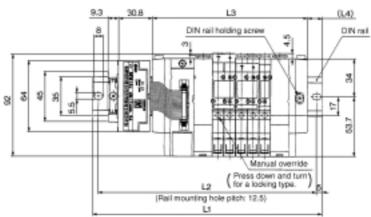
Series SY3000: Serial Transmission/Plug-in

SS5Y3-45S1□U-Stations U-C4 Scale: 30% (Pitch) 2n-One-tough fitting 24.8 (A, B port) Applicable tube O.D.: e4 DIN rail release button Note) Dimensions L1 to L4 of SS5Y3-45S1□U-262 Stations U-C4 are the same as SS5Y3-45S1□U-Stations D-C4. 0.2 2-One-touch (P. R port) Applicable tube O.D.: e8 (L4) ма DIN rail holding screw DIN rail Terminal screw 3 Φ 苗 8 53.7 Manual override Press down and turn for a locking type. Block separator button (push type) (Rail mounting hole pitch: 12.5) Stations n 2 3 4 5 6 8 9 10 198 210.5 223 235.5 L1 160.5 173 185.5 198 248 (Station n) (Station 1) L2 150 162.5 175 187.5 187.5 200 212.5 225 237.5 91.5 102 112.5 123 L3 133.5 144 154.5 165 175.5 L4 14 15 16 17 12 13 14 | 15 63.3 8 (3.5)

34.6

SS5Y3-45S1□U-Stations B-C4





| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|-------|-------|--------------|--------------|--------------|--------------|-------|-------|-------|
| L1 | 173 | 185.5 | 198 | 210.5 | 223 | 235.5 | 235.5 | 248 | 260.5 |
| L2 | 162.5 | 175 | 187.5 | 200 | 212.5 | 225 | 225 | 237.5 | 250 |
| L3 | 108 | 118.5 | 129 | 139.5 | 150 | 160.5 | 171 | 181.5 | 192 |
| L4 | 12 | 13 | 14 | 15 | 16 | 17 | 12 | 13 | 14 |
| Stations n | 11 | 12 | 13 | 14 | 15 | 16 | | | |
| | 070 | | | | | | | | |
| | 273 | 285.5 | 298 | 298 | 310.5 | 323 | | | |
| L2 | 262.5 | 285.5 | 298 287.5 | 298 287.5 | 310.5 300 | 323 312.5 | | | |
| | _ | | | | | | | | |

Note) The width of the SI unit will be 24.3mm longer for applications with E: Matsushita Electric Works or G: Rockwell Automation Contact SMC for details.



Note) The width of the SI unit will be 24.3mm longer for applications with E: Matsushita Electric Works or G: Rockwell Automation Contact SMC for details.



Single valve

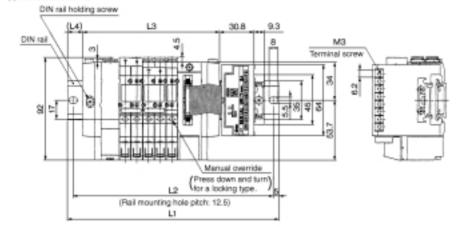




Scale: 30%

Note) Dimensions L1 to L4 of SS5Y3-45S1□D-Stations D-C4 are the same as SS5Y3-45S1□D- Stations U-C4.

(A. B port) Applicable tube O.D.: e4 24.8 DIN rail release button 2-One-touch fitting (P. Riport) Applicable tube O.D.: at



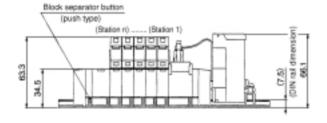
DIN rail release button

8

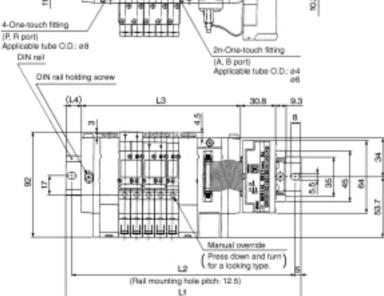
2n-One-touch fitting

4 9 10 L1 160.5 185.5 198 198 210.5 223 235.5 248 173 L2 150 162.5 175 187.5 187.5 200 212.5 225 237.5 L3 133.5 144 154.5 165 175.5 91.5 102 112.5 123 L4 16 17 12 13 14

Note) The width of the SI unit will be $\boxed{24.3 \text{mm}}$ longer for applications with E: Matsushita Electric Works or G: Rockwell Automation Contact SMC for details.



SS5Y3-45S1□D- Stations B-C4 (Pitch) P = 10.5 24.8



| | Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 7 | L1 | 173 | 185.5 | 198 | 210.5 | 223 | 235.5 | 235.5 | 248 | 260.5 |
| あ | L2 | 162.5 | 175 | 187.5 | 200 | 212.5 | 225 | 225 | 237.5 | 250 |
| 1 | L3 | 108 | 118.5 | 129 | 139.5 | 150 | 160.5 | 171 | 181.5 | 192 |
| 7 | L4 | 12 | 13 | 14 | 15 | 16 | 17 | 12 | 13 | 14 |
| 4 | Stations n | 11 | 12 | 13 | 14 | 15 | 16 | | | |
| 8 | L1 | 273 | 285.5 | 298 | 298 | 310.5 | 323 | | | |
| - | L2 | 262.5 | 275 | 287.5 | 287.5 | 300 | 312.5 | | | |

L3 202.5 213 223.5 234 244.5 255 L4 15 17 11.5 12.5 13.5 16

Note) The width of the SI unit will be 24.3mm longer for applications with E: Matsushita Electric Works or G: Rockwell Automation Contact SMC for details.

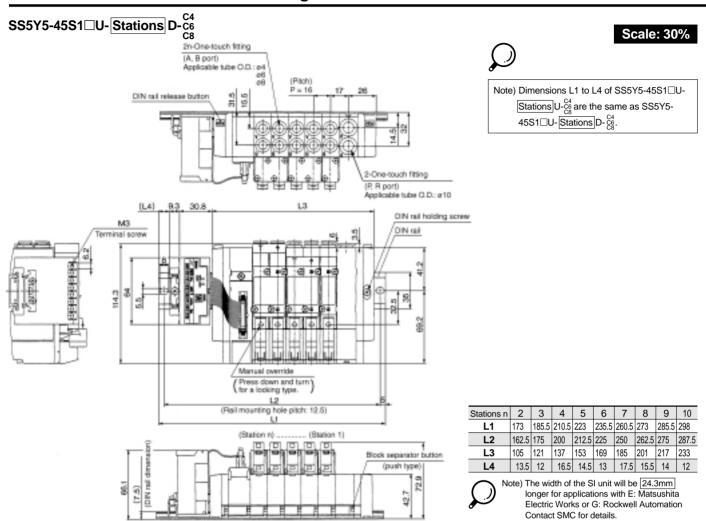
operated

Order made

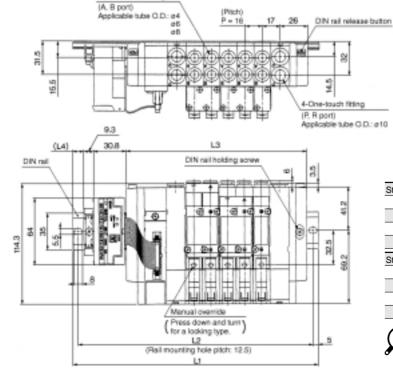
Precautions



Series SY5000: Serial Transmission/Plug-in



SS5Y5-45S1 \square U-Stations B- $^{\text{C4}}_{\text{C8}}$



2n-One-touch fitting

| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 198 | 210.5 | 223 | 235.5 | 260.5 | 273 | 285.5 | 310.5 | 323 |
| L2 | 187.5 | 200 | 212.5 | 225 | 250 | 262.5 | 275 | 300 | 312.5 |
| L3 | 123 | 139 | 155 | 171 | 187 | 203 | 219 | 235 | 251 |
| L4 | 17 | 15.5 | 13.5 | 12 | 16.5 | 14.5 | 13 | 17.5 | 15.5 |
| Stations n | 11 | 12 | 13 | 14 | 15 | 16 | | | |
| L1 | 335.5 | 348 | 373 | 385.5 | 398 | 410.5 | | | |
| L2 | 325 | 337.5 | 362.5 | 375 | 387.5 | 400 | | | |
| L3 | 267 | 283 | 299 | 315 | 331 | 347 | | | |
| L4 | 14 | 12 | 16.5 | 15 | 13 | 11.5 | | | |



Note) The width of the SI unit will be 24.3mm longer for applications with E: Matsushita Electric Works or G: Rockwell Automation Contact SMC for details.

Scale: 30%

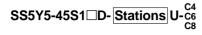


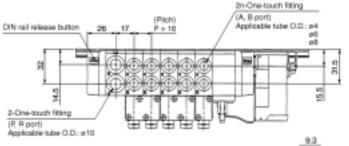
operated

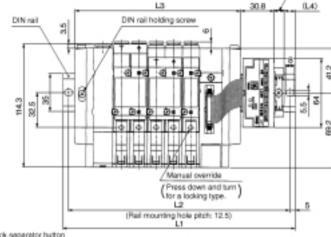
Order made

Precautions

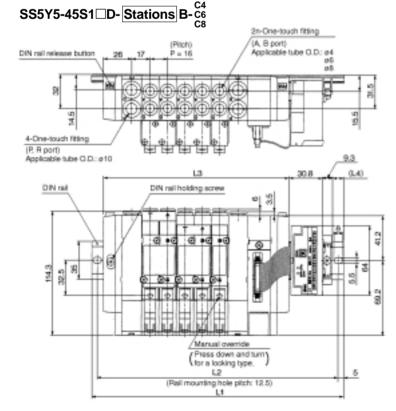






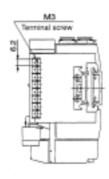


Block separator button (Station n) (Station 1) (push type) 72.9 9





Note) Dimensions L1 to L4 of SS5Y5-45S1□D-Stations D-c6 are the same as SS5Y5-45S1□D-Stations U-C4



| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 173 | 185.5 | 210.5 | 223 | 235.5 | 260.5 | 273 | 285.5 | 298 |
| L2 | 162.5 | 175 | 200 | 212.5 | 255 | 250 | 262.5 | 275 | 287.5 |
| L3 | 105 | 121 | 137 | 153 | 169 | 185 | 201 | 217 | 233 |
| L4 | 13.5 | 12 | 16.5 | 14.5 | 13 | 17.5 | 15.5 | 14 | 12 |

Note) The width of the SI unit will be 24.3mm longer for applications with E: Matsushita Electric Works or G: Rockwell Automation Contact SMC for details.

| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 198 | 210.5 | 223 | 235.5 | 260.5 | 273 | 285.5 | 310.5 | 323 |
| L2 | 187.5 | 200 | 212.5 | 225 | 250 | 262.5 | 275 | 300 | 312.5 |
| L3 | 123 | 139 | 155 | 171 | 187 | 203 | 219 | 235 | 251 |
| L4 | 17 | 15.5 | 13.5 | 12 | 16.5 | 14.5 | 13 | 17.5 | 15.5 |

| | Stations n | 11 | 12 | 13 | 14 | 15 | 16 |
|---|------------|-------|-------|-------|-------|-------|-------|
| | L1 | 335.5 | 348 | 373 | 385.5 | 398 | 410.5 |
| Ī | L2 | 325 | 337.5 | 362.5 | 375 | 387.5 | 400 |
| | L3 | 267 | 283 | 299 | 315 | 331 | 347 |
| ĺ | L4 | 14 | 12 | 16.5 | 15 | 13 | 11.5 |



Note) The width of the SI unit will be 24.3mm longer for applications with E: Matsushita Electric Works or G: Rockwell Automation Contact SMC for details.

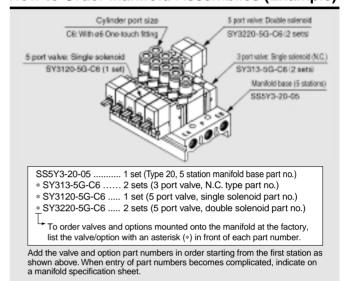
SY300/5000 3 Port Valve/Mixed Mounting Style on 5 Port valve Manifold

3 port valve can be mounted on manifol for 5 port valve.

Applicable Manifolds

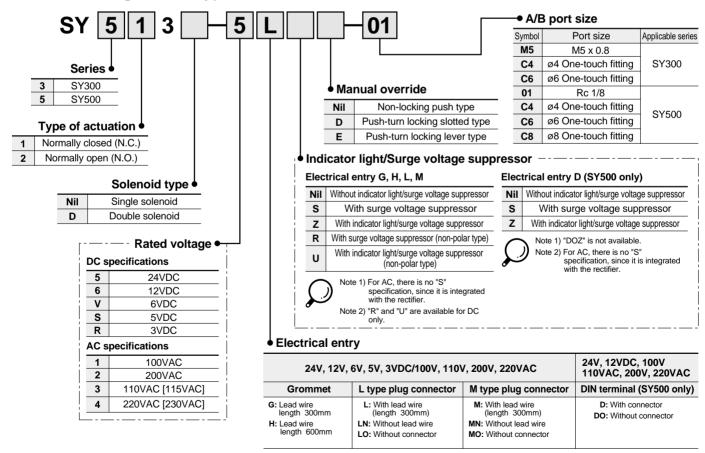
Can be mounted on all manifold types in series SY3000/5000. For manifold part numbers, refer to "How to Order Manifold" pages for each series.

How to Order Manifold Assemblies (Example)



Body Ported/How to Order Valves

Individual wiring: SS5Y₅-Type 20



Note 1) "LN" and "MN" include 2 sockets.

Note 2) "D" and "DO" are not available for SY300.

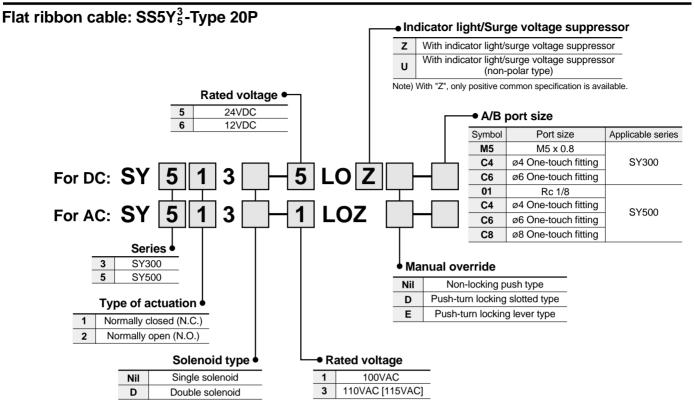
Note 3) DIN43650C standard DIN terminal "Y" is also available. Refer to page 189 for details.



Note) When single body ported solenoid valves are ordered, manifold mounting bolts and gaskets are not included. Order them separately if necessary. (Refer to page 56 for details.)



Body Ported/How to Order Valves



Base Mounted/How to Order Valves

AC specifications

2

3

4

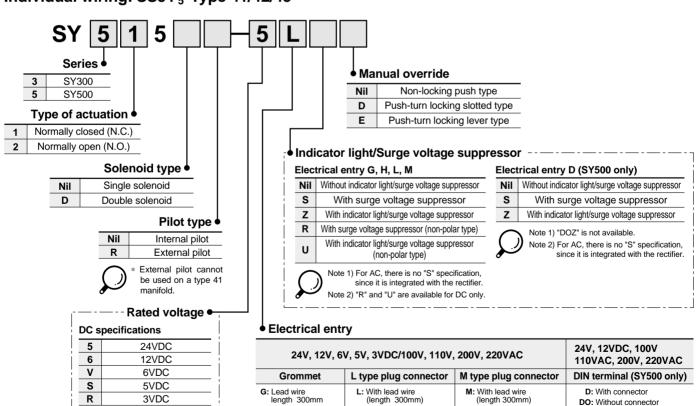
100VAC

200VAC

110VAC [115VAC]

220VAC [230VAC]





SMC

Note 2) "D" and "DO" are not available for SY300.

Note 1) "LN" and "MN" include 2 sockets

LN: Without lead wire

LO: Without connector

Note 3) DIN43650C standard DIN terminal "Y" is also available. Refer to page 189 for details.

MN: Without lead wire

MO: Without connector

H: Lead wire

length 600mm

158

valve

20P

ype Single

1ype 1y 41 4

42 I y

° 6 1√K 41

Type 42P

1ype 43P

/pe Ty

Type □

3 port

Air

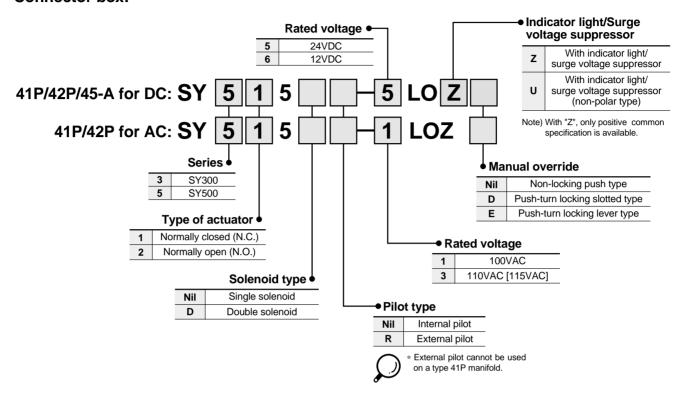
Order made

spec. sheets

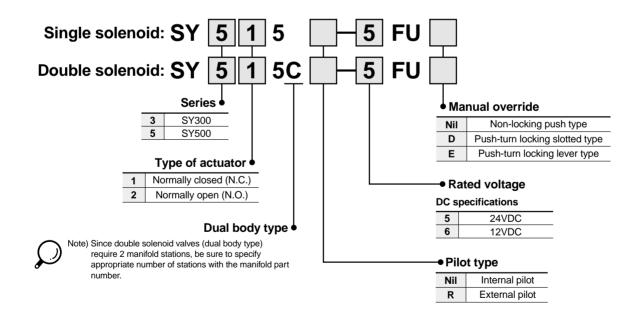
Precautions

Base Mounted/How to Order Valves

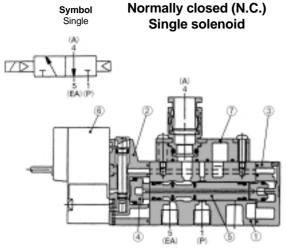
Flat ribbon cable: SS5Y₅-Type 41P/42P/45-A

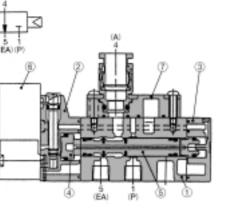


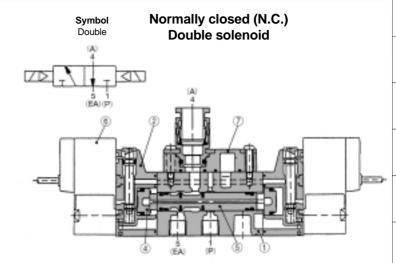
Plug-in: SS5Y₅³-Type 45□



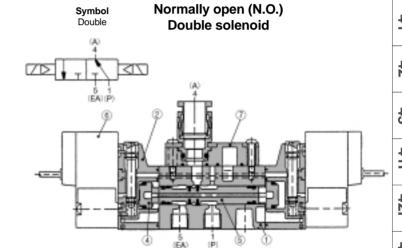
Construction







Normally open (N.O.) Symbol Single solenoid Single



Parts list

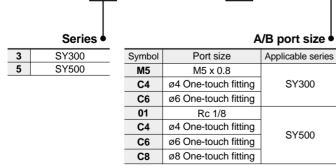
SY

| No. | Description | Material | Note |
|-----|----------------------|---|-------|
| 1 | Body | Die-cast aluminum (SY300 is die-cast zinc.) | White |
| 2 | Adaptor plate | Resin | White |
| 3 | End plate | Resin | White |
| 4 | Piston | Resin | _ |
| 5 | Spool valve assembly | Aluminum/NBR | _ |

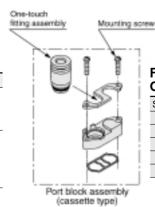
Replacement parts

| No. | Description | Part no. |
|-----|----------------------|--|
| 6 | Pilot valve assembly | Refer to "How to Order Pilot Valve Assemblies" on page 5. |
| 7 | Port block assembly | Refer to "How to Order Port Block Assemblies" below. |

How to Order Port Block Assemblies



00 - 2A



For replacement of One-touch fitting assembly only

| Symbol | Part no. | Applicable series |
|--------|----------------|-------------------|
| C4 | VVQ1000-50A-C4 | SY300 |
| C6 | VVQ1000-50A-C6 | 31300 |
| C4 | VVQ1000-51A-C4 | |
| C6 | VVQ1000-51A-C6 | SY500 |
| C8 | VVQ1000-51A-C8 | |
| | | |

Specifications

Dimensions, specifications, solenoid specifications, response time, and effective area are the same as 5 port valves.

Weights

Models/Series SY300

| Valve model | Type | Weight g | | | |
|-------------------------|--------------|----------|-------------------------|--|--|
| valve model | of actuation | Grommet | L/M type plug connector | | |
| SY3□3-□□-M5 | Single | 48 | 51 | | |
| 3 t 3 🗆 3 - 🗆 🗆 - IVI 3 | Double | 63 | 70 | | |
| CV2□2 □□ C4 | Single | 53 | 57 | | |
| SY3□3-□□-C4 | Double | 68 | 75 | | |
| 0)/0000 000 | Single | 51 | 55 | | |
| SY3□3-□□-C6 | Double | 66 | 73 | | |
| SY3□5-□□ | Single | 44 | 48 | | |
| 313⊔3-⊔⊔ | Double | 59 | 66 | | |

Models/Series SY300

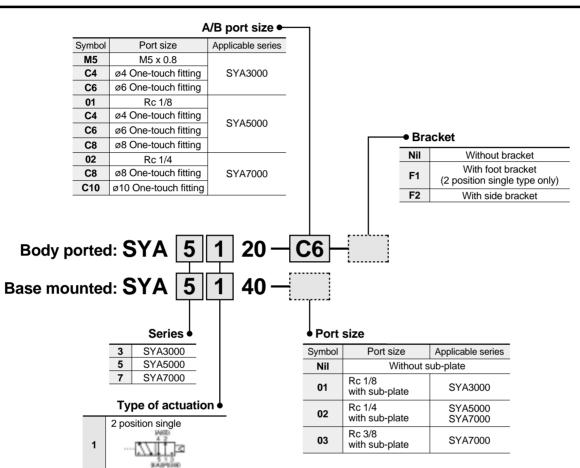
| Valve model | Type | Weight g | | | | | |
|------------------------------|--------------|----------|-------------------------|--------------|--|--|--|
| valve model | of actuation | Grommet | L/M type plug connector | DIN terminal | | | |
| SY5□3-□-01 | Single | 66 | 70 | 93 | | | |
| 5 t 5 □ 3- □ - U i | Double | 81 | 89 | 135 | | | |
| CVE□2 □ C4 | Single | 79 | 80 | 103 | | | |
| SY5□3-□-C4 | Double | 94 | 98 | 144 | | | |
| SY5□3-□-C6 | Single | 76 | 75 | 98 | | | |
| 313_30 | Double | 91 | 94 | 140 | | | |
| SY5□3-□-C8 | Single | 72 | 82 | 105 | | | |
| 315 <u></u> _3- <u>_</u> -C0 | Double | 87 | 101 | 147 | | | |
| SY5□5-□□ | Single | 52 | 56 | 79 | | | |
| 313_3 | Double | 67 | 74 | 120 | | | |



Manifold spec. Precautions sheets

5 Port Air Operated Valve SYA3000/5000/7000

How to Order



2 position double

3 position closed center

3 position exhaust center

3 position pressure center

2

3

5

How to Order Manifold Bases

Manifolds identical to the non-plug-in type manifolds for series SY are used. (Applicable to types 20, 41, 42, and 45)

SS5YA $\frac{3}{5}$ Specify the order as for SS5Y $\frac{3}{7}$.

* Add the valve and option part numbers in order.

Example>

SS5YA5-42-03-02 1 set (Type 42, 3 station manifold base part no.)

* SYA5140 1 set (Single air operated valve part no.)

* SYA5240 1 set (Double air operated valve part no.)

*SY5000-26-2A1 set (Blanking plate assembly part no.)

To order valves and options mounted onto the manifold at the factory, list the valve/option with an asterisk (*) in front of each part number.



Note) When single body ported air operated valves are ordered, manifold mounting bolts and gaskets are not included. Order them separately if necessary. (Refer to page 56 for details.)

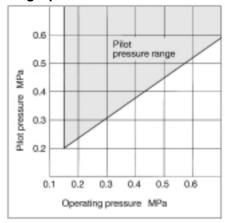
Specifications

| Fluid | | Air | | |
|------------------------------|-----------------------------------|---|--|--|
| Operating pressure range | 2 position single | 0.15 to 0.7 | | |
| Operating pressure range MPa | 2 position double | 0.1 to 0.7 | | |
| IVIFA | 3 position | 0.2 to 0.7 | | |
| | 2 position single | (0.7 x P + 0.1) to 0.7P: Operating pressure | | |
| Pilot pressure range MPa | 2 position double | 0.1 to 0.7 | | |
| IVIPa | 3 position | 0.2 to 0.7 | | |
| Ambient and fluid temperate | ure °C | Maximum 60 | | |
| Manual override | | Non-locking push type | | |
| Lubrication | | Non-lube | | |
| Mounting orientation | | Unrestricted | | |
| Impact resistance/Vibration | resistance m/s ^{2 Note)} | 150/30 | | |

Note) Impact resistance: No malfunction resulted from the impact test using a drop impact tester. The test was performed one time each in the axial and right angle directions of the main valve, for both ON and OFF states of the pilot signal. (Value in the initial stage)

Vibration resistance: No malfunction occurred in a one-sweep test between 8.3 and 2000Hz. Test was performed in the axial and right angle directions of the main valve for both ON and OFF states of the pilot signal. (Value in the initial stage)

Pilot pressure range for single pilot



Models/Series SYA3□20 (Body ported)

| Valve model | Type of actuation | | Type of actuation Pilot Port size | | | Effective area mr | Weight g | |
|-------------|-------------------|------------------|-----------------------------------|-----------|---------------------------------|------------------------------|-----------------------------|----------|
| valve model | Type or a | actuation | port size | P, EA, EB | A, B | P to A/B | A/B to EA/EB | weight g |
| | 2 position | Single Double | | | | 3.6 (0.2) | 3.78 (0.21) | 35 37 |
| SYA3□20-M5 | | Closed center | | | M5 x 0.8 | 3.6 (0.2) | 3.42 (0.19) | 37 |
| | 3 position | Exhaust center | | | WIO X 0.0 | 3.6 (0.2) | 3.78 (0.21) {2.7 (0.15)} | 39 |
| | | Pressure center | | | | 3.96 (0.22) {2.88 (0.16)} | 3.6 (0.2) | |
| | 2 position | Single | | | C4 (ø4 One-touch) fitting | 3.42 (0.19) | 3.6 (0.2) | 44 |
| | 2 position | Double | M5 x 0.8 | M5 x 0.8 | | | | 46 |
| SYA3□20-C4 | 3 position | Closed center | | | | 3.42 (0.19) | 3.42 (0.19) | |
| 0.7.022001 | | Exhaust center | | | | 3.42 (0.19) | 3.78 (0.21) {2.7 (0.15)} | 48 |
| | | Pressure center | | | | 3.6 (0.2) {2.16 (0.12)} | 3.6 (0.2) | |
| | 2 position | Single | | | | 2.0 (0.0) | 4 4 4 (0 22) | 40 |
| | 2 position | Double | | | | 3.6 (0.2) | 4.14 (0.23) | 42 |
| SYA3□20-C6 | | Closed center | | | C6 /ø6 One-touch | 3.6 (0.2) | 3.96 (0.22) | |
| 2.1.0 | 3 position | Exhaust center | | | fitting / | 3.78 (0.21) | 4.5 (0.25) {3.06 (0.17)} | 44 |
| | | Pressure center | | | | 3.96 (0.22) {2.88 (0.16)} | 3.96 (0.22) | |





Note) Values inside $\{\ \}$ are for normal position.

Models/Series SYA3□40 (Base mounted)

| \/al\ | Type of actuation | | Pilot | | Effective area m | Maiaht a Note 2) | |
|-------------|-------------------|-----------------|-----------|-----------|------------------------------|------------------------------|------------------|
| Valve model | Type or a | ctuation | port size | Port size | P to A/B | A/B to EA/EB | Weight g Note 2) |
| | 2 position | Single | | Rc 1/8 | 4.00 (0.07) | 5.4 (0.3) | 69 (34) |
| | 2 position | Double | M5 x 0.8 | | 4.86 (0.27) | 3.4 (0.3) | 71 (36) |
| SYA3□40-01 | 3 position | Closed center | | | 4.68 (0.26) | 4.86 (0.27) | |
| | | Exhaust center | | | 4.86 (0.27) | 5.94 (0.33) {3.24 (0.18)} | 73 (38) |
| | | Pressure center | | | 6.66 (0.37) {3.24 (0.18)} | 5.22 (0.29) | |



Note 1) Values inside $\{\ \}$ are for normal position. Note 2) Values inside $(\)$ are for valves without sub-plate.





Models/Series SYA5□20 (Body ported)

| \/ahva maadal | Tuna | of a struction | Pilot | Port | size | Effective area mr | m² (Cv factor) Note) | Weight g |
|---------------|-------------------|-----------------|-----------|-----------|---|----------------------------|----------------------------|----------|
| Valve model | Type of actuation | | port size | P, EA, EB | A, B | P to A/B | A/B to EA/EB | weight g |
| | 0 ===!ti== | Single | | | | 0.40 (0.45) | 40.0 (0.50) | 58 |
| | 2 position | Double | | | | 9.18 (0.15) | 10.6 (0.59) | 64 |
| SYA5□20-01 | | Closed center | | | Rc 1/8 | 7.38 (0.41) | 7.92 (0.44) | |
| | 3 position | Exhaust center | | | | 7.56 (0.42) | 12.06 (0.67) {8.28 (0.46)} | 69 |
| | | Pressure center | | | | 10.62 (0.59) {4.32 (0.24)} | 8.46 (0.47) | |
| | 2 position | Single | | | | E E (0.24) | 2.0 (0.22) | 82 |
| | z position | Double | | Rc 1/8 | C4 | 5.5 (0.31) | 3.9 (0.22) | 87 |
| SYA5□20-C4 | 3 position | Closed center | | | (ø4 One-touch) fitting C6 (ø6 One-touch) fitting | 5.3 (0.29) | 3.9 (0.22) | 93 |
| | | Exhaust center | M5 x 0.8 | | | 5.3 (0.29) | 3.9 (0.22) | |
| | | Pressure center | | | | 5.7 (0.32) | 3.9 (0.22) | |
| | 2 position | Single | | | | 9 (0.5) | 9 (0.5) | 76 |
| | | Double | | | | | | 82 |
| SYA5□20-C6 | | Closed center | | | | 7.2 (0.4) | 7.38 (0.41) | |
| | 3 position | Exhaust center | | | | 7.38 (0.41) | 9.72 (0.54) {7.2 (0.4)} | 87 |
| | | Pressure center | | | | 10.62 (0.59) {4.32 (0.24)} | 7.2 (0.4) | |
| | 0 ===!ti== | Single | | | | 0.40 (0.54) | 0.0 (0.55) | 68 |
| | 2 position | Double | | | C8 | 9.18 (0.51) | 9.9 (0.55) | 74 |
| SYA5□20-C8 | | Closed center | | | /ø8 One-touch | 7.38 (0.41) | 7.92 (0.44) | |
| | 3 position | Exhaust center | | fitting / | 7.38 (0.41) | 11.88 (0.66) {7.74 (0.43)} | 79 | |
| | - | Pressure center | | | | 10.62 (0.59) {4.32 (0.24)} | 7.92 (0.44) | |



Note) Values inside $\{\ \}$ are for normal position.

Models/Series SYA5□40 (Base mounted)

| Ī | Value medal | Tuno | of actuation | Pilot | David alian | Effective area mr | Marianta a Noto 2) | | |
|---|---------------------|------------|-----------------|-----------|-------------|---------------------------|----------------------|------------------|--|
| | Valve model Type of | | of actuation | port size | Port size | P to A/B | A/B to EA/EB | Weight g Note 2) | |
| | | 2 position | Single | M5 x 0.8 | Rc 1/4 | 12.78 (0.71) | 12.6 (0.7) | 105 (42) | |
| | | | Double | | | 12.76 (0.71) | | 110 (47) | |
| | SYA5□40-02 | 3 position | Closed center | | | 7.56 (0.42) | 8.1 (0.45) | | |
| | | | Exhaust center | | | 7.92 (0.44) | 14.4 (0.8) {9 (0.5)} | 115 (52) | |
| | | | Pressure center | | | 15.84 (0.88) {4.5 (0.25)} | 8.64 (0.48) | | |



Note 1) Values inside { } are for normal position.

Note 2) Values inside () are for valves without sub-plate.

Models/Series SYA7□20 (Body ported)

| Valve model | Type of actuation | | Pilot | Port | size | Effective area mr | Weight g | | | | | |
|-------------|-------------------|-----------------|-----------------------------|----------------------|-----------------|-----------------------------|----------------------------|--------------|--------------|--------------|--------------|-----|
| valve model | | | port size | P, EA, EB | A, B | P to A/B | A/B to EA/EB | vveigni g | | | | |
| | 2 position | Single | | | | 40.0 (0.0) | 45.00 (0.07) | 132 | | | | |
| | 2 position | Double | | | | 16.2 (0.9) | 15.66 (0.87) | 177 | | | | |
| SYA7□20-02 | | Closed center | | | Rc 1/4 | 12.06 (0.67) | 11.34 (0.63) | | | | | |
| | 3 position | Exhaust center | | | | 11.88 (0.66) | 16.74 (0.93) {11.7 (0.65)} | 186 | | | | |
| | | Pressure center | | P port: | | 17.1 (0.95) {11.16 (0.62)} | 11.34 (0.63) | | | | | |
| | 2 position | Single | Rc 1/4 Rc 1/8 EA, EB ports: | Rc 1/4 EA, EB ports: | | | 1 ' 1 | | | 13.86 (0.77) | 13.68 (0.76) | 138 |
| | | Double | | | C8 | 13.00 (0.77) | 13.00 (0.70) | 183 | | | | |
| SYA7□20-C8 | 3 position | Closed center | | | | /ø8 One-touch\ | 11.52 (0.64) | 10.44 (0.58) | | | | |
| | | Exhaust center | | | | 11.16 (0.62) | 14.4 (0.8) {10.8 (0.6)} | 192 | | | | |
| | | Pressure center | | | | 14.58 (0.81) {10.62 (0.59)} | 10.44 (0.58) | | | | | |
| | 2 position | Single | | | | | | | 45.04 (0.00) | 4404(0.00) | 135 | |
| | 2 position | Double | | | C10 | 15.84 (0.88) | 14.94 (0.83) | 180 | | | | |
| SYA7□20-C10 | | Closed center | | | /ø10 One-touch\ | 12.24 (0.68) | 11.16 (0.62) | | | | | |
| | 3 position | Exhaust center | | | fitting / | 11.88 (0.66) | 16.2 (0.89) {11.34 (0.63)} | 189 | | | | |
| | | Pressure center | | | | 16.74 (0.93) {11.16 (0.62)} | 11.34 (0.63) | | | | | |

Note) Values inside { } are for normal position.

Models/Series SYA7□40 (Base mounted)

| Valve model | Type of actuation | | Pilot | Port size | Effective area m | Weight a Note 2) | |
|-------------------|-----------------------|-----------------|-----------|------------------|----------------------------|-----------------------------|-------------------|
| valve model | | | port size | | P to A/B | A/B to EA/EB | weight g (10th 2) |
| | 2 position 3 position | Single | | | 23.22 (1.29) | 21.6 (1.2) | 240 (111) |
| | | Double | Rc 1/8 | Rc 1/4 Rc 3/8 | | | 286 (157) |
| SYA7□40- 02 03 | | Closed center | | | 14.04 (0.78) | 12.24 (0.68) | |
| | | Exhaust center | | | 14.04 (0.78) | 20.88 (1.16) {12.96 (0.72)} | 294 (165) |
| | | Pressure center | | | 24.48 (1.36) {13.5 (0.75)} | 12.42 (0.69) | |



Note 1) Values inside $\{\ \}$ are for normal position and port size of Rc 3/8.

Note 2) Values inside () are for valves without sub-plate.



valve 20 23

ype Single 3

e Type 42

pe Type 3 41P

42P

43P

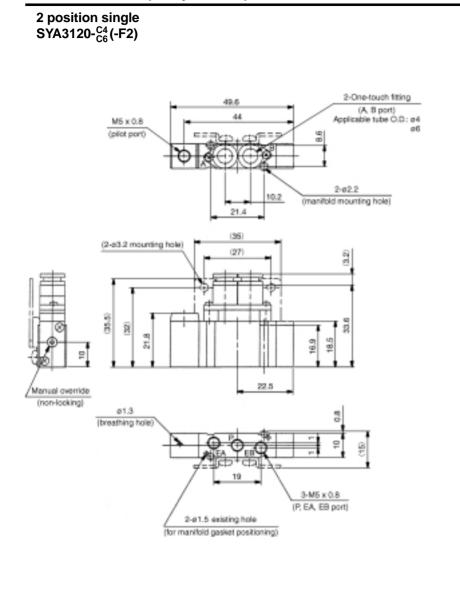
be Type 45-NA

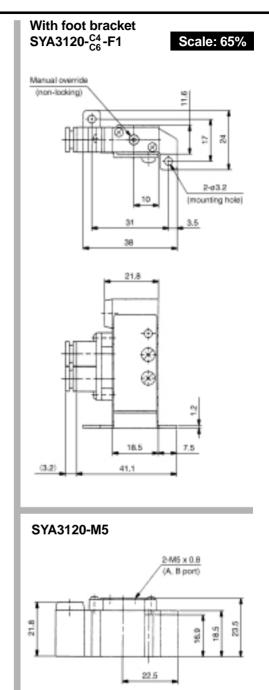
made

spec. sheets

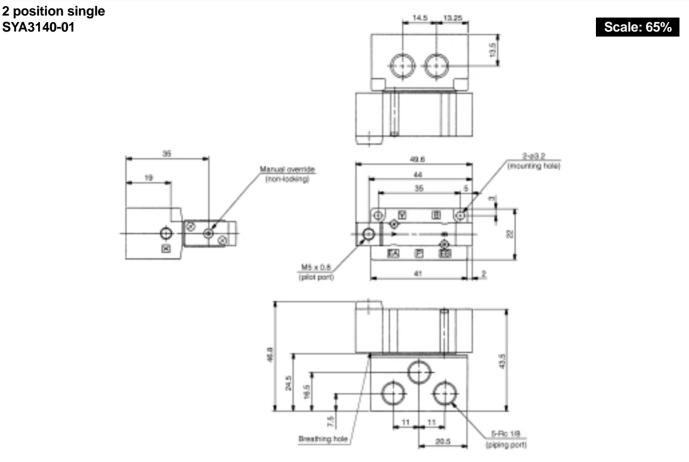
164

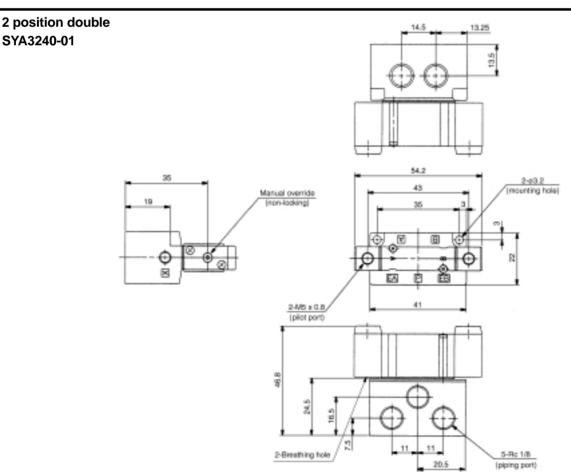
Series SYA3000 (Body Ported) Dimensions





Series SYA3000 (Base Mounted) Dimensions





SYA3000/5000/7000

Single Type 20 Type 23

Type 20P

Type Single valve 41 Type 42

Type 43

Type 41P

Type 42P

Type 43P

Type 45

Type 45- NA

Type 45□

3 port Air operated

Order made

Manifold spec. sheets

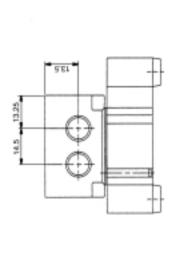
168

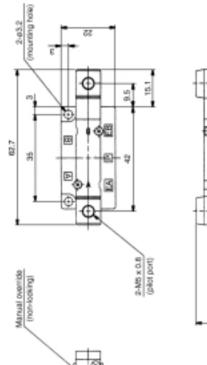
Precautions

Scale: 65%

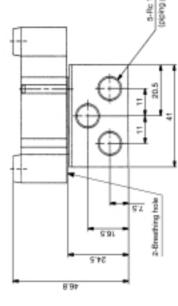
3 position closed center/exhaust center/pressure center SYA3 4/40-01





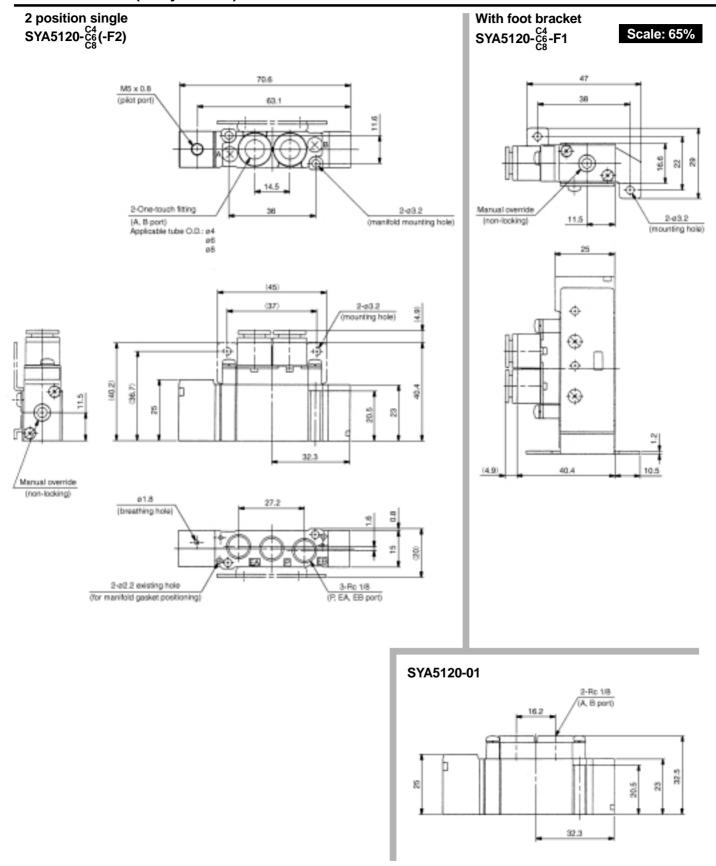


 Φ

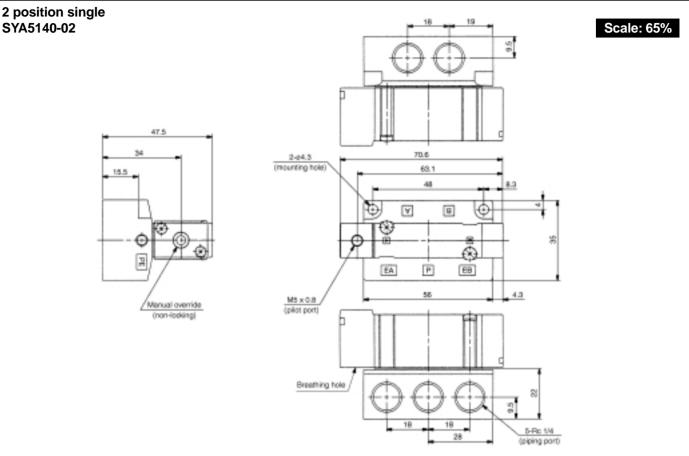


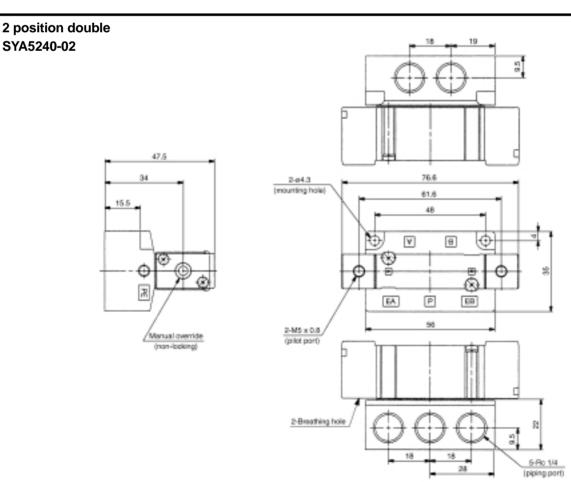
SWC

Series SYA5000 (Body Ported) Dimensions



Series SYA5000 (Base Mounted) Dimensions





SYA5240-02

SYA3000/5000/7000

Single valve 20 Type 23 Type 20P

Type Single Type valve 41

Type 42 Type 43

Type 41P

Type 42P Type 43P

Type 45 **Type 45**- NA

Type 45□

3 port Air operated

Order made

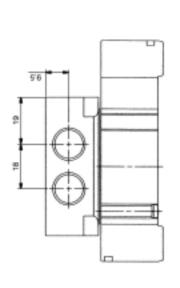
Manifold spec. sheets

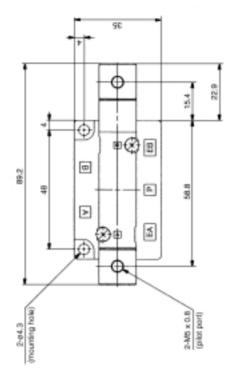
172

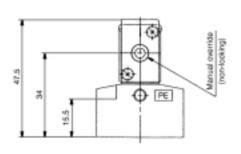
Precautions

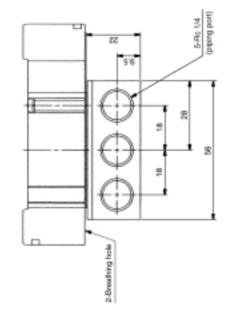
Scale: 65%

3 position closed center/exhaust center/pressure center SYA5 $\frac{3}{5}$ 40-02





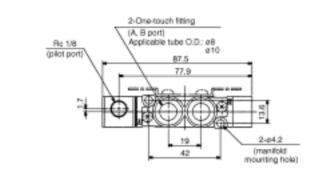


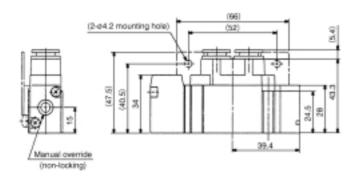


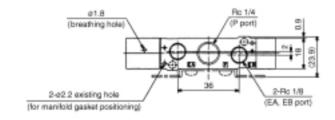


Series SYA7000 (Body Ported) Dimensions

2 position single SYA7120-^{C8}_{C10}(-F2)

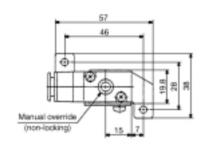


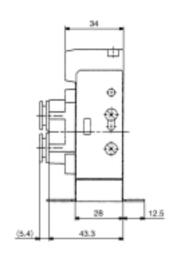




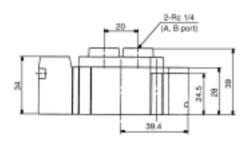
With foot bracket SYA7120-C8 -F1

Scale: 45%





SYA7120-02

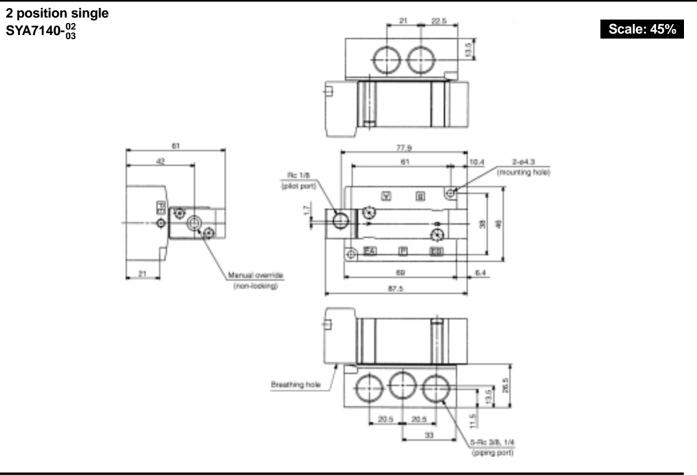


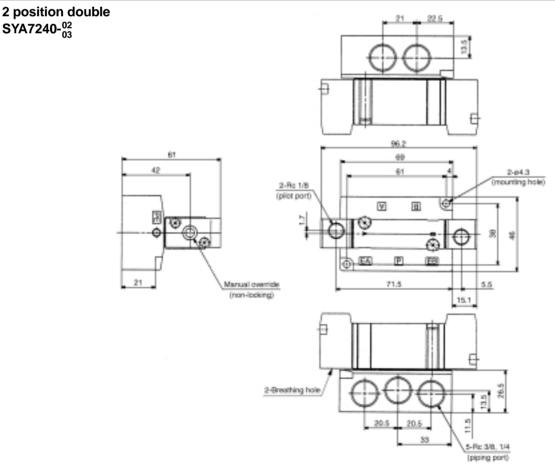


Precautions

174

Series SYA7000 (Base Mounted) Dimensions





SYA7240-02

SYA3000/5000/7000

Type 20P

Type Single Type valve 41 Type 42

Type 43

Type 41P

Type 42P

Type 43P

Type 45 **Type 45**- NA Type 45□

3 port valve Air operated

Order made

Manifold spec. sheets Precautions

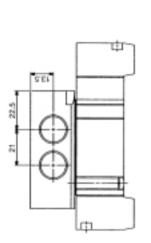
176

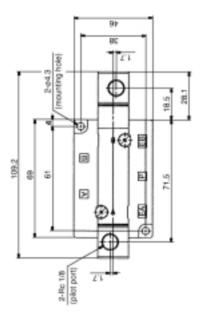
Single valve 20

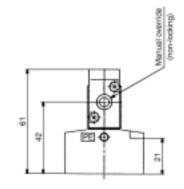
Type 23

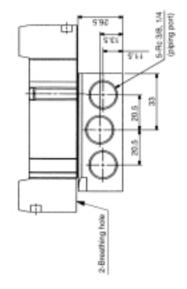
Scale: 45%

3 position closed center/exhaust center/pressure center SYA7440-02













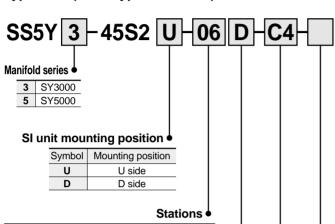
Order Made Specifications SY3000/5000 Serial Type with SMC IN313



Serial transmission manifold equipped with SMC's IN313.

How to Order Manifolds

Type 45S2 (Serial type with IN313)



| Symbol | Stations | Note |
|--------|-------------|----------------------------------|
| 02 | 2 stations | Single wiring specification |
| ÷ | : | (Up to 16 solenoids applicable) |
| 16 | 16 stations | (Op to 10 soleriolds applicable) |



Note 1) Includes the number of blanking plate assemblies.

Note 2) Two manifold stations are required for double solenoid 3 position valves (dual body type).

SUP/EXH block assembly mounting position

| Symbol | Mounting position | Applicable stations | | | |
|--------|------------------------|---------------------|--|--|--|
| U | U side | 2 to 10 stations | | | |
| D | D side | 2 to 10 stations | | | |
| В | Both sides | 2 to 16 stations | | | |
| M* | Special specifications | | | | |

 For special specifications, order separately on a manifold specification sheet.

A/B port size

SY3000

| | - |
|-------------|----------------------|
| Symbol | Port size |
| C4 | ø4 One-touch fitting |
| C6 | ø6 One-touch fitting |
| M* | Mixed |

SY5000

| Symbol | Port size |
|--------|----------------------|
| C4 | ø4 One-touch fitting |
| C6 | ø6 One-touch fitting |
| C8 | ø8 One-touch fitting |
| M* | Mixed |

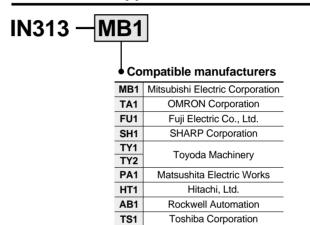
^{*} For mixed specifications, order separately on a manifold specification sheet.

Option

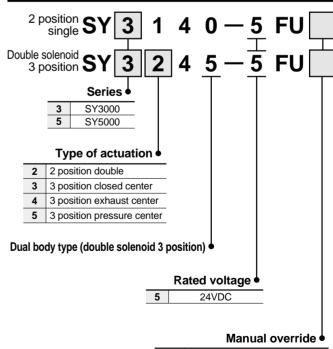
When a DIN rail longer than the specified stations is necessary, indicate the number of required stations. (Max. 20 stations)

For the external pilot specification and built-in silencer type, refer to page 184.

How to Order Applicable SI Units



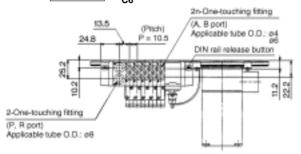
How to Order Valves

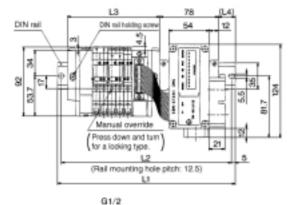


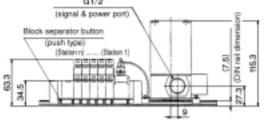
| Nil | Non-locking push type |
|-----|--------------------------------|
| D | Push-turn locking slotted type |
| E | Push-turn locking lever type |

SY3000: Serial Transmission/Plug-in

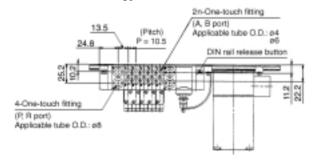
SS5Y3-45S2D-Stations U-C4

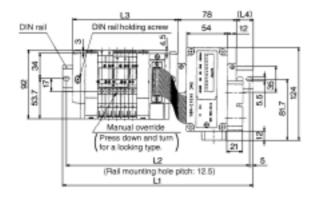






SS5Y3-45S2U-Stations B-C4







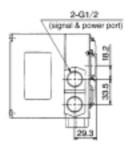
Note) Dimensions L1 to L4 of

SS5Y3-45S2D- Stations D-C4

SS5Y3-45S2U-Stations D-C4, and

SS5Y3-45S2U-Stations U^{-C4}_{C6} are the same as

SS5Y3-45S2D-Stations U-C4



| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 198 | 210.5 | 223 | 235.5 | 235.5 | 248 | 260.5 | 273 | 285.5 |
| L2 | 187.5 | 200 | 212.5 | 225 | 225 | 237.5 | 250 | 262.5 | 275 |
| L3 | 91.5 | 102 | 112.5 | 123 | 133.5 | 144 | 154.5 | 165 | 175.5 |
| L4 | 14 | 15 | 16 | 17 | 12 | 13 | 14 | 15 | 16 |



Note) Dimensions L1 to L4 of SS5Y3-45S2U-Stations B-C4 are the same as SS5Y3-45S2D-Stations B-C4.

| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|------------|-----------|-------------|-----------|-------------|-------------|-----------|-------------|-------|
| L1 | 210.5 | 223 | 235.5 | 248 | 260.5 | 273 | 273 | 285.5 |
| L2 | 200 | 212.5 | 225 | 237.5 | 250 | 262.5 | 262.5 | 275 |
| L3 | 108 | 118.5 | 129 | 139.5 | 150 | 160.5 | 171 | 181.5 |
| L4 | 12 | 13 | 14 | 15 | 16 | 17 | 12 | 13 |
| | | | | | | | | • |
| Stations n | 10 | 11 | 12 | 13 | 14 | 15 | 16 | |
| Stations n | 10 298 | 11 310.5 | 12 323 | 13 335.5 | 14 335.5 | 15 348 | 16 360.5 | |
| | - | | | _ | | - | | |
| L1 | 298 | 310.5 | 323 | 335.5 | 335.5 | 348 | 360.5 | |

Single valve

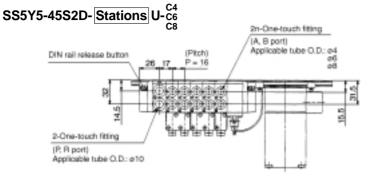
Scale: 20%

Precautions



Type **45S2**

SY5000: Serial Transmission/Plug-in





Scale: 20%

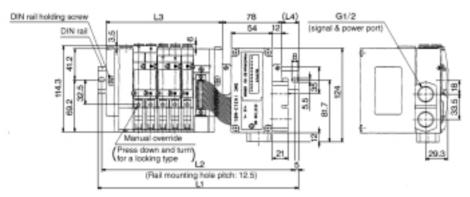
Note) Dimensions L1 to L4 of

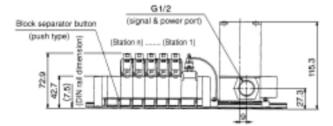
SS5Y5-45S2D-Stations D-C4 C8,

SS5Y5-45S2U-Stations D-C6, and

SS5Y5-45S2U-Stations U- $^{\text{C4}}_{\text{C8}}$ are the same as

SS5Y5-45S2D-Stations U-C4.

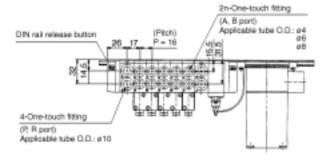


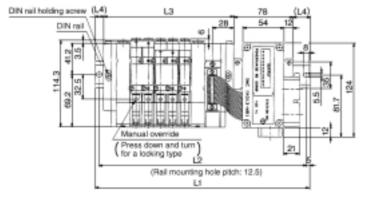


| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 210.5 | 223 | 248 | 260.5 | 273 | 298 | 310.5 | 323 | 335.5 |
| L2 | 200 | 212.5 | 237.5 | 250 | 262.5 | 287.5 | 300 | 312.5 | 325 |
| L3 | 105 | 121 | 137 | 153 | 169 | 185 | 201 | 217 | 233 |
| L4 | 13.5 | 12 | 16.5 | 14.5 | 13 | 17.5 | 15.5 | 14 | 12 |



SS5Y5-45S2U-Stations B-C6





| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 235.5 | 248 | 260.5 | 273 | 298 | 310.5 | 323 | 348 |
| L2 | 225 | 237.5 | 250 | 262.5 | 287.5 | 300 | 312.5 | 337.5 |
| L3 | 123 | 139 | 155 | 171 | 187 | 203 | 219 | 235 |
| L4 | 17 | 15.5 | 13.5 | 12 | 16.5 | 14.5 | 13 | 17.5 |
| Stations n | 10 | 11 | 12 | 13 | 14 | 15 | 16 | |
| L1 | 360.5 | 373 | 385.5 | 410.5 | 423 | 435.5 | 460.5 | |
| L2 | 350 | 362.5 | 375 | 400 | 412.5 | 425 | 450 | |
| | | | | | | | | |
| L3 | 251 | 267 | 283 | 299 | 315 | 331 | 347 | |

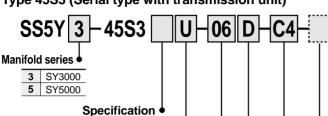
Order Made Specifications SY3000/5000 Serial Type with

OMRON G71-OD16

Serial transmission manifold equipped with OMRON'S G71-OD16.

How to Order Manifolds

Type 45S3 (Serial type with transmission unit)



Specification

Symbol With transmission unit ONot Without transmission unit

Note) Even without a transmission unit, the length of the DIN rail can accommodate a transmission unit. If a shorter length for the DIN rail is desired (same as type 45□), add "0" for option at the end of the part number.

Transmission unit mounting position

| Symbol | Mounting position |
|--------|-------------------|
| U | U side |
| D | D side |

Stations

| Symbol | Stations | Note |
|--------|----------|---|
| 02 | 2 | Single wiring enecification |
| : | : | Single wiring specification (Up to 16 solenoids applicable) |
| 16 | 16 | (Op to 10 soleriolds applicable) |

Note 1) Includes the number of blanking plate

Note 2) Two manifold stations are required for double solenoid 3 position valves (dual body type).

SUP/EXH block assembly mounting position

| Symbol | Mounting position | Applicable stations | | | |
|--------|------------------------|---------------------|--|--|--|
| U | U side | 2 to 10 stations | | | |
| D | D side | 2 to 10 stations | | | |
| В | Both sides | 2 to 16 stations | | | |
| M* | Special specifications | | | | |

* For special specifications, order separately on a manifold specification sheet.

A/B port size

SY3000

| Port size |
|----------------------|
| ø4 One-touch fitting |
| ø6 One-touch fitting |
| Mixed |
| |

SY5000

| Symbol | Port size |
|--------|----------------------|
| C4 | ø4 One-touch fitting |
| C6 | ø6 One-touch fitting |
| C8 | ø8 One-touch fitting |
| M* | Mixed |

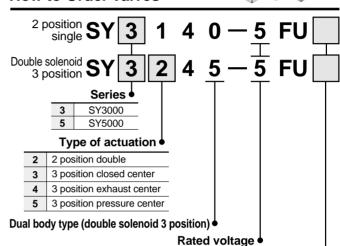
* For mixed specifications, order separately on a manifold specification sheet.

Option •

When a DIN rail longer than the specified stations is necessary, indicate the number of required stations. (Max. 20 stations)



How to Order Valves



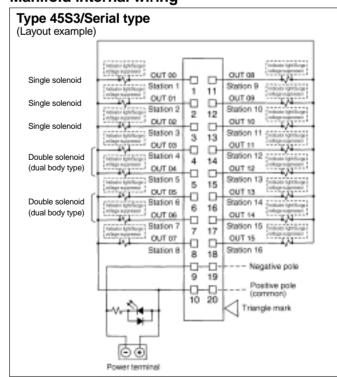
5

Manual override

| Nil | Non-locking push type |
|-----|--------------------------------|
| D | Push-turn locking slotted type |
| E | Push-turn locking lever type |

24VDC

Manifold internal wiring



Note 1) For OMRON transmission terminal specifications, refer to the instruction manual or catalog of the transmission terminal

Note 2) A maximum of 16 solenoids can be used. Contact SMC if more than 16 solenoids are

⚠ Caution

Wiring specifications of SS5Y 5-45S30 differ from SS5Y 5-45PG.



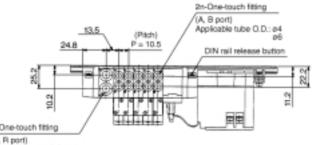
180

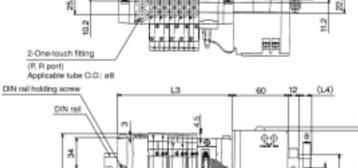
Precautions

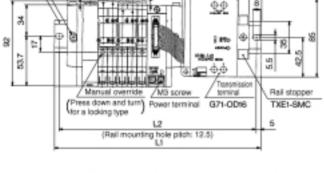
Type **45S**3

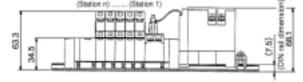
SY3000: Serial Transmission/Plug-in

SS5Y3-45S3D-Stations U-C4









\mathcal{Q}

Scale: 25%

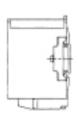
Note) Dimensions L1 to L4 of

SS5Y3-45S3D-Stations D-C4,

SS5Y3-45S3U-Stations D-C4, and

SS5Y3-45S3U-Stations U_{-C6}^{C4} are the same as

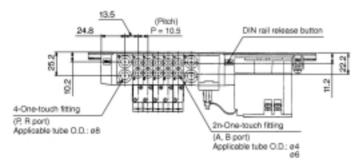
SS5Y3-45S3D-Stations U-C4.



| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 198 | 198 | 210.5 | 223 | 235.5 | 248 | 260.5 | 260.5 | 273 |
| L2 | 187.5 | 187.5 | 200 | 212.5 | 225 | 237.5 | 250 | 250 | 262.5 |
| L3 | 91.5 | 102 | 112.5 | 123 | 133.5 | 144 | 154.5 | 165 | 175.5 |
| L4 | 17 | 12 | 13 | 14 | 15 | 16 | 17 | 11.5 | 12.5 |

\mathcal{Q}

SS5Y3-45S3D-Stations B-C4



| DIN rail holding screw | L3 | 60 | 12, (| L4) |
|------------------------|--|-------------|-------|--|
| DIN rail | Manual override (Press down and turn) for a locking type (Rail incurting hole pitch | minal G71-0 | ⊕ com | SE S |

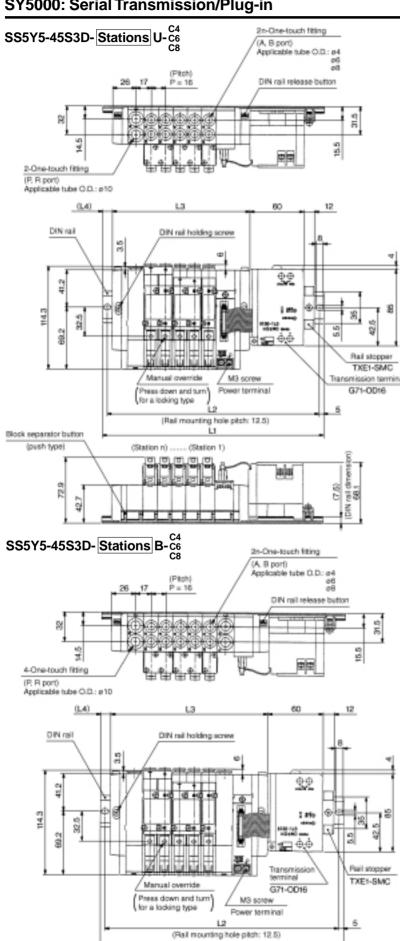
| Stations B- $_{C6}^{C4}$ are the same as SS5Y3 45S3D- $\overline{\text{Stations}}$ B- $_{C6}^{C4}$. | 3- |
|--|----|
| | |

Note) Dimensions L1 to L4 of SS5Y3-45S3U-

| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|------------|-----------|-----------|-------------|-----------|-------------|-----------|-------------|-------|
| L1 | 210.5 | 223 | 235.5 | 235.5 | 248 | 260.5 | 273 | 285.5 |
| L2 | 200 | 212.5 | 225 | 225 | 237.5 | 250 | 262.5 | 275 |
| L3 | 108 | 118.5 | 129 | 139.5 | 150 | 160.5 | 171 | 181.5 |
| L4 | 15 | 16 | 17 | 12 | 13 | 14 | 15 | 16 |
| | | | | | | | | |
| Stations n | 10 | 11 | 12 | 13 | 14 | 15 | 16 | |
| Stations n | 10 298 | 11 298 | 12 310.5 | 13 323 | 14 335.5 | 15 348 | 16 360.5 | |
| | - | | | - | | - | _ | |
| L1 | 298 | 298 | 310.5 | 323 | 335.5 | 348 | 360.5 |] |

Single valve

SY5000: Serial Transmission/Plug-in



Lt



Scale: 25%

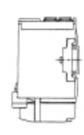
Note) Dimensions L1 to L4 of

SS5Y5-45S3D-Stations D-C6

SS5Y5-45S3U-Stations D-C6, and

SS5Y5-45S3U-Stations U- $\frac{C4}{C8}$ are the same as

SS5Y5-45S3D- Stations U-C4



| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L1 | 210.5 | 223 | 235.5 | 260.5 | 273 | 285.5 | 298 | 323 | 335.5 |
| L2 | 200 | 212.5 | 225 | 250 | 262.5 | 275 | 287.5 | 312.5 | 325 |
| L3 | 105 | 121 | 137 | 153 | 169 | 185 | 201 | 217 | 233 |
| L4 | 16.5 | 15 | 13 | 17.5 | 16 | 14 | 12.5 | 17 | 15 |



Note) Dimensions L1 to L4 of SS5Y5-45S3U-Stations B-ce are the same as SS5Y5-45S3D-Stations B-C4

| Stations n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|------------|-----------|-----------|-------------|-----------|-------------|-------------|-----------|-------|
| L1 | 223 | 235.5 | 260.5 | 273 | 285.5 | 310.5 | 323 | 335.5 |
| L2 | 212.5 | 225 | 250 | 262.5 | 275 | 300 | 312.5 | 325 |
| L3 | 123 | 139 | 155 | 171 | 187 | 203 | 219 | 235 |
| L4 | 14 | 12 | 16.5 | 15 | 13 | 17.5 | 16 | 14 |
| | | | | | | | | |
| | | | | | | | | |
| Stations n | 10 | 11 | 12 | 13 | 14 | 15 | 16 | |
| Stations n | 10 348 | 11 373 | 12 385.5 | 13 398 | 14 410.5 | 15 435.5 | 16 448 | |
| | _ | | | _ | | _ | _ | |
| L1 | 348 | 373 | 385.5 | 398 | 410.5 | 435.5 | 448 | |



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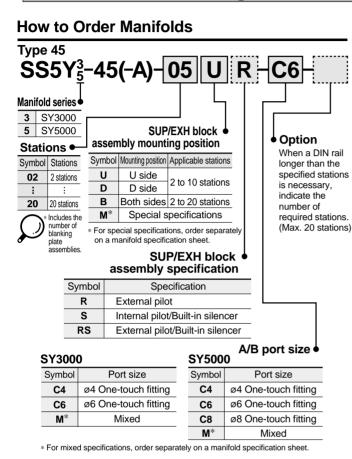
Order Made Specifications SY3000/5000 External pilot and Built-in Silencer



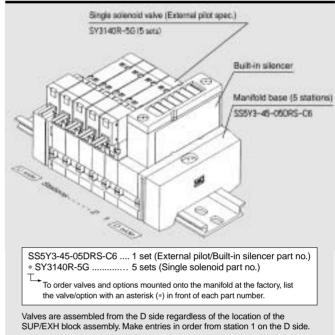
Manifolds with external pilot specification for use with low pressure and vacuum are added to the stacking and DIN rail mount types. Also, a clean appearance is achieved with the built-in silencer.



Individual wiring/Connector box



How to Order Manifold Assemblies (Example)

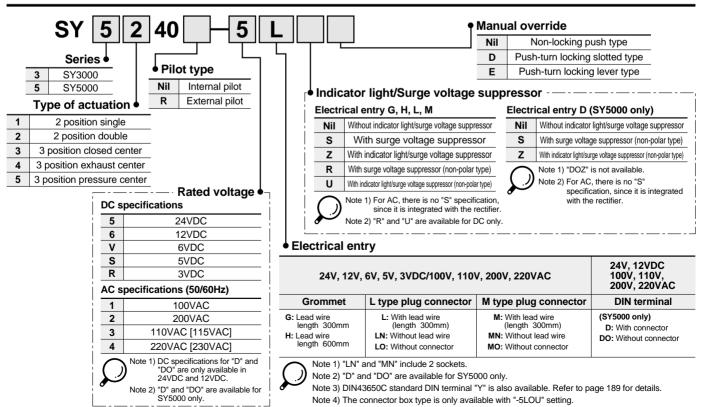


When entry of part numbers becomes complicated, indicate on a manifold specification sheet.

When SUP/EXH block assemblies are mounted on both sides, two pieces of the external pilot and silencer will be mounted on each side.

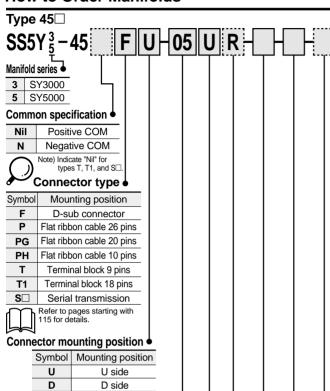
For special applications of the SUP/EXH block, the SUP/EXH block assembly shown on page 105 (SX3/5000-51-1A) is also available. Indicate the part number and mounting positions on a manifold specification sheet in section (b). (Manifold Specification Sheet on pages 201 through 204)

How to Order Valves



Plug-in

How to Order Manifolds



| | | Stations • |
|--------|-------------|-----------------------------|
| Symbol | Stations | Note |
| 02 | 2 stations | |
| : | : | Single wiring specification |
| 20 | 20 stations | |



Note 1) Includes the number of blanking plate assemblies.

Since the number of stations is limited depending on the connector type, refer to page 118.

Note 3) Two manifold stations are required for double solenoid 3 position valves (dual body type).

SUP/EXH block assembly mounting position •

| Symbol | Mounting position | Applicable stations | | | | |
|--------|------------------------|---------------------|--|--|--|--|
| U | U side | 2 to 10 stations | | | | |
| D | D side | 2 to 10 stations | | | | |
| В | Both sides | 2 to 20 stations | | | | |
| M* | Special specifications | | | | | |

^{*} For special specifications, order separately on a manifold

SUP/EXH block assembly specification •

| Symbol | Specification |
|--------|----------------------------------|
| R | External pilot |
| S | Internal pilot/Built-in silencer |
| RS | External pilot/Built-in silencer |

A/B port size

| 513000 | | 515000 | |
|--------|----------------------|--------|----------------------|
| Symbol | Port size | Symbol | Port size |
| C4 | ø4 One-touch fitting | C4 | ø4 One-touch fitting |
| C6 | ø6 One-touch fitting | C6 | ø6 One-touch fitting |
| M* | Mixed | C8 | ø8 One-touch fitting |
| | | M* | Mixed |

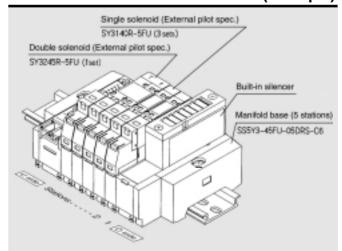
^{*} For mixed specifications, order separately on a manifold specification sheet.

Voltage specification ●

| Nil | 24VDC | |
|--|-------|--|
| 12V | 12VDC | |
| Note) Indicate "Nil" for types T, T1, and S□. | | |

When a DIN rail longer than the specified stations is necessary, indicate the number of required stations. (Max. 20 stations)

How to Order Manifold Assemblies (Example)



SS5Y3-45FU-05DRS-C6 1 set (External pilot/Built-in silencer part no.) * SY3140R-5FU 3 sets (Single solenoid part no.) * SY3245R-5FU 1 set (Double solenoid part no.)

To order valves and options mounted onto the manifold at the factory, list the valve/option with an asterisk (*) in front of each part number.

Valves are assembled from the D side regardless of the location of the SUP/EXH block assembly. Make entries in order from station 1 on the D side

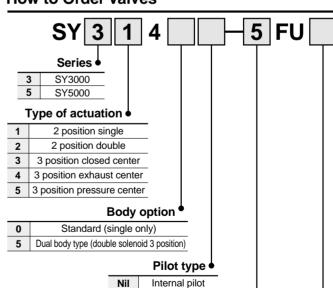
When entry of part numbers becomes complicated, indicate on a manifold When SUP/EXH block assemblies are mounted on both sides, two pieces of the

external pilot and silencer will be mounted on each side. For special applications of the SUP/EXH block, the SUP/EXH block assembly

shown on page 143 (SX3/5000-51-2A) is also available. Indicate the part number and mounting positions on a manifold specification sheet in section (b).

Since double solenoid 3 position valves (dual body type) require 2 manifold stations, be sure to specify the appropriate number of stations with the manifold part number. (Manifold Specification Sheet on pages 205 through 222)

How to Order Valves



External pilot

Rated voltage

| 5 | 24VDC |
|------------|-------|
| 6 | 12VDC |
| V * | 6VDC |
| S* | 5VDC |
| R^* | 3VDC |
| | |

| <u> </u> | * Applies to 45T/T1 only. |
|----------|---------------------------|
|) | 24VDC only for type S□ |

| Manual | override (|
|--------|------------|
| Mana | Override. |

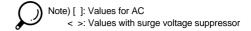
| Nil | Non-locking push type |
|-----|--------------------------------|
| D | Push-turn locking slotted type |
| E | Push-turn locking lever type |

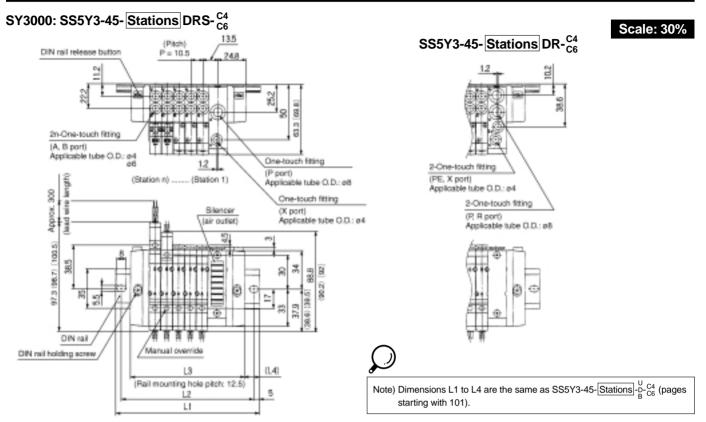


184

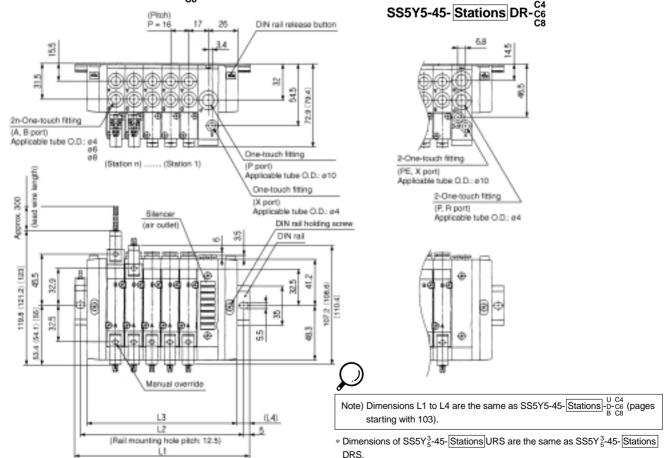


External Pilot and Built-in Silencer





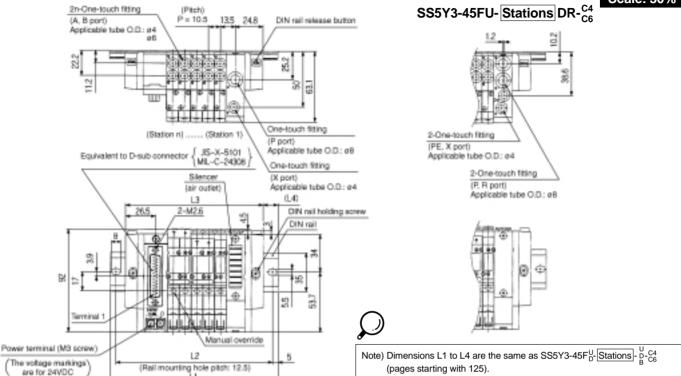
SY5000: SS5Y5-45-Stations DRS-C6 C8



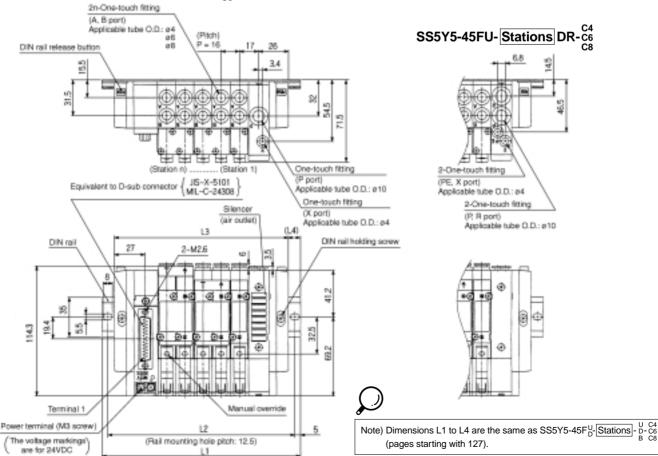
External Pilot and Built-in Silencer

SY3000: SS5Y3-45FU- Stations DRS-C4

Scale: 30%



SY5000: SS5Y5-45FU-Stations DRS-C6



* Dimensions of SS5Y $_5^3$ -45-Stations URS are the same as SS5Y $_5^3$ -45-Stations

SMC

Precautions

186

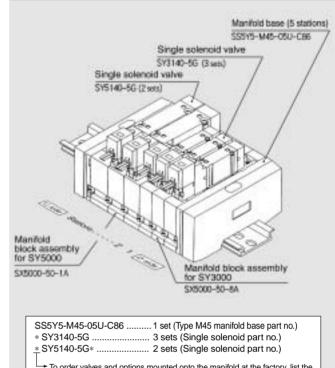
Order Made Specifications SY3000/5000 **Mixed Mounting Type**

Non-plug-in

SY5000 manifold base allows mounting of SY3000.

How to Order Manifolds Type M45 (Mixed mounting) SS5Y5-M45-Mixed mounting type Stations • SUP/EXH block Symbol Stations Option assembly mounting position 02 2 stations When a DIN rail Symbol Mounting position Applicable stations longer than the U U side specified stations is 20 20 stations 2 to 10 stations D necessary, indicate D side Includes the the number of number of В Both sides 2 to 20 stations blanking required stations Special specifications plate (Max. 20 stations) assemblies * For special specifications, order separately on a manifold specification sheet. SUP/EXH block assembly specification Specification Symbol Standard/Internal pilot Nil Built-in silencer Note) External pilot specification is not available for the mixed mounting type. A/B port size Port size Port size Symbol Symbol SY5000: ø4 One-touch fitting SY5000: ø6 One-touch fitting C66 C44 SY3000: ø4 One-touch fitting SY3000: Ø6 One-touch fitting SY5000: ø4 One-touch fitting SY5000: Ø8 One-touch fitting C46 SY3000: ø6 One-touch fitting SY3000: ø4 One-touch fitting SY5000: ø8 One-touch fitting

How to Order Manifold Assemblies (Example)



| \$\$S\$75-M45-05U-C86 | | |
|--|--|--|
| To order valves and options mounted onto the manifold at the factory, list the valve/option with an asterisk (*) in front of each part number. | | |

Valves are assembled from the D side regardless of the location of the SUP/EXH block assembly. Add the valve and option part numbers in order starting from the first station on the D side. When entry of part numbers becomes complicated, indicate on a manifold specification sheet. (Manifold Specification Sheet on pages 227 and 228)

C86

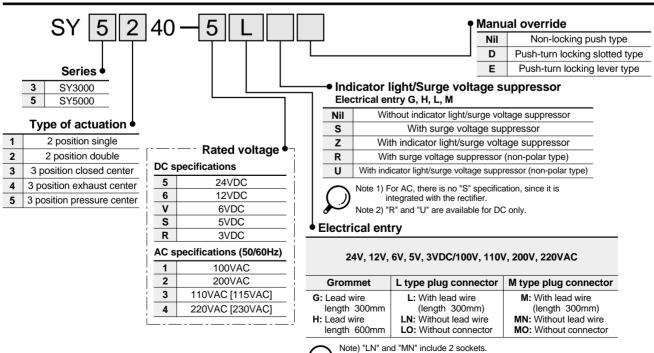
SY3000: Ø6 One-touch fitting

How to Order Valves

C64

SY5000: ø6 One-touch fitting

SY3000: ø4 One-touch fitting





Note) "LN" and "MN" include 2 sockets



^{*} For mixed specifications, order separately on a manifold specification sheet.

Mixed Mounting Type Dimensions

18

16 x n2

(Rail mounting hole pitch: 12.5)

(SY5000 pitch

8Y3000 pitch P = 12.5

12.5 x n1 17

2n1-One-touch fitting

(A, B port) Applicable tube O.D.: ø4

DIN reil

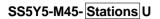
(L4)

5

DIN rail holding scre



Scale: 30%



82

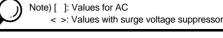
|68| |53.8 (56.2)

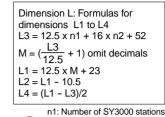
88 53.4 (54.1) 8

2-One-touch fitting (P, R port) Applicable tube O.D.: o10

2n2-One-touch fitting

(A. B port) Applicable tube C.D.: a4 a6 a8





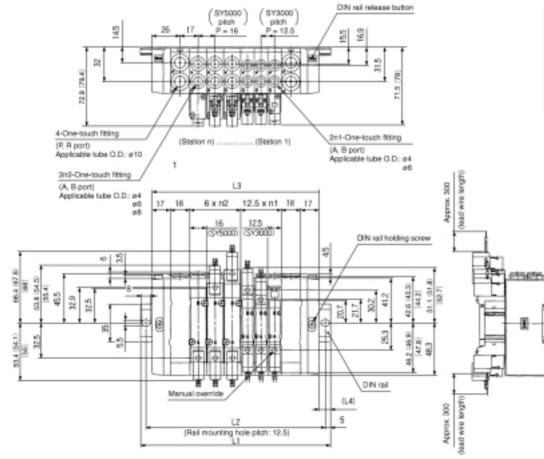
Note) Dimensions L1 to L4 of SS5Y5-M45-Stations D are the same as SS5Y5-M45-Stations U.

n2: Number of SY5000 stations

Арргок. 300

Аррган 300

SS5Y5-M45- Stations B



Dimension L: Formulas for dimensions L1 to L4 $L3 = 12.5 \times n1 + 16 \times n2 + 70$ $L3 = 12.5 \times N1 + 16 \times N2 + 70$ $M = (\frac{L3}{12.5} + 1) \text{ omit decimals}$ $L1 = 12.5 \times M + 23$ L2 = L1 - 10.5 L4 = (L1 - L3)/2

> n1: Number of SY3000 stations n2: Number of SY5000 stations

188

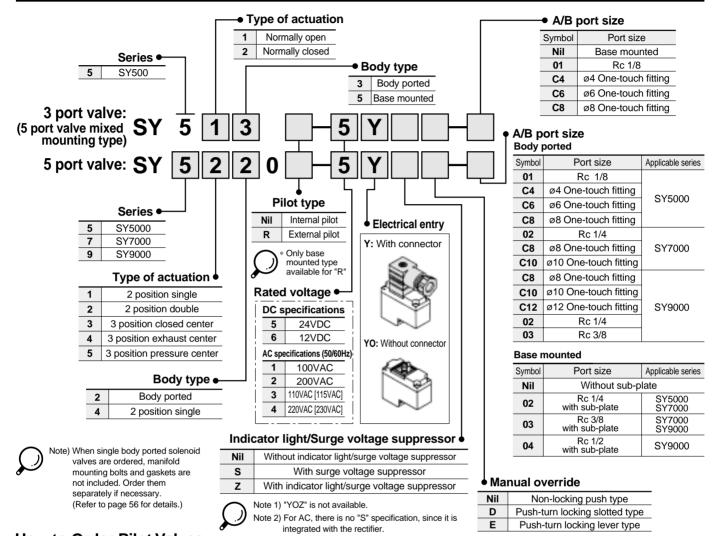
Single valve

Order Made Specifications SY5000/7000/9000/SY500 **DIN Connector** (DIN 43650C Standard)

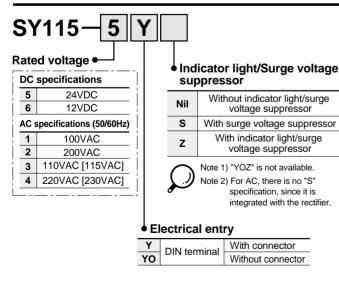
DIN connector type with conformity to DIN43650C (8mm pitch between DIN terminals) standard



How to Order Valves



How to Order Pilot Valves



DIN connector part nos.

| Without indicator light SY100-82-1 | | | |
|------------------------------------|---------------|---------------|--|
| With indicator light | | | |
| Rated voltage | Rating symbol | Part no. | |
| 24VDC | 24VN | SY100-82-3-05 | |
| 12VDC | 12VN | SY100-82-3-06 | |
| 100VAC | 100VN | SY100-82-3-01 | |
| 200VAC | 200VN | SY100-82-3-02 | |
| 110VAC (115VAC) | 110VN | SY100-82-3-03 | |
| 220VAC (230VAC) | 220VN | SY100-82-3-04 | |

Caution

- 1. Use the specified heavy duty vinyl cord (ø3.5 to ø7) to meet the IP65 (enclosure) standard. Also, tighten the ground nut and holding screws within the specified torque range. Refer to page 236 for DIN terminal usage (hints on connecting and changing the outlet, precautions, compatible cables, and circuit diagram).
- Since the pitch between DIN terminals is 9.4mm for the "D" type DIN connector, it is not inter-changeable.
- 3. DIN connectors other than the "D" type have "N" at the end of the rating symbol. (Although "N" is not indicated when the connector is without the indicator light, it can be distinguished by the label.)
- 4. Dimensions are the same as the "D" type DIN connector.
- 5. When replacing only the pilot assembly, SY115-□D and SY115-□Y are interchangeable. However, changing from SY114 (G, L, M) to SY115-□D/□Y (DIN terminal), or vice versa, is not possible

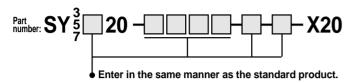


Order Made Specifications SY3000/5000/7000/9000 Body Ported Type with External Pilot Main Valve Fluoro Rubber Specification Energy Saving Solenoid Valve



Body Ported Type with External Pilot

Applicable solenoid valve series: SY3□20, SY5□20, SY7□20



Operating pressure range MPa

| Operating pressure range | -100kPa to 0.7 |
|--------------------------|----------------|
| Pilot pressure range | 0.25 to 0.7 |

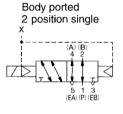
Dimensions

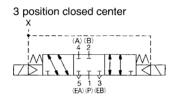
SY3000: Overall length will be 6.5mm longer. SY5000/7000: Overall length will be 10mm longer.

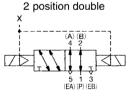
External pilot port size

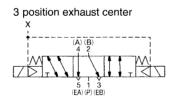
| Series | Port size |
|----------------------|-----------|
| SY3000 | M3 x 0.5 |
| SY ⁵ 7000 | M5 x 0.8 |

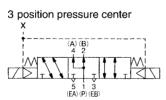
JIS symbols









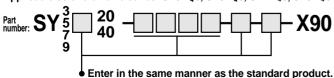


Main Valve Fluoro Rubber Specification

The use of fluoro rubber for the main valve can be applied in situations such as the following.

 When a turbine oil other than the recommended type is used and swelling of the spool valve seal causes or may cause malfunction.

Applicable solenoid valve series: $SY3\square_4^20$, $SY5\square_4^20$, $SY7\square_4^20$, $SY9\square_4^20$



Specifications and performance are the same as the standard product.

Energy Saving Solenoid Valve (Contact SMC for details on specifications and lead time.)

Power consumption is reduced to approximately 1/3 of the standard product by cutting the excess power used for holding valves in an energized condition. (Effective when energized with the rated voltage of 24VDC for more than 62ms.)

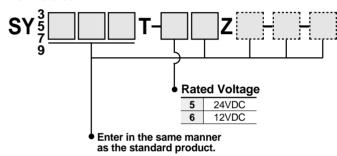
Specifications

| Series | | SY ³⁰⁰⁰ ₇₀₀₀ T |
|----------------------|---------|--------------------------------------|
| Rated coil voltage V | | 24DC, 12DC |
| Power consumption W | Inrush | 0.55 |
| | Holding | 0.22 |

Specifications other than above are the same as the standard product.

Applicable solenoid valve series: $SY3 \square_4^2 0$, $SY5 \square_4^2 0$, $SY7 \square_4^2 0$, $SY9 \square_4^2 0$ (Except DIN terminal type)

How to order



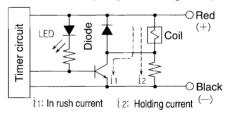
Dimensions are the same as the standard product.

Working Principle

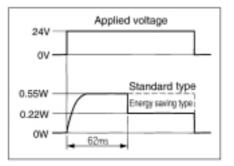
The circuit shown below reduces current consumption when holding, which facilitates overall energy savings.

Refer to the power waveform shown below.

Electrical circuit (with power saving circuit)



Second Second



3 port Air valve operat

Order Manage S

lanifold spec. sheets

SMC

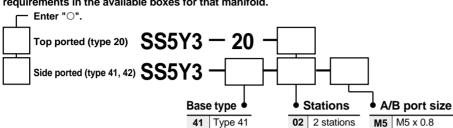
SY3000: Standard Manifold

Manifold Specification Sheet

Follow procedures (1) through (3).

1 Manifold Type

Enter a "O" for the manifold type to be used and enter requirements in the available boxes for that manifold.



42 Type 42

Specification sheet no. Purchase order no. Equipment name Quantity Required date set(s)

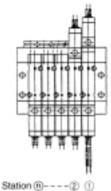
Customer name

Contact person

Rc 1/8

C4 Ø4 One-touch fitting

C6 Ø6 One-touch fitting Type 41, 42



2 Valve Type

2 position single solenoid

3 position closed center

4 3 position exhaust center

5 3 position pressure center

Indicate in the station table below. Pilot type

Nil

R

2 position double solenoid

Internal pilot

When using an external pilot

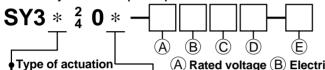
appropriate box for "External Pilot Specification".

valve, enter a "O" in the

External pilot

(type 3□40 only, for type 42 base)

Enter the symbols for required specifications as indicated below.



(A) Rated voltage (B) Electrical entry

| DC specifications | | |
|-------------------|-------|--|
| 5 | 24VDC | |
| 6 | 12VDC | |
| V | 6VDC | |
| S | 5VDC | |
| R | 3VDC | |
| AC specifications | | |

(50/60Hz) 1 100VAC 200VAC 3 | 110VAC [115VAC] 220VAC [230VAC]

20 stations

| | G | Grommet (lead wire length 300mm | | | | | | | | |
|---|----|----------------------------------|-------------------|--|--|--|--|--|--|--|
| | Н | Grommet (lead wire length 600mm) | | | | | | | | |
| - | L | L type plug | With lead wire | | | | | | | |
| - | LN | L type plug connector | Without lead wire | | | | | | | |
| - | LO | COLLIGECTOL | Without connector | | | | | | | |
| - | M | M type plug | With lead wire | | | | | | | |
| | MN | M type plug connector | Without lead wire | | | | | | | |
| | MO | COLLIGOROL | Without connector | | | | | | | |

Note 1) For AC, there is no "S" integrated with the

Note 2) "R" and "U" are available for DC only.

Note) SY3 20- colors is for type 20 manifolds. SY3 40- is for type 41 and 42 manifolds. SY3 40R- is for type 42 manifolds.

D

Ε

Indicator light/ © Surge voltage suppressor D Manual override

Type 41

Type 42

Type 41, 42

| Nil | Without indicator light/ surge voltage suppressor |
|-----|--|
| s | With surge voltage suppressor |
| Z | With indicator light/ surge voltage suppressor |
| R | With surge voltage suppressor (non-polar) |
| | With indicator light/ |

surge voltage suppressor (non-polar)

(E) A/B port size

| Nil | For type 41 and 42 manifolds | | | | | | | |
|-------|------------------------------|-----------|--|--|--|--|--|--|
| M5 | M5 x 0.8 | | | | | | | |
| C4 | ø4 One-touch fitting | | | | | | | |
| C6 | ø6 One-touch fitting | manifolds | | | | | | |
| Note) | Mixed mounting | | | | | | | |

Non-locking push type

Push-turn locking

Push-turn locking

slotted type

Note) For the type 20 mixed mounting sepcification, it is not necessary to indicate a symbol in the box. Instead, specify a symbol (M5, C4, etc.) in place of a "O" in the station table below.

3 Stations

Indicate the type of actuation and layout of valves with a "O". However, for an interface regulator with gauge, indicate with a "G" instead of "O".

| | Stations | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Quantity |
|---|--|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|----------|
| 2 position | Single solenoid | | | | | | | | | | | | | | | | | | | | | |
| 2 position | Double solenoid | | | | | | | | | | | | | | | | | | | | | |
| | Closed center | | | | | | | | | | | | | | | | | | | | | |
| 3 position | Exhaust center | | | | | | | | | | | | | | | | | | | | | |
| | Pressure center | | | | | | | | | | | | | | | | | | | | | |
| | N.C. single | | | | | | | | | | | | | | | | | | | | | |
| 3 port valve | N.C. double | | | | | | | | | | | | | | | | | | | | | |
| o port varve | N.O. single | | | | | | | | | | | | | | | | | | | | | |
| | N.O. double | | | | | | | | | | | | | | | | | | | | | |
| | pilot specification nly for external pilot) | | | | | | | | | | | | | | | | | | | | | |
| (=::::::::::::::::::::::::::::::::::::: | Blanking plate assembly | | | | | | | | | | | | | | | | | | | | | |
| | Individual SUP spacer assembly | | | | | | | | | | | | | | | | | | | | | |
| Options | Individual EXH spacer assembly | | | | | | | | | | | | | | | | | | | | | |
| | Interface regulator (P regulated) | | | | | | | | | | | | | | | | | | | | | |
| | Interface regulator (A1 regulated) | | | | | | | | | | | | | | | | | | | | | |
| | Interface regulator (B1 regulated) | | | | | | | | | | | | | | | | | | | | | |

Notes: • Blanking plate assembly: SY3000-26-9A (Type 20), SY3000-26-9A (Type 41, 42)

- Individual EXH spacer assembly: SY3000-39-20A (Type 20), SY3000-39-2A (Type 41, 42)
- Individual SUP spacer assembly: SY3000-38-20A (Type 20), SY3000-38-2A (Type 41, 42) Interface regulator: ARBY3000-□-□-2 (Type 41, 42)

Enter ordered part numbers.

| Part no. | Qty. |
|----------|------|
| | |
| | |
| | |
| | |

| Part no. | Qty. |
|----------|------|
| | |
| | |
| | |
| | |

| Order no. | |
|------------------|--|
| Clerk (code no.) | |
| Dept. code | |

- Refer to pages 157 and 158 for 3 port valve part numbers.
- Refer to page 238 for interface regulator part numbers. Also, for interface regulators with gauge, the part numbers for odd number and even number stations are different.



For SMC use only

| SY5000: Stand | ard | l M: | an | ifc |)ld | | | С | usto | mer | name | Э | | | | | | | | , , | |
|---|--------------------|----------------------|-------------------|----------|--------------|-------------|---------------|-----------------|------------------|------------------|--------------------|----------------|---------------------|----------|---|-------------------|----------|----------|-----------------|--|---------------|
| | | | | | | | | - | | | erson | _ | | | | | | | | | |
| Manifold Spec | ific | ati | or | า S | She | et | • | _ <u>_</u> - | | | sheet n | | | | | | | | | | ┦┌ |
| mannora opoo | | 70.0 . | • | • | | | | \vdash | | | rder n | - | | | | | | | | | ┨┌. |
| ollow procedures ① through ③ | 3). | | | | | | | - | • • | | t nam | іе | | oot/ | ٥) [|) o au | ired | doto | π | | |
| Manifold Type | | | | | | | | Q | uant | ııy | | | | set(| 5) г | requ | illeu | uale | <i>;</i> | | ا ا |
| inter a "O" for the manifold type equirements in the available box | | | | | | | | | | | | | | | | | | | | жĦ | 2 |
| Top ported (type 20) | 5Y5 | 5 — | 20 |) – | | | | | | | | | | | | | Ë | Ja | d | ⊕ . • • • • • | 7 |
| Side ported (type 41, 42) SS | _ | | T | | \ | | Ļ | \exists | A /F | | | | | | | | 0 | 9 | 5 0 | | 2 |
| | _ | ase typ | pe ● pe 41 | - | 02 | Stati | ons tation | | | Rc 1/8 | t size | е | | Туре | 11 | _ | | T | Ĭ | | \vdash |
| | _ | 12 Typ | | - | : | 20 s | : | | 02 | Rc 1/4 | | ch fit | | Туре | 42 | 2 | | Ħ | ₩ 7 | T | 2 |
| 2 Valve Type | | | | | | | | | C8 9 | ø8 Or | ne-tou | ch fit | ting | Туре | 41, 4 | 2 | Station | n (®- | | @ ① | ; |
| inter the symbols for required s | pecific | ations | as ii | ndica | ated be | elow. | | | | | | | N | Ś | Y3□4 | 0-🗆 | □□ is | for ty | pe 41 | e 20 manifolds. and 42 manifolds. 2 manifolds. | |
| SY5 * ² / ₄ 0 * - | | | | الر D | _ _ (E | _) | | | | | | | ator li je volt | ght/ | | | | | | override | |
| Type of actuation | _ | _ | , | \sim | B Ele | | cal e | entry | | | N | | Without surge v | | | | Nil | I N | on-lo | cking push type | , , l |
| 1 2 position single solenoid 2 2 position double solenoid | | pecific | | s | _ | | • | wire le | | | | | With s | | voltaç | je | D | | ush-ti otted | urn locking type | |
| 2 2 position double solenoid 3 3 position closed center | 5 6 | 12 | VDC VDC | | 1 | | Ò | wire le With | ngth 60 Llead | | z | | With ind surge v | | | ssor | E | Р | | urn locking | - - |
| 4 3 position exhaust center 5 3 position pressure center | V S | | DC DC | _ | IN | type ponnec | | | | d wire | | ١, | With s | ırge v | oltage | | _ | | | • | - ; |
| Indicate in the station table below. | R | 3V pecifica | DC | | M | 1 type | plua | With | lead | wire | | - | suppre With ind | | | olar) | Nil | _ | | size 41 and 42 manifolds | - ⊢ |
| Pilot type | (50/60 | DHz) | | | | onnec | | | | d wire nector | | J 9 | surge v (non-po | oltage : | | ssor | 01 | R | c 1/8 | | |
| Nil Internal pilot | | 100VA | | | DO D | IN term | ninal | | connec | ctor nector | Note | | AC, the | | | | C4 C6 | _ | | uch fitting For type 20 | L |
| R External pilot (type 5□40 only, for type 42 base) | 3 | 110VAC | | | V* | IN term | ninal | With | conne | ctor | - - Note | inte 2) Sin | egrated ice "D", | with the | he rectifier. "Y", and "YO" C8 Ø8 One-touch fitting | | | | | — maniioids | ; |
| When using an external pilot valve, enter a "O" in the | | 220VAC C specific | • | | * Refer to | page | 189. | VVILLIC | out con | nector | - | "U" | are no | t availa | | | | | | | . i |
| appropriate box for "External Pilot Specification". | ty | OO", "Y", a | nly avai | ilable | | | | | | | | ava | ailable. | | "are not Note) For the type 20 mixed mour sepcification, it is not necess to indicate a symbol in the (| | | | | , it is not necessary | , $-$ |
| 0.00 | in | 24VDC a | and 12V | /DC. | | | | | | | | | only. | | | | | box. I | nstead | I, specify a symbol | |
| 3 Stations | | | | | | | | | | | | | | | | | | in the | station | r table below. | |
| dicate the type of actuation and | ayout | of valv | es w | ith a | "O". I | lowe | ver, f | or an | inte | rface | regul | lator | with | gau | ge, ir | dica | te wit | th a ' | "G" iı | nstead of "O". | . 4 |
| Stations Single solenoid | 20 | 19 1 | 18 1 | 17 1 | 16 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Quantity | |
| position Double solenoid | + | | | | | | | | | | | | | | | | | | | | |
| Closed center | | | | | | | | | | | | | | | | | | | | | - 3 |
| position Exhaust center Pressure center | + | | | + | | | | | | | | | | | | | | | | | · - |
| N.C. single | | | | | | | | | | | | | | | | | | | | | - - - [|
| port valve N.C. double | + | | | \perp | | - | | - | | | | | | | | | - | | | | . Ì |
| N.O. single N.O. double | + | | | + | | | | + | | | | | | | | | | | | | . ∟ |
| xternal pilot specification | | | | | | | | | | | | | | | | | | | | | |
| Enter only for external pilot) | + | | | _ | | _ | | | | | | | | | | | _ | | - | | - |
| Blanking plate assembly Individual SUP spacer assemble | , | | + | + | | | | | | | | | | | | | | | | - | |
| Individual EXH spacer assemble | y | | | | | | | | | | | | | | | | | | | | |
| Interface regulator (P regulated | - | | | \Box | | | | | _ | | \Box | | | | | | | | | | . |
| Interface regulator (A1 regulated Interface regulator (B1 regulated | · | | + | + | | | | | | | | | | | | | | | | - | - |
| otes: • Blanking plate assembly: SY5000-26 • Individual SUP spacer assembly: SY5 | -18A (Typ | | | | | (Type 4 | , 11, 42) | • In | iterfac | | spacer lator: A | | | | | | | SY50 | 00-39- | 2A (Type 41, 42) | - |
| nter ordered part numbers. | | | | | | For S | SMC (| use or | nıy | | | | | | | | | | | | |
| Part no. | | C | ty. | | | | | Par | t no. | | | | Q | ty. | - | rder | | | | | |
| | | | | | | | | | | | | | | | - | | ode no | D.) | | | |
| | | | | | | | | | | | | | | | | ept. | | 157 - | d 450 1 | or 2 portughts = ==" | |
| | | | | | | | | | | | | | | \dashv | n | umbers | s. | | | or 3 port valve part | J |
| | | | | | | | | | | | | | | | | efer to umbers | | 38 for i | interfac | e regulator part | |
| | | | | | | | | | | | | | | | " | | | | | | |
| | | | | | | | ∂S | MC | | | | | | | | | | | | 192 | : |

Copy this page for use as needed.

Date:

SY7000: Standard Manifold

Manifold Specification Sheet

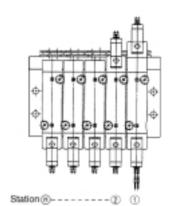
Follow procedures (1) through (3).

Manifold Type

Enter a "O" for the manifold type to be used and enter requirements in the available boxes for that manifold.

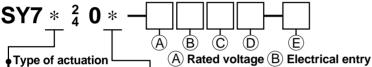


Date: Customer name Contact person Specification sheet no. Purchase order no. Equipment name Required date Quantity



2 Valve Type

Enter the symbols for required specifications as indicated below.



1 2 position single solenoid

| | 2 position single solenola |
|----|----------------------------|
| 2 | 2 position double solenoic |
| 3 | 3 position closed center |
| 4 | 3 position exhaust center |
| -5 | 3 position pressure cente |

Indicate in the station table below.

Pilot type

| | المالمة المسملة |
|-----|------------------------------------|
| Nil | Internal pilot |
| R | External pilot |
| ĸ | (type 7□40 only, for type 42 base) |

When using an external pilot valve, enter a "O" in the appropriate box for "External Pilot Specification"

DC specifications

| | • |
|---|-------|
| 5 | 24VDC |
| 6 | 12VDC |
| ٧ | 6VDC |
| S | 5VDC |
| R | 3VDC |

AC specifications

| 30/00112) | | | | | | | | | |
|-----------|-----------------|--|--|--|--|--|--|--|--|
| 1 | 100VAC | | | | | | | | |
| 2 | 200VAC | | | | | | | | |
| 3 | 110VAC [115VAC] | | | | | | | | |
| 4 | 220VAC [230VAC] | | | | | | | | |

Note) DC specification of "D", "DO", "Y", and "YO" types are only available in 24VDC and 12VDC.

| | G | Groffiffet (lead wife length 300ff | | | | | | | | |
|---|-----|------------------------------------|----------------------|--|--|--|--|--|--|--|
| | Н | Grommet (lead | d wire length 600mm) | | | | | | | |
| | L | I tuno niua | With lead wire | | | | | | | |
| | LN | L type plug connector | Without lead wire | | | | | | | |
| - | LO | Connector | Without connector | | | | | | | |
| | М | M type plug | With lead wire | | | | | | | |
| | MN | M type plug connector | Without lead wire | | | | | | | |
| | МО | Connector | Without connector | | | | | | | |
| | D | DIN terminal | With connector | | | | | | | |
| | DO | DIN terminal | Without connector | | | | | | | |
|] | Υ* | DIN terminal | With connector | | | | | | | |
| ĺ | Y0* | DIIN LEITIIIIAI | Without connector | | | | | | | |

2 stations

20 20 stations

02

* Refer to page 189.

Indicator light/

A/B port size **02** Rc 1/4

C10 Ø10 One-touch fitting

© Surge voltage suppressor

| Nil | surge voltage suppressor |
|-----|--|
| S | With surge voltage suppressor |
| Z | With indicator light/ surge voltage suppressor |
| R | With surge voltage suppressor (non-polar) |
| U | With indicator light/ surge voltage suppressor (non-polar) |

Note 1) For AC, there is no "S" specification, since it is integrated with the rectifier

Note 2) Since "D", "DO", "Y", and "YO" are non-polar types, "R" and "U" are not available.

Note 3) "DOZ" and "YOZ" are not available.

Note 4) "R" and "U" are available for DC only.

Note) SY7 20 - Color is for type 20 manifolds.

SY7 40- is for type 42 manifolds.

| (D) Ma | anual override |
|--------|------------------|
| NII | Non looking puch |

| Nil | Non-locking push type |
|-----|--------------------------------|
| D | Push-turn locking slotted type |
| E | Push-turn locking lever type |
| | |

(E) A/B port size

| Nil | For type 42 ma | anifolds |
|-------|-----------------------|-----------|
| | Rc 1/4 | |
| | ø8 One-touch fitting | |
| C10 | ø10 One-touch fitting | manifolds |
| Note) | Mixed mounting | |

Note) For the type 20 mixed mounting sepcification, it is not necessary to indicate a symbol in the E box. Instead, specify a symbol (0.2, C8, etc.) in place of a "○ in the station table below.

3 Stations

Indicate the type of actuation and layout of valves with a "O".

| | Stations | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Quantity |
|---------------------|--|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|----------|
| 2 position | Single solenoid | | | | | | | | | | | | | | | | | | | | | |
| 2 position | Double solenoid | | | | | | | | | | | | | | | | | | | | | |
| | Closed center | | | | | | | | | | | | | | | | | | | | | |
| 3 position | Exhaust center | | | | | | | | | | | | | | | | | | | | | |
| | Pressure center | | | | | | | | | | | | | | | | | | | | | |
| Externa (Enter o | l pilot specification only for external pilot) | | | | | | | | | | | | | | | | | | | | | |
| | Blanking plate assembly | | | | | | | | | | | | | | | | | | | | | |
| | Individual SUP spacer assembly | | | | | | | | | | | | | | | | | | | | | |
| Options | Individual EXH spacer assembly | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |

Notes: • Blanking plate assembly: SY7000-26-20A (Type 20), SY7000-26-20A (Type 42)

- Individual SUP spacer assembly: SY7000-38-1A (Type 20), SY7000-38-2A (Type 42)
- Individual EXH spacer assembly: SY7000-39-1A (Type 20), SY7000-39-2A (Type 42)

For SMC use only

Enter ordered part numbers.

| Part no. | Qty. |
|----------|------|
| | |
| | |
| | |
| | |

| Part no. | Qty. |
|----------|------|
| | |
| | |
| | |
| | |

| Order no. | |
|------------------|--|
| Clerk (code no.) | |
| Dept. code | |

SMC

Precautions

Dept. code

| | | Stations | | | | | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Quantity |
|------------------------------------|------------------------------------|---|---|--|---|---|-------------------------------|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| 2 200 | ition | Single solenoid | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 posi | illon | Double solenoid | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Closed center | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 posi | ition | Exhaust center | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Pressure center | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | • | | | | | | | | | | | | | | | | | | | | | | | | | |
| Exterr (Enter | nal pil r only | ot specification for external pilot) | | | | | | | | | | | | | | | | | | | | | | | | | |
| SUP b | block | disc | Т | | | | | | | | | | | | | | | | | | | | | | | | |
| © EXH block disc (2 pcs./location) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Se Individ | ndividua | al SUP spacer assembly | | | | | | | | | | | | | | | | | | | Ċ | | | | | | |
| ig In | ndividua | al EXH spacer assembly | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3 pos Blank Exter (Ente SUP EXH b | External pil (Enter only SUP block EXH block d | 2 position Single solenoid Double solenoid Closed center Exhaust center Pressure center Blanking plate assembly External pilot specification (Enter only for external pilot) SUP block disc EXH block disc (2 pcs./location) | 2 position Single solenoid Double solenoid Closed center Exhaust center Pressure center Blanking plate assembly External pilot specification (Enter only for external pilot) SUP block disc EXH block disc (2 pcs./location) | 2 position Single solenoid Double solenoid Closed center Exhaust center Pressure center Blanking plate assembly External pilot specification (Enter only for external pilot) SUP block disc EXH block disc (2 pcs./location) | 2 position Single solenoid Double solenoid Closed center Exhaust center Pressure center Blanking plate assembly External pilot specification (Enter only for external pilot) SUP block disc EXH block disc (2 pcs./location) | 2 position Single solenoid | 2 position Single solenoid Double solenoid Closed center 3 position Exhaust center Pressure center Blanking plate assembly External pilot specification (Enter only for external pilot) SUP block disc EXH block disc (2 pcs./location) | 2 position Single solenoid Double solenoid Closed center 3 position Exhaust center Pressure center Blanking plate assembly External pilot specification (Enter only for external pilot) SUP block disc EXH block disc (2 pcs./location) | 2 position Single solenoid Double solenoid Closed center Shaust center Pressure center Blanking plate assembly External pilot specification (Enter only for external pilot) SUP block disc EXH block disc (2 pcs./location) | 2 position Single solenoid Double solenoid Closed center Shaust center Pressure center Blanking plate assembly External pilot specification (Enter only for external pilot) SUP block disc EXH block disc (2 pcs./location) | 2 position Single solenoid Double solenoid Closed center Exhaust center Pressure center Blanking plate assembly External pilot specification (Enter only for external pilot) SUP block disc EXH block disc (2 pcs./location) | 2 position Single solenoid Double solenoid Closed center Exhaust center Pressure center Blanking plate assembly External pilot specification (Enter only for external pilot) SUP block disc EXH block disc (2 pcs./location) | 2 position Single solenoid Double solenoid Double solenoid | 2 position Single solenoid Double solenoid Double solenoid | 2 position Single solenoid Double solenoid Double solenoid | 2 position Single solenoid Double solenoid Double solenoid | 2 position Single solenoid Double solenoid Double solenoid | 2 position Single solenoid Double solenoid Double solenoid Double solenoid Single solenoid Double solenoid Double solenoid Single solenoid Double solenoid Single solenoid | 2 position Single solenoid Double solenoid Double solenoid Double solenoid Single solenoid Double solenoid Double solenoid Single solenoid Double solenoid Single solenoid | 2 position Single solenoid Double solenoid Double solenoid Double solenoid Single solenoid Double solenoid Single solenoid Double solenoid Single solenoid | 2 position Single solenoid Double solenoid Double solenoid Double solenoid Single solenoid Double solenoid Single solenoid Double solenoid Single solenoid | 2 position Single solenoid Double solenoid Double solenoid Double solenoid Single solenoid Double solenoid Double solenoid Single solenoid Double solenoid Single solenoid | 2 position Single solenoid Double solenoid | 2 position Single solenoid Double solenoid Double solenoid Double solenoid Single solenoid Double solenoid Double solenoid Double solenoid Single solenoid Double solenoid Single solenoid Double solenoid Single solenoid Double solenoid Single solenoid | 2 position Single solenoid Double solenoid | 2 position Single solenoid Double solenoid Double solenoid Double solenoid Single solenoid Double solenoid |

Notes: • Blanking plate assembly: SY9000-26-2A

Individual SUP spacer assembly: SY9000-38-2A

For SMC use only

- SUP block disc: SY9000-57-1A
- EXH block disc: SY9000-57-1A (2 pcs./location)
- Individual EXH spacer assembly: SY9000-39-2A

| Ente | r ordered part numbers. | |
|------|-------------------------|------|
| | Part no. | Qty. |
| | | |
| | | |
| | | |
| | | |

| Part no. | Qty. |
|----------|------|
| | |
| | |
| | |
| | |

| Order no. | |
|------------------|--|
| Clerk (code no.) | |
| Dept. code | |
| | |



| Stations | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Quantity | For DC | For 100VAC | For 110VAC |
|--|----|----|----|---|---|---|---|---|---|---|---|---|----------|--------------|---------------|---------------|
| Connector assembly (for 2 position single) | | | | | | | | | | | | | | SY3000-37-3A | SY3000-37-32A | SY3000-37-35A |
| Connector assembly (for 2 position double, 3 position) | | | | | | | | | | | | | | SY3000-37-4A | SY3000-37-33A | SY3000-37-36A |
| Connector assembly (for 2 position single, with spacer assembly) | | | | | | | | | | | | | | SY5000-37-3A | SY5000-37-15A | SY5000-37-19A |
| Connector assembly (for 2 position double, 3 position,) | | | | | | | | | | | | | | SY3000-37-6A | SY3000-37-34A | SY3000-37-37A |

Enter ordered part numbers.

| | Part no. | Qty. | |
|--|----------|------|--|
| | | | |
| | | | |
| | | | |
| | | | |

| Part no. | Qty. |
|----------|------|
| | |
| | |
| | |
| | |

| Order no. | | |
|------------------|------------------|--|
| Clerk (code no.) | | |
| Dept. code | | |
| D () | F7 4F0 (0 t t | |

Refer to pages 157 and 158 for 3 port valve part numbers.



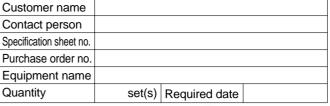
196

Nefer to page 238 for interface regulator part numbers. Also, for interface regulators with gauge, the part numbers for odd number and even number stations are different.

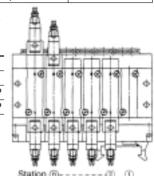
Manifold Specification Sheet

Follow procedures 1 through 3.

| Manifold Type |
|---------------|
|---------------|

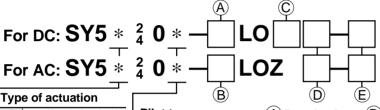


Enter a "O" for the manifold type to be used and enter requirements in the available boxes for that manifold. Enter "O". A/B port size Top ported (type 20P) **SS5Y5** — **20P** Rc 1/8 Type 41P Type 42P 02 Rc 1/4 Side ported (type 41P, 42P) SS5Y5 C6 ø6 One-touch fitting Type 41P, 42P C8 ø8 One-touch fitting Type 41P, 42P Stations **41** Type 41 03 3 stations **42** Type 42 12 12 stations



2 Valve Type

Enter the symbols for required specifications as indicated below.



Note) SY5□20-□LO^U₇□-□ is for type 20P manifolds. SY5□40-□LO is for type 41P and 42P manifolds. SY5 \square 40R- \square L $\stackrel{\cup}{0}$ \square is for type 42P manifolds.

(C) Indicator light/Surge voltage suppressor

| Z | With indicator light/surge voltage suppressor |
|---|---|
| U | With indicator light/surge voltage suppressor (non-polar) |

Note) Only positive COM specification is available for "Z".

Non-locking push type

Push-turn locking

Push-turn locking

slotted type

lever type

| 1 | 2 position single solenoid |
|-------|--------------------------------|
| 2 | 2 position double solenoid |
| 3 | 3 position closed center |
| 4 | 3 position exhaust center |
| 5 | 3 position pressure center |
| ndica | te in the station table below. |

Pilot type Nil Internal pilot External pilot

(type 5□40 only, for type 42P base When using an external pilot valve, enter a "O" in the appropriate box for "External Pilot Specification".

(A) Rated voltage (D) Manual override 24VDC 12VDC (B) Rated voltage

1 100VAC 3 110VAC [115VAC] (E) A/B port size

| \sim | • | |
|--------|----------------------|------------------------|
| Nil | For type 41P and 4 | 2P manifolds |
| 01 | Rc 1/8 | |
| C4 | ø4 One-touch fitting | E |
| C6 | ø6 One-touch fitting | For type 20P manifolds |
| C8 | ø8 One-touch fitting | maniioids |
| Note) | Mixed mounting | |
| | | |

Note) For the type 20 mixed mounting sepcification, it is not necessary to indicate a symbol in the Ebox. Instead, specify a symbol (01, C4, etc.) in place of a "O" in the station table below

Stations

Indicate the type of actuation and layout of valves with a "O". However, for an interface regulator with gauge, indicate with a "G" instead of "O".

| | | | | | | 1 | | | | | | | | 1 |
|-----------------------|--|----|----|----|---|---|---|---|---|---|---|---|---|----------|
| | Stations | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Quantity |
| 0!!! | Single solenoid | | | | | | | | | | | | | |
| 2 position | Double solenoid | | | | | | | | | | | | | |
| | Closed center | | | | | | | | | | | | | |
| 3 position | Exhaust center | | | | | | | | | | | | | |
| | Pressure center | | | | | | | | | | | | | |
| | N.C. single | | | | | | | | | | | | | |
| 3 port valve | N.C. double | | | | | | | | | | | | | |
| o port vaive | N.O. single | | | | | | | | | | | | | |
| | N.O. double | | | | | | | | | | | | | |
| External (Enter or | pilot specification nly for external pilot) | | | | | | | | | | | | | |
| | Blanking plate assembly | | | | | | | | | | | | | |
| | Individual SUP spacer assembly | | | | | | | | | | | | | |
| Ontions | Individual EXH spacer assembly | | | | | | | | | | | | | |
| Options | Interface regulator (P regulated) | | | | | | | | | | | | | |
| | Interface regulator (A1 regulated) | | | | | | | | | | | | | |
| | Interface regulator (B1 regulated) | | | | | | | | | | | | | |

Notes: • Blanking plate assembly: SY5000-26-19A (Type 20P), SY5000-26-19A (Type 41P, 42P)

- Individual EXH spacer assembly: SY5000-39-1A (Type 20P), SY5000-39-2A (Type 41P, 42P)
- Individual SUP spacer assembly: SY5000-38-1A (Type 20P), SY5000-38-2A (Type 41P, 42P) Interface regulator: ARBY5000-\(\subseteq -2 \) (Type 41, 42)

For SMC use only

Indicate connector assemblies with a "O" in accordance with the valve specifications.

| | | - | | | | | | | | | | | | | | |
|--|----|----|----|---|---|---|---|---|---|---|---|---|----------|--------------|---------------|---------------|
| Stations | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Quantity | For DC | For 100VAC | For 110VAC |
| Connector assembly (for 2 position single) | | | | | | | | | | | | | | SY5000-37-3A | SY5000-37-15A | SY5000-37-19A |
| Connector assembly (for 2 position double, 3 position) | | | | | | | | | | | | | | SY5000-37-4A | SY5000-37-16A | SY5000-37-20A |
| Connector assembly (for 2 position single, with spacer assembly) | | | | | | | | | | | | | | SY5000-37-5A | SY5000-37-17A | SY5000-37-21A |
| Connector assembly (for 2 position double, 3 position,) | | | | | | | | | | | | | | SY5000-37-6A | SY3000-37-18A | SY5000-37-22A |

Enter ordered part numbers.

| Part no. | Qty. |
|----------|------|
| | |
| | |
| | |
| | |

| Part no. | Qty. |
|----------|------|
| | |
| | |
| | |
| | |

| Order no. | |
|------------------|--|
| Clerk (code no.) | |
| Dept. code | |

- Refer to pages 157 and 158 for 3 port valve part numbers.
- Refer to page 238 for interface regulator part

Notes: • Blanking plate assembly: SY7000-26-21A (Type 20P), SY7000-26-21A (Type 42P) Individual SUP spacer assembly: SY7000-38-1A (Type 20P), SY7000-38-2A (Type 42P)

• Individual EXH spacer assembly: SY7000-39-1A (Type 20P), Y7000-39-2A (Type 42P)

For SMC use only

Indicate connector assemblies with a "O" in accordance with the valve specifications. 12 11 10 9 Quantity For 100VAC For 110VAC For DC Connector assembly (for 2 position single) SY5000-37-19A SY5000-37-3A SY5000-37-15A Connector assembly (for 2 position double, 3 position) SY5000-37-4A SY5000-37-16A SY5000-37-20A Connector assembly (for 2 position single, with spacer assembly) SY5000-37-17A SY5000-37-5A SY5000-37-21A Connector assembly (for 2 position double, 3 position, with spacer assembly SY5000-37-6A SY5000-37-18A SY5000-37-22A

SMC

Enter ordered part numbers

| | Part no. | Qty. |
|--|----------|------|
| | | |
| | | |
| | | |
| | | |

| Part no. | Qty. |
|----------|------|
| | |
| | |
| | |
| | |

| Order no. | |
|------------------|--|
| Clerk (code no.) | |
| Dept. code | |
| | |

3 3 position closed center
4 3 position exhaust center
5 3 position pressure center Indicate in the station table below.

R External pilot
When using an external pilot valve, enter a "0" in the 6 section of the station table below.

B Rated voltage
1 100VAC
3 110VAC [115VAC]

Indicate the type of actuation and layout of valves with a "O".

Pilot type

Internal pilot

IWhen A/B port sizes are mixed, indicate symbols (C8, C10, etc.) in the (a) section.]

Nil

Note) For the mixed mounting sepcification, it is not necessary to indicate a symbol in the (E) box. Instead, specify a symbol (02, C10, etc.) in place of a "O" in the station table below.

| | | Stations | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Quantity |
|---------------|--------------|---|----|----|----|-----|---|----------|---|---|---|---|---|---|----------|
| | 0 iti | Single solenoid | | | | | | | | | | | | | |
| | 2 position | Double solenoid | | | | | | | | | | | | | |
| _ | | Closed center | | | | | | | | | | | | | |
| a | 3 position | Exhaust center | | | | | | | | | | | | | |
| | | Pressure center | | | | | | | | | | | | | |
| | Blanking p | late assembly | | | | | | | | | | | | | |
| b | External p | ilot specification y for external pilot) | | | | | | | | | | | | | |
| $\overline{}$ | SUP block | disc | | | · | · | | <u> </u> | | · | · | | · | | |
| © | EXH block | disc (2 pcs./location) | | | | | | | | | | | | | |
| | ළ Individu | ual SUP spacer assembly | | | | _ ' | | | | | | | | | |
| (d) | See Individu | ual EXH spacer assembly | | | | | | | | | | | | 1 | |

(A) Rated voltage (D) Manual override

Non-locking push type

Push-turn locking

Push-turn locking

slotted type

lever type

24VDC

Notes: • Blanking plate assembly: SY9000-26-3A

2 position single solenoid

2 position double solenoid

- Individual SUP spacer assembly: SY9000-38-1A
 Individual SYL spacer assembly: SY0000-30-1A
- SUP block disc: SY9000-61-2A
 EXH block disc: SY9000-61-2A (2 pcs./location)
- Individual EXH spacer assembly: SY9000-39-1A

For SMC use only

Indicate connector assemblies with a "O" in accordance with the valve specifications.

| Stations | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Quantity | For DC | For 100VAC | For 110VAC |
|---|----|----|----|---|---|---|---|---|---|---|---|---|----------|--------------|--------------|--------------|
| Connector assembly (for 2 position single) | | | | | | | | | | | | | | SY9000-37-1A | SY9000-37-1B | SY9000-37-1C |
| Connector assembly (for 2 position double, 3 position) | | | | | | | | | | | | | | SY9000-37-2A | SY9000-37-2B | SY9000-37-2C |
| Connector assembly (for 2 position single, with spacer assembly) | | | | | | | | | | | | | | SY9000-37-3A | SY9000-37-3B | SY9000-37-3C |
| Connector assembly (for 2 position double, 3 position,) | | | | | | | | | | | | | | SY9000-37-4A | SY9000-37-4B | SY9000-37-4C |

Enter ordered part numbers.

| Part no. | Qty. |
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| | Vann | 0: Flat R | ihl | h 0 | n C | , , | hl | ^ | | | (| Custo | mei | r naı | me | | | | | | | | Fea |
| | | | וטו | JU | 11 (| <i>,</i> a | IJΙ | C | | | C | Conta | act p | erso | on | | | | | | | | Features |
| В | ase Mou | nted | | | | | | | | | S | Specifi | cation | shee | et no. | | | | | | | | 0, |
| M | anifo | old Spec | ifi | Ca | tio | n | S | he | אַנ | • | F | Purch | ase (| orde | r no. | | | | | | | | - (1 |
| | | - | | | 1110 | | | 110 | | • | E | Equip | mer | nt na | ame | | | | | | | | valve |
| | • | lures ① through 🤇 | 3). | | | | | | | _ | (| Quan | tity | | | se | et(s) F | Requ | uired da | ite | | | ve Ve |
| 1 | Manif | old Type | | | | | | | | | 1 | Ор | tion | | | | | | | | | | NY- |
| Ente | er the sym | ools for required s | pecif | icati | ons in | the | box | es be | elow. | | | | nbol I il | Diro | ct mour | | nting ty | ре | | | | | 20 20 |
| S | S5Y9 | -43P- | | |] [| } | ـــــــــــــــــــــــــــــــــــــ | | | : | | | $\overline{}$ | | | นทt (with | DIN ra | ail) | | | | | |
| | tions ❤ | | | | ן נ | : | L | Т | | r | <u>-</u> ; | | 0 | | | unt (with | | | is necessary, i | indicate | | | 23 23 |
| | Stations | P/R port outle | t pos | _ sitio | n√s | UP/ | /EXH | 니 J blo | ck | | | D | * | the nu | mber of requ | uired stations | in the area | shown | by an asterisk | (*). | | | Œ |
| 04 | 4 stations | Symbol Outlet position App | | | ıs a | _ | | y sp | | | on_ | | | | | | | (1 | Maximum n | umber o | | 12 stations) - Valve | 20P |
| _ | 12 stations | U U side D D side | o 10 s | tation | s Sym | nbol iI | | Speci dard/ | | | ot ' | Symb | B po | | oecifica | tion | | | <u>)</u> _ | - | Ŷ Ý | stations | ם פ |
| | ludes the | B Both sides 4 to | | | | 2 | Exte | rnal p | ilot | | | C8 | _ | | ne-touc | | U si | de | ДД | i | | D side | אַן |
| | nking plate semblies. | Note) When using SUP block discs, specif SUP/EXH block as | y "B" f | or the | R | | | al pilot nal pilo | | | | C10 | | | | ch fitting ch fitting | _ | عم | | | | | 23P |
| | | mounting position. | | ıy | | o | LXIOII | iai piio | , Danie | | | Note | | | ed mou | | - | Ø | 06 06 | 06 06 | - ⊲ | | |
| 9 | Valve | Type | | | | | | | | | | | | | mounting | g, indicate | 0 | | 9 9 | 9 9 | 9 8 | | valve |
| Ent | er the sym | bols for required s | pecif | icati | ons as | ind | licate | ed be | elow. | | | | , | , | ion of the | , | | ⊗ ⊗ | 06 06 | 06 06 | | | |
| | | | | | (<u>A</u>) | | _ | <u>(Ç)</u> | | _ | | | labie. | | | | | _ | | | | , I | 41 |
| F | or DC: | SY9 * 40 |) * | _ | - | L | O | | | | | 6 | | | | | | | u u | ů ů | r¶ 4 | 3 | 7,0 |
| | | T | | - | H | | ا | _ | Έ | ╡ | | <u>C</u> | | | | | | | e supp | | r | | |
| F | or AC: | SY9 * 40 |) * | _ | Ш | L | O _Z | | | | | | | | | | | | suppresso suppresso | | | | 42 |
| ΓT | ype of ac | tuation | | _ | B | | | | (C | | | | J | (non | -polar) | | | | | _ | | | |
| | | | lot t | уре | | | (| (A) F | Rate | ov b | ltage | e _ | • | | | · | ation is | availa | ıble for "Z" | | | | 43 43 |
| | | a closed center — | | | al pilot | | _ : | 5 6 | 24V 12V | | | | | | l over | | _ | | | | | | |
| | | exhaust center — | | | nal pilot externa | l pilot | _ ; | | | | | | | | locking i-turn lo | push typ | <u>be</u> | | | | | | 41P |
| | | n pressure center val | ve, en | er a " | on the tation tal | (D | (| <u>B</u> F | 100V | | tage | e [| , | slotte | ed type | | _ | | | | | | Pe |
| \ | dicate in the s | | ow. | | | | | | 110V | | 5VAC] | ı | | | type | cking | _ | | | | | | 4.5 |
| 3 | Statio | ns | | | | | | | | | | | | | | | | | | | | | 42P |
| Indi | | pe of actuation and | d lav | out c | of valve | es w | ith a | a "O" | | _ | | | | | | | | | | | | | |
| [Wh | en A/B po | rt sizes are mixed, | | | | · | | Ť | | | e a | | on.] | | | | | | | | | | 43P |
| | | Stations Single solenoid | 12 | ! | 11 | + 1 | 10 | 1 9 | 9 | 8 | | 7 | | 6 | 5 | 4 | | 3 | 2 | 1 | C | Quantity | |
| | 2 position | Double solenoid | | | | | | | | | | | | | | | | | | | | | 45 |
| (a) | | Closed center | | | | | | | | | | | | | | | | | | | | | 0.0 |
| • | 3 position | Exhaust center Pressure center | | | | | | | | | | | | | | | _ | | + | | | | 45.7 |
| | Blanking p | late assembly | | | | | | | | | | | | | | | | | | | | | 45- NA |
| b | | ilot specification / for external pilot) | | | | | | | | | | | | | | | | | | | | | |
| _ | SUP block | . , | | | | 1 | | | | | | | | | | | | | | | | | 45 |
| © — | | disc (2 pcs./location) | | | | | | | | | | | | | | | | | | | | | ட்டம் |
| d | .≌ | al SUP spacer assembly al EXH spacer assembly | | | | | | | | | | | | | | | - | | + | | | | |
| Note | | plate assembly: SY9000 |)-26-4 <i>i</i> | Α | | • Indi | ividua | ⊥ I SUP | space | er asse | embly: | : SY90 | 00-38 | -2A | | | | | | | | | |
| | | ck disc: SY9000-57-2A ck disc: SY9000-57-2A (2 | 2 pcs./ | locatio | | • Indi | ividua | I EXH | space | er asse | embly: | : SY90 | 00-39 | -2A | | | | | | | | | |
| | | • | | | | | | | | | use o | • | _ | | | | | | | | | | - u |
| Ind | cate conn | ector assemblies v Stations | _ | _ | | ord 9 | ance 8 | e wit | h the | valv 5 | e sp | ecific | | ns. | Quanti | tv = | or DC | | For 100' | V/AC | For 1 | 10VAC | valve |
| Co | nnector assem | ably (for 2 position single) | 12 | 11 | 10 | 9 | • | | 0 | 5 | 4 | 3 | 2 | <u> </u> | Quanti | - | 00-37- | 1A | SY9000-3 | | | 0-37-1C | 9 7 |
| | | for 2 position double, 3 position) ably (for 2 position single, with spacer assembly) | | | $+ \top$ | \exists | | | | | | | | | | _ | 000-37-2 | | SY9000-3 | | | 00-37-2C | oper |
| Co | nector assem | IDIY (with spacer assembly) IDIY (for 2 position double, 3 position,) | | | | \dashv | | | | | | | | | | |)00-37-;)00-37- <i>;</i> | -+ | SY9000-3 SY9000-3 | | | 00-37-3C 00-37-4C | operated |
| | | or 2 position double, 3 posit | ion) | | ` | | | | | | | | | | 1 | | | | SY9000 | | | | |
| Ente | r ordered par | | | | | _ | | | | | | | | | | 1 2 | | | Г | | | | Order made |
| | | Part no. | | | Qty. | \dashv | | | | | Pa | art no | | | | Qty. | _ | Order | no. | | | | P → |

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| C | ·V200 | 0. No | 1 | - | : | | | | | | | С | ust | ome | er na | ame | | | | | | | | | | |
| 2 | Y300 | 0: Non-p | II | g | -ın |) | | | | | | С | ont | act i | pers | son | | | | | | | | | | |
| DI | N Rail M | anifold | | | | | | | | | | - | | | • | et no | | | | | | | | | | |
| R A | !£ - | 14 0 | :c: | | _1 | ! ~ | | \ I_ | | | | Η. | | | | er no | + | | | | | | | | | |
| IVI | anıto | old Spec | ITI | C | at | IOr | 1 5 | n | ee | J. | | - | | | | ame | | | | | | | | | | |
| | | ures ① through 🤇 | | | | | | | | | | - | • • | ntity | | iairic | _ | | no+/0 | \ D | a. i | rod | date | $\overline{}$ | | |
| | <u> </u> | old Type | ی). | | | | | | | | | G | luai | ility | | | | S | et(s |) Ke | equi | rea | uau | е | | |
| | | old Type bols for required s | | | lion. | . in 4h | 0 h 0 v | | | | | • | • | tior | | | | | | | | | | | | |
| | - | -45P | peci | | | | | es i | | w. { | | | spe indi | cified cate | d stati the n | ions i | s nec er of r | han the essar equire | у, | (M | axım | | numb | | _ | s: 20 stations Valve |
| _ | Stations | SUP/EXH block | | emb | oly | | P/EX | | | | _ | | 7 | | , | | | 110) | | | | 0 | | 9 | |)- Layout (for special specification |
| | 2 stations | mounting posit | | | _ | | semb | | <u> </u> | | | | | | | size | | | _ | | | Ä | ш | i | 1 | |
| : | : | Symbol Mounting position Ap | plicabl | e stati | ions | Symbo | _ | | cifica | | | _ | Syml C4 | | | Speci | | on fitting | _ | U side | | | ٦. | in the | 11 | D side |
| * Inc | 20 stations ludes the | U Side 2 | to 10 | statio | ons | Nil R* | | | pilot | | l pilo | | CE | | | | | fitting | | | П | | 의 | \exists | = | |
| nur | mber of nking plate | | to 20 | | | S* | _ | | <u> </u> | | ilence | er | М | | | | xed | | _ | F | 11 | 11 | ١٠. | 1"1 | ** | II 🗎 |
| | eamhliae | Special specificatio For special specificatio | | | | RS* | | | | | silenc | | Note) | | | | | indica | te | 0 | 8 | | | !! | 4 | 100 |
| | | the station table below | | | | | An aste made p | | | licate | s ord | ler | | | | instea n table | | ∪ ın | | | 7 I | 0 | 00 | 0 | ō | |
| (2 | Valve | Type | | | | | | | | | | | | | | | | | | | Ц | Ų | J. | Ц | | |
| Ente | | bols for required s | peci | fica | tions | s as ir | ndicat | ed k | oelo | w. | | | | | | | | | | | | U | | III. | W | |
| _ | ype of ac | - T | A) (A) | | ted | © volta | _ | <u></u> | Ele | ctri | cal (| entr | y | | | <u>©</u> | Indi Sur | cator ge vo | light Itage | / supp | ress | or | <u>D</u> | Ма | ınua | l overrid |
| | | on double solenoid | _ | ÷ | | ations | <u> </u> | G | _ | | | | <u> </u> | th 300 | | 1 | Nil | Witho | ut indi | cator I ge sup | ight/ press | or | 1 | lik | | locking type |
| - | | on closed center | <u>5</u> | _ | | VDC VDC | | H | | | · T | | <u> </u> | th 600 d wire | | | s | | | volta | | | | | | |
| - | | on exhaust center on pressure center | V S | _ | | DC DC | | LN | cor | pe p | olug – tor – | With | out l | ead v | wire | . — | | Suppi | | r or light | +/ | | | D | | ı-turn lockinç ed type |
| Īr | - | station table below. | R | | | DC | | LO M | 1 | | | | | conne d wire | ector | | Z | | | ge sup | | or | | | | |
| H | Pilot | type Internal pilot | | spe /60H | | ations | | MN | ⊔ cor | ype p nect | or – | With | out l | ead v | | | R | With suppr (non- | resso | | ge | | | E | | i-turn locking type |
| | R | External pilot | 1 2 | 2 | 00VA | \C | | | | | | | | | | | U | With in | ndicat volta | or light ge sup | | or | | | | |
| | valve, | using an external pilot enter a "O" in the | 3 4 | | | C [115VA C [230VA | | | | | | | | | | Not | to 1) [| (non- | . , | e is no | | | ficatio | | | |
| • | | riate box for "External pecification". | _ | | | , [2001] | .01 | | | | | | | | | | É | ince it | is in | tegrate | ed wit | th the | recti | fier. | | |
| (3 | Statio | ns | | | | | | | | | | | | | | Not | | R" and only. | d "U" a | are av | ailabl | e for | 24VE | C | | |
| | | yout of valves, etc | \arid | h a | "_" | Цом | wor | for | an i | ntor | face | roc | uula | tor v | with | aa | , i | dica | to w | ith a | "C" | ' inc | toac | 1 of | "_" | |
| | | | ., wit | a | | | | | | | | | | | | yauç 11 | | | 8 7 | | 5 | 4 | 3 | 2 | Ŭ. 1 | Quantity |
| | | ns or layout Single solenoid | | | \vdash | | 20 | 19 | 18 | 17 | 10 | 13 | 14 | 13 | 12 | 11 | 10 | 9 8 | 0 / | +6 | 5 | +4 | 3 | +- | + | Quantity |
| | 2 position | Double solenoid | | | | | | | | | | | | | | | \dashv | | \perp | | | İ | | | | |
| | 3 position | Closed center Exhaust center | | | | | | | | | | | | | | | | | + | | - | - | | | | |
| | 7 7 20.0011 | Pressure center | | | | | | | | | | | | | | | | | 土 | | | | | | | |
| (a) | | N.C. single N.C. double | | | | | _ | _ | | | | | | | | | \dashv | + | \perp | | - | + | + | - | | |
| | 3 port valves | N.O. single | | | | | | | | | | | | | | | | | | | | + | | | | |
| | N.O. double Blanking plate assembly | | | | | | | | | | | | | | | \neg | | | | | F | | | | | |
| | | ate assembly ot specification | | | | | + | | | | | | | | | | + | + | + | | + | + | + | - | | |
| | (Enter only | for external pilot) | | | | | \perp | | | | | | | | | | _ | \perp | \perp | | 1 | \perp | 1 | - | | |
| b | Special SU specifications | JP/EXH block assembly | | | \vdash | | | | | | | | | | \vdash | | | + | + | | | | - | - | | |
| <u> </u> | SUP block | | T | T | T | | \Box | | \perp | \perp | | \perp | \perp | \perp | Τ' | T | T. | Ľ | | | İ | Ì | | Ϊ | | |
| _ | | disc (2 pcs./location) al SUP spacer assembly | \vdash | \perp | \vdash | \perp | \Box | \perp | \perp | \vdash | \vdash | \perp | \vdash | \perp | \vdash | \vdash | | 4 | Н | \perp | \perp | \vdash | \perp | \perp | \perp | |
| | | al EXH spacer assembly | \vdash | | | - | - | + | + | | | - | | - | | | | | + | _ | + | + | + | + | + | |

| | 2 ===:4:= | Sirigle soleriold | | | | | | | | | | | | | | | | | | | | | | | | _ |
|----------|--|--|--------------------------|-------------------------------------|---------|--------|---------|---------------|----------|-------|----------------|---------|---------|---------|--------------------|--------------------|---------------|-------------------|---------|---------|--------|----------|-----------------|----------|--------------------------------|---|
| | 2 positio | Double solenoid | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Closed center | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3 positio | n Exhaust center | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Pressure center | | | | | | | | | | | | | | | | | | | | | | | | |
| | | N.C. single | | | | | | | | | | | | | | | | | | | | | | | | |
| a | 3 port valv | N.C. double | | | | | | | | | | | | | | | | | | | | | | | | _ |
| | S PUIT VAIV | N.O. single | | | | | | | | | | | | | | | | | | | | | | | | _ |
| | | N.O. double | | | | | | | | | | | | | | | | | | | | | | | | |
| | Blanking | plate assembly | | | | | | | | | | | | | | | | | | | | | | | | |
| | External | pilot specification ly for external pilot) | | | | | | | | | | | | | | | | | | | | | | | | _ |
| | - | | - | | | | | | | | | | | | | | | | | | | \vdash | \vdash | \vdash | | _ |
| b | Special specifications | SUP/EXH block assembly | | | | | | | | | | | | | | | | | | | | \vdash | $\vdash \vdash$ | | | _ |
| | SUP bloc | de dia a | | \vdash | | 1 | Ц. | \Box | \dashv | | - | \Box | \Box | \Box | | | | \Box | - | | \Box | \vdash | + | \vdash | | _ |
| © | | ck disc (2 pcs./location) | - | _ | | - | _ | - | - | | | - | - | + | | | _ | _ | - | - | - | + | + | _ | | _ |
| | | | | Д., | \perp | | \perp | Д, | | | | \perp | Д. | \perp | | \perp | | Д, | \perp | \perp | Ш | ㅗ | ᆂ | \perp | | _ |
| | | idual SUP spacer assembly | | | | | | | | | | | | | | | | | | | | | | | | _ |
| | ဖွ Indiv | idual EXH spacer assembly | | | | | | | | | | | | | | | | | | | | | | | | |
| (d) | .ট্র Inter | face regulator (P regulated) | | | | | | | | | | | | | | | | | | | | | | | | |
| | Subject of the second of the s | ace regulator (A1 regulated) | | | | | | | | | | | | | | | | | | | | | | | | _ |
| | | ace regulator (B1 regulated) | | | | | | | | | | | | | | | | | | | | | | | | _ |
| Notes | SUP block | late assembly: SX3000-75-1A disc: SX3000-77-1A disc: SX3000-77-1A (2 pcs./location | Indi | vidual SL vidual EX rface reg | H space | r asse | mbly: S | SY3000 □-2 | 0-39-2 | A • S | SUP/E SUP/E | XH blo | ock as: | sembly | y (star y (R ty | ndard): rpe): S | SX30 X3000 | 00-51- 0-51-3/ | 1A • | | | | | | SX3000-51-4A): SX3000-51-5 | |

For SMC use only

| Ente | r ordered part numbers. | |
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| | Part no. | Qty. |
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| Clerk (code no.) | |
| Dept. code | |

Note 1) For special specifications of the SUP/EXH block assembly mounting position, list its part number and quantity with the manifold type.

Note 2) Refer to pages 157 and 158 for 3 port valve part numbers.

Note 3) Refer to page 238 for interface regulator part numbers. Also, for interface regulators with gauge, the part numbers for odd number and even number stations are different.

| A Rail Manifold anifold Specification Sheet ow procedures 1 through 3. Manifold Type or the symbols for required specifications in the boxes below. Stations 2 stations 2 stations U U side D D side D D side B Both sides 2 to 20 stations Oxymbol Mounting position Reference | Customer na Contact pers Specification she Purchase orde Equipment n Quantity Option When a DIN specified stationicate the n stations. (Maximum stations) | son eet no. ler no. name rail longer tions is ne | set | (s) R | | | | | |
|--|--|--|------------------------------|-------------------------------|----------------|---------------------|-------------------------|---------------------|---------------------------|
| Anifold Specification Sheet ow procedures 1 through 3. Manifold Type or the symbols for required specifications in the boxes below. S5Y5 — 45 Sup/EXH block assembly mounting position Symbol Mounting position Symbol Mounting position Symbol Specifications U U side 2 to 10 stations udes the D D side 2 to 10 stations R* External pilot | Specification she Purchase orde Equipment in Quantity • Option When a DIN is specified static indicate the ni | eet no. ler no. name rail longertions is ne | | (s) R | | | | | |
| anifold Specification Sheet ow procedures ① through ③. Manifold Type or the symbols for required specifications in the boxes below. Stations ② stations ② stations ② symbol Mounting position Symbol Mounting position Symbol Mounting position Symbol Specification Nil Standard/Internal parts of the symbol stations U U side ② to 10 stations U D D side ② to 20 stations U D D side ② to 20 stations U Standard/Internal parts of the symbol stations U Symbol Specification Nil Standard/Internal parts of the symbol symb | Purchase order Equipment in Quantity Option When a DIN is specified statified indicate the in | rail longer | | (s) R | | | | | |
| Manifold Type The symbols for required specifications in the boxes below. Symbol Mounting position Symbol Mounting position Symbol Mounting position Symbol Mounting position Symbol Mounting position Symbol Mounting position Symbol Specification Symbol Specific | Equipment n Quantity Option When a DIN is specified stati indicate the n | rail longer tions is ne | | (s) R | | | | | |
| Manifold Type The symbols for required specifications in the boxes below. Symbol Mounting position Symbol Mounting position Symbol Mounting position Symbol Mounting position Symbol Mounting position Symbol Mounting position Symbol Specification Symbol Specific | Quantity Option When a DIN I specified stati indicate the n | rail longer tions is ne number of | | (s) R | -auire | | | | |
| Manifold Type or the symbols for required specifications in the boxes below. S5Y5 — 45 Sup/EXH block assembly mounting position Symbol Mounting position Symbol Mounting position Symbol Mounting position Symbol Specification Nil Standard/Internal processes the process of the symbol stations will be a symbol station will be a symbol stations will be a symbol station will be a symbol station will be a symbol | Option When a DIN is specified statified indicate the n | tions is ne number of | | (s) R | aquire | | $\overline{}$ | | |
| str the symbols for required specifications in the boxes below. Stations SUP/EXH block assembly mounting position Symbol Mounting position Symbol Mounting position Symbol Specification Symbol S | When a DIN is specified stati indicate the n | tions is ne number of | | | | ed da | ate | | |
| Stations 2 stations 2 stations U U side D D side D D shade D D Sha | specified state indicate the n | tions is ne number of | | | | | | | |
| SUP/EXH block assembly mounting position Symbol Mounting position Applicable stations 2 stations Symbol Mounting position Applicable stations 20 stations U U side 2 to 10 stations D D side D D side R* External pilot R* External pilot | indicate the n | number of | | (N | laximur | m num | nber of | valve | es: 20 stations) |
| SUP/EXH block assembly mounting position Symbol Mounting position Applicable stations 2 stations Symbol Mounting position Applicable stations 20 stations U U side 2 to 10 stations D D side D D side R* External pilot R* External pilot | stations. (Max | | | | (n)- | | @ | ① · | Valve stations |
| Stations SUP/EXH block assembly mounting position Symbol Mounting position Symbol Mounting position Applicable stations U U side | | x. 20 stati | ons) | | @ - | | P | 4 | ① - Layout (forspecial |
| Symbol Mounting position Applicable stations 20 stations U U side D D side D D D side D D D side D D D side D D D side D D D side D D D side D D D side D D D side D D D side D D D side D D D side D D D side D D D side | | 4 -! | | | Å | _ | | | specifications) |
| 20 stations udes the D D side 2 to 10 stations R* External pilot | | Specificat | ion | U side | | A. | <u> </u> | ė | : Diside |
| udes the D D side 2 to 10 stations R* External pilot | | One-touch | | | | 미 | | | |
| | C6 Ø6 C | One-touch | | Ħ | 1.6 | 1'9 | •a •e | 1 *9 | |
| nking plate M Special specifications | | One-touch Mixed | n fitting_ | 06 | 4 | П | | П | 80 |
| * For special specifications, indicate in | - | | . indicate | 9 | PH | | - | 읨 | 11 F |
| made products. | C4, C6 or | r C8 instea | | | 110 | 101 | | 1 | |
| Valve Type | in the stat | tion table. | | _ | W | B. | 74 | T | |
| er the symbols for required specifications as indicated below. | | | | | | | | | |
| SY5 * 40 * — | | | llaata: " | L-11 | | | | | |
| | cal entry | (C) Su | licator lig rge volta | ht/ ge supp | ressor | r ([|) Ma | anua | al override |
| \widehat{A} \widehat{B} \widehat{C} \widehat{D} \widehat{c} Grown | (lead wire length 300mm) | | Without in | ndicator | light/ | - 1 | Nil | | n-locking |
| 1 2 position single colonoid (1) Nated Voltage | (lead wire length 600mm) | | surge vol With sur | | | | IVII | pus | h type |
| 2 2 position double solenoid DC specifications L type | | | suppres | | .ye | _ | D | | h-turn locking |
| 3 3 position closed center 5 24VDC LO Conne | Without connector | Z | With indic | | | r - | | SIOU | ted type |
| 4 3 position exhaust center V 6VDC MN Myp | | - | With sur | ge volta | • | - | Е | | h-turn locking |
| dicate in the station table below S 5VDC MO CONTR | Without connector | K | suppress (non-po | | | _ | | ieve | er type |
| Pilot type AC specifications (50/60Hz) DIN te | ninal With connector Without connector | | With indic | | | _ | | | |
| Nil Internal pilot 1 100VAC Y* | With connector | · | surge vol | | pressor | i | | | |
| R External pilot 2 200VAC YO* DIVIGE | without connector | Note I) | For AC, the since it is in | | | | | | |
| When using an external pilot valve, enter a "O" in the | | | DOZ" is no | Ü | | e recuii | er. | | |
| appropriate box for "External Note) DC specification of "D", "DO", "Y", and "YO" types are only available in | | | 'R" and "U" | | | | | | |
| 24VDC and 12VDC. | | | Since "D", " polar types, | | | | | | |
| Stations | | | | | | | | | |
| cate the layout of valves, etc., with a "O". However, for an interfa | e regulator with | gauge, i | ndicate | with a | ı "G" i | nste | ad of | "0" | |
| | 15 14 13 12 | 11 10 | 9 8 | 7 6 | 5 | 4 | 3 2 | 1 | Quantity |
| 2 position Single solenoid Double solenoid | | | | | + | - | _ | +- | |
| Closed center | | | | | | _ | | 工 | |
| 3 position Exhaust center Pressure center | | | | | + | - | _ | +- | |
| N.C. single | | | | | | 士 | | | |
| 3 port valves N.C. double N.O. single | | | | | + | | _ | + | + |
| N.O. double | | | | | $\pm \pm$ | \equiv | | | |
| Blanking plate assembly External pilot specification | | | | | ++ | | + | - | |
| (Enter only for external pilot) | | | | | $\perp \perp$ | | | \perp | |
| Special SUP/EXH block assembly specifications | | | | | ++ | + | + | + | + |
| SUP block disc | | | | | 二 | 工 | П | İ | |
| EXH block disc (2 pcs./location) | | | | $\perp \downarrow \downarrow$ | + | 1 | + | + | |
| Individual EVII and accomplete | | | | | ++ | + | + | + | |
| Interface regulator (P regulated) Interface regulator (A1 regulated) | | | | | | \rightrightarrows | \perp | I | |
| Interface regulator (A1 regulated) Interface regulator (B1 regulated) | | | | | ++ | + | + | + | |
| *Blanking plate assembly: SX5000-76-1A *Individual SUP spacer assembly: SY5000-38-2A | SUP/EXH block assembly | ly (standard). | SX5000-51- | 1A •S⊟ | _II P/EXH ⊬ | lock ass | sembly (| S tyne) | : SX5000-51-4A |
| SUP block disc: SX5000-77-1A EXH block disc: SX5000-77-1A (2 pcs./location) Individual EXH spacer assembly: SY5000-39-2A Individual EXH spacer assembly: SY5000-39-2A Individual EXH spacer assembly: SY5000-39-2A Individual EXH spacer assembly: SY5000-39-2A | | | | | | | | | e): SX5000-51-5A |
| | use only ——— | | | | | | | - | |
| Part no. Qty. | Part no. | | Qty. | Or | der no |). | | | |
| -9. | <u> </u> | | ,. | - E | erk (cod | | | | |
| | | | | | ept. co | | | | |
| | | | | | | | | | |
| | | | | Note | | | | | the SUP/EXH block |
| | | | | | assen and q | mbly mo quantity | unting po with the r | osition, manifol | list its part number |

3 port Air Order spec. Precautions sheets

Interface regulator (B1 regulated) Note) The lead wire assembly for use between the valves and connector box is included with the manifold, therefore its specification is not necessary.

• Individual SUP spacer assembly: SY3000-38-2A • SUP/EXH block assembly (Rstandard): SX3000-51-1A • SUP/EXH block assembly (S type): SX3000-51-4A • SUP/EXH block assembly (Rstype): SX3000-51-5A • SUP/EXH block assembly (Rstype): SX3000-51-5A

Notes: • Blanking plate assembly: SX3000-75-1A
• SUP block disc: SX3000-77-1A
• EXH block disc: SX3000-77-1A (2 pcs./location)

For SMC use only Enter ordered part numbers.

| Part no. | Qty. |
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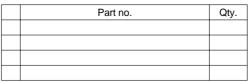
| Part no. | Qty. |
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| Clerk (code no.) | |
| Dept. code | |
| National Engineering | · ···································· |

For special specifications of the SUP/EXH block assembly mounting position, list its part number and quantity with the manifold type.
 Refer to pages 157 and 158 for 3 port valve part numbers.

a 3) Refer to page 238 for interface regulator part numbers. Also, for interface regulators with gauge, the part numbers for odd number and even number stations are different.

| op; | y this page | | | | | | | | | | | | | _ | | | | | | | | : | / / | |
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| | | - | | . J. T | | | | | | <u> </u> | ıipme | | ame | • | | | _ | | | | 1 | | | |
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| | | old Type | | | | | | | | | | | 0 | 4: | _ | | | | | | | | | |
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| 3 | S5Y5 | 5-45 | - | \dashv | | | | \vdash | | H | - | | stati | ions | is nec | essary | , indic | ate t | he n | umbe | | | | F |
| ре | cificatio | n •——— | \top | | Τ' | Т | ٠۲ | | | | ,L | | OFFE | equire | eu sia | uons. | (Max. | 20 SI | | 1S) A/B | no | rt o | izo | |
| mbo | -1. | ecification | _ | | | | | P/EXH | bloc | / 266 | ambl | • | | | (H b | | | | _ | mbol | • | | ification | _ |
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| | | vire assemblies | ♦ Stati | | | | Symbol M | 01 | _ | Applicab | le statior | 1S — | ymbol Nil | | | cificat | on nal pi | lot | | C6 | _ | | touch fit | |
| | uded is differe | nt. nounting position | | ations | Note Up to | | U D | U sid D sid | | 2 to 10 | station | | R* | _ | ternal | | p. | | | C8 M | Ø8 | | touch fit lixed | 9 |
| _ | | unting position | : | : 1 | 6 solen applica | oids | BE | Both si | des 2 | | | | S* | _ | | | in silen | | No | | or mix | | ounting, | , 8 |
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Note 1) For special specifications of the SUP/EXH block assembly mounting position, list its part number and quantity with the manifold type.

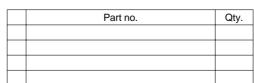
Note 2) Refer to pages 157 and 158 for 3 port valve part numbers.

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Precautions

Enter ordered part numbers.

Part no. Qty



Order no.
Clerk (code no.)
Dept. code

Note 1) For special specifications of the SUP/EXH block assembly mounting position, list its part number and quantity with the manifold type.

Note 2) Refer to pages 157 and 158 for 3 port valve part numbers.

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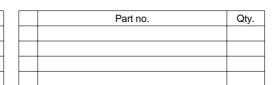
Precautions

Enter ordered part numbers.

Part no.

For mixed port sizes

Qty



Order no.
Clerk (code no.)
Dept. code

Note 1) For special specifications of the SUP/EXH block assembly mounting position, list its part number and quantity with the manifold type.

Note 2) Refer to pages 157 and 158 for 3 port valve part numbers.

For SMC use only

| Сору | this page | for use as needed | i . | | | | | | | | | | | | | | | | | | | | | | Dat | e: | / / | |
|---------------|------------------------------|--|---------------|-------------|----------------|------------------|----------|----------|-------------------|----------|---------------|---------------|----------|----------|----------|----------|--------------|----------|-------------------|----------|------------------|---------------|---------------------------|----------------------------|-----------------|--------------------|--|-----------------|
| | VEOO | n. Elet D: | 6 6 | 0 10 | ^ | ماه | ما | 20 | ח | | | | C | Cust | tom | er n | ame | 9 | | | | | | | - Lui | | , , | Features |
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| | | lures 1) through | | | u | | ,,, | U | ,,,, | C. | <i>,</i> , | | - | <u> </u> | • | | nam | е | | | | | | | | | | Single valve |
| | | old Type | ③ . | | | | | | | | | | C | Qua | ntity | ' | | | | se | t(s) | Re | quir | ed da | ate | | | ye |
| | | ools for required | enac | ifics | tion | ne in | the | hov | os k | مامد | w | | | | | | | | | | | | | | | | | ,,J |
| SS | 55Y5- non specifi | -45 P | G | onne | _ | Ţ | | | | | | | | | _ | | Vo | ltac | |] | V st | atior requ | a DII ns is r uired | necess | ary, inc | licate | e specified the number stations) | ype Type 23 |
| Nil | Positive Negative | | ınting | pos | ition | | | | | | | | | | | _ | Nil | 24\ | | - Pec | ,,,,, | atic | ,,, | _ | A/B | port | size | |
| - 14 | rioganivo | Symi | ool Mo | | g posi side | ition | | | | | | | | | | | 12V | 12V | 'DC | | | | | S | /mbol | • | cification | \sq |
| | | D | _ | D s | ide | | | | l ● SU | IP/E | ∟ XH b | lock | ass | emb | olv | | | ⊸ S | | | | | icati | | | | -touch fitting -touch fitting | Type 20P |
| | Combal Of- | | NI- | | tati | ons | <u>•</u> | | mo | ount | ing p | osit | ion | | _ | | | Symbo | _ | | ecifi | | | | | | -touch fitting | - |
| | | ations Single v | No | | ifica | tion | _ | S | ymbol U | Moi | unting U s | | ion A | Applic | able s | tation | ns | Nil | Sta | | | | al pilo | | M | | Mixed | Type 23P |
| | i 16 16 s | tations (Up to 16 s | _ | • | | | e) | | D | | Ds | | : | 2 to ′ | 10 sta | ations | s — | R* S* | Inte | | terna ilot/Ru | | ot silence | _ | indi | cate C | d mounting, C4, C6 or C8 | |
| | | des the number of blank | ing pla | te ass | embli | ies. | _ | | B M | Е | Soth : | sides ecia | | | 16 sta | | <u>S</u> | RS* | - | 1 | | | silence | | | ead of tion tal | f "O" in the ble. | Single valve |
| | | stations are required for noid, because they are d | | | | single | • | * F | or sp | ecial | specif | ficatio | | | | | _ i | Note) | An a | | | | | | | | | lve |
| 2 | Valve | Type | | | | | | S | tation | table | belo | w. | | | | | | | 2, ac | | 1 | Maxi | mum | | | | stations | |
| | | ools for required | spec | ifica | tior | ns as | ind | icat | ed b | | | | | | | | | | | | 1 | ⊕- ⊕- | (| ирто н 30 (20 30 (4) | (i) | | e applicable. / Valve station Layout | Type 41 |
| 0 | VF . | | $\overline{}$ | \neg | | : | | • | (<u>A</u> | | atec | | _ ` | ge | | | | | | | | i | | | | | specifications | レス |
| 5 | Y5 <u>*</u> | ** * - | ┖ | | F | U | | j | | 5 6 | _ | VDC VDC | | | | | | U sid | le j ^r | 7 | | Ŧ | Ŧ | | ٥ | 70 | Diside | Type 42 |
| | | _ | (A | () | | | B | | | | ge m | | | | | the | | | \Box | IJ | 0 | 0 | 90 | T + Ø 90 | 98 | - | L | |
| | • | uation/Body opt | | Pi | _ | type ntern | | lot | _ <u>B</u> | <u>M</u> | anu | al c | vei | rrid | е | _ | | | 0 | | Ħ, | a. 6 | | fo. | | 8 | 0 | уре 43 |
| 2 | 45 2 position | double solenoid | | R | _ | Exter | | | | Nil | | n-loc | | - | | <u>-</u> | | | ٦ | Ш | ľ | 0 | | | ā | 11 | | 5.4 |
| | - | n closed center boo | ly | | | g an e r a "○ | | | t | D | | sh-tu tted | | | ıg | | | | L | Н, | 置 羅。 | П | | -111 | Ш | 7 | J | 11P |
| | - | pressure center | | appro | priate | box f | or "Ex | | ı | Е | | sh-tu | | ockir | ng | | | | | | āά | ш | ш | 414 | Ų. | Ш | | (b) |
| | | ation table below. | | | эроон | | | | _ | | 1.4. | I | F - | | | _ | C | onnec | tor b | lock | 7 | ٦ | | Ŧ, | Sin louble s | | lenoid d | 24 |
| • Ent | | or one station for | | | | | | | | | | | | | | | | | | | | | | osition | | | itions or layout | |
| • Ent | | ver two stations | for a | dou | ıble | sole | noi | _ | <u> </u> | | _ | | <u> </u> | | _ | | _ | · · | | _ | | _ | | _ | | | | Type 43P |
| $\overline{}$ | Station | ns or layout Single solenoid | | | | | | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Qua | ntity | | | |
| | 2 position | | <u>i</u> | | | | | | | | | | | | | | | | | | | | | | | | | Type 45 |
| | 3 position | Double solenoid Closed center Exhaust center Pressure center | A | | | | | | | | | | | | | | | | | | | | | | | | | 5 pe |
| | o position | Pressure center | | | | + | | | | | | | | | \vdash | | | | | | | | | | | | | |
| (a) | | N.C. single | | | | | | | | | | | | | | | | | | | | | | | | | | Type 45-NA |
| - | 3 port valves | N.C. double N.O. single | + | | | | | | | | | | | | - | | - | | | | | | | | | | | ≥_0 |
| | | N.O. double | | | | | | | | | | | | | | | | | | | | | | | | | | 닷됐 |
| | | ate assembly | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | External pile (Enter only | ot specification for external pilot) | | | | | | | | | | | | | | | | | | | | | | | | | | 1,5 |
| b | Opoolui | P/EXH block assemb | ly | | | | | | | | | | | | | | | | | | | | | | | | | |
| | supecifications SUP block of | diaa | 1 | 1 | Ь, | Ц. | <u> </u> | <u> </u> | | <u> </u> | <u> </u> | _ | | | 1 | Ц. | 1 | _ | | | <u> </u> | <u> </u> | | | | | | |
| (c) - | | disc (2 pcs./location) | \dashv | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | + | + | + | | | | | | |
| [Entry | y example] | · | // | , | | | , | | | _ | Notes: | | , | | | | - 1 | | - | | | | | | | | | < ω |
| | Statio | ons or layout | Д(| 6 | 5 | 4 | 3 | 2 | 1 | 1 | Blan | ٠. | | | | | 000-76 A | 6-2A | | | | | | | | | SX5000-51-2 <i>F</i> 5000-51-6A | 3 port valve |
| (a) | 2 position | Single solenoid Double solenoid | + | | 8 | C6 | - | | 0 | 1 | | | | | | | ۰ ۹ (2 pc | cs./loc | ation |) •S | UP/E | XH b | lock a | ssemb | ly (S typ | e): SX | 5000-51-7A | |
| - F | | Double solehold | | 0 | , o | | 1 | <u>′</u> | - | <u> </u> | | | | | | | | | | • 8 | UP/E | XH b | lock a | ssemb | ly (RS ty | /pe): S | X5000-51-8A | Air operat |
| | | For mixed port s | izes | | | | | | | F | or SI | MC u | se o | nly | _ | | | | | | | | | | | | | Air operated |
| Enter | ordered par | | | | $\overline{}$ | Otr | \neg | | <u> </u> | | | | | | ` | | | | |)tv | ٦ | Ore | lar n | <u> </u> | | | | |
| + | | Part no. | | | + | Qty. | + | - | | | | | ra | rt no | J. | | | | 1 | Qty. | + | _ | der no rk (co | o. de no.) | | | | Order made |
| | | | | | | | \dashv | | | | | | | | | | | | | | 1 | _ | pt. cc | | | | | 0 ¥ |

SMC

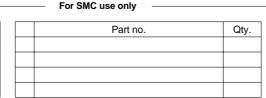
Note 1) For special specifications of the SUP/EXH block assembly mounting position, list its part number and quantity with the manifold type.

Note 2) Refer to pages 157 and 158 for 3 port valve part numbers.

Enter ordered part numbers.

Part no.

Qty.



Order no.
Clerk (code no.)
Dept. code

Note 1) For special specifications of the SUP/EXH block assembly mounting position, list its part number and quantity with the manifold type.

Note 2) Refer to pages 157 and 158 for 3 port valve part numbers.

| Negative COM Validation | Copy thi | s page f | or use as nee | eded. | | | | | | | | | | | | | | | | | Date: / / | |
|--|------------|--------------|---|------------|-----------------|-------------------|----------|----------|----------|----------|------------|-------|------------|----------|---------------|----------|-------------------|-------------|---------------|------------------|---------------------------------------|---|
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| Negative COM Validation | Nil | Positive (| COM | mount | Co | nnec posit | tor | 1 | | | | | | | | | | | <u> </u> | of required st | tations. (Max. 20 stations) | 230 |
| Systems Supremental block assembly Supremental block | N N | legative | COM | | | | | tion | | | | | | | | | | | | | <u> </u> | |
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| Type of actuation/Body option Type Push | | | | | \downarrow | _ | | ٠ | <u> </u> | | * \ | /olta | ge mu | ıst co | - rresp | ond w | ith th | е | | 7 | 1 | q |
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| Section Stations or layout | | | | Standard | <u> </u> | Nil | lr | nterna | al pil | ot | | Nil | Nor | n-lock | king p | oush t | /pe | | ۹III | Ø 50A 60 | DA SA | σ |
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| Stations Push-turn locking Push-turn loc | | | | | | | | | | | | D | | | | | | | 119 | | | |
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| 2 position Superison Super | • Enter a | | | ons fo | r a | dou | ble | sole | noic | _ | | | _ | _ | <u> </u> | _ | e en | try exampl | le below · | .) | | 45≤ |
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| Note 1) For special specifications of the SUP/EXH block assembly mounting position, list its part number and quantity with the manifold type. Note 2) Refer to pages 157 and 158 for 3 port | Enter ord | ered part | numbers. | | | | | | | _ | _ | | JI JIV | .o u | Je 01 | ···y | | | | | | |
| Note 1) For special specifications of the SUP/EXH block assembly mounting position, list its part number and quantity with the manifold type. Note 2) Refer to pages 157 and 158 for 3 port | | | Part no. | | | | | Qty. | | | | | | | Par | t no. | | | Qty. | Order no. | | 🧸 Q |
| Note 1) For special specifications of the SUP/EXH block assembly mounting position, list its part number and quantity with the manifold type. Note 2) Refer to pages 157 and 158 for 3 port | | | | | | | | | | | | | | | | | | | | Clerk (code | e no.) | |
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| | | | | | | | | | | | | | | | | | | | | posit | ion, list its part number and | ec. |
| | | | | | | | | | | | | | | | | | | | | Note 2) Refe | r to pages 157 and 158 for 3 p | ort |

SMC

Precautions

For mixed port sizes Enter ordered part numbers. Part no

Part no. Qty.

Order no. Clerk (code no.) Dept. code

• SUP/EXH block assembly (RS type): SX3000-51-8A

Note 1) For special specifications of the SUP/EXH block assembly mounting position, list its part number and quantity with the manifold type.

Note 2) Refer to pages 157 and 158 for 3 port valve part numbers.

For SMC use only

Qty.

| Cop | y this page | for use as needed. | | | | | | | | | | | | | | | | | Date: / / | |
|----------|---|--|------------|-----------------------------|----------|---------|--------------|-------------|---------------|----------|----------------|----------------|--------------|----------------------|-------------|--------------------------|-----------------------------|---|--|--|
| | VEOC | O. Tarresia | اے | D | ء ا | اء | . 10 | \ F |): | ۱۵, | | | С | ust | ome | er name | | | | Fe |
| 2 | Y 500 | 0: Termin | aı | В | 10 | CK | (; |) F | 'n | IS, |) | | С | ont | act | person | | | | Features |
| Р | lug-in, DI | N Rail Manifold | | | | | | | | | | | Sp | ecifi | catio | n sheet no. | | | | % |
| NA | anifo | Id Snoc | fi | ^- | 1 | i | n | C | h | \ | . | | Pι | urch | ase | order no. | | | | |
| IVI | aiiii | old Speci | | U(| 11 | IU | П | J | 116 | ; C | ; [| | E | quip | ome | ent name | | | | Single valve |
| | • | ures ① through ③ |). | | | | | | | | | | Q | uar | itity | | set | s) Require | d date | lye |
| (1 | Manifo | old Type | | | | | | | | | | | | | | | | | | |
| Ent | er the symb | ools for required sp | eci | ficat | ons | s in | the I | оохе | s b | elov | ٧. | | _ | | | a O | | | | ype 20 |
| Ş | S55Y5 | 5-45 T | | 4 | | | | | į | | | | | | | • Opt Whe | n a DIN rai | I longer than th | ne specified | Õ |
| | | · · · · · · · · · · · · · · · · · · · | J | | | ┚┖╌ | ┌┤: | ٠٦ | | L | | | : | ٠٠٢ | | | | ssary, indicate ions. (Max. 20 | | 2 |
| | moui | Connector • nting position | | | | | | | | | | | | | | | | | → A/B port size | Type 23 |
| | | Mounting position | | | | | | L | | | | | | | | → SUP/EX | 'H block | | Symbol Specification | |
| | U | U side | | | | | | ا دا | ID/E | :VL | l blo | ok r | | mh | lv. | | oly specif | ication | C4 Ø4 One-touch fitting | Type 20P |
| | <u> </u> | D side | | tati | | \Box | | | | | po: | | | HIID | ıy | Symbol | Specifi | | C6 Ø6 One-touch fitting C8 Ø8 One-touch fitting | 0 0 0 |
| Syr | nbol Statio | ns No | | ıaıı | JIIS | | 3 | Symb | ool | М | lount | | | ion | | Nil S R* | tandard/In Externa | ternal pilot | M Mixed | NJ |
| | 2 statio | Single wiring | spe | cifica | tion | | - | U D | | | | J sic D sic | | | _ | | | uilt-in silencer | Note) For mixed mounting, indicate C4, C6 or C8 | Type 23P |
| | : : 18 8 statio | Ons (Up to 8 soleno | ids a | applio | able | e) | | В | | C | Во | th si | des | 1! - | _ | | | uilt-in silencer | instead of "O" in the station table. | |
| | , | number of blanking plate a are required for valves oth | | | ıle | _ | * | M For sp | | | cial | • | | | | Note) An aste made p | erisk (*) indi vroducts. | | | Single valve |
| 14016 | | cause they are dual body ty | | AII (011 I | ,,,, | | | station | | | | -, " | 501 | | | | | | number of valves: 8 stations) up to 8 solenoids are applicable. | e e |
| (2 | Valve | Туре | | | | | | | | | | | | | | | | (h(l) | ② ① Valve stations ③ ② ① Layout | Ę |
| Ent | er the symb | ools for required sp | eci | ficati | ons | s as | indi | cate | d be | elov | v. | | | | | | | 1 | (for special specifications) | Type 41 |
| C | Y5 * | * * * — | | 7 F | : 1 | ıí | | } | (A) | Ra | ted | vol | ltag | е | | 100 | U side | | D side | |
| | 713 <u>*</u> | | _ | | • | | | | | 5 | 24V | | _ | | | | ĤΤ | 7,4 | | ype 42 |
| Г | |] | A | | | | B | | | 6 | 12V | DC | - | | | | | Ø 80 | 2 00 00 | Õ |
| | * - | uation/Body optior | | Pile | ot t | уре | | | B | Ma | anua | al o | veri | ride | • | | | | | Ę |
| | 245 2 position 245 2 position | single solenoid Standard | _ [| Nil | - | | al pilo | | _ | lil | Nor | n-loc | king | pus | h typ | oe De | 7 1# | 0 6 6A 6 | | уре 43 |
| | 345 3 position | | | R | _ | | al pil | | | D | | | rn lo | ckin | g | | | | | ~ ¬ |
| | 445 3 position 545 3 position | exhaust center type | V | /hen u alve, e ppropi | nter | a "O" | in the | | | | _ | ted t | ype rn lo | ckin | n | _ | H | | | 344 |
| | | ation table below. | | ilot Sp | | | | ciriai | | E | | er typ | | | | Co | onnector block | 7 7 | Single solenoid | Φ |
| (3 | Statio | ns | | | | | | | | | | | | | | _ | uous) | - 3 pos | Double solenoid | 5 .4 |
| | nter a "O" fo | or one station for a | | | | | | | | | | | | | | | • | | included with the stations or layout. | A A |
| • Er | | ver two stations fo | ra | douk | le s | sole | noid | _ | ÷ | | | • | <u>`</u> | _ | ne e | | le below. | .) | | ~ - |
| _ | Station | ns or layout Single solenoid | | \dashv | _ | | - | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Quantity | - | | | #\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ |
| | 2 position | | | | | | | | | | | | | | | | - | | | ŌŌ |
| | | Double solenoid Closed center Exhaust center Pressure center | | | | | | | | | | | | | | | _ | | | Type 45 |
| | 3 position | Exhaust center Pressure center | | \dashv | \dashv | | | \dashv | \dashv | | - | | | | | | - | | | 200 |
| | | N.C. single | | | | | | | | | | | | | | | _ | | | |
| a | 3 port valves | N.C. double | | | | | | | | | | | | | | | - | | | Type 45- ÑA |
| | | N.O. single N.O. double | | | | | | | | | | | | | | | _ | | | ≽ ֿ ₪ |
| | Blanking pla | ite assembly | | | | | | | | | | | | | | | _ | | | V 3 |
| | | ot specification for external pilot) | | | | | | | | | | | | | | | _ | | | ype □ |
| | <u> </u> | P/EXH block assembly | | | | | | \dashv | \dashv | | | | | | | | _ | | | |
| b | specifications | | \Box | ightharpoonup | \Box | \Box | Ţ | \perp | ightharpoonup | | \Box | \Box | \perp | | | | - | | | |
| © | SUP block of | disc disc (2 pcs./location) | | | + | + | | | + | | | | | | | | - | | | |
| | ry example] | (1, 253,554,000,7) | // | | | | | | | N | otes: | | | | | | - | | | |
| [Ent | | ons or layout | 7(| 6 | 5 | 4 | 3 | 2 | 1 | • [| Blanki | ٠. | | | | SX5000-76-2A | | | sembly (standard): SX5000-51-2A | ς ω |
| [Ent | Statio | | | | | C6 | | | 0 | | SUP b EXH b | | | | | 7-1A 7-1A (2 pcs./loc | | | sembly (R type): SX5000-51-6A sembly (S type): SX5000-51-7A | $\omega =$ |
| [Ent | Station 2 position | Single solenoid | 4)H | | ٠, | | | | | | | | | | | | , | | | <u></u> |
| _ | | Single solenoid Double solenoid | | С | 3 | _ | ¢ | _ | - | _ | | | | | | | | IP/EARI DIOCK as | sembly (RS type): SX5000-51-8A | 3 port valve o |
| _ | | | s - | C | 3 | <u></u> | <u> </u> | | _ | F٥ | r SM | C us | se on | ılv | _ | | | IP/EAH DIOCK AS | sembly (RS type): SX5000-51-8A | |
| | | Double solenoid For mixed port size t numbers. | es – | C | | <u></u> | ` | | _ | Fo | r SM | C us | | | _ | | T - | | sembly (RS type): SX5000-51-8A | |
| | 2 position | Double solenoid For mixed port size | es – | C | | Qty. | ¥ | | | Fo | r SM | C us | | i ly t no. | _ | | Qty. | Order no. | | Air operated |
| | 2 position | Double solenoid For mixed port size t numbers. | es – | C | | Qty. | | | _ | Fo | r SM | C us | | | _ | | Qty. | Order no. | e no.) | Air operated |
| | 2 position | Double solenoid For mixed port size t numbers. | es — | C | | Qty. | \ | | | Fo | r SM | C us | | | | | Qty. | Order no. Clerk (code Dept. cod | e no.) e special specifications of the | Air Order operated made |
| | 2 position | Double solenoid For mixed port size t numbers. | =)) | C | | Qty. | | | | Fo | r SM | C us | | | | | Qty. | Order no. Clerk (code Dept. cod Note 1) For s SUP posit | e no.) | Air operated |

SMC

214

Precautions

Part no

Qty.

Order no.
Clerk (code no.)
Dept. code

Note 1) For special specifications of the SUP/EXH block assembly mounting position, list its part number and quantity with the manifold type.

Note 2) Refer to pages 157 and 158 for 3 port valve part numbers.

For SMC use only

Enter ordered part numbers.

For mixed port sizes

Qty.

Part no

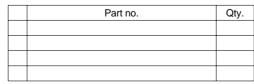
Note 1) For special specifications of the SUP/EXH block assembly mounting position, list its part number and quantity with the manifold type. Note 2) Refer to pages 157 and 158 for 3 port valve part numbers.

Clerk (code no.) Dept. code

216

Copy this page for use as needed. Date: **SY3000:** PC Wiring System Compatible Flat Ribbon Cable 20 pins Customer name Contact person Plug-in, DIN Rail Manifold Specification sheet no. **Manifold Specification Sheet** Purchase order no Equipment name Quantity set(s) Required date Follow procedures (1) through (3). 1 Manifold Type Enter the symbols for required specifications in the boxes below. Option SS5Y3-45G When a DIN rail longer than the specified stations is necessary, indicate the number of required stations. (Max. 20 stations) Connector mounting position A/B port size Symbol Mounting position Symbol Specification SUP/EXH block U side ø4 One-touch fitting C4 assembly specification SUP/EXH block assembly D ø6 One-touch fitting C6 Symbol Specification mounting position Stations 4 М Mixed Standard/Internal pilot Symbol Mounting position Applicable stations Note) For mixed mounting. Symbol Stations External pilot R indicate C4 or C6 instead of "O" in the U side 02 2 stations 2 to 10 stations Internal pilot/Built-in silencer s Single wiring specification D side D station table. (Up to 16 solenoids applicable) RS External pilot/Built-in silencer В Both sides 2 to 16 stations 16 stations Special specifications Note 1) Includes the number of blanking plate assemblies Maximum number of valves: 16 stations Note 2) Two stations are required for valves other than single solenoid, because they are dual body type. For special specifications, indicate in the However, up to 16 solenoids are applicable. station table below @ - - ② ② ① ---Valve stations -- (3 2 1 - Layout (for special specifications) 2 Valve Type Enter the symbols for required specifications as indicated below. D side U side * * * (A) Manual override ø Type of actuation/Body option Pilot type Non-locking push type 140 2 position single solenoid Standard Internal pilot Push-turn locking 245 2 position double solenoid Dual External pilot 345 3 position closed center body Push-turn locking lever type 445 3 position exhaust center When using an external pilot valve, enter a "O" in the appropriate box for "External Pilot Specification". type 545 3 position pressure center Single solenoid Indicate in the station table below Double solenoid position 3 Stations Note) The connector block is not included with the stations or layout. • Enter a "O" for one station for a single solenoid type. • Enter a "O" over two stations for a double solenoid or 3 position type. (See the entry example below.) [For mixed specifications of A/B port sizes, enter C4 or C6 in the (a) section.] Stations or layout 20 19 18 17 16 15 14 13 12 11 10 9 8 6 Single solenoid 2 position Double solenoid Closed center 3 position Exhaust center Pressure center N.C. single (a) N.C. double 3 port valves N.O. single N.O. double Blanking plate assembly External pilot specification (Enter only for external pilot) SUP/EXH block assembly SUP block disc (C) EXH block disc (2 pcs./location) [Entry example] • Blanking plate assembly: SX3000-75-2A • SUP/EXH block assembly (standard): SX3000-51-2A 2 Stations or layout 6 5 4 3 SUP block disc: SX3000-77-1A • SUP/EXH block assembly (R type): SX3000-51-6A Single solenoid C4 (a) 2 position • EXH block disc: SX3000-77-1A (2 pcs./location) • SUP/EXH block assembly (S type): SX3000-51-7A Double solenoid C 6 • SUP/EXH block assembly (RS type): SX3000-51-8A For mixed port sizes For SMC use only Enter ordered part numbers

Part no. Qty.



Order no.
Clerk (code no.)
Dept. code

Note 1) For special specifications of the SUP/EXH block assembly mounting position, list its part number and quantity with the manifold type.

Note 2) Refer to pages 157 and 158 for 3 port valve part numbers.

Part no

SMC

Qty.

Part no

Manifold spec.

Qty.

Order no.

Clerk (code no.)
Dept. code

Note 1) For special specifications of the SUP/EXH block assembly mounting position, list its part number and quantity with the manifold type.

Note 2) Refer to pages 157 and 158 for 3 port valve part numbers.

| | | Stations | or layout | | | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Quantity |
|----------|--------|-----------------------------------|----------------------------------|--|--|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|----------|
| | SS | 2 position | Single solenoid | | | | | | | | | | | | | | | | | | | |
| | valves | 2 position | Double solenoid | | | | | | | | | | | | | | | | | | | |
| | | | Closed center | | | | | | | | | | | | | | | | | | | |
| | port | 3 position | Exhaust center | | | | | | | | | | | | | | | | | | | |
| | 2 | | Pressure center | | | | | | | | | | | | | | | | | | | |
| (a) | sə/ | N.C. single | | | | | | | | | | | | | | | | | | | | |
| a | valves | N.C. double | Э | | | | | | | | | | | | | | | | | | | |
| | port | N.O. single | | | | | | | | | | | | | | | | | | | | |
| | 3р | N.O. double | 9 | | | | | | | | | | | | | | | | | | | |
| | В | lanking plate | assembly | | | | | | | | | | | | | | | | | | | |
| | E: | xternal pilot : Enter only for | specification external pilot) | | | | | | | | | | | | | | | | | | | |
| <u> </u> | | | EXH block assembly | | | | | | | | | | | | | | | | | | | |
| Ь | spec | ifications | | | | | | | | | | | | | | | | | | | | |
| (c) | SI | UP block dis | С | | | | | | | | | | | | | | | | | | | |
| | E) | XH block dis | c (2 pcs./location) | | | | | | | | | | | | | | | | | | | |

Notes: • Blanking plate assembly: SX3000-75-2A

- SUP block disc: SX3000-77-1A
- EXH block disc: SX3000-77-1A (2 pcs./location)
- SUP/EXH block assembly (standard): SX3000-51-2A SUP/EXH block assembly (R type): SX3000-51-6A
- SUP/EXH block assembly (S type): SX3000-51-7A SUP/EXH block assembly (RS type): SX3000-51-8A

For SMC use only

Enter ordered part numbers.

| Part no. | Qty. |
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| Part no. | Qty. |
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| Order no. | |
|------------------|--|
| Clerk (code no.) | |
| Dept. code | |

Note 1) For special specifications of the SUP/EXH block assembly mounting position, list its part number and quantity with the manifold type.

Note 2) Refer to pages 157 and 158 for 3 port valve part numbers.

operated

Precautions

SUP/EXH block assembly (R type): SX5000-51-6A

For SMC use only

Part no

SUP block disc: SX5000-77-1A

Enter ordered part numbers.

• EXH block disc: SX5000-77-1A (2 pcs./location)

Part no

Qty.

SUP/EXH block assembly (RS type): SX5000-51-8A

Note 1) For special specifications of the SUP/EXH block assembly mounting position, list its part number and quantity with the manifold type.

Note 2) Refer to pages 157 and 158 for 3 port valve part numbers.

Order no. Clerk (code no.) Dept. code

Qty.

| CV | /200 |). Sorial M | liri | ~ /C | , O 100 | <u> </u> | 01 | ام | \ | | Cı | sto | mer | nan | ne | | | | | | | | | | |
|--|--|--|--|--|--|--|-------------------------|------------------|--|---|---|---|------------|----------------|--|--------------------|-------------------|-----------|---|---|----------------------------|------------------------------|-------------|----------------------------------|------------------------------|
| | |): Serial W | | y (3 | ep | ar | at(| ta | | | Co | nta | ct pe | erso | n | | | | | | | | | | |
| Pluç | g-in, DI | N Rail Manifold | | | | | | | | | Sp | ecific | ation | sheet | no. | | | | | | | | | | |
| | nit- | Jd Spac | it:~ | ~1 : | ^ | C | h | ^ | .1 | | Pu | rcha | ase o | rder | no. | | | | | | | | | | |
| | | old Spec | | all | | J | 11 | tt | ;[| | Ec | uipı | men | t na | me | | | | | | | | | | |
| llov | v proced | lures ① through ③ | 3). | | | | | | | | Qı | ıant | tity | | | | se | et(s) | Re | equi | ired d | ate | | | |
| 1 | Manif | old Type | | | | | | | | | | | | | | | | | | | | | | | |
| iter | the syml | ools for required sp | oecifica | tions i | n the | box | es b | elov | w. | | | | | | • | Opt | | NINI | مما الم | | than th | | منائم ما | | |
| | - | 3-45S1 T | | Ш | | ٦Г | | [|] | | | | [|] | | statio | ons is | nec | essa | ry, in | than the | the nu | ımbe | r | |
| _ | | | ᆜᄔ | ┚ | | JL | $ ightarrow \mathbb{1}$ | İ | آآ | | | | ╗. | .,; | | of re | quire | d sta | tions | . (Ma | ax. 20 s | station | ıs) | | |
| l un | it type | ithout SI unit | ╎┌┌ | | | | | | | | L | | | _ | _ | | | | | | → A/I | В ро | rt si | ize | |
| | | pose type: Series EX300 | | Statio | ns | | | | | | | | <u> </u> | SUP | EXH I | olock a | sseml | oly sp | ecifica | ation | Symbol | _ | • | fication | |
| В | MELS | ECNET/MINI-S3 | | mbol | Statio | | | | Not | | | | | /mbol | _ | | ecific | | | | C4 | _ | | ouch fittir ouch fittir | <u> </u> |
| C D | Sa | SYSBUS tellite I/O Link | | 02 : | 2 station | ons | | | ring s 16 so | | icatio | 1 | - | Nil R* | Sta | andar Ext | d/Inte | | | <u> </u> | C6 M | 960 | | xed | ig |
| Ε | N | MEWNET-F | | | 6 stat | ions | | | oplica | | | _ | - | S* | Inte | nal pil | | | | r | | or mix | | ounting, | _ |
| 1 3 | | vire (16 outputs) ardley Remote I/O | | e 1) Includ e 2) Two s | | | | | 0. | | | | I | RS* | Exte | rnal pi | lot/Bu | ilt-in s | silence | er | | ndicate nstead | | or C6 " in the | |
| 1 | Uni- | wire H System | I NOTE | solen | oid, bed | ause | they a | are du | al bod | y type | 010113 8. | ıyıe | N | | | erisk orodu | | licate | s ord | er | | tation | | | |
| 1 | | nk (16 outputs) | | | | | | | | | | \neg | | | .uuc | Journ | | | | I ID/EV | /∐ blee!- | 2000 | hlu | nuntina s | eir: |
| 2 | | ink (8 outputs) T Link Mini | Note 1) V | Vith gene equired o | | | | a trans | smissio | on uni | it is | L | | SI : | ıniŧ | mo | ınti | na | | | | | | ounting po | |
| 2 | | DeviceNet | Note 2) E | | out an S | I unit, | the le | ength o | of the | DIN ra | ail can | N | • | | sitio | | arill | 9 | Syli | _ | | g positi side | | • | |
| 21 | | Bus/S (16 outputs) Bus/S (8 outputs) | ra | ail is desi | red (sar | ne as | type 4 | | | | | | | | Иour | ıting _l | | on | |) | D s | side | | to 10 sta | |
| J | | JEMANET | Note 3) F | efer to pa | ages 14 | 6 thro | ugh 1 | | | | | | | U D | | U sid | | | E | _ | | sides | | to 16 sta | |
| / | Valve | CC-Link | Note 4) F | tefer to pa | age 229 | for th | e full | descri | ptions | for S | I unit t | уре. | | | | טוט ט | 1C | | | | | | <u> </u> | licate in th | |
| 24 | 5 2 position | single solenoid Standard double solenoid Dual | | | rnal pi ernal p | | | Nil D | Pus | | rn loc | | type | - | 0 | 4 | | | | | 8 A 0 | - | 2 | 0 0 | |
| 24! 34! 44! 54! | 5 2 position 5 3 position 5 3 position 5 3 position | double solenoid n closed center exhaust center pressure center | Ni R When valve, appro | Exte | rnal pi ernal p externa O" in th | ilot al pilot e | - - - t | | Pus slot | h-tur ted t | rn loc ype rn loc | king | 1 | - | | 4 | The second second | | | | | - | | 8 0 | |
| 245 345 445 545 Indic | 5 2 position 5 3 position 5 3 position 5 3 position cate in the st | double solenoid n closed center exhaust center pressure center attion table below. | Ni R When valve, appro | I Inte | rnal pi ernal p externa O" in th | ilot al pilot e | - - - t | D | Pus slot | h-tur ted ty h-tur | rn loc ype rn loc | king | 1 | - | | Con | | bioo | | | | | 9 | ngle sole | noid |
| 245 345 445 545 India | 5 2 position 5 3 position 5 3 position 5 3 position | double solenoid n closed center exhaust center pressure center attion table below. | Ni R When valve, appro | Exte | rnal pi ernal p externa O" in th | ilot al pilot e | - - - t | D | Pus slot | h-tur ted ty h-tur | rn loc ype rn loc | king | 1 | - | | | ector | | | | 300 | D Continue | Souble | ngle sole solenoid | |
| 245 345 445 Indic | 5 2 position 5 3 position 5 3 position 5 3 position cate in the st Statio | double solenoid n closed center exhaust center pressure center ation table below. | Ni R When valve, appro Pilot S | Inte External using an enter a "priate box Specificat" | ernal pi ernal p externa o" in th or for "Ex ion". | illot al pilot e kterna pe. | - - - ! | D E | Pus slott Pus leve | h-tur ted ty h-tur er typ | rn loc ype rn loc be | king |) | - | | ote) T | he cor | nect | | ck is r | 300 | D Continue | Souble | ngle sole | |
| 245 345 445 Indic | 5 2 position 5 3 position 5 3 position 5 3 position 5 3 position cate in the st Statio er a "O" for | double solenoid n closed center exhaust center pressure center ation table below. In Sor one station for a sover two stations for a stations for a solenoid body type. | Ni R When valve, appro Pilot S | Inte External using an enter a "priate box Specificat" | ernal pi ernal p externa o" in th or for "Ex ion". | ilot al pilot e tterna pe. d or | 3 pc | D E | Pus slott Pus leve | h-turted ty h-turer typ | rn loc ype rn loc be | king | enti | <u> </u> | cam | ote) T | he cor | nnect | or bloo | | not include | ded wit | Souble | ngle sole solenoid | |
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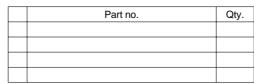
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| SY50 | 00: Serial Wi | rinc | 1 (54 | ena | ara | tec | 1) | | F | usto | | | | ; | | | | | | | | | | | | Features | 1 |
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| Follow pro | cedures ① through ③. | | | | | | | | _ |)uan | | | | | | se | et(s) | R | equ | ired | dat | e | | | | valve | חמן |
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| SS5 | Y5-45S1 🖳 | | \vdash | | | | | _ | | | | Ī, | | s | tatio | ns is | s nec | essa | ary, i | ndicat ax. 20 | te th | e nun | nber | | | _ | |
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| | al purpose type: Series EX300 IELSECNET/MINI-S3 SYSBUS | Sym | | tation | _ | | | ote | | | | Syml | bol | | Spe | cific | ation | 1 | | C4 | 4 | ø4 Or | ne-tou | uch fit uch fit | ting | _ | |
| D E | Satellite I/O Link MEWNET-F | 0 1 | | station : statio | | | viring o 16 s applic | solen | | on | | Ni R | * | | Exte | rna | l pilo | t | | CE | 3 | | | uch fit | <u> </u> | 20P | |
| F1 | Uni-wire (16 outputs) en-Bradley Remote I/O | Note 1 | 1) Include: 2) Two sta | s the no | umber are requ | of blank uired for | ing pla valve | ate as | r than | | е | RS | * E | xtern | al pilo al pilo | ot/Bu | ilt-in s | silenc | er | |) For | | d mou | eu unting 6 or C | | 23P | ₹ |
| H J1 | Uni-wire H System S-Link (16 outputs) | | solenoid | d, beca | use the | ey are c | lual bo | dy typ | e. | _ | | Note |) An a | | isk (* oduct | | dicate | | | | inst stat | ead o | of "O" able. | in the | | | |
| J2 K | T Link Mini | rec | th general quired on t | he CP | U side. | | | | | | L | | l un | | | nti | ng | | | | | | , | • | position e stations | valve | ב ה ה |
| | mpoBus/S (16 outputs) | aco rail | en without commoda i is desired | te an S d (same | SI unit. I e as typ | lf a shoi oe 45⊡) | ter len | gth fo | r the [| DIN | | | osit | tion |) | | _ | | U D | ι | J sic | le | | | stations | | |
| R2 Co | | the ote 3) Re | e end of the fer to pag fer to pag | e part i es 146 | numbe throug | r. h 148 fo | or SI u | nit spe | ecifica | ations. | | U | | U | side |) | | | B M | Bo | th si | des | | o 16 s ficatio | stations ons | - 4 | עספ |
| 2 Val | ve Type ymbols for required spe | cificati | ions as | indi | cated | d held | w | | | Maxim Howe | | | | | | | | sta \ | | cial sp able b | | | | | e station | | |
| SY5 | *** * | <u>5</u> F | U | | | | | | , . | | , | ар 10 | .000 | | | Si un | | | - T | | Ĭ, | 9 9 | Y | (for s | special sification | 5) | _ |
| Type of | actuation/Body option | 24V[| _ | (A) | | <u>(A)</u> N | | | | | | | | Ħ | | Ì | L | . 0 | F | a ea | ď | 82 | 02 | | Ħ | 437 | Type |
| 140 2 pc 245 2 pc | isition single solenoid sition double solenoid sition closed center Dual | Nil R | Intern | al pilo | | Nil D | Pu | sh-tu | | j pusl ocking | | pe | | | 0 4 | | | | | DA C | 5 S | M 24 | | 8 | | 41P | Type |
| 445 3 pc 545 3 pc | body type sition pressure center the station table below. | valve, e appropi | using an exenter a "O' riate box for pecification | in the or "Exte | | Е | | sh-tu er ty | | ockinę | g — | | | | | | 4 | Ļ | | | | | | 1 | solenoid | 42P | Type |
| | O" for one station for a s | | | | | | : · | | (C - | 41- | | | | Not | | e coi | nnect | or blo | ock is | | posit | ion | uble s | olenoi | | Δ. | Typ |
| | O" over two stations for tations or layout | a dour | ole sole | | | 5 14 | _ | | <u> </u> | _ | е е 9 | ntry 8 | exa 7 | mpi 6 | e be | 4 | v.) | 2 | 1 | Q | uan | tity | • | | | | |
| 2 posit | ion Single solenoid | | | | | | | | | | | | | | | | | Ī | Ė | | | | | | | 45 | Տ՝ |
| 3 posit | Closed center | | | | | | | | | | | | | | | | | | | | | | | | | 45 | Ď |
| | Pressure center N.C. single | | | | | | | | | | | | | | | | | | | | | | | | | N N | D |
| a 3 port va | N.C. double | | | | # | | | | | | | | | | | | | | | | | | | | | 45 | 7 |
| | N.O. single N.O. double | | | | | \pm | | | | | | | | | | | | 1 | | | | | | | | | 50 |
| - | ng plate assembly | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (Enter | al pilot specification only for external pilot) | | | | \perp | | | | | | | | | | | | | | _ | | | | | | | | |
| (b) Special specification | | | | | \pm | | <u> </u> | | Щ | | _ | | | | | Ļ | | 1 | 1 | | | | | | | | |
| (C) | ock disc ock disc (2 pcs./location) | | | | | | | | + | | + | | | | | - | | | - | | | | | | | \$ | ယ |
| [Entry exam | | <u></u> | | | | | Notes: | | | | | | | | | | | | | | | | | | | valve | 200 |
| | Stations or layout Single solenoid | 6 | 5 4 C6 | 3 | | | | ٠. | | ssem | | | | i-2A | | | | | | | | • | , | | 100-51-2 <i>i</i> 100-51-6A | | + |
| (a) 2 posi | tion Double solenoid |) c | | 0 | _ | <i></i> | | | | | | | | s./loo | ation |) • ; | SUP/ | EXH | block | asser | mbly | (S typ | oe): S | X5000 |)-51-7A)0-51-8A | operated | ₽ |
| Enter ordere | For mixed port sizes d part numbers. | I | | | | – F | or SI | /IC u | se or | nly | _ | | | | | | | | | | | | | | | | ב כ |
| Enter ordered | Part no. | | Qty. | | | | | | Par | rt no. | | | | | C | Qty. | | \vdash | rder | | , o) | | | | | made | |
| | | | | | | | | | | | | | | | | | | _ | <u> </u> | ode n code | ιυ.) | | | | | spec. sheets | Manif |
| | | | | 7 | | | | | | | | | | | | | 4 | Note | as | r specia sembly d quanti | moun | ting pos | sition, lis | st its pa | EXH block art number | | |
| | | | | | | | To the second | SN | /C | | | | | | | | | Note | 2) Re | fer to pa | ages 1 | 57 and | 158 | *** | 222 | Precautions | , |
| | | | | | | | - | | | | | | | | | | | | | | | | | | | Suons | ± |

Enter ordered part numbers. Part no Qty.

223

For mixed port sizes



For SMC use only

SMC

Order no. Clerk (code no.) Dept. code

Note 1) For special specifications of the SUP/EXH block assembly mounting position, list its part number and quantity with the manifold type. Note 2) Refer to pages 157 and 158 for 3 port valve part numbers.

Note 3) List the SI unit part number.

ØSMC

Qty.

Order no.

Part no

Enter ordered part numbers

Part no

Qty.

Clerk (code no.)

Dept. code

Note 1) For special specifications of the SUP/EXH block assembly mounting position, list its part number and quantity with the manifold type.

and quantity with the manifold type.

Note 2) Refer to pages 157 and 158
for 3 port valve part numbers.

Note 3) List the SI unit part number.

224

Precautions

Date:

SY3000: For Serial, OMRON Transmission Unit

Plug-in, DIN Rail Manifold

Manifold Specification Sheet

Follow procedures 1) through 3).

Customer name Contact person Specification sheet no Purchase order no. Equipment name Quantity set(s) Required date

1 Manifold Type

Enter the symbols for required specifications in the boxes below.

Option SS5Y3-45S3 When a DIN rail longer than the specified stations is necessary, indicate the number of required stations. (Max. 20 stations) Specification • Transmission unit mounting position Nil With transmission unit Symbol | Mounting position Without transmission unit

> U side D D side

> > Stations 6

| Symbol | Stations | Note |
|--------|-------------|----------------------------------|
| 02 | 2 stations | Single wiring specification |
| | | (Up to 16 solenoids applicable) |
| 16 | 16 stations | (Up to 16 soleriolds applicable) |

Note 1) Includes the number of blanking plate assemblies.

Note 2) Two stations are required for valves other than single solenoid, because they are dual body type

SUP/EXH block assembly mounting position

| Symbol | woulding position | Applicable stations | | | | | | | | | |
|---|------------------------|---------------------|--|--|--|--|--|--|--|--|--|
| U | U side | 2 to 10 stations | | | | | | | | | |
| D | D side | 2 10 10 314110113 | | | | | | | | | |
| В | Both sides | 2 to 16 stations | | | | | | | | | |
| М | Special specifications | | | | | | | | | | |
| * For special specifications, indicate in the | | | | | | | | | | | |

station table below

SUP/EXH block assembly specification

| Symbol | Specification | | | | | | | | |
|--------|----------------------------------|--|--|--|--|--|--|--|--|
| Nil | Standard/Internal pilot | | | | | | | | |
| R* | External pilot | | | | | | | | |
| S* | Internal pilot/Built-in silencer | | | | | | | | |
| RS* | External pilot/Built-in silencer | | | | | | | | |
| | | | | | | | | | |

Note) An asterisk (*) indicates order made products.

Maximum number of valves: 16 stations

However, up to 16 solenoids are applicable.

 A/B port size Symbol Specification ø4 One-touch fitting C4 ø6 One-touch fitting C6 Mixed

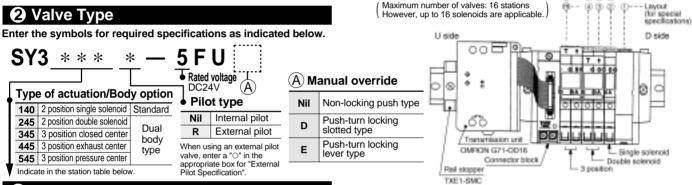
Note) For mixed mounting, indicate C4 or C6 instead of "O" in the station table.

Valve stations

(R) -- (R) (R) (T) ----

00 00 00 m--

Valve Type



Stations

Note) The connector block is not included with the stations or layout.

• Enter a "O" for one station for a single solenoid type.

• Enter a "O" over two stations for a double solenoid or 3 position type. (See the entry example below.)

| | | | | _ | | _ | _ | <u> </u> | | _ | | · | _ | | | | · | _ | | _ | | _ | |
|--------------------|---------------------------------------|--|-----------------------------|---|------|----|----|----------|----|----|----|---|---|---|---|---|---|---|---|---|----------|---|--|
| Stations or layout | | | | | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Quantity | | |
| | 2 position | Single solenoid | | | | | | | | | | | | | | | | | | | | | |
| | 2 position | Double solenoid | <u>e</u> | | | | | | | | | | | | | | | | | | | | |
| | | Closed center | amb | | | | | | | | | | | | | | | | | | | | |
| | 3 position | Exhaust center | Refer to the entry example. | | | | | | | | | | | | | | | | | | | | |
| | | Pressure center | e H | | | | | | | | | | | | | | | | | | | | |
| (a) | | N.C. single | | | | | | | | | | | | | | | | | | | | | |
| | 3 port valves N.C. double N.O. single | | | | | | | | | | | | | | | | | | | | | | |
| | | N.O. single | | | | | | | | | | | | | | | | | | | | | |
| | | N.O. double | | | | | | | | | | | | | | | | | | | | | |
| | Blanking pla | ate assembly | | | | | | | | | | | | | | | | | | | | | |
| | External pile (Enter only | ot specification for external pilot |) | | | | | | | | | | | | | | | | | | | | |
| | | P/EXH block ass | embly | | | | | | | | | | | | | | | | | | | | |
| Ю | specifications | | | | | | | | | | | | | | | | | | | | | | |
| (c) | SUP block | disc | | | | | | | | | | | | | | | | | | | | | |
| U | EXH block | EXH block disc (2 pcs./location) | | | | | | | | | | | | | | | | | | | | | |

[Entry example] Stations or layout 6 5 4 3 2 1 C4 Single solenoid 2 position (a) Double solenoid C 6

Notes

- Blanking plate assembly: SX3000-75-2A
- SUP block disc: SX3000-77-1A
- EXH block disc: SX3000-77-1A (2 pcs./location) SUP/EXH block assembly (S type): SX3000-51-7A
- SUP/EXH block assembly (standard): SX3000-51-2A
- SUP/EXH block assembly (R type): SX3000-51-6A
 - SUP/EXH block assembly (RS type): SX3000-51-8A

For mixed port sizes For SMC use only

| Ente | Enter ordered part numbers. | | | | | | | | | |
|------|-----------------------------|------|--|--|--|--|--|--|--|--|
| | Part no. | Qty. | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Part no. | Qty. |
|----------|------|
| | |
| | |
| | |
| | |

| Order no. | |
|------------------|--|
| Clerk (code no.) | |
| Dept. code | |

Note 1) For special specifications of the SUP/EXH block assembly mounting position, list its part number and quantity with the manifold type.

Note 2) Refer to pages 157 and 158 for 3 port valve part numbers.



operated made

Precautions

Clerk (code no.)

Dept. code

Note 1) For special specifications of the SUP/EXH block assembly mounting

• SUP/EXH block assembly (S type): SX5000-51-7A

Order no.

• SUP/EXH block assembly (RS type): SX5000-51-8A

Note 1) For special specifications of the SUP/EXH block assembly mounting position, list its part number and quantity with the manifold type.

Note 2) Refer to pages 157 and 158 for 3 port valve part numbers.

For SMC use only

Part no

• EXH block disc: SX5000-77-1A (2 pcs./location)

Qty.

2 position

Enter ordered part numbers

Double solenoid

Part no

For mixed port sizes

C 8

Qty.

Manifold Specification Sheet

Follow procedures 1 through 3.

1 Manifold Type

Symbol Sta

02 2s

20 20 9

Includes

blanking plate assemblies.

Series

2

3

4

2 Valve Type

SY5000

SY3000

Type of actuation

1 2 position single solenoid

2 position double solenoid

3 position closed center

3 position exhaust center

5 3 position pressure center

Indicate in the station table below

* 40

Enter the symbols for required specifications in the boxes below.

SS5Y5-M45 Stati on SUP/EXH block assembly specification

Symbol

Specification

Nil Standard/Internal pilot Built-in silencer

Note 1) An asterisk (*) indicates order made products.

mounting types.

(B) Electrical entry

L type plug

M type plug

connector

G Grommet (lead wire length 300mm)

Grommet (lead wire length 600mm)

With lead wire

Without lead wire

Without connector

With lead wire

Without lead wire

Without connector

Note 2) External pilot is not

(D)

LN

LO

М

MN

| ions | ◆ SUP | /EXH block assem | bly mounting positio |
|----------|--------|-------------------|----------------------|
| ations | Symbol | Mounting position | Applicable stations |
| tations | U | U side | 2 to 10 stations |
| : | D | D side | 2 10 10 31410113 |
| stations | В | Both sides | 2 to 20 stations |
| the | M* | Special sp | ecifications |

* For special specifications, indicate in the station table below

Enter the symbols for required specifications as indicated below.

(B)

(A) Rated voltage

24VDC

12VDC

6VDC

5VDC

AC specifications (50/60Hz)

100VAC

200VAC

110VAC [115VAC] 4 220VAC [230VAC]

R

DC specifications

A/B port size

Option

Quantity

Customer name

Contact person

Specification sheet no. Purchase order no.

Equipment name

Order Made

Note 1) When a DIN rail longer than the specified stations is necessary indicate the number of required stations. (Max. 20 stations)

Note 2) For the additional length, a DIN rail for SY5000 will be used.

(One-touch fitting)

| Symbol | Applicable | tube size |
|------------|--------------|--------------|
| Cyrribor | SY5000 | SY3000 |
| C44 | ø4 | ø4 |
| C46 | ø4 | ø6 |
| C64 | ø6 | ø4 |
| C66 | ø6 | ø6 |
| C84 | ø8 | ø4 |
| C86 | ø8 | ø6 |
| M | Mix | red |
| Note) F | or mixed spe | cifications. |

instead of a "O", enter C4 or C6 for SY3000 and C4, C6 or C8 for SY5000 in the a section of the station @------- @ ①----- Valve stations -Layout (for special specifications) @(P) (T)

(Maximum number of valves: 20 stations)

Date:

[Notes]

Blanking plate assembly: Blanking plate assembly:

SUP block disc:

SX3000-75-1A (For SY3000) SX5000-77-1A

set(s) Required date

• EXH block disc: SX5000-77-1A (2 pcs./location) Individual SUP spacer assembly: SY5000-38-2A (For SY5000)

• Individual EXH spacer assembly: SY5000-39-2A (For SY5000) Individual SUP spacer assembly: SY3000-38-2A (For SY3000)

 Individual EXH spacer assembly: SY3000-39-2A (For SY3000) • SUP/EXH block assembly (standard): SX5000-51-1A

 SUP/EXH block assembly (S type): SX5000-51-4A

C Indicator light/Surge voltage suppressor

| Nil | Without indicator light/ surge voltage suppressor | R | With surge voltage suppressor | | | |
|-----|--|---|---|--|--|--|
| S | With surge voltage suppressor | | (non-polar) With indicator light/ | | | |
| Z | With indicator light/ surge voltage suppressor | U | surge voltage suppressor (non-polar) | | | |

Note 1) For AC, there is no "S" specification, since it is integrated with the rectifier.

Note 2) "R" and "U" are available for DC only

(D) Manual override

SX5000-76-1A (For SY5000)

| | Nil | Non-locking push type |
|-----|-----|--------------------------------|
| sor | D | Push-turn locking slotted type |
| _ | E | Push-turn locking lever type |

Stations

Indicate the layout of valves, etc., with a "O"

| | Stations | or layout | | | | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Quantity |
|----------|----------------|-------------------------|----|--|----------|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|----------|
| | | Single solenoid | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 position | Double solenoid | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Closed center | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 3 position | Exhaust center | | | | | | | | | | | | | | | | | | | | | | | | |
| SY5000 | | Pressure center | | | | | | | | | | | | | | | | | | | | | | | | |
| ∑ | | N.C. single | | | | | | | | | | | | | | | | | | | | | | | | |
| 0, | 3 port valves | N.C. double | | | | | | | | | | | | | | | | | | | | | | | | |
| | 5 port valves | N.O. single | | | | | | | | | | | | | | | | | | | | | | | | |
| | | N.O. double | | | | | | | | | | | | | | | | | | | | | | | | |
| | Blanking p | late assembly | | | | | | | | | | | | | | | | | | | | | | | | |
| a | 2 position | Single solenoid | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Double solenoid | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Closed center | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 3 position | Exhaust center | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | Pressure center | | | _ | | | | | | | | | | | | | | | | | | | | | |
| SY3000 | | N.C. single | | | | | | | | | | | | | | | | | | | | | | | | |
| ြလ | 3 port valves | N.C. double | | | | | | | | | | | | | | | | | | | | | | | | |
| | o port varvoo | N.O. single | | | | | | | | | | | | | | | | | | | | | | | | |
| | | N.O. double | | | | | | | | | | | | | | | | | | | | | | | | |
| | Blanking p | late assembly | | | | | | | | | | | | | | | | | | | | | | | | |
| | Special | SUP/EXH block assembly | | | | | | | | | | | | | | | | | | | | | | | | |
| b | specifications | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u> </u> | SUP block | k disc | | | | | | | | | | | | | | | | | | | | | | | | |
| © | EXH block | disc (2 pcs./location | 1) | | | | | | | | | | | | | | | | | | | | | | | |
| | g Individ | ual SUP spacer assembly | | | <u> </u> | • | | , | | | | | | | | Γ | | | | Γ | | | | | | |
| d | S Individu | ual EXH spacer assembly | | | | | | | | | | | | | | | | | | | | | | | | |

Enter ordered part numbers.

| Part no. | Qty. |
|----------|------|
| | |
| | |
| | |
| | |

| Part no. | Qty. |
|----------|------|
| | |
| | |
| | |
| | |

| Order no. | |
|------------------|--|
| Clerk (code no.) | |
| Dept. code | |
| | |

Note 1) For special specifications of the SUP/EXH block assembly mounting position, list its part number and quantity with the manifold type.

Note 2) Refer to pages 157 and 158 for 3 port valve part numbers.

For SMC use only

SMC

Note 2) Refer to pages 157 and 158 for 3 port valve part numbers.

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Precautions

Compatible SI units

| Symbol | SI unit | Manufacturer/Organization | | |
|--------|------------------------------------|---|--|--|
| Α | EX300 | SMC | | |
| В | MELSECNET/MINI-S3 Data Link System | Mitsubishi Electric Corporation | | |
| С | SYSBUS Wire System | OMRON Corporation | | |
| D | Satellite I/O Link System | SHARP Corporation | | |
| Е | MEWNET-F System | Matsushita Electric Works | | |
| F1 | Uni-wire System (16 outputs) | NKE Corporation | | |
| G | Allen-Bradley Remote I/O System | Rockwell Automation | | |
| Н | Uni-wire H System | NKE Corporation | | |
| J1 | S-Link System (16 outputs) | SUNX Corporation | | |
| J2 | S-Link System (8 outputs) | SUNX Corporation | | |
| K | T Link Mini System | Fuji Electric Co., Ltd. | | |
| Q | DeviceNet | ODVA | | |
| R1 | CompoBus/S (16 outputs) | OMRON Corporation | | |
| R2 | CompoBus/S (8 outputs) | OMRON Corporation | | |
| U | JEMANET (JPCN-1) | The Japan Electrical Manufacturer's Association | | |
| ٧ | CC-Link System | Mitsubishi Electric Corporation | | |





Series SY3000/5000/7000/9000

Safety Instructions

These safety instructions are intended to prevent a hazardous situation and/or equipment damage. These instructions indicate the level of potential hazard by a label of "Caution", "Warning" or "Danger". To ensure safety, be sure to observe ISO 4414 Note 1), JIS B 8370 Note 2) and other safety practices.

⚠ Caution: Operator error could result in injury or equipment damage.

Warning: Operator error could result in serious injury or loss of life.

⚠ Danger : In extreme conditions, there is a possible result of serious injury or loss of life.

Note 1) ISO 4414: Pneumatic fluid power – Recommendations for the application of equipment to transmission and control systems.

Note 2) JIS B 8370: General Rules for Pneumatic Equipment

Marning

1. The compatibility of pneumatic equipment is the responsibility of the person who designs the pneumatic system or decides its specifications.

Since the products specified here are used in various operating conditions, their compatibility for the specific pneumatic system must be based on specifications or after analysis and/or tests to meet your specific requirements.

2. Only trained personnel should operate pneumatically operated machinery and equipment.

Compressed air can be dangerous if an operator is unfamiliar with it. Assembly, handling or repair of pneumatic systems should be performed by trained and experienced operators.

- 3. Do not service machinery/equipment or attempt to remove components until safety is confirmed.
- 1. Inspection and maintenance of machinery/equipment should only be performed after confirmation of safe locked-out control positions.
- 2. When equipment is to be removed, confirm the safety process as mentioned above. Cut the supply pressure for this equipment and exhaust all residual compressed air in the system.
- 3. Before machinery/equipment is restarted, take measures to prevent shooting-out of cylinder piston rod, etc. (Bleed air into the system gradually to create back pressure.)
- 4. Contact SMC if the product is to be used in any of the following conditions:
- 1. Conditions and environments beyond the given specifications, or if product is used outdoors.
- 2. Installation on equipment in conjunction with atomic energy, railway, air navigation, vehicles, medical equipment, food and beverages, recreation equipment, emergency stop circuits, press applications, or safety equipment.
- 3. An application which has the possibility of having negative effects on people, property, or animals, requiring special safety analysis.

3 port Air valve operated

Order Made s

anifold spec. sheets





Series SY3000/5000/7000/9000 3, 5 Port Solenoid Valve Precautions 1

Be sure to read before handling.

Design

△Warning

1. Actuator drive

When an actuator, such as a cylinder, is to be driven using a valve, take appropriate measures to prevent potential danger caused by actuator operation.

2. Intermediate stopping

When a 3 position closed center valve is used to stop a cylinder piston at an intermediate position, accurate stopping of the piston in a predetermined position is difficult due to the compressibility of air. Furthermore, since valves and cylinders are not guaranteed for zero air leakage, it may not be possible to hold a stopped position for an extended length of time. Contact SMC if it is necessary to hold a stopped position for an extended time.

3. Effect of back pressure when using a manifold

Use caution when valves are used on a common exhaust manifold, as actuator malfunction due to back pressure may occur. Especially when operating an air operated valve or a single acting cylinder, or using a 3 position exhaust center valve, malfunction may occur due to the exhaust from the other actuators. In cases where there is a danger of back pressure influence, take countermeasures by selecting a valve with back pressure check valve, or using a supply/exhaust block assembly and an EXH block disc, etc.

4. Holding of pressure (including vacuum)

Since valves are subject to air leakage, they cannot be used for applications such as holding pressure (including vacuum) in a pressure vessel.

5. Cannot be used as an emergency shutoff valve, etc.

The valves presented in this catalog are not designed for safety applications such as an emergency shutoff valve. If the valves are used in this type of system, other reliable safety assurance measures should also be adopted.

6. Maintenance space

The installation should allow sufficient space for maintenance activities (removal of valve, etc.).

7. Release of residual pressure

Provide a residual pressure release function for maintenance purposes. Special consideration should be given to the release of residual pressure between the valve and cylinder in the case of a 3 position closed center type valve.

8. Vacuum applications

When a valve is used for vacuum switching, etc., take measures against the suction of external dust or other contaminants from vacuum pads and exhaust ports, etc. Moreover, an external pilot type valve should be used in this case. Contact SMC in case of an internal pilot type.

9. Using double solenoid valves

When newly using double solenoid valves, the actuator may move in an unexpected direction depending on the valve switching position. Take measures to prevent the danger caused by the actuator's movements.

10. Ventilation

When a valve is used inside a sealed control panel, etc., provide ventilation to prevent a pressure increase caused by exhausted air inside the control panel or a temperature increase caused by the heat generated by the valve.

Selection

△Warning

1. Confirm the specifications.

The products presented in this catalog are designed only for use in compressed air systems (including vacuum). Do not operate at pressures or temperatures, etc., beyond the range of the specifications, as this can cause damage or malfunction. (Refer to specifications.)

Contact SMC when using a fluid other than compressed air (including vacuum).

2. Extended periods of continuous energization

Use a DC specification or an energy saving type if valves will be continuously energized for extended periods of time, or the energized period will be longer than the de-energized period. Contact SMC regarding other products available for AC specifications.

△Caution

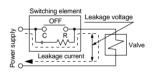
1. Momentary energization

If a double solenoid valve will be operated with momentary energization, it should be energized for at least 0.1 second.

However, the cylinder may malfunction depending on the secondary load conditions; therefore, it should be energized until the cylinder reaches the stroke end position.

2. Leakage voltage

Particularly when using a C-R element (surge voltage suppressor) for protection of the switching element, take note that leakage voltage will increase due to leakage current flowing through the C-R element. Therefore, select a circuit or an element in advance



to limit the amount of residual leakage voltage to the values shown below. Also, if return malfunction occurs due to the leakage voltage, install a bleeder resistor. Contact SMC for details on the bleeder resistor.

With DC coil: 3% or less of rated voltage With AC coil: 8% or less of rated voltage

3. Low temperature operation

Unless otherwise indicated in the specifications for each valve, operation is possible to -10° C, but appropriate measures should be taken to avoid solidification or freezing of drainage and moisture, etc.

4. Operation for air blowing

When using solenoid valves for air blowing, an external pilot type should be used.

Note that the pressure drop caused by the air blowing can have an effect on the internal pilot type valves when internal pilots and external pilots are used on the same manifold.

Furthermore, supply compressed air to the external pilot port within the pressure range prescribed in the specifications, and when using a double solenoid type for air blowing, make sure that it is always energized when air is being blown.

5. Mounting orientation

The mounting orientation is unrestricted.

Series SY3000/5000/7000/9000 3, 5 Port Solenoid Valve Precautions 2

Be sure to read before handling.

Mounting

△Warning

1. If air leakage increases or equipment does not operate properly, stop operation.

After mounting and maintenance, etc., connect the compressed air and power supplies, and perform appropriate function and leakage tests to confirm that the unit is mounted properly.

2. Instruction manual

Mount and operate the product after reading the manual carefully and understanding its contents. Also keep the manual where it can be referred to as necessary.

3. Painting and coating

Warnings or specifications printed or pasted on the product should not be erased, removed or covered up.

Consult SMC if paint is to be applied to resin parts, as this may have an adverse effect due to the paint solvent.

Piping

∆Caution

1. Preparation before piping

Before piping is connected, it should be thoroughly blown out with air (flushing) or washed to remove chips, cutting oil and other debris from inside the pipe.

2. Wrapping of pipe tape

When connecting pipes and fittings, etc., be sure that chips from the pipe threads and sealing material do not get inside the

Further, when pipe tape is used, leave 1.5 to 2 thread ridges exposed at the end of the threads.



3. When using closed center valves

When using closed center type valves, check carefully to be sure there are no air leaks from the piping between the valves and cylinders.

4. Tightening torques

When connecting fittings to valves, tighten as indicated below.

- 1) M5 type
- 1. When using SMC fittings, follow the guidelines below.

M5: After tightening by hand, tighten an additional 1/6 turn with a tightening tool. However, if miniature fittings are used, tighten an additional 1/4 turn with a tightening tool after tightening by hand. For fittings with gaskets in 2 locations, e.g., universal elbow or universal tee, tighten an additional 1/2 turn.

- Note) If fittings are over-tightened, air leakage may result due to breaking of fitting threads or deformation of the gaskets. However, if fittings are not tightened sufficiently, loosening of the threads and air leakage and may occur.
 - 2. When fittings other than SMC fittings are used, follow the instructions of the respective fitting manufacturer.

2) Rc threads

Fasten with the proper tightening torques as shown below.

| Connection threads | Proper tightening torque N·m |
|--------------------|------------------------------|
| Rc 1/8 | 7 to 9 |
| Rc 1/4 | 12 to 14 |
| Rc 3/8 | 22 to 24 |
| Rc 1/2 | 28 to 30 |

5. Connection of piping to products

When connecting piping to a product, refer to its instruction manual to avoid mistakes regarding the supply port, etc.

Wiring

△Caution

1. Polarity

When connecting power to a DC specification solenoid valve equipped with (indicator light) surge voltage suppressor, confirm whether or not there is polarity.

If there is polarity, take note of the following points.

Without built-in diode to protect polarity:

If a mistake is made regarding polarity, the diode in the valve, the control device switching element or power supply equipment, etc., may burn out.

• With diode to protect polarity:

If a mistake is made regarding polarity, it will not be possible to switch the valve.

2. Applied voltage

When electric power is connected to the solenoid valve, be careful to apply the proper voltage. Improper voltage may cause malfunction or burn out the coil.

3. Confirmation of connections

After completing the wiring, confirm that the connections are correct.

4. Handling of pilot valves

Be sure that forces exceeding 20N are not applied to the pilot valves due to lead wire deflection and external forces, as this may cause damage.

Lubrication

∆Caution

1. Lubrication

- 1) The valve has been lubricated for life at the factory, and does not require any further lubrication.
- 2) In the event that it is lubricated, use class 1 turbine oil (without additives), ISO VG32.

However, once lubrication is applied it must be continued, as loss of the original lubricant may lead to malfunction.

Contact SMC regarding class 2 turbine oil (with additives), ISO VG32.





Series SY3000/5000/7000/9000 3, 5 Port Solenoid Valve Precautions 3

Be sure to read before handling.

Air Supply

△Warning

1. Use clean air.

Do not use compressed air which contains chemicals, synthetic oils containing organic solvents, salts or corrosive gases, etc., as this can cause damage or malfunction.

△Caution

1. Install air filters.

Install air filters close to valves at their upstream side. A filtration degree of $5\mu m$ or less should be selected.

2. Install an air dryer, after-cooler or water separator, etc.

Air that includes excessive drainage may cause malfunction of valves and other pneumatic equipment. To prevent this, install an air dryer, after-cooler or water separator, etc.

3. If excessive carbon dust is generated, eliminate it by installing mist separators at the upstream side of valves.

If excessive carbon dust is generated by the compressor, it may adhere to the inside of valves and cause malfunction.

Refer to SMC's "Compressed Air Cleaning Systems" catalog for further details on compressed air quality.

Operating Environment

Marning

- 1. Do not use valves in atmospheres of corrosive gases, chemicals, salt water, water or steam, or where there is direct contact with any of these.
- 2. Do not use in an explosive atmosphere.
- 3. Do not use in locations subject to vibration or impact. Confirm the specifications in the main section of this catalog.
- 4. A protective cover, etc., should be used to shield valves from direct sunlight.
- 5. Shield valves from radiated heat generated by nearby heat sources.
- 6. Employ suitable protective measures in locations where there is contact with water droplets, oil or welding spatter, etc.
- 7. When solenoid valves are mounted in a control panel or are energized for extended periods of time, employ measures to radiate excess heat, so that temperatures remain within the valve specification range.

Maintenance

△Warning

1. Perform maintenance procedures as shown in the instruction manual.

If handled improperly, malfunction or damage of machinery or equipment may occur.

2. Equipment removal and supply/exhaust of compressed air

When equipment is removed, first confirm that measures are in place to prevent dropping of work pieces and run-away of equipment, etc. Then cut the supply pressure and power, and exhaust all compressed air from the system using its residual pressure release function.

Furthermore, in the case of 3 position closed center type valves, compressed air will remain between valves and cylinders, and must be exhausted similarly.

When the equipment is to be started again after remounting or replacement, first confirm that measures are in place to prevent lurching of actuators, etc., and then confirm that the equipment is operating normally.

3. Low frequency operation

Valves should be switched at least once every 30 days to prevent malfunction. (Use caution regarding the air supply.)

4. Manual override operation

When the manual override is operated, connected equipment will be actuated. Confirm safety before operating.

∧Caution

1. Drainage removal

Remove drainage from air filters regularly. (Refer to specifications.)

How to Find the Flow Rate (at air temperature of 20°C)

Subsonic flow when P1 + 0.1013 < 1.89 (P2 + 0.1013)

 $Q = 226S \sqrt{\triangle P(P2 + 0.1013)}$

Sonic flow when P1 +0.1013 ≥ 1.89 (P2 + 0.1013)

Q = 113S (P1 + 0.1013)

Q: Air flow rate [/min (ANR)]

S: Effective area (mm²)

 \triangle P : Pressure drop (P1 – P2) [MPa]

P1: Upstream pressure [MPa]

P2: Downstream pressure [MPa]

* Correction for different air temperatures

Multiply the flow rate calculated with the above formulas by a coefficient from the table below.

| Air temperature (°C) | -20 | -10 | 0 | 10 | 30 | 40 | 50 | 60 |
|------------------------|------|------|------|------|------|------|------|------|
| Correction coefficient | 1.08 | 1.06 | 1.04 | 1.02 | 0.98 | 0.97 | 0.95 | 0.94 |



Series SY3000/5000/7000/9000 Specific Product Precautions 1

Be sure to read before handling.
Refer to pages 230 through 233 for safety instructions and common precautions.

∆Warning

Manual Override Operation

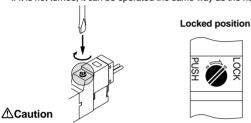
■ Non-locking push type [Standard type]

Push in the direction of the arrow



■ Push-turn slotted locking type [type D]

While pressing, turn in the direction of the arrow. If it is not turned, it can be operated the same way as the non-locking type.

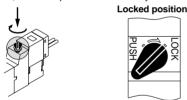


When operating the locking type D with a screw driver, turn it gently using a watchmakers screw driver.

[Torque: Less than 0.1N·m]

■ Push-turn lever locking type [type E]

While pressing, turn in the direction of the arrow. If it is not turned, it can be operated the same way as the non-locking type.



∆Caution

When locking the manual override on the push-turn locking types (D, E), be sure to push it down before turning. Turning without first pushing it down can cause damage to the manual override and trouble such as air leakage, etc.

Note) It can also be operated using the manual override on the pilot valve side.

However, the manual override on the pilot valve side is a non-locking push type only, which is operated by pushing it in the direction of the arrow.



Marning

Solenoid Valves for 200V, 220VAC Specifications

Solenoid valves with grommet and L/M type plug connector AC specifications have a built-in rectifier circuit in the pilot section to operate the DC coil. With 200V, 220VAC specification pilot valves, this built-in rectifier generates heat when energized. The surface may become hot depending on the energized condition; therefore, do not touch the solenoid valves.



Exhaust Throttle

With series SY, the pilot valve and main valve share a common exhaust inside the valve. Therefore, do not block the exhaust port when arranging the piping.

△ Caution

Series SY3000, SY5000, SY7000, SY9000 Used as a 3 Port Valve

Using 5 port valves as 3 port valves

Series SY valves can be used as normally closed (N.C.) or normally open (N.O.) 3 port valves by closing one of the cylinder ports (A or B) with a plug. However, they should be used with the exhaust ports kept open. (Refer to pages 157 through 161 for dedicated 3 port solenoid valves.)

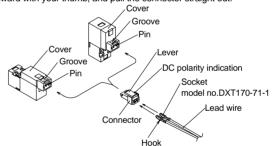
| Plug position | | B port | A port | | |
|---------------------|--------|--|--|--|--|
| Configuration | | N.C. | N.O. | | |
| solenoids | Single | Plug (A) (B) 4 7 2 5 1 3 (EA)(P)(EB) | Plug (A) (B) 4 7 2 5 1 3 (EA)(P)(EB) | | |
| Number of solenoids | Double | Plug (A) (B) 4 7 2 5 1 3 (EA)(P)(EB) | Plug (A) (B) 4 2 5 1 3 (EA)(P)(EB) | | |

⚠Caution

How to Use Plug Connectors

1. Attaching and detaching connectors

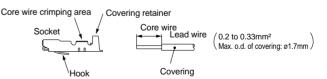
- To attach a connector, hold the lever and connector unit between your fingers and insert straight onto the pins of the solenoid valve so that the lever's pawl is pushed into the groove and locks.
- To detach a connector, remove the pawl from the groove by pushing the lever downward with your thumb, and pull the connector straight out.



2. Crimping of lead wires and sockets

Strip 3.2 to 3.7mm at the end of the lead wires, insert the ends of the core wires evenly into the sockets, and then crimp with a crimping tool. When this is done, take care that the coverings of the lead wires do not enter the core wire crimping area.

(Crimping tool: Model number DXT170-75-1)



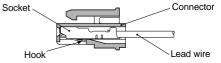
3. Attaching and detaching sockets with lead wires

Attaching

Insert the sockets into the square holes of the connector (+, – indication), and continue to push the sockets all the way in until they lock by hooking into the seats in the connector. (When they are pushed in, their hooks open and they are locked automatically.) Then confirm that they are locked by pulling lightly on the lead wires.

Detaching

To detach a socket from a connector, pull out the lead wire while pressing the socket's hook with a stick having a thin tip (about 1mm). If the socket will be used again, first spread the hook outward.



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Manifold spec. sheets

234



Series SY3000/5000/7000/9000 Specific Product Precautions 2

Be sure to read before handling.
Refer to pages 230 through 233 for safety instructions and common precautions.

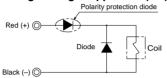
△Caution

Surge Voltage Suppressor

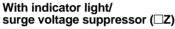
<For DC>

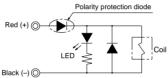
Grommet, L and M type plug connectors

■ Standard type (with polarity)
With surge voltage suppressor (□S)



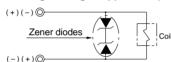




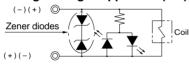


■ Non-polar type
With surge voltage suppressor (□R)





With indicator light/ surge voltage suppressor (□U)

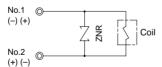


- Connect the standard type in accordance with the +, polarity indication. (The non-polar type can be used with the connections made either way.)
- Since voltage specifications other than standard 24V and 12V DC do not have diodes for polarity protection, be careful not to make errors in the polarity.
- When wiring is done at the factory, positive (+) is red and negative (-) is black.

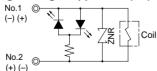
DIN terminal

With surge voltage suppressor (DS)



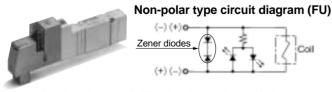


With indicator light/ surge voltage suppressor (DZ)



The DIN terminal type does not have polarity

Plug-in Type



Plug-in valves do not have polarity. Therefore, they can be used for both the positive COM (SS5Y $\frac{3}{5}$ -45 \square) and negative COM(SS5Y $\frac{3}{5}$ -45 \square).

<For AC>

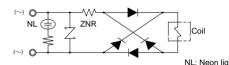
(There is no "S" type, because the generation of surge voltage is prevented by a rectifier.)

Grommet, L and M type plug connectors



DIN terminal

With indicator light (DZ)



Note) Zener diodes and ZNR surge voltage suppressor have residual voltage corresponding to the protective element and rated voltage; therefore, protect the controller side from the surge voltage.

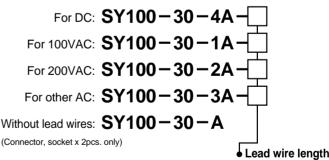
The residual voltage of the diodes is approximately 1V.

⚠Caution

Plug Connector Lead Wire Length

Plug connector lead wires have a standard length of 300mm, however, the following lengths are also available.

Connector assembly part numbers



| Nil | 300mm |
|-----|--------|
| 6 | 600mm |
| 10 | 1000mm |
| 15 | 1500mm |
| 20 | 2000mm |
| 25 | 2500mm |
| 30 | 3000mm |
| 50 | 5000mm |
| | |

Ordering

Include the connector assembly part number together with the part number for the plug connector's solenoid valve without connector. <Example> Lead wire length 2000mm

For DC For AC SY3120-5LO-M5 SY100-30-4A-20 SY100-30-1A-20



Series SY3000/5000/7000/9000 Specific Product Precautions 3 Be sure to read before handling. Refer to page 200 through 200 feet to page 200 through 20

Refer to pages 230 through 233 for safety instructions and common precautions.

⚠Caution

How to Use the DIN Terminal Connector

Connection

- 1. Loosen the holding screw and pull the connector out of the solenoid valve ter-
- 2. After removing the holding screw, insert a flat head screw driver, etc., into the notch on the bottom of the terminal block and pry it open, separating the terminal block and the housing.
- 3. Loosen the terminal screws (slotted screws) on the terminal block, insert the cores of the lead wires into the terminals according to the connection method, and fasten them securely with the terminal screws.
- 4. Secure the cord by fastening the ground nut.

∧Caution

When making connections, take note that using other than the supported size (ø3.5 to ø7) heavy duty cord will not satisfy IP65 (enclosure) standards. Also, be sure to tighten the ground nut and holding screw within their specified torque ranges

Changing the entry direction

After separating the terminal block and housing, the cord entry can be changed by attaching the housing in the desired direction (4 directions at 90° intervals).

* When equipped with a light, be careful not to damage the light with the cord's lead wires

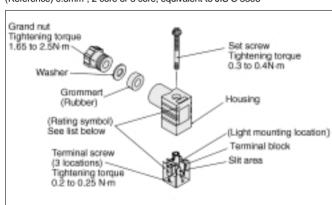
Precautions

Plug in and pull out the connector vertically without tilting to one side.

Compatible cable

Cord O.D.: ø3.5 to ø7

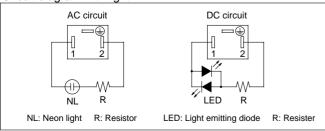
(Reference) 0.5mm2, 2 core or 3 core, equivalent to JIS C 3306



DIN Connector Part Nos.

| Without light | SY100-61-1 | | | | |
|---------------|---------------|---------------|--|--|--|
| With light | | | | | |
| Rated voltage | Rating symbol | Part no. | | | |
| 24VDC | 24V | SY100-61-3-05 | | | |
| 12VDC | 12V | SY100-61-3-06 | | | |
| 100VAC | 100V | SY100-61-2-01 | | | |
| 200VAC | 200V | SY100-61-2-02 | | | |
| 110VAC | 110V | SY100-61-2-03 | | | |
| 220VAC | 220V | SY100-61-2-04 | | | |

Circuit diagram with light



Note) Refer to page 189 for DIN connector conforming to DIN43650C standard.

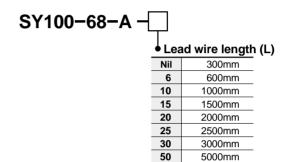
∆Caution

Connector Assembly with Cover

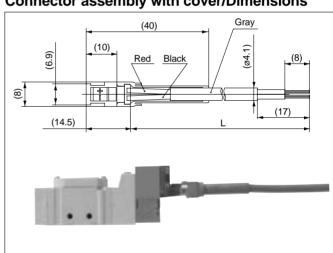
Connector assembly with dust proof protective cover

- Effective for prevention of short circuit failure due to the entry of foreign matter into the connector
- Chloroprene rubber for electrical use, which provides outstanding weather resistance and electrical insulation, is used for the cover material. However, do not allow contact with cutting oil, etc.
- Use of a round type cord creates a neat appearance

Part numbers



Connector assembly with cover/Dimensions



Ordering Examples

Enter the part number for a plug connector solenoid valve without connector together with the part number for a connector assembly with cover.

<Example 1> Lead wire length of 2000mm

SY3120-5LOZ-M5 SY100-68-A-20

<Example 2> Lead wire length of 300mm (standard)

SY3120-5LPZ-M5

Symbol for connector assembly with cover

* In this case, the part number for the connector assembly with cover is not re-





Series SY3000/5000/7000/9000 Specific Product Precautions 4

Be sure to read before handling.
Refer to pages 230 through 233 for safety instructions and common precautions.

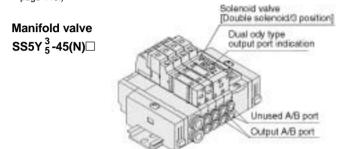
** ⚠** Caution

Plug-in Type

■ When using a double solenoid valve (Dual body type: SY \(^2_3\) 245-□FU) on the plug-in type manifold (SS5Y \(^3_5\)-45 (N)□), two manifold stations are required. Output to A/B ports will be made through the manifold block on the side indicated by an arrow on the top of the solenoid valve. Therefore, arrange the piping on the side indicated by the arrow.

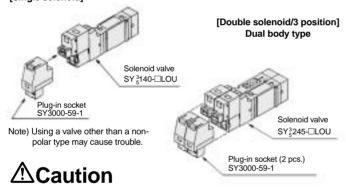
Although the "T" side will not be used, plugs will not be necessary since it is sealed with the valve.

(However, insert a plug into the A/B ports if dust intrusion is possible. Refer to page 118.)



Plug-in type solenoid valves consist of a non-polar solenoid valve and a plug-in socket. When ordering them separately, refer to the following part numbers.

[Single solenoid]



Series SY9000 DIN Rail

The DIN rail used with series SY9000 is stronger than that used with series SY3000 and SY5000. Use this exclusive DIN rail with series SY9000. Furthermore, if using a DIN rail other than that supplied by SMC, refer to the manifold mounting section below, and mount using the same method as prescribed for side facing and rear facing, regardless of the mounting orientation.

Manifold Mounting

For type 23, 43, 45, and 45□ DIN rail mounting, when attaching a manifold to a mounting surface, etc., with bolts, if the entire bottom surface of the DIN rail contacts the mounting surface in a horizontal mounting, it can be used by simply securing both ends of the DIN rail. However, for any other mounting method or for side facing and rear facing, etc., secure the DIN rail with bolts at uniform intervals using the following as a guide: 2 to 5 stations at 2 locations, 6 to 10 stations at 3 locations, 11 to 15 stations at 4 locations, and 16 to 20 stations at 5 locations. In addition, even in the case of a horizontal mounting, if the mounting surface is subject to vibration, etc., take the same measures indicated above. If secured at fewer than the specified number of locations, warping or twisting may occur in the DIN rail and manifold, causing trouble such as air leakage.

△Caution

Precautions for One-touch Fittings

The pitch determined for each of the series SY piping ports (P, A, B, etc.) is based on the assumption that series KJ One-touch fittings will be used. For this reason, other pipe fittings may interfere with each other depending on their type and size. Dimensions should be confirmed in a pipe fitting catalog before they are used.

△Caution

Precautions for One-touch Fittings

1. Tube attachment/detachment for One-touch fittings

1) Attaching of tube

- 1. Take a tube having no flaws on its periphery and cut it off at a right angle. When cutting the tube, use tube cutters TK-1, 2 or 3. Do not use pinchers, nippers or scissors, etc. If cutting is done with tools other than tube cutters, the tube may be cut diagonally or become flattened, etc., making a secure installation impossible, and causing problems such as the tube pulling out after installation or air leakage. Allow some extra length in the tube.
- 2. Grasp the tube and push it in slowly, inserting it securely all the way into the fitting.
- After inserting the tube, pull on it lightly to confirm that it will not come out. If it is not installed securely all the way into the fitting, this can cause problems such as air leakage or the tube pulling out.

2) Detaching of tube

- Push in the release button sufficiently, pushing its collar equally around the circumference.
- Pull out the tube while holding down the release button so that it does not come out. If the release button is not pressed down sufficiently, there will be increased bite on the tube and it will become more difficult to pull it out.
- 3. When the removed tube is to be used again, cut off the portion which has been chewed before reusing it. If the chewed portion of the tube is used as is, this can cause trouble such as air leakage or difficulty in removing the tube.

⚠ Caution

Precautions on Other Tube Brands

 When using other than SMC brand tubes, confirm that the following specifications are satisfied with respect to the outside diameter tolerance of the tube.

1) Nylon tube within ± 0.1 mm within ± 0.1 mm within ± 0.1 mm within ± 0.1 mm within ± 0.1 5mm within ± 0.2 mm

Do not use tubes which do not meet these outside diameter tolerances. It may not be possible to connect them, or they may cause other trouble, such as air leakage or the tube pulling out after connection.





Series SY3000/5000/7000/9000 Specific Product Precautions 5 Be sure to read before handling. Refer to page 220 through 200 (co.)

Refer to pages 230 through 233 for safety instructions and common precautions.

△Caution

Interface Regulators

| Specifications | | | | | | | | | |
|--|-------------------------|------------------------------|------------------------|-------------------------|----------------|------------------------|-----------|--|--|
| Interface regulator model | ARBY3000-□-P-2 | ARBY300 | 00-□- ^{A1} -2 | ARBY5000-□-P-2 ARBY5000 | | 00-□- ^{A1} -2 | | | |
| Applicable solenoid valve model | | SY31 40(R) | | SY1 40(R) | | | | | |
| Regulated port | | Р | Α | В | Р | Α | В | | |
| Regulating pressure range | | | 0.1 to 0.7MPa | | | | | | |
| Maximum operating pressure | | 0.7MPa | | | | | | | |
| Fluid | | Air | | | | | | | |
| Ambient and fluid temperature | emperature Maximum 50°C | | | | | | | | |
| Pressure gauge port size | | M5 x 0.8 | | | | | | | |
| Weight | With pressure gauge | 46g (with 05), 50g (with 06) | | | 66.8g | | | | |
| weight | With plug | 20g | | 60.4 | | .4g | | | |
| Supply side effective area (Cv factor) Note 3) | P to A, B | _ | 2.45mm | n² (0.13) | _ | — 7.61mm² (0.4 | | | |
| Exhaust side effective area (Cv factor) Note 3) A, B to EA, EB | | 4.05mm² (0.22) | 3.91mm | n² (0.21) | 11.1mm² (0.61) | 10.1mm | n² (0.56) | | |

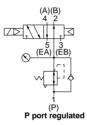
Note 1) Pressurize the interface regulator from P port on the base.

Note 2) With closed center and pressure center valves, the pressure can be regulated through P port only.

Note 3) Effective area, excluding the regulated port, when a primary pressure of 0.5MPa is supplied with regulators mounted on the solenoid valves (2 positions) and sub-plate. Refer to "Flow Characteristics" regarding the regulated port.

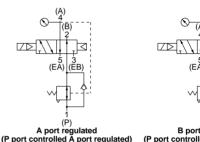
100 (Cv factor) Effective area 50 0.25 Set pressure MPa





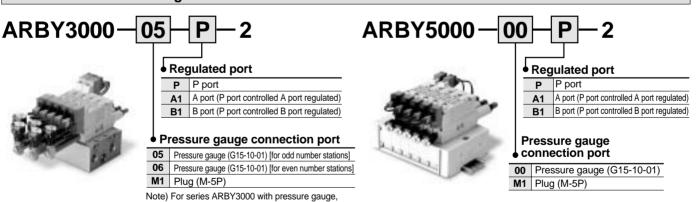
Note 4) Values for weight include gasket and mounting screws

Note 5) With A, B ports regulated (P port controlled A, B ports regulated), the effective area (CV factor) for the regulated port and unregulated passage (P to B or P to A) decreases as shown in the graph below when the set pressure is 0.25MPa or less.



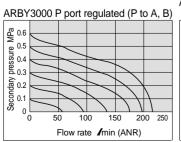
B port regulated
(P port controlled B port regulated)

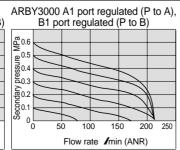
How to Order Interface Regulators



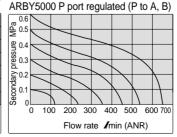
Flow Characteristics

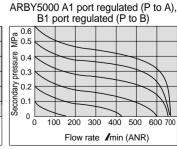
(Conditions: Primary pressure of 0.7MPa with 2 position solenoid valves mounted)





note that the part numbers for odd number and even number stations differ to prevent interference between the pressure gauges when installing on the manifold.

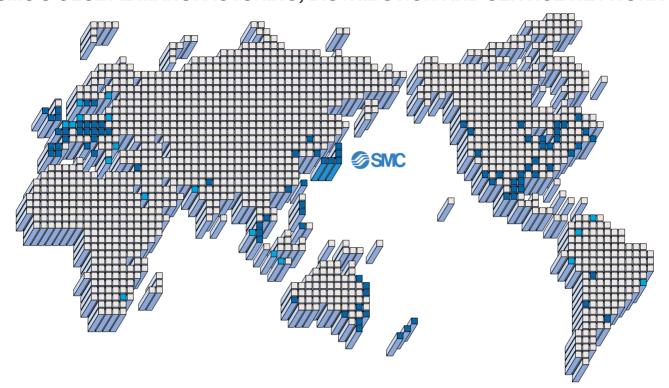




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SMC'S GLOBAL MANUFACTURING, DISTRIBUTION AND SERVICE NETWORK



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SMC Pneumatique SA

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