

Metal Seal/Rubber Seal Base Mounted Series VQ

Small space and small volume

All pilot valves are compactly mounted on one side. The space saving design of mounting all fittings on one side permits mounting in three directions.

Mounting space.....45% DOWN

Mounting volume..... 50% DOWN



VQ0000
(VV5Q05)

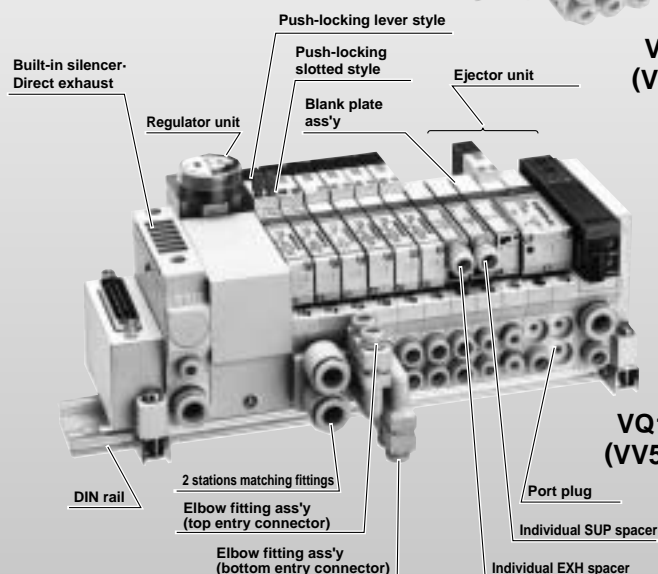
Unprecedented high speed response and long service life

(Metal seal, single, with indicator light and surge voltage suppressor)

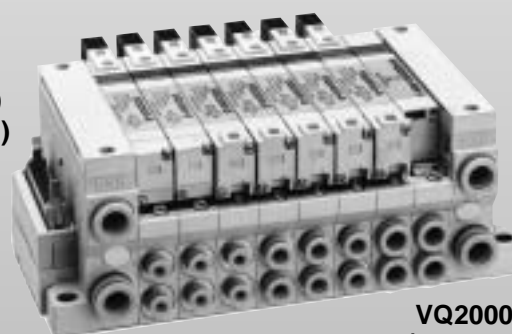
VQ0000	10ms	} 200 million cycles
VQ1000	10ms	
VQ2000	20ms	
Dispersion accuracy		±2ms

Thin compact design with large flow capacity

Model	Manifold pitch (mm)	Cv		Cylinder speed
		Metal seal	Rubber seal	
VQ0000	11	0.15	0.2	up to ø40
VQ1000	10.5	0.20	0.30	up to ø50
VQ2000	16	0.80	0.90	up to ø80



VQ1000
(VV5Q11)



VQ2000
(VV5Q21)

The photo does not show an actual use example.









A variety of options

Innovative mounting methods

The non-bis, one-clamp structure permits easy valve replacement. (Plug-in Unit)

Built-in One-touch fittings for easy piping

A variety of common wiring methods are standardized.

F Kit (D-sub connector) Number of pins: 15, 25   Top entry Side entry	P Kit (Flat cable connector) Number of pins: 10, 16, 20, 26   Top entry Side entry		
G Kit (Flat cable with terminal block) Number of pins: 20 	T Kit (Terminal box) 	L Kit (Lead wire) 	S Kit (Serial transmission unit) 

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

VFS

VS

VS7

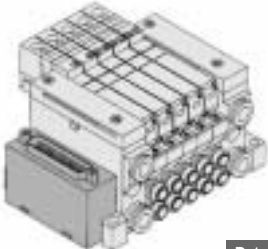

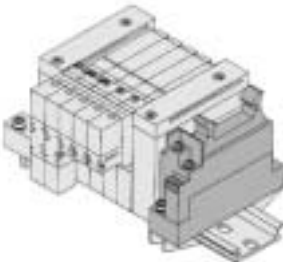
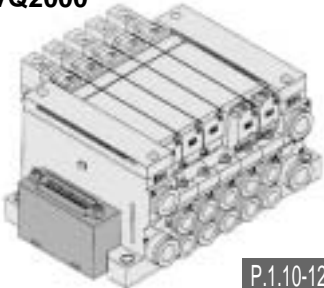
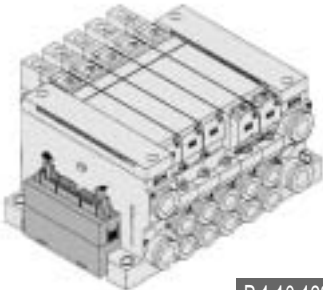

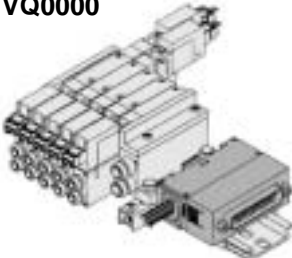
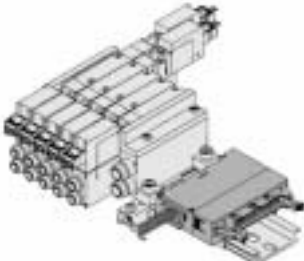
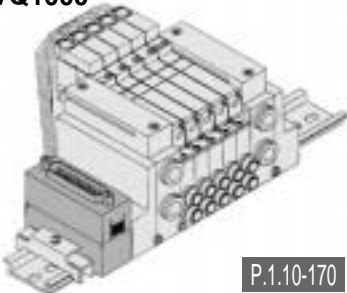
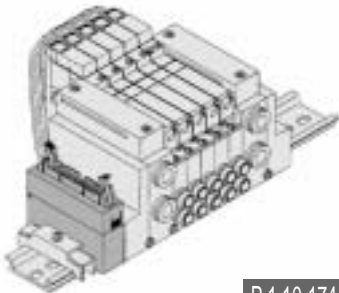
Valve Specifications

Base Mounted																						
Plug-in	Series VQ1000	Metal seal	VQ1□00	3.6 (0.2)	3.6 (0.2)	●	●	●	●	●	●	●	●						●	●	●	
		Rubber seal	VQ1□01	5.4 (0.3)	5.4 (0.3)																	
	P.1.10-118						P.1.10-122															
	Series VQ2000	Metal seal	VQ2□00	14.4 (0.8)	12.6 (0.7)	●	●	●	●	●	●	●	●						●	●	●	
		Rubber seal	VQ2□01	16.2 (0.9)	14.4 (0.8)																	
	P.1.10-120						P.1.10-122															
	Plug lead	Series VQ0000	Metal seal	VQ0□50	2.7 (0.15)	2.0 (0.11)	●	●	●	●		●	●	●		●	●	●	●	●		
			Rubber seal	VQ0□51	3.6 (0.2)	2.7 (0.15)																
		P.1.10-164						P.1.10-168														
		Series VQ1000	Metal seal	VQ1□10	3.6 (0.2)	3.6 (0.2)	●	●	●	●	●								●		●	●
Rubber seal			VQ1□11	5.4 (0.3)	5.4 (0.3)																	
P.1.10-166						P.1.10-168																

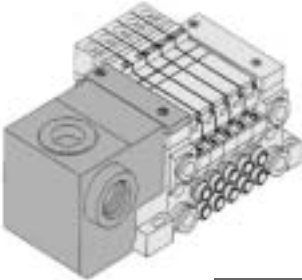

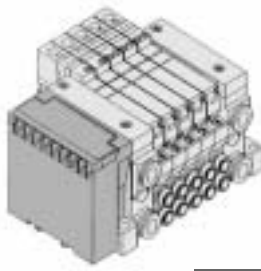
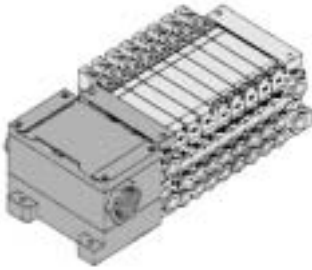
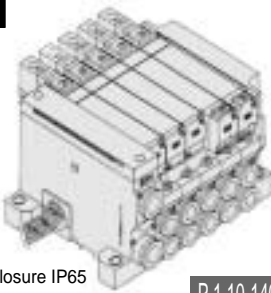
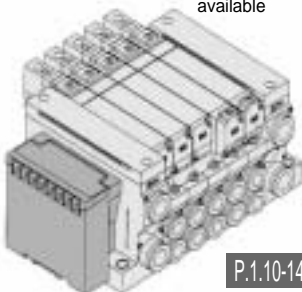
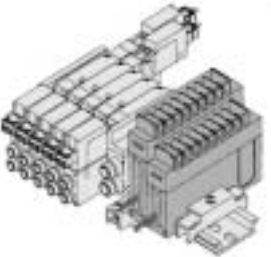
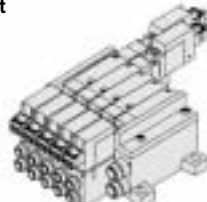
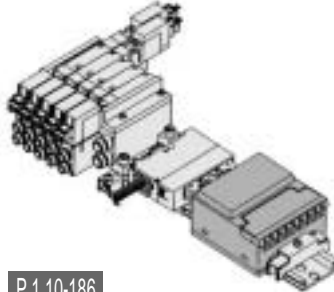
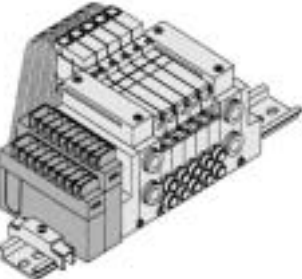
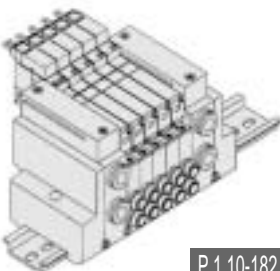
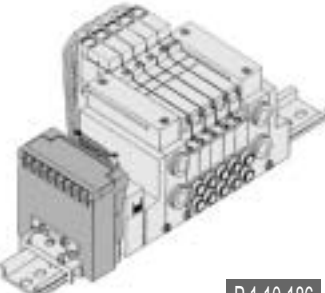
Options					Manifold Options									
P.1.10-197				External pilot	P.1.10-159				Blank plate	P.1.10-148				Blank plate
				D-sub connector 15 pin					Individual SUP/EXH					Individual SUP/EXH
				Flat cable 10 pin, 16 pin, 20 pin					SUP/EXH passage spacer					SUP/EXH passage spacer
	Contact SMC for S kit			Negative COM specifications		Contact SMC for S/G kit			Name plate					Name plate
				One-touch fitting/Inch size					Check valve for prevention of back pressure					Check valve for prevention of back pressure
P.1.10-197				For special wiring spec.	P.1.10-159				DIN rail mounting					DIN rail mounting
	Except for L kit					Except for L kit			Built-in silencer					Built-in silencer
									Silencer for EXH port					Silencer for EXH port
	Contact SMC for S kit					Contact SMC for S/G kit			Elbow fitting for cylinder port					Elbow fitting for cylinder port
									Two stations matching fittings for double flow rate					Two stations matching fittings for double flow rate
P.1.10-197					P.1.10-159				Plug for cylinder port					Plug for cylinder port
	Except for L kit					Except for L kit			Regulator unit					Regulator unit
									Ejector unit mounted					Ejector unit mounted
	Contact SMC for S kit					Contact SMC for S/G kit			Double check block					Double check block
P.1.10-192					P.1.10-154					P.1.10-190				
P.1.10-192					P.1.10-154									
P.1.10-192					P.1.10-154									
P.1.10-192					P.1.10-154									
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P.1.10-192					P.1.10-154									

Series VQ/Base Mounted: Variations

Manifold Variations

	<div>F</div> <div>Kit</div> <div>D-sub connector</div> <div>Conforming to MIL D-sub connector</div>	<div>P</div> <div>Kit</div> <div>Flat cable connector</div> <div>Conforming to MIL flat cable connector</div>	<div>G</div> <div>Kit</div> <div>Flat cable with power supply terminal block</div> <div>Conforming to MIL flat cable connector. Applicable to OMRON's serial transmission unit.</div>
Plug-in	<div>Series VQ1000</div> <div></div> <div>P.1.10-124</div>	<div></div> <div>P.1.10-128</div>	<div></div> <div>P.1.10-132</div>
	<div>Series VQ2000</div> <div></div> <div>P.1.10-124</div>	<div></div> <div>P.1.10-128</div>	<div></div> <div>P.1.10-132</div>
Plug lead	<div>Series VQ0000</div> <div></div> <div>P.1.10-170</div>	<div></div> <div>P.1.10-174</div>	<div>—</div>
	<div>Series VQ1000</div> <div></div> <div>P.1.10-170</div>	<div></div> <div>P.1.10-174</div>	<div>—</div>

Manifold Variations

T kit Terminal box (Terminal block) Terminal blocks are compactly arranged on one side.	L C kit Lead wire Direct electrical entry style	S kit Serial transmission unit Enables single-wire solenoid valve-PLC operation	Port size	
			SUP EXH port P, R	Cylinder port A, B
 Terminal box P.1.10-136	L kit  P.1.10-140	 P.1.10-144	C8 (ø8) N9 (ø5/16") <Option> Built-in silencer	C3 (ø3.2) C4 (ø4) C6 (ø6) M5 (M5 thread) N1 (ø1/8") N3 (ø5/32") N7 (ø1/4")
 Enclosure IP65 available P.1.10-136	L kit  Enclosure IP65 available P.1.10-140	 Enclosure IP65 available P.1.10-144	C10 (ø10) N11 (ø3/8") <Option> Built-in silencer	C4 (ø4) C6 (ø6) C8 (ø8) N3 (ø5/32") N7 (ø1/4") N9 (ø5/16")
 Terminal block P.1.10-178	C kit  P.1.10-182	 P.1.10-186	C6 (ø6) N7 (ø1/4") <Option> Built-in silencer	C3 (ø3.2) C4 (ø4) M5 (M5 thread) N1 (ø1/8") N3 (ø5/32")
 Terminal block P.1.10-178	C kit  P.1.10-182	 P.1.10-186	C8 (ø8) N9 (ø5/16") <Option> Built-in silencer	C3 (ø3.2) C4 (ø4) C6 (ø6) M5 (M5 thread) N1 (ø1/8") N3 (ø5/32") N7 (ø1/4")

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

VFS

VS

VS7

Cylinder Speed Chart

Series VQ0000

Model	Fitting (One-touch fitting) Effective area (mm ²) (Cv factor)	Cylinder speed (mm/s)	Cylinder bore size (mm)											
			Series CJ2 Pressure 0.5MPa Load factor 25% Piping length 2m Speed controller: AS2000F-06 (S=4.5mm ²) Cylinder stroke 50mm			Series CM2 Pressure 0.5MPa Load factor 50% Piping length 5m Speed controller: AS2000F-06 (S=4.5mm ²) Cylinder stroke 100mm				Series CA1 Pressure 0.5MPa Load factor 50% Piping length 5m Speed controller: AS2000F-06 (S=4.5mm ²) Cylinder stroke 300mm				
			ø6	ø10	ø16	ø20	ø25	ø32	ø40	ø40	ø50	ø63	ø80	ø100
VQ0000 (Metal seal)	ø4 2.7 (0.15)	150												
		300												
		450												
		600												
		750												
VQ0001 (Rubber seal)	ø4 3.6 (0.2)	150												
		300												
		450												
		600												
		750												

Series VQ1000

Model	Fitting (One-touch fitting) Effective area (mm ²) (Cv factor)	Cylinder speed (mm/s)	Cylinder bore size (mm)											
			Series CJ2 Pressure 0.5MPa Load factor 25% Piping length 2m Speed controller: AS3000F-06 (S=6.5mm ²) Cylinder stroke 50mm			Series CM2 Pressure 0.5MPa Load factor 50% Piping length 5m Speed controller: AS3000F-06 (S=6.5mm ²) Cylinder stroke 100mm				Series CA1 Pressure 0.5MPa Load factor 50% Piping length 5m Speed controller: AS3000F-06 (S=6.5mm ²) Cylinder stroke 300mm				
			ø6	ø10	ø16	ø20	ø25	ø32	ø40	ø40	ø50	ø63	ø80	ø100
VQ1000 (Metal seal)	ø6 3.6 (0.2)	150												
		300												
		450												
		600												
		750												
VQ1001 (Rubber seal)	ø6 5.4 (0.3)	150												
		300												
		450												
		600												
		750												

Series VQ2000

Model	Fittings (One-touch fitting) Effective area (mm ²) (Cv factor)	Cylinder speed (mm/s)	Cylinder bore size (mm)											
			Series CJ2 Pressure 0.5MPa Load factor 25% Piping length 2m Speed controller: AS3000F-08 (S=10mm ²) Cylinder stroke 50mm			Series CM2 Pressure 0.5MPa Load factor 50% Piping length 5m Speed controller: AS3000F-08 (S=10mm ²) Cylinder stroke 100mm				Series CA1 Pressure 0.5MPa Load factor 50% Piping length 5m Speed controller: AS3000F-08 (S=10mm ²) Cylinder stroke 300mm				
			ø6	ø10	ø16	ø20	ø25	ø32	ø40	ø40	ø50	ø63	ø80	ø100
VQ2000 (Metal seal)	ø8 14.4 (0.80)	150												
		300												
		450												
		600												
		750												
VQ2001 (Rubber seal)	ø8 16.2 (0.90)	150												
		300												
		450												
		600												
		750												

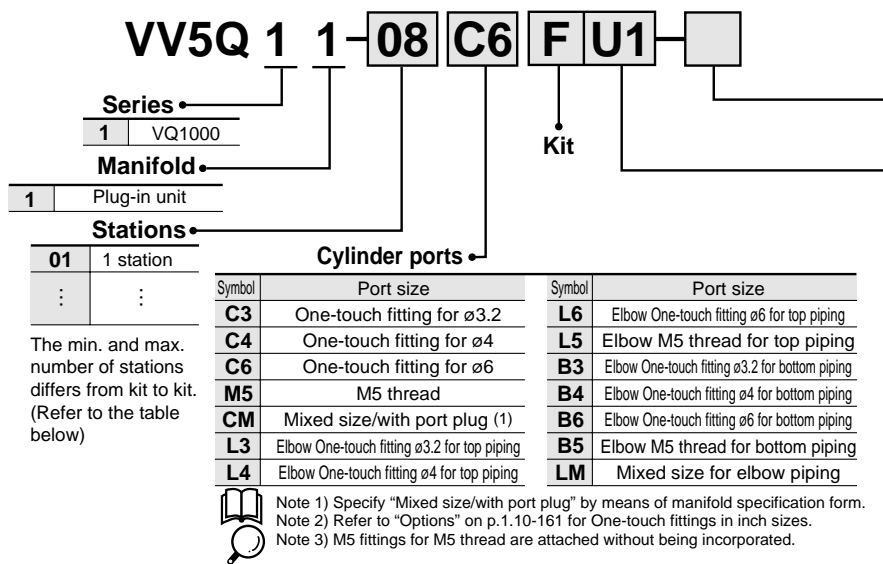
VQ1000

Base Mounted

Plug-in Unit



How to Order Manifold

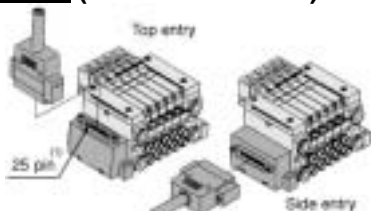
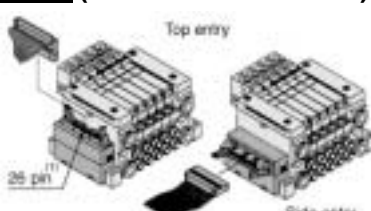
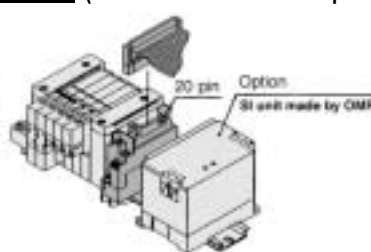
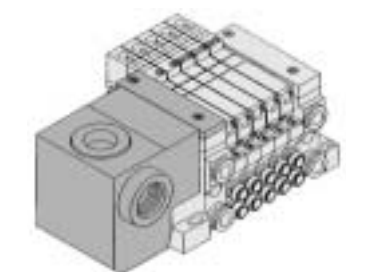

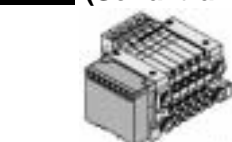


Option

Symbol	Option
—	None
B	Check valve for prevention of back pressure ⁽²⁾
D	DIN rail mounting
G1	1 set of regulator unit ⁽³⁾
G2	2 sets of regulator unit ⁽³⁾
G3	3 sets of regulator unit ⁽³⁾
J□	With vacuum ejector unit ⁽⁴⁾
K	Special wiring specification (Not double wiring) ⁽⁵⁾
N	With name plate
R	External pilot ⁽⁶⁾
S	Built-in silencer (Direct exhaust)

- Note 1) If specifying more than one option, please list alphabetically. Example) -BRS
- Note 2) Models with a suffix "-B" have check valves for prevention of back pressure at all manifold stations. If not all stations need this check valve, specify the stations where check valves are installed by using a manifold specification form.
- Note 3) Specify the mounting position by means of the manifold specification form.
- Note 4) Refer to p.1.10-152 for the details of ejector mounted styles. A combination of "J" and "N" is unavailable.
- Note 5) Specify the wiring by means of the manifold specification form. (Except for L kit)
- Note 6) Indicate "R" for the valve with external pilot.

Kit/Electrical entry/Cable length

<div><div>F</div><div>Kit (D-sub connector)</div></div> <div></div> <div><table><tr><th colspan="2">Connector location</th></tr><tr><td>Top (vertical)</td><td>Side (horizontal)</td></tr></table><div>P.1.10-124</div></div> <div><table><tr><td rowspan="4">F Kit</td><td>U0</td><td rowspan="4">F Kit</td><td>S0</td><td>Without cable</td><td rowspan="4">2 to 24 stations⁽²⁾</td></tr><tr><td>U1</td><td>S1</td><td>With cable (1.5m)</td></tr><tr><td>U2</td><td>S2</td><td>With cable (3m)</td></tr><tr><td>U3</td><td>S3</td><td>With cable (5m)</td></tr></table></div>					Connector location		Top (vertical)	Side (horizontal)	F Kit	U0	F Kit	S0	Without cable	2 to 24 stations ⁽²⁾	U1	S1	With cable (1.5m)	U2	S2	With cable (3m)	U3	S3	With cable (5m)	<div><div>P</div><div>Kit (Flat cable connector)</div></div> <div></div> <div><table><tr><th colspan="2">Connector location</th></tr><tr><td>Top (vertical)</td><td>Side (horizontal)</td></tr></table><div>P.1.10-128</div></div> <div><table><tr><td rowspan="4">P Kit</td><td>U0</td><td rowspan="4">P Kit</td><td>S0</td><td>Without cable</td><td rowspan="4">2 to 24 stations⁽²⁾</td></tr><tr><td>U1</td><td>S1</td><td>With cable (1.5m)</td></tr><tr><td>U2</td><td>S2</td><td>With cable (3m)</td></tr><tr><td>U3</td><td>S3</td><td>With cable (5m)</td></tr></table></div>					Connector location		Top (vertical)	Side (horizontal)	P Kit	U0	P Kit	S0	Without cable	2 to 24 stations ⁽²⁾	U1	S1	With cable (1.5m)	U2	S2	With cable (3m)	U3	S3	With cable (5m)	<div><div>G</div><div>Kit (Flat cable connector with power supply terminal block)</div></div> <div></div> <div><table><tr><td rowspan="4">G Kit</td><td>0</td><td>Without cable</td><td rowspan="4">2 to 16 stations⁽²⁾</td></tr><tr><td>1</td><td>With cable (1.5m)</td></tr><tr><td>2</td><td>With cable (3m)</td></tr><tr><td>3</td><td>With cable (5m)</td></tr></table><div>P.1.10-132</div><div>Compatible only with 24VDC valves.</div></div>					G Kit	0	Without cable	2 to 16 stations ⁽²⁾	1	With cable (1.5m)	2	With cable (3m)	3	With cable (5m)
Connector location																																																														
Top (vertical)	Side (horizontal)																																																													
F Kit	U0	F Kit	S0	Without cable	2 to 24 stations ⁽²⁾																																																									
	U1		S1	With cable (1.5m)																																																										
	U2		S2	With cable (3m)																																																										
	U3		S3	With cable (5m)																																																										
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P Kit	U0	P Kit	S0	Without cable	2 to 24 stations ⁽²⁾																																																									
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	2	With cable (3m)																																																												
	3	With cable (5m)																																																												
<div><div>T</div><div>Kit (Terminal box)</div></div> <div></div> <div><div>P.1.10-136</div><table><tr><td>T Kit</td><td>0</td><td>Terminal box</td><td>2 to 24 stations⁽²⁾</td></tr></table></div>					T Kit	0	Terminal box	2 to 24 stations ⁽²⁾	<div><div>L</div><div>Kit (Lead wire cable)</div></div> <div></div> <div><div>P.1.10-140</div><table><tr><td rowspan="3">L Kit</td><td>0</td><td>With cable (0.6m)</td><td rowspan="3">1 to 8 stations</td></tr><tr><td>1</td><td>With cable (1.5m)</td></tr><tr><td>2</td><td>With cable (3m)</td></tr></table></div>					L Kit	0	With cable (0.6m)	1 to 8 stations	1	With cable (1.5m)	2	With cable (3m)	<div><div>S</div><div>Kit (Serial transmission unit)</div></div> <div></div> <div><table><tr><td rowspan="16">S Kit</td><td>O</td><td>Without SI unit</td><td rowspan="16">Max. 16 stations⁽²⁾</td></tr><tr><td>A</td><td>With general type, Series EX300</td></tr><tr><td>B</td><td>SI unit for MELSECNET/MINI-S3 Data Link System (Mitsubishi Electric)</td></tr><tr><td>C</td><td>SI unit for SYSBUS Wire System (OMRON)</td></tr><tr><td>D</td><td>SI unit for Satellite I/O Link System (Sharp)</td></tr><tr><td>E</td><td>SI unit for MEWNET-F System (Matsushita Electric Works Ltd.)</td></tr><tr><td>F</td><td>SI unit for 16 point Uni-wire System (NKE)</td></tr><tr><td>G</td><td>SI unit for Remote I/O (RIO) System (Allen-Bradley Co.)</td></tr><tr><td>H</td><td>SI unit for 16 point Uni-wire H System (NKE)</td></tr><tr><td>J1</td><td>SI unit for 16 point S-LINK System (Sunx)</td></tr><tr><td>J2</td><td>SI unit for 8 point S-LINK System (Sunx)</td></tr><tr><td>K</td><td>SI unit for T-LINK Mini System (Fuji Electric)</td></tr><tr><td>Q</td><td>SI unit for Device Net and Compo Bus/D (OMRON)</td></tr><tr><td>R1</td><td>SI unit for 16 point Compo Bus/S (OMRON)</td></tr><tr><td>R2</td><td>SI unit for 8 point Compo Bus/S (OMRON)</td></tr><tr><td>V</td><td>SI unit for CC-LINK (Mitsubishi Electric)</td></tr></table><div>P.1.10-144</div><div>The valve is equipped with an indicator light and surge voltage suppressor, and the voltage is 24V DC. The dust proof SI unit is also available. Refer to p.1.10-144 for details.</div></div>					S Kit	O	Without SI unit	Max. 16 stations ⁽²⁾	A	With general type, Series EX300	B	SI unit for MELSECNET/MINI-S3 Data Link System (Mitsubishi Electric)	C	SI unit for SYSBUS Wire System (OMRON)	D	SI unit for Satellite I/O Link System (Sharp)	E	SI unit for MEWNET-F System (Matsushita Electric Works Ltd.)	F	SI unit for 16 point Uni-wire System (NKE)	G	SI unit for Remote I/O (RIO) System (Allen-Bradley Co.)	H	SI unit for 16 point Uni-wire H System (NKE)	J1	SI unit for 16 point S-LINK System (Sunx)	J2	SI unit for 8 point S-LINK System (Sunx)	K	SI unit for T-LINK Mini System (Fuji Electric)	Q	SI unit for Device Net and Compo Bus/D (OMRON)	R1	SI unit for 16 point Compo Bus/S (OMRON)	R2	SI unit for 8 point Compo Bus/S (OMRON)	V	SI unit for CC-LINK (Mitsubishi Electric)		
T Kit	0	Terminal box	2 to 24 stations ⁽²⁾																																																											
L Kit	0	With cable (0.6m)	1 to 8 stations																																																											
	1	With cable (1.5m)																																																												
	2	With cable (3m)																																																												
S Kit	O	Without SI unit	Max. 16 stations ⁽²⁾																																																											
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	Q	SI unit for Device Net and Compo Bus/D (OMRON)																																																												
	R1	SI unit for 16 point Compo Bus/S (OMRON)																																																												
	R2	SI unit for 8 point Compo Bus/S (OMRON)																																																												
	V	SI unit for CC-LINK (Mitsubishi Electric)																																																												

- Note 1) Besides the above, F and P kits with different number of pins are available. Refer to p1.10-159 for details.
- Note 2) Refer to p.1.10-160 for details.

How to Order Valve

VQ 1 1 0 0 Y 5

Series
1 VQ1000

Configuration

1	2 position single (A/B)
2	2 position double (A/B)
3	3 position closed center (A/B)
4	3 position exhaust center (A/B)
5	3 position pressure center (A/B)

Seal

0	Metal
1	Rubber

Manual override

- Non-locking push style
- Push-locking slotted style
- Push-locking lever style

Indicator light and surge voltage suppressor

—	Yes
E (1)	No

Note 1) Unapplicable to the S kit.

Pilot valve

Symbol	Specification	DC	AC
—	Standard	(1.0W) ○	○ (1)
H (1)	High pressure	(1.5W) ○	—
Y (1)	Low wattage	(0.5W) ○	—

Note 1) Refer to p.1.10-122 for AC.

Coil voltage

1	100V AC (50/60Hz)
2 (1)	200V AC (50/60Hz)
3	110V AC (50/60Hz)
4 (1)	220V AC (50/60Hz)
5	24V DC
6	12V DC

Note 1) 200/220V AC models are applicable to F and L kits.

How to Order Manifold Ass'y (Example)

Ordering example

Single solenoid (24V DC) VQ1100-5 (4 sets)
Double solenoid (24V DC) VQ1200-5 (4 sets)
Blank plate VQ1000-10A-1 (1 set)
D-sub connector cable VV25000-21A-2
Cylinder port C6 With One-touch fitting for ø6
Manifold base (9 stations) VV5Q11-09C6FU2

Ordering example

VV5Q11-09C6FU2 ... 1 set (F kit 9 station manifold base No.)
*VQ1100-5 4 sets (Single solenoid No.)
*VQ1200-5 4 sets (Double solenoid No.)
*VV1000-10A-1 1 sets (Blank plate No.)

→ The * mark is an assembling mark. Prefix with "*" to mark parts for ass'y nos. of solenoid valves, etc.

Specify valve and option nos. below the manifold base No. When arrangement is complicated, specify the nos. by using a manifold specification form.

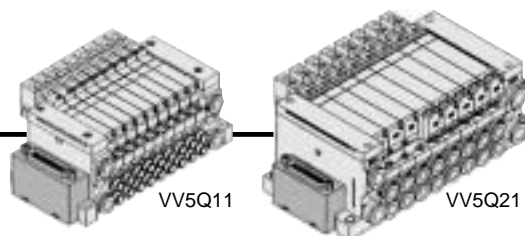
Manifold Options

P.1.10-148

Blank plate assembly VVQ1000-10A-1	SUP block plate VVQ1000-16A	Double check block VVQ1000-FPG-□□	2 stations matching fitting assembly VVQ1000-52A-C8	Blank plug KQP-X19
Individual SUP spacer VVQ1000-P-1-C6	EXH block plate assembly VVQ1000-19A-□□-□□-□□-□□	Elbow fittings assembly VVQ1000-F-L-□□-□□-□□-□□	Silencer (EXH port) AN200-KM8	Blank plate with connector VVQ1000-1C-□-□
Individual EXH spacer VVQ1000-R-1-C6	Check valve for prevention of back pressure assembly [-B] VVQ1000-18A	DIN rail mounting bracket [-D] VVQ1000-57A	Regulator unit VVQ1000-AR-1	
Vacuum ejector unit [-J□]	Name plate [N] VVQ1000-N-Station (1 to Max. stations)	Built-in silencer, direct exhaust [-S]	Port plug VVQ0000-58A	

● Refer to p.1.10-157 for cylinder port fittings.
● Refer to p.1.10-209 for replacement parts.

F VQ1000/2000 Kit (D-sub Connector)



- The D-sub connector reduces installation labor for electrical connection.
- The D-sub connector (25 pin std., 15 pin option) conforms with MIL permitting use of commercial connectors with wide interchangeability.
- Top or side receptacle position can be selected in accordance with the available mounting space.
- Max. 24 stations.

D-sub connector (25 pin)

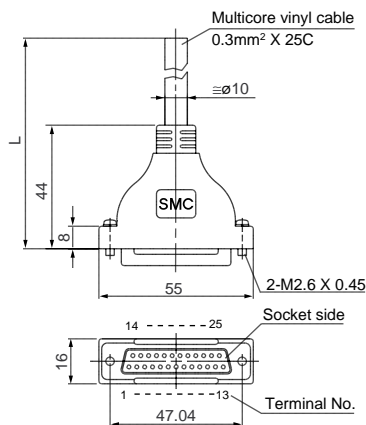
Manifold Specifications

Series	Porting specifications			Applicable stations
	Port location	P, R	A, B	
VQ1000	Side	C8	C3, C4, C6, M5	Max. 24
VQ2000	Side	C10	C4, C6, C8	Max. 24

Cable Assembly

AXT100-DS25-015 030 050

(The D-sub connector cable assembly can be ordered individually or included in a specific manifold model No.) Refer to "How to Order Manifold".



D-sub connector cable ass'y (Option)

Cable length (L)	Ass'y No.	note
1.5m	AXT100-DS25-015	Cable 25 core X 24AWG
3m	AXT100-DS25-030	
5m	AXT100-DS25-050	

* For other commercial connectors, use a 25-pin female connector made in conformity with MIL-C-24308.

Electric characteristics

Item	Characteristic
Conductor resistance Ω/km , 20°C	65 or less
Voltage limit V, 1min, AC	1000
Insulation resistance $M\Omega/\text{km}$, 20°C	5 or more

Note) The min. bending radius of D-sub cable assembly is 20mm.

Wire color table by terminal number of D-sub connector cable assembly:

Terminal No.	Lead wire color	Dot marking
1	Black	—
2	Brown	—
3	Red	—
4	Orange	—
5	Yellow	—
6	Pink	—
7	Blue	—
8	Violet	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	Violet	—
18	Gray	—
19	Orange	Black
20	Red	White
21	Brown	White
22	Pink	Red
23	Gray	Red
24	Black	White
25	White	—



Note) Types with 15 pin are also available. See p.1.10-159 for details.

How to Order Manifold

VV5Q 1 1-08 C6 F U 1-N

Series	
1	VQ1000
2	VQ2000

Manifold	
1	Plug-in unit

Stations	
02	2 stations
24	24 stations

Note) Refer to p.1.10-160 for details.

Connector location	
U	Top(vertical)
S	Side(horizontal)

Cable (length)	
0	Without cable
1	With cable (1.5m)
2	With cable (3m)
3	With cable (5m)

Cylinder ports

Symbol	Port size	VQ1000	VQ2000
C3	One-touch fitting for $\phi 3.2$	●	
C4	One-touch fitting for $\phi 4$	●	●
C6	One-touch fitting for $\phi 6$	●	●
C8	One-touch fitting for $\phi 8$		●
M5	M5 thread	●	
CM	Mixed size/with port plug	●	(3)

Note 1) Insert "L" (top piping) or "B" (bottom piping) for elbow type. Example) B6 (Elbow One-touch fitting for $\phi 6$, bottom piping.)

Note 2) Indicate "LM" for models with elbow fittings and mixed cylinder port sizes.

Note 3) Specify "Mixed size/with port plug" by means of manifold specification form.

Note 4) Refer to "Options" on p.1.10-161 for One-touch fittings in inch sizes.

Option

Symbol	Option	VQ1000	VQ2000	Remarks
—	None	●	●	
B	Check valve for prevention of back pressure	●	●	(2)
D	DIN rail mounting	●	●	
G1	1 set of regulator unit	●		(3)
G2	2 sets of regulator unit			
G3	3 sets of regulator unit			
J□	With vacuum ejector unit	●		(4)
K	Special wiring specification (Not double wiring)	●	●	(5)
N	With name plate	●	●	
R	External pilot	●	●	(6)
S	Built-in silencer (Direct exhaust)	●	●	



Note 1) If specifying more than one option, please list alphabetically. Example) -BRS

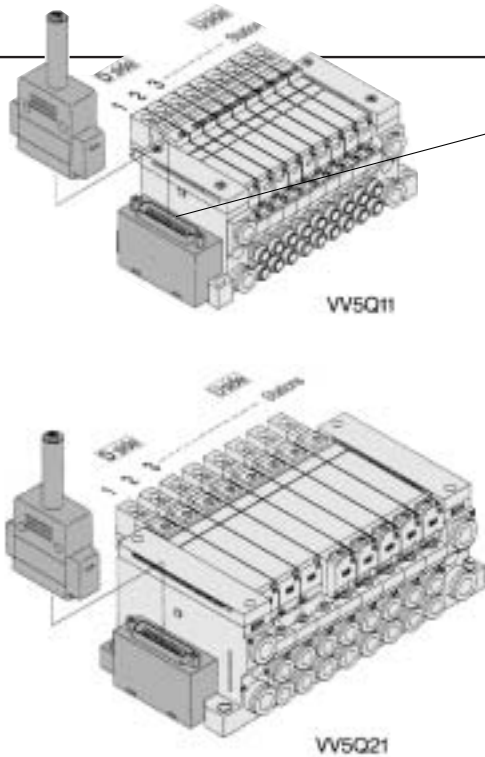
Note 2) Models with a suffix "-B" have check valves for prevention of back pressure at all manifold stations. If not all stations need this check valve, specify the stations where check valves are installed by manifold specification form.

Note 3) Specify the mounting position by means of the manifold specification form.

Note 4) Refer to p.1.10-152 for the details of ejector mounted styles. A combination of "J" and "N" is unavailable.

Note 5) Specify the wiring by means of the manifold specification form.

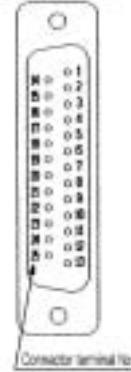
Note 6) Indicate "R" for the valve with external pilot.



The total number of stations is tabulated starting from station one on the D side.

Electrical Wiring Specifications

D-sub connector



Irrespective of the valves or options, the internal wiring is made double (connected to SOL. A and SOL. B) for respective stations of the manifold. The optional specification permits mixture of single and double wiring. See p.1.10-160 for details.



Note) Use negative COM valves for negative COM specification manifolds. (See p.1.10-160)

D-sub cable ass'y
AXT100-DS25-015
030
050
wire color table

	Terminal No.	Polarity	Lead wire color	Dot marking
1 station	SOL.A. 1	(-)	(+) Black	—
	SOL.B. 14	(-)	(+) Yellow	Black
2 station	SOL.A. 2	(-)	(+) Brown	—
	SOL.B. 15	(-)	(+) Pink	Black
3 station	SOL.A. 3	(-)	(+) Red	—
	SOL.B. 16	(-)	(+) Blue	White
4 station	SOL.A. 4	(-)	(+) Orange	—
	SOL.B. 17	(-)	(+) Violet	—
5 station	SOL.A. 5	(-)	(+) Yellow	—
	SOL.B. 18	(-)	(+) Gray	—
6 station	SOL.A. 6	(-)	(+) Pink	—
	SOL.B. 19	(-)	(+) Orange	Black
7 station	SOL.A. 7	(-)	(+) Blue	—
	SOL.B. 20	(-)	(+) Red	White
8 station	SOL.A. 8	(-)	(+) Violet	White
	SOL.B. 21	(-)	(+) Brown	White
9 station	SOL.A. 9	(-)	(+) Gray	Black
	SOL.B. 22	(-)	(+) Pink	Red
10 station	SOL.A. 10	(-)	(+) White	Black
	SOL.B. 23	(-)	(+) Gray	Red
11 station	SOL.A. 11	(-)	(+) White	Red
	SOL.B. 24	(-)	(+) Black	White
12 station	SOL.A. 12	(-)	(+) Yellow	Red
	SOL.B. 25	(-)	(+) White	—
	COM. 13	(+)	Note) (-) Orange	Red

Positive COM Negative COM

How to Order Valve

VQ 1 1 0 0 Y 5

Series

1	VQ1000
2	VQ2000

Configuration

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

Seal

0	Metal
1	Rubber

Manual override

—	Non-locking push style
B	Push-locking slotted style
C	Push-locking lever style

Indicator light and surge voltage suppressor

—	Yes
E	No

Coil voltage

1	100V AC (50/60Hz)
2	200V AC (50/60Hz)
3	110V AC (50/60Hz)
4	220V AC (50/60Hz)
5	24V DC
6	12V DC

Pilot valve

Symbol	Specification	DC	AC
—	Standard	(1.0W) ○	○ ⁽¹⁾
H	High pressure	(1.5W) ○	—
Y	Low wattage	(0.5W) ○	—

Note) Refer to p.1.10-122 for AC.

How to Order Manifold Ass'y

Specify valve and option nos. below the manifold base no.

(Example)

D-sub connector kit with 3m cable

VV5Q11-09C6FU2...1 set-Manifold base No.

* VQ1100-5.....2 sets-Valve No. (Stations 1 to 2)

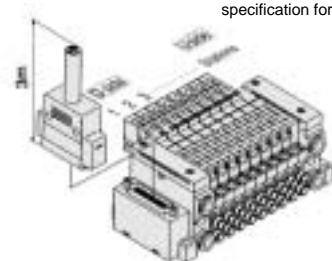
* VQ1200-5.....4 sets-Valve No. (Stations 3 to 6)

* VQ1300-5.....2 sets-Valve No. (Stations 7 to 8)

* VVQ1000-10A-1...1 set-Blank plate No. (Station 9)

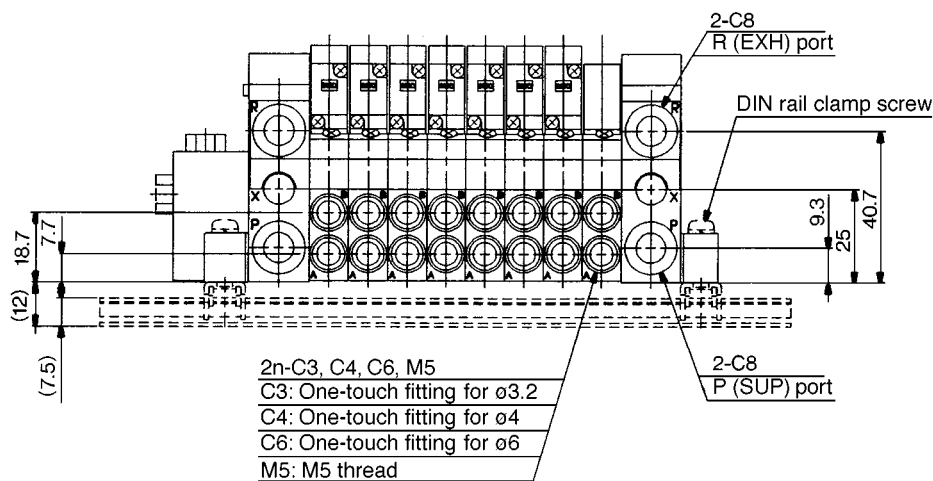
Add prefix "*" to parts nos. of the solenoid valves, etc.

Write sequentially from the 1st station on the D side. When part nos. written collectively are complicated, specify by using a manifold specification form.



Note) Refer to "Options" on p.1.10-160 and 1.10-161 for external pilot and negative COM specifications.

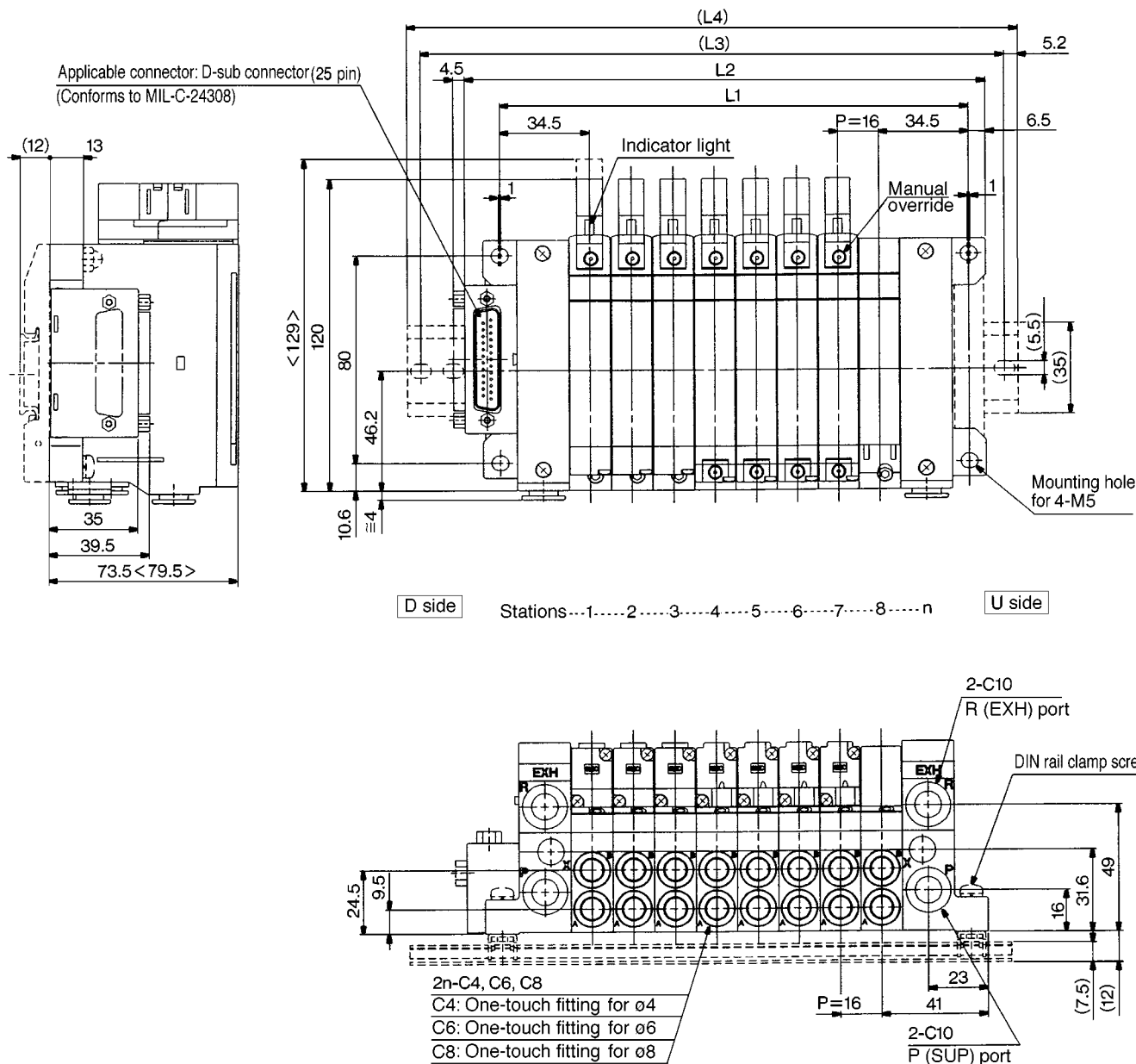
The broken lines indicate DIN rail mounting style [-D] and side entry connector [-FS].





VQ2000

The broken lines indicate DIN rail mounting style [-D] and side entry connector [-FS].



< >: AC type and TÜV approved type

Dimensions (mm)

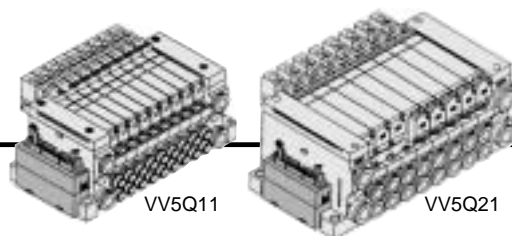
Equation $L1=16n+53$, $L2=16n+73$ n: Station (Max. 24)

L	n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L1		85	101	117	133	149	165	181	197	213	229	245	261	277	293	309	325	341	357	373	389	405	421	437
L2		105	121	137	153	169	185	201	217	233	249	265	281	297	313	329	345	361	377	393	409	425	441	457
(L3)		137.5	150	162.5	187.5	200	212.5	225	250	262.5	275	300	312.5	325	337.5	350	375	387.5	400	412.5	437.5	450	462.5	487.5
(L4)		148	160.5	173	198	210.5	223	235.5	260.5	273	285.5	310.5	323	335.5	348	360.5	385.5	398	410.5	423	448	460.5	473	498



- Manifold
 - F kit (Top entry connector)---SV5Q21M, #1
 - F kit (Side entry connector)---SV5Q21M, #2
- Valve
 - 2 position single---SV5Q21V, #7
 - 2 position double---SV5Q21V, #8
 - 3 position ---SV5Q21V, #8

P VQ1000/2000 Kit (Flat Cable Connector)



- MIL flat cable connector reduces installation labor for electrical connection.
- The connector (26 pin; 10, 16, and 20 pin option) conforms with MIL spec. permitting use of widely interchangeable commercial connectors.
- Top or side receptacle position can be selected in accordance with the available mounting space.
- Max. 24 stations.

Manifold Specifications

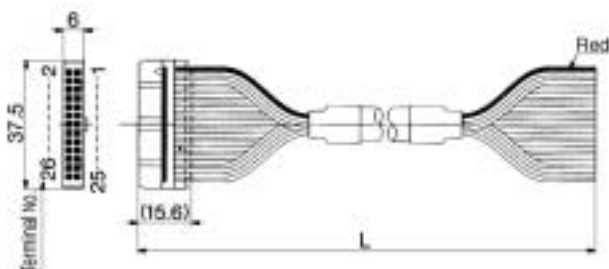
Series	Porting specifications			Applicable stations
	Port location	Port size		
		P, R	A, B	
VQ1000	Side	C8	C3, C4, C6, M5	Max. 24
VQ2000	Side	C10	C4, C6, C8	Max. 24

Flat cable (26 pin)

Cable Assembly

AXT100-FC26-1 to 3

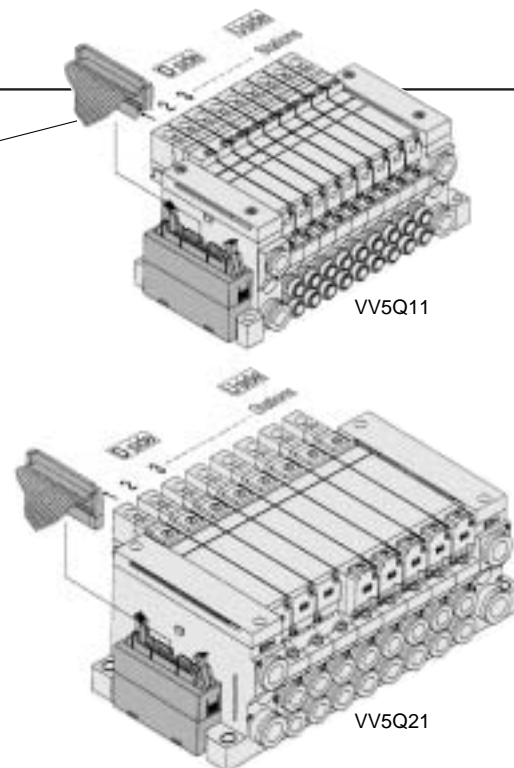
(Flat cable connector assembly can be ordered individually or included in a specific manifold model no. Refer to "How to Order Manifold".)



Flat cable connector assembly (Option)

Cable length (L)	Ass'y No.	Note
1.5m	AXT100-FC26-1	Cable 26 core X 28AWG
3m	AXT100-FC26-2	
5m	AXT100-FC26-3	

* For other commercial connectors, use 26-pin type with strain relief made in conformity with MIL-C-83503.



The total number of stations is tabulated starting from station one on the D side.



Note) Types with 10, 16, or 20 pin are also available. See p.1.10-159 for details.

How to Order Manifold

VV5Q 1 1-08 C6 P U 1-N

Series

1	VQ1000
2	VQ2000

Manifold

1	Plug-in unit
---	--------------

Stations

02	2 stations
⋮	⋮
24	24 stations



Note) Refer to p.1.10-160 for details.

Connector location

U	Top (vertical)
S	Side (horizontal)

Cylinder ports

Symbol	Port size	VQ1000	VQ2000
C3	One-touch fitting for ø3.2	●	
C4	One-touch fitting for ø4	●	●
C6	One-touch fitting for ø6	●	●
C8	One-touch fitting for ø8		●
M5	M5 thread	●	
CM	Mixed size/with port plug	●	● ⁽³⁾



Note 1) Insert "L" (top piping) or "B" (bottom piping) for elbow type.
Example) B6 (Elbow One-touch fittings for ø6, bottom piping.)



Note 2) Indicate "LM" for models with elbow fittings and mixed cylinder port sizes.

Note 3) Specify "Mixed size/with port plug" by means of manifold specification form.

Note 4) Refer to "Options" on p.1.10-161 for One-touch fittings in inch sizes.

Cable (length)

0	Without cable
1	With cable (1.5m)
2	With cable (3m)
3	With cable (5m)

Option

Symbol	Option	VQ1000	VQ2000	Remarks
—	None	●	●	
B	Check valve for prevention of back press.	●	●	(2)
D	DIN rail mounting	●	●	
G1	1 set of regulator unit	●		(3)
G2	2 sets of regulator unit			
G3	3 sets of regulator unit			
J□	With vacuum ejector unit	●		(4)
K	Special wiring specification (Not double wiring)	●	●	(5)
N	With name plate	●	●	
R	External pilot	●	●	(6)
S	Built-in silencer (Direct exhaust)	●	●	

Note 1) If specifying more than one option, please list alphabetically. Example) -BRS

Note 2) Models with a suffix "B" have check valves for prevention of back pressure at all manifold stations. If not all stations need this check valve, specify the stations where check valves are installed by manifold specification form.

Note 3) Specify the mounting position by means of the manifold specification form.

Note 4) Refer to p.1.10-152 for the details of ejector mounted styles. A combination of "J" and "N" is unavailable.

Note 5) Specify the wiring by means of the manifold specification form.

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

VFS

VS

VS7

●Electrical Wiring Specifications

Flat cable connector

Station	Terminal No.	Polarity
1 station	SOL.A. 1	(-)
	SOL.B. 2	(+)
2 station	SOL.A. 3	(-)
	SOL.B. 4	(+)
3 station	SOL.A. 5	(-)
	SOL.B. 6	(+)
4 station	SOL.A. 7	(-)
	SOL.B. 8	(+)
5 station	SOL.A. 9	(-)
	SOL.B. 10	(+)
6 station	SOL.A. 11	(-)
	SOL.B. 12	(+)
7 station	SOL.A. 13	(-)
	SOL.B. 14	(+)
8 station	SOL.A. 15	(-)
	SOL.B. 16	(+)
9 station	SOL.A. 17	(-)
	SOL.B. 18	(+)
10 station	SOL.A. 19	(-)
	SOL.B. 20	(+)
11 station	SOL.A. 21	(-)
	SOL.B. 22	(+)
12 station	SOL.A. 23	(-)
	SOL.B. 24	(+)
COM.	COM. 25	(+)
	COM. 26	(-) ⁽¹⁾

Electrical Wiring Specifications

Irrespective of the valves or options, the internal wiring is made double (connected to SOL.A and SOL.B) for respective stations of the manifold. The optional specification permits mixture of single and double wiring. See p.1.10-160 for details.

Note) Use negative COM valves for negative COM specification manifolds. (See p.1.10-160)

How to Order Valve

VQ 1 1 0 0 Y 5

Series

1	VQ1000
2	VQ2000

Configuration

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

Seal

0	Metal
1	Rubber

Manual override

-	Non-locking push style
B	Push-locking slotted style
C	Push-locking lever style

Indicator light and surge voltage suppressor

-	Yes
E	No

Pilot valve

Symbol	Specification	DC	AC
-	Standard	(1.0W) ○	○ ⁽¹⁾
H	High pressure	(1.5W) ○	-
Y	Low pressure	(0.5W) ○	-

Coil voltage

1	100V AC (50/60Hz)
3	110V AC (50/60Hz)
5	24V DC
6	12V DC

Note) Refer to "Options" on p.1.10-160 and 1.10-161 for external pilot and negative CO-M specifications.

Note 1) Refer to p.1.10-122 for AC.

How to Order Manifold Ass'y

Specify valve and option nos. below the manifold base no.

(Example)

Flat cable kit with 3m cable

VV5Q11-09C6PU2..1 set -Manifold base No.

* VQ1100-5.....2 sets-Valve No. (Stations 1 to 2)

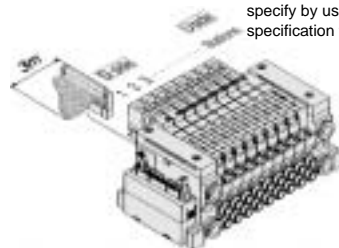
* VQ1200-5.....4 sets-Valve No. (Stations 3 to 6)

* VQ1300-5.....2 sets-Valve No. (Stations 7 to 8)

* VVQ1000-10A-1...1 set -Blank plate No. (Station 9)

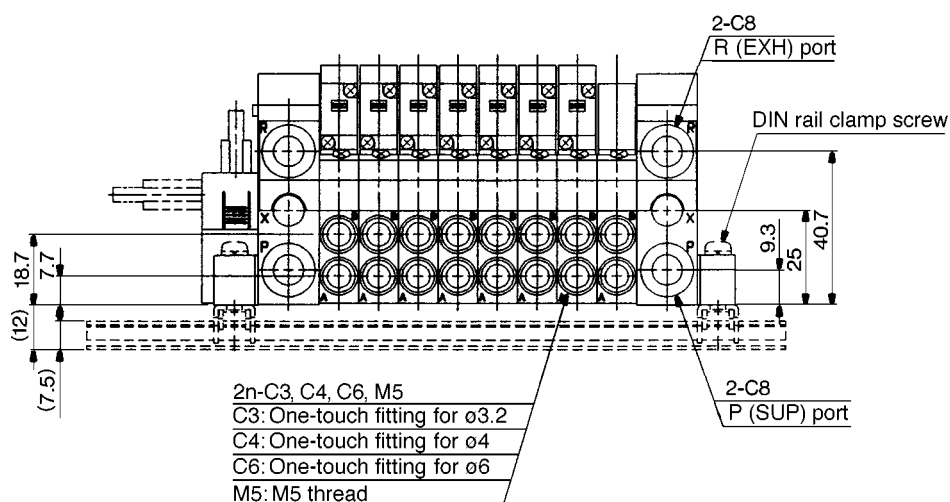
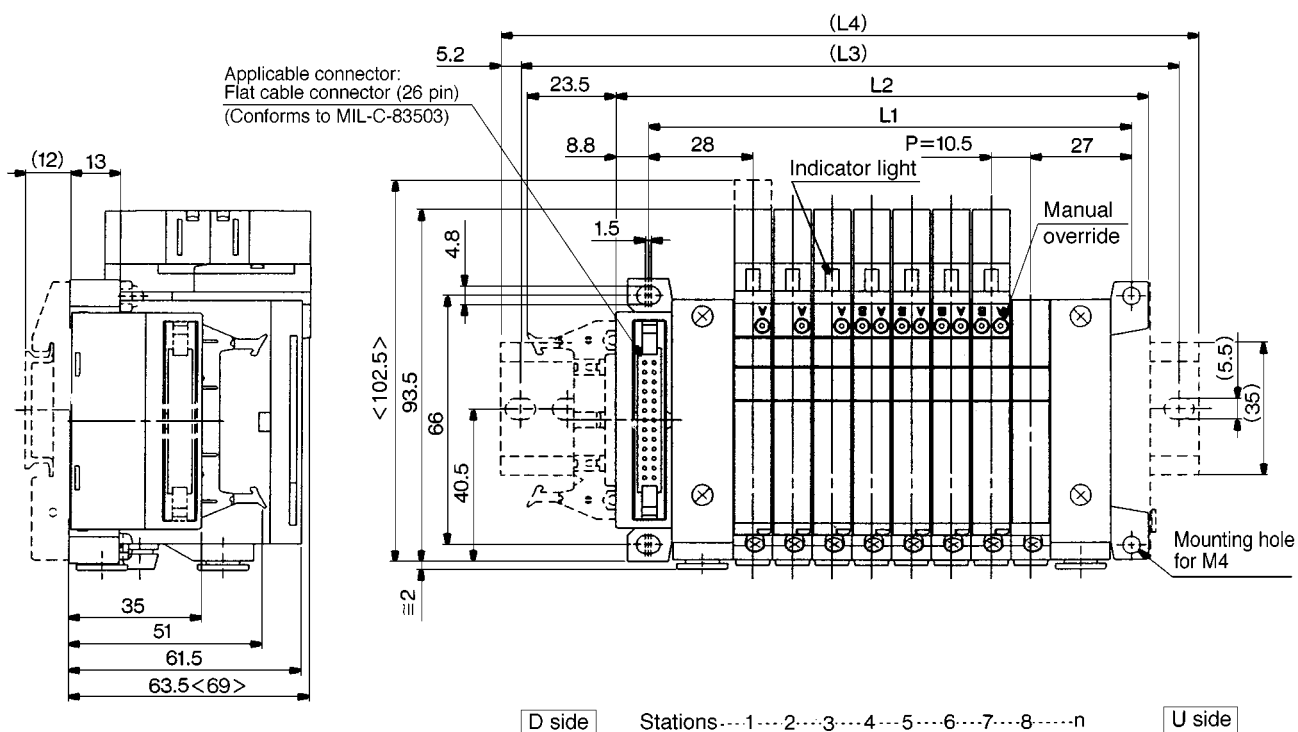
Add prefix "*" to parts nos. of the solenoid valves, etc.

Write sequentially from the 1st station on the D side. When part Nos. written collectively are complicated, specify by using a manifold specification form.



VQ1000

The broken lines indicate DIN rail mounting style [-D] and side entry connector [-PS].



< >: AC type and TÜV approved type

Dimensions (mm)

Equation $L1=10.5n+44.5$, $L2=10.5n+62.5$ n: Station (Max. 24)

L	n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L1		65.5	76	86.5	97	107.5	118	128.5	139	149.5	160	170.5	181	191.5	202	212.5	223	233.5	244	254.5	265	275.5	286	296.5
L2		78.5	89	99.5	110	120.5	131	141.5	152	162.5	173	183.5	194	204.5	215	225.5	236	246.5	257	267.5	278	288.5	299	309.5
(L3)		112.5	125	137.5	150	162.5	175	187.5	187.5	200	212.5	225	225	237.5	250	262.5	275	287.5	287.5	300	312.5	325	337.5	
(L4)		123	135.5	135.5	148	160.5	173	185.5	198	198	210.5	223	235.5	235.5	248	260.5	273	285.5	298	298	310.5	323	335.5	348

Vacuum ejector unit style: Equation $L1 = 10.5n + 28.7 + (\text{number of ejector units} \times 26.7)$
 $L2 = 10.5n + 41.3 + (\text{number of ejector units} \times 26.7)$
 $L4$ is $L2$ plus about 30.

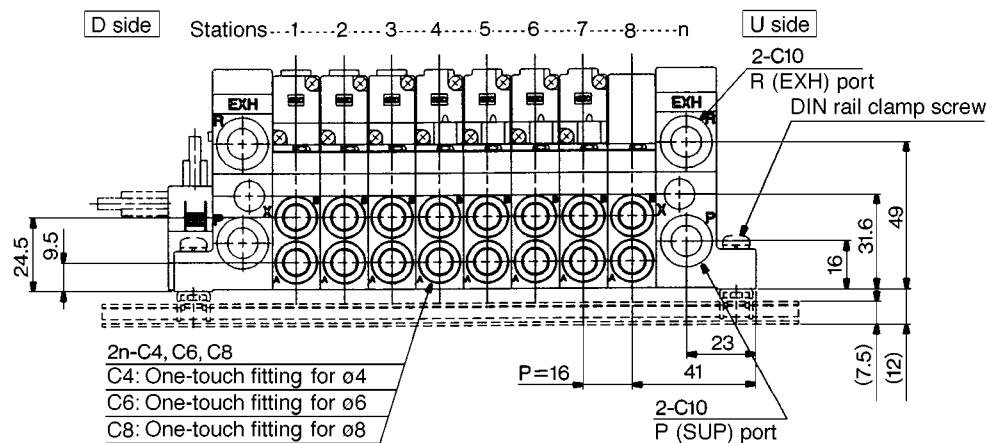
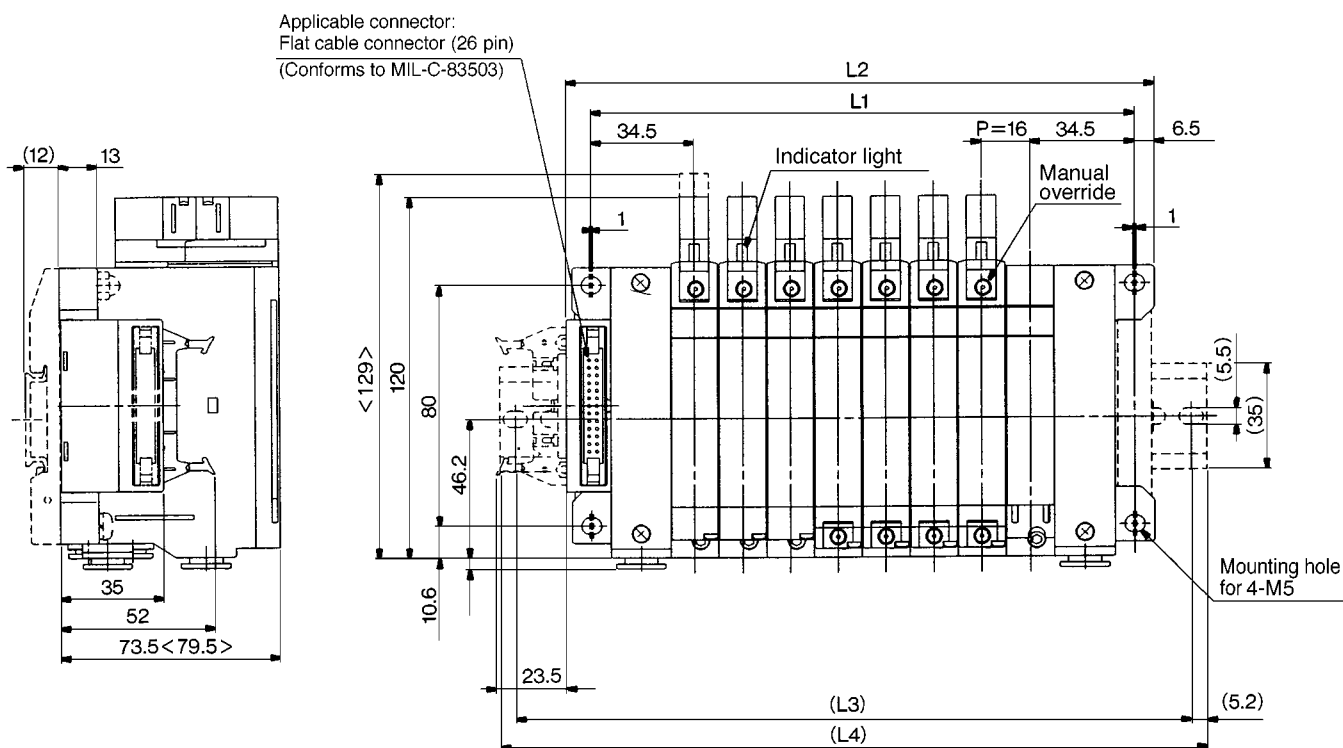


- **Manifold**
 - P kit (Top entry connector)....SV5Q11M, #3
 - P kit (Side entry connector)....SV5Q11M, #4
- **Valve**
 - 2 position singleSV5Q11V, #9
 - 2 position double....SV5Q11V, #10
 - 3 position.....SV5Q11V, #10



VQ2000

The broken lines indicate DIN rail mounting style [-D] and side entry connector [-PS].



< >: AC type and TÜV approved type

Dimensions (mm)

Equation $L1=16n+53$, $L2=16n+68$ n: Station (Max. 24)

L	n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L1		85	101	117	133	149	165	181	197	213	229	245	261	277	293	309	325	341	357	373	389	405	421	437
L2		100	116	132	148	164	180	196	212	228	244	260	276	292	308	324	340	356	372	388	404	420	436	452
(L3)		125	150	162.5	175	187.5	212.5	225	237.5	262.5	275	287.5	300	312.5	337.5	350	362.5	387.5	400	412.5	425	450	462.5	475
(L4)		135.5	160.5	173	185.5	198	223	235.5	248	273	285.5	298	310.5	323	348	360.5	373	398	410.5	423	435.5	460.5	473	485.5



- Manifold
 - P kit (Top entry connector)---SV5Q21M, #3
 - P kit (Side entry connector)---SV5Q21M, #4
- Valve
 - 2 position single.....SV5Q21V, #7
 - 2 position double.....SV5Q21V, #8
 - 3 position.....SV5Q21V, #8

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

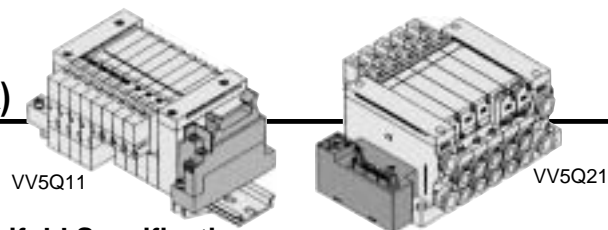
VFS

VS

VS7

G VQ1000/2000

Kit (Flat Cable Connector with Terminal Block)



- Terminal block for power supply equipped with a 20 pin flat cable connection for rationalized connection of valves.
- Solenoid valves and power supply can be connected by the same cable to a specific output unit that requires power supply from the output section to the internal circuit. (SI unit)
- Max. 16 stations

Manifold Specifications

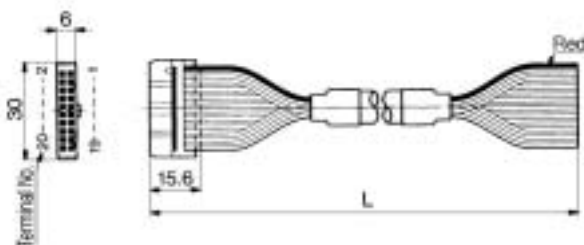
Series	Port location	Porting specifications		Applicable stations
		P, R	A, B	
VQ1000	Side	C8	C3, C4, C6, M5	Max.16
VQ2000	Side	C10	C4, C6, C8	Max.16

Flat cable(20 pin)

Cable Assembly

AXT100-FC20-1 to 3

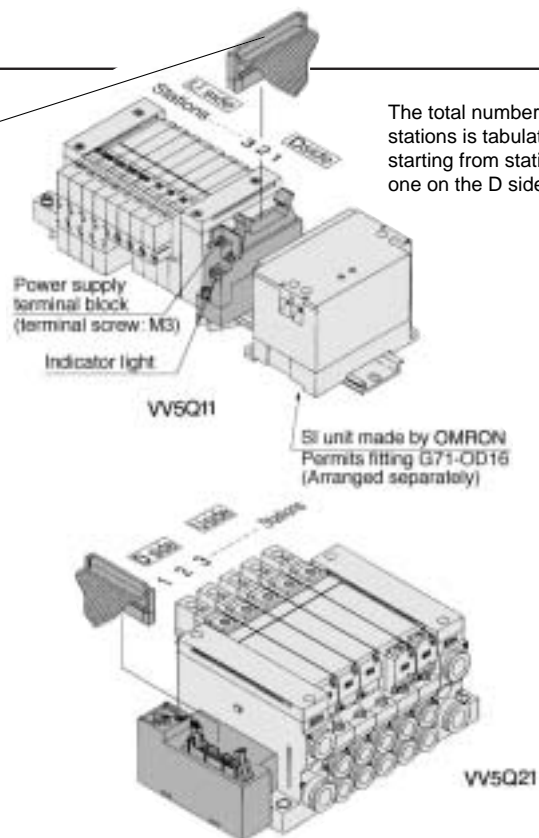
(Flat cable connector assembly can be ordered individually or included in a specific manifold model no. Refer to "How to Order Manifold".)



Flat cable connector assembly (Option)

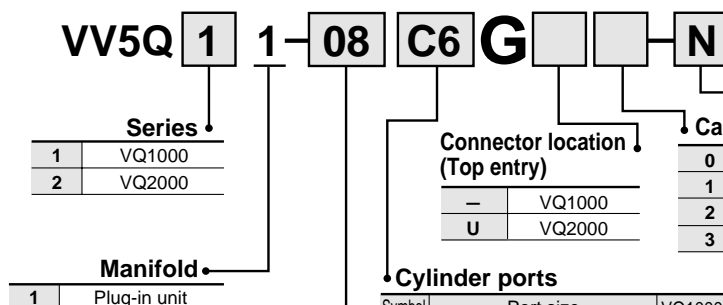
Cable length (L)	Ass'y No	Note
1.5m	AXT100-FC20-1	Cable 20 core X 28AWG
3m	AXT100-FC20-2	
5m	AXT100-FC20-3	

* For other commercial connectors, use 20 pin type with strain relief made in conformity with MIL-C-83503.



The total number of stations is tabulated starting from station one on the D side.

How to Order Manifold



Stations

02	2 stations
...	...
16 ⁽¹⁾	16 stations

Note 1) Refer to p.1.10-160 for details.

Note 1) Insert "L" (top piping) or "B" (bottom piping) for elbow type. Example) B6 (Elbow One-touch fittings for ø6, bottom piping.)

Note 2) Indicate "LM" for models with elbow fittings and mixed cylinder port sizes.

Note 3) Specify "Mixed size/with port plug" by means of manifold specification form.

Note 4) Refer to "Options" on p.1.10-161 for One-touch fittings in inch sizes.

Option

Symbol	Option	VQ1000	VQ2000	Remains
-	None	●	●	
B	Check valve for prevention of back press.	●	●	(2)
D	DIN rail mounting	●	●	
G1	1 set of regulator unit	●		(3)
G2	2 sets of regulator unit			
G3	3 sets of regulator unit			
J	With vacuum ejector unit	●		(4)
K	Special wiring specification (Not double wiring)	●	●	(5)
N	With nameplate	●	●	
R	External pilot	●	●	(6)
S	Built-in silencer (Direct-exhaust)	●	●	

Note 1) If specifying more than one option, please list alphabetically. Example) -BRS

Note 2) Models with a suffix "-B" have check valves for prevention of back pressure at all manifold stations. If not all stations need this check valve, specify the stations where check valves are installed by manifold specification form.

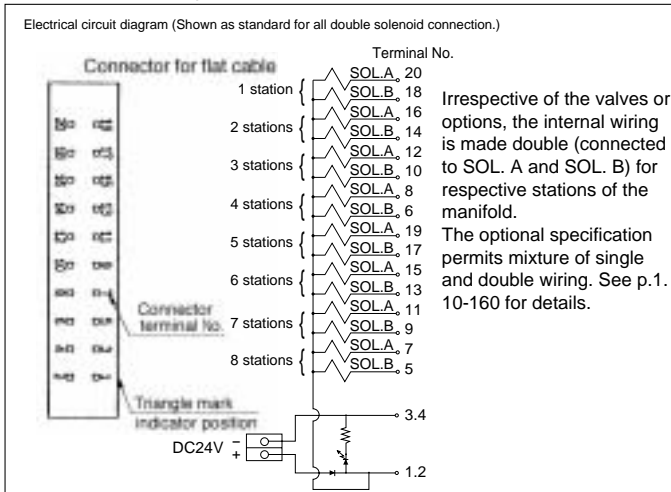
Note 3) Specify the mounting position by means of the manifold specification form.

Note 4) Refer to p.1.10-152 for the details of ejector mounted styles. A combination of "J" and "N" is unavailable.

Note 5) Specify the wiring by means of the manifold specification form.

Note 6) Indicate "R" for the valve with external pilot.

•Connector Ass'y



How to Order Valve

VQ 1 1 0 0 Y — 5

Series

1	VQ1000
2	VQ2000

Configuration

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

Seal

0	Metal
1	Rubber

Manual override

—	Non-locking push style
B	Push-locking slotted style
C	Push-locking lever style

Indicator light and surge voltage suppressor

—	Yes
E	No

Coil voltage

5	DC24V
---	-------

Pilot valve

Symbol	Specification	DC
—	Standard	(1.0W) ○
H	High pressure	(1.5W) ○
Y	Low wattage	(0.5W) ○

Note) Refer to "Options" on p.1.10-161 for external pilot specifications.

How to Order Manifold Ass'y

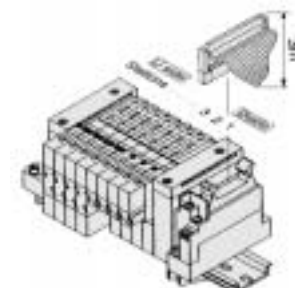
Specify valve and option nos. below the manifold base no.

(Example)

Flat cable with power supply terminal block and 3m cable
 VV5Q11-08C6G2...1 set —Manifold base No.
 * VQ1100-5.....4 sets—Valve No. (Stations 1 to 4)
 * VQ1200-5.....1 set —Valve No. (Stations 5)
 * VQ1300-5.....3 sets—Valve No. (Stations 6 to 8)

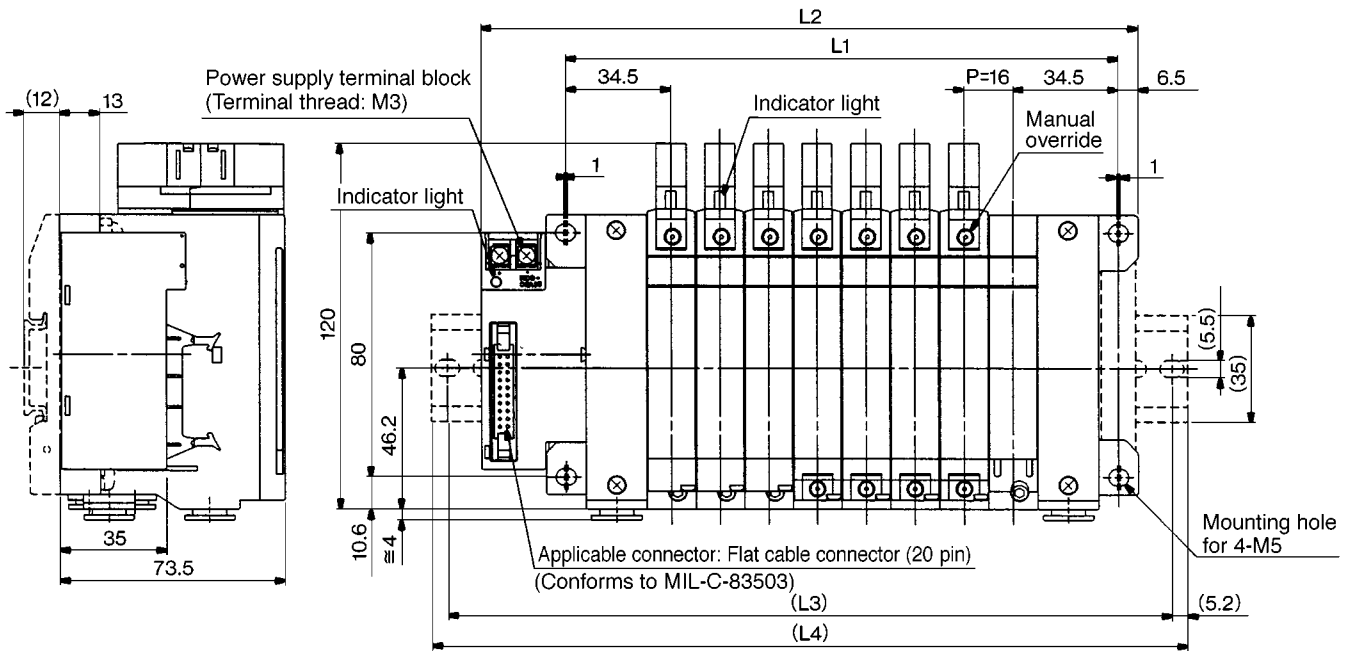
Add prefix "*" to parts nos. of the solenoid valves, etc.

Write sequentially from the 1st station on the D side. When part nos. written collectively are complicated, specify by using a manifold specification form.



VQ2000

The broken lines indicate DIN rail mounting style [-D].



SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

VFS

VS

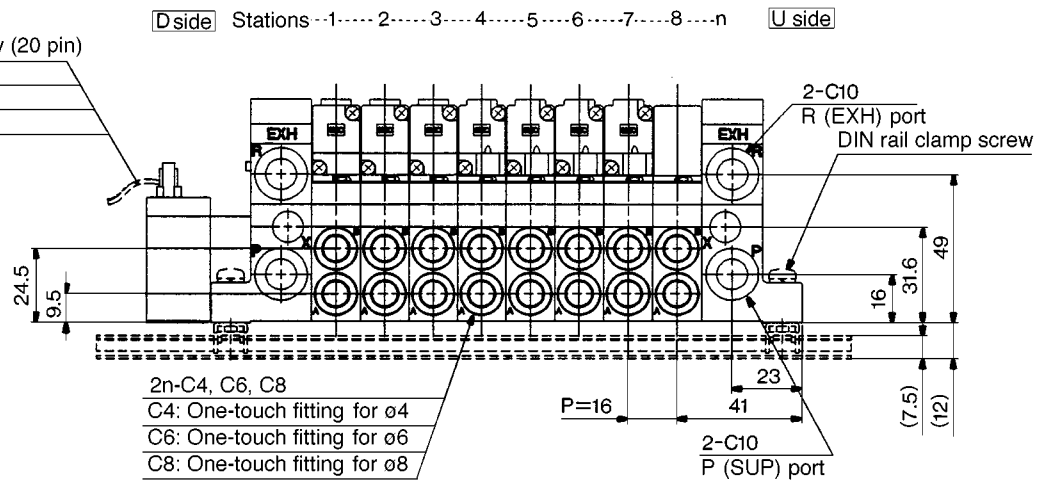
VS7

Flat cable connector assembly (20 pin)

AXT100-FC20-1: 1.5m

AXT100-FC20-2: 3m

AXT100-FC20-3: 5m



Dimensions (mm)

Equation $L1=16n+53$, $L2=16n+87$ n: Station (Max. 16 stations)

L	n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1		85	101	117	133	149	165	181	197	213	229	245	261	277	293	309
L2		119	135	151	167	183	199	215	231	247	263	279	295	311	327	343
(L3)		150	162.5	175	187.5	212.5	225	237.5	262.5	275	287.5	300	325	337.5	350	362.5
(L4)		160.5	173	185.5	198	223	235.5	248	273	285.5	298	310.5	335.5	348	360.5	373

Vacuum ejector unit style: Equation $L1=10.5n+29.7$ +(number of ejector units X 26.7)

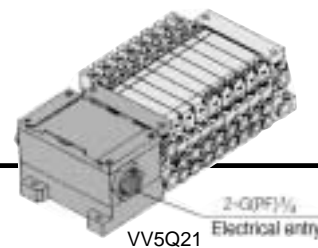
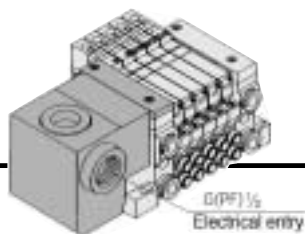
$L2=10.5n+46.8$ +(number of ejector units X 26.7)

L4 is L2 plus about 30.

T VQ1000/2000 Kit (Terminal Box)

IP65 available

VV5Q11



VV5Q21

Manifold Specifications

Series	Port location	Porting specifications		Applicable stations
		P, R	A, B	
VQ1000	Side	C8	C3, C4, C6, M5	Max. 24
VQ2000	Side	C10	C4, C6, C8	Max. 20

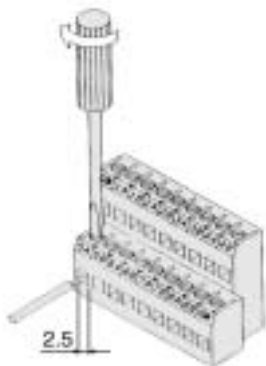
- This kit has a small terminal box inside a junction box. The electrical entry port {VQ1000: G(PF)1/2, VQ2000: G(PF)3/4} permits connection of conduit fittings.
- Max. 24 stations.
- Enclosure: dust-resistant/jet-proof type (IP65) available. (Series VQ2000)

Terminal Block Connection

Open the terminal block cover for wire connection.

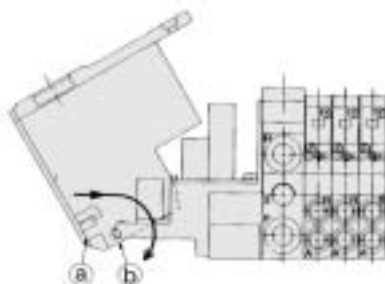
Sequence 1. How to remove terminal block cover

Loosen the screws on the terminal block cover and open it in the direction shown by the arrow. The cover can then be removed from the terminal block.



Sequence 2. Wire connection

The diagram on the left shows the terminal block wiring schematic. All stations are provided with double solenoid wiring. Insert each lead wire into the terminal opening and tighten the screw directly above.



Sequence 3. How to replace terminal block cover

Hook groove "b" on shaft "a" and close the cover. Then tighten the screws.

Electrical Wiring Specifications/VQ1000

Terminal No.		Polarity	
COM.		COM	(+)
1 station	SOL.A.	1A	(-)
	SOL.B.	1B	(+)
2 stations	SOL.A.	2A	(-)
	SOL.B.	2B	(+)
3 stations	SOL.A.	3A	(-)
	SOL.B.	3B	(+)
4 stations	SOL.A.	4A	(-)
	SOL.B.	4B	(+)
5 stations	SOL.A.	5A	(-)
	SOL.B.	5B	(+)
6 stations	SOL.A.	6A	(-)
	SOL.B.	6B	(+)
7 stations	SOL.A.	7A	(-)
	SOL.B.	7B	(+)
8 stations	SOL.A.	8A	(-)
	SOL.B.	8B	(+)
9 stations	SOL.A.	9A	(-)
	SOL.B.	9B	(+)
10 stations	SOL.A.	10A	(-)
	SOL.B.	10B	(+)
11 stations	SOL.A.	11A	(-)
	SOL.B.	11B	(+)
12 stations	SOL.A.	12A	(-)
	SOL.B.	12B	(+)
COM.		COM	(+)

The quantity of terminal blocks used depends on the number of manifold stations:

Manifold	Qty. of terminal blocks
2 to 8 stations	2 rows
9 to 12 stations	3 rows

Irrespective of the valves or options, the internal wiring is made double (connected to SOL. A and SOL. B) for respective stations of the manifold. The optional specification permits mixture of single and double wiring. See p.1.10-160 for details.

Note) Use negative COM valves for negative COM specification manifolds. See p.1.10-160 for details.

The total number of stations is tabulated starting from station one on the D side.

How to Order Manifold

VV5Q 1 1-08 C6 T 0-N

Series

1	VQ1000
2	VQ2000

Manifold

1	Plug-in unit
---	--------------

Stations

02	2 stations
...	...
24 ^{Note)}	24 stations

Note) VQ2000: Max. 20 stations.

Cylinder ports

Symbol	Port size	VQ1000	VQ2000
C3	One-touch fitting for ø3.2	●	
C4	One-touch fitting for ø4	●	●
C6	One-touch fitting for ø6	●	●
C8	One-touch fitting for ø8		●
M5	M5 thread	●	
CM	Mixed size/with port plug	●	● ⁽³⁾

Note 1) Insert "L" (top piping) or "B" (bottom piping) for elbow type. Example) B6 (Elbow One-touch fittings for ø6, bottom piping.)

Note 2) Indicate "LM" for models with elbow fittings and mixed cylinder port sizes.

Note 3) Specify "Mixed size/with port plug" by means of manifold specification form.

Note 4) Refer to "Options" on p.1.10-161 for One-touch fittings in inch sizes.

Option

Symbol	Option	VQ1000	VQ2000	Remarks
—	None	●	●	
B	Check valve for prevention of back press.	●	●	(2)
D	DIN rail mounting	●	●	
G1	1 set of regulator unit			
G2	2 sets of regulator unit	●		(3)
G3	3 sets of regulator unit			
J□	With vacuum ejector unit	●		(4)
K	Special wiring specification (Not double wiring)	●	●	(5)
N	With name plate	●	●	
R	External pilot	●	●	(6)
S	Built-in silencer (Direct exhaust)	●	●	
W	IP65		●	

Note 1) If specifying more than one option, please list alphabetically. Example) -BRS

Note 2) Models with a suffix "B" have check valves for prevention of back pressure at all manifold stations. If not all stations need this check valve, specify the stations where check valves are installed by a manifold specification form.

Note 3) Specify the mounting position by means of the manifold specification form.

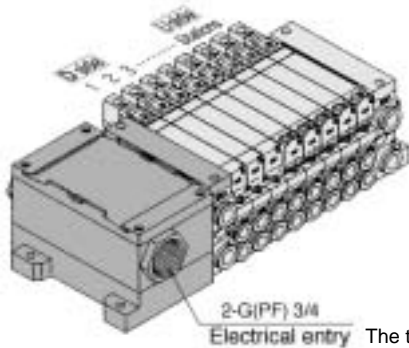
Note 4) Refer to p.1.10-152 for the details of ejector mounted styles.

A combination of "J" and "N" is unavailable.

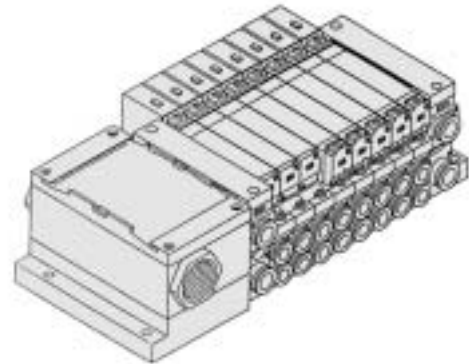
Note 5) Specify the wiring by means of the manifold specification form.

Note 6) Indicate "R" for the valve with external pilot.

Note) Refer to "Options" on p.1.10-160 for negative COM specifications.

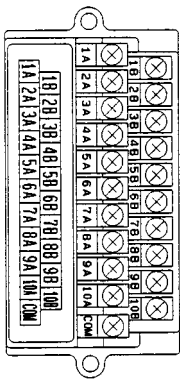


The total number of stations is tabulated starting from station one on the D side.



VV5Q21
Dust resistant/Jet proof type

Special Wiring Specifications/VQ2000



	Terminal No.	Polarity
1 station	SOL.A. 1A	(-) (+)
	SOL.B. 1B	(-) (+)
2 stations	SOL.A. 2A	(-) (+)
	SOL.B. 2B	(-) (+)
3 stations	SOL.A. 3A	(-) (+)
	SOL.B. 3B	(-) (+)
4 stations	SOL.A. 4A	(-) (+)
	SOL.B. 4B	(-) (+)
5 stations	SOL.A. 5A	(-) (+)
	SOL.B. 5B	(-) (+)
6 stations	SOL.A. 6A	(-) (+)
	SOL.B. 6B	(-) (+)
7 stations	SOL.A. 7A	(-) (+)
	SOL.B. 7B	(-) (+)
8 stations	SOL.A. 8A	(-) (+)
	SOL.B. 8B	(-) (+)
9 stations	SOL.A. 9A	(-) (+)
	SOL.B. 9B	(-) (+)
10 stations	SOL.A. 10A	(-) (+)
	SOL.B. 10B	(-) (+)
	COM.	(+) (-)

Irrespective of the valves or options, the internal wiring is made double (connected to SOL. A and SOL. B) for respective stations of the manifold. The optional specifications permits mixture of single and double wiring. See p.1.10-160 for details.

Note) Use negative COM valves for negative COM specification manifolds. See p.1.10-160 for details.

How to Order Valve

VQ 1 1 0 0 Y 5

Series

1	VQ1000
2	VQ2000

Configuration

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

Seal

0	Metal
1	Rubber

Pilot valve

Symbol	Specification	DC	AC
—	Standard	(1.0W) ○	○ ⁽¹⁾
H	High pressure	(1.5W) ○	—
Y	Low wattage	(0.5W) ○	—

Note 1) Refer to p.1.10-122 for AC.

Enclosure

—	Dust proof
W	Dust tight/Jet proof (IP65) Note)

Note) VQ2000 only.

Manual override

—	Non-locking push style
B	Push-locking slotted style
C	Push-locking lever style

Indicator light and surge voltage suppressor

—	Yes
E	No

Coil voltage

1	100V AC (50/60Hz)
3	110V AC (50/60Hz)
5	24V DC
6	12V DC

How to Order Manifold Ass'y

Specify valve and option nos. below the manifold base no.

(Example)

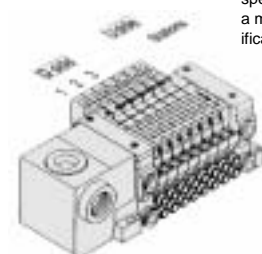
Terminal box kit

VV5Q11-08C6T0 1 set—Manifold base No.

* VQ1100-5 2 sets—Valve No. (Stations 1 to 2)
* VQ1200-5 4 sets—Valve No. (Stations 3 to 6)
* VQ1300-5 1 set—Valve No. (Station 7)
* VVQ1000-10A-1 1 set—Blank plate No. (Station 8)

Add prefix "S" to parts nos. of the solenoid valves, etc.

Write sequentially from the 1st station on the D side. When part nos. written collectively are complicated, specify by using a manifold specification form.

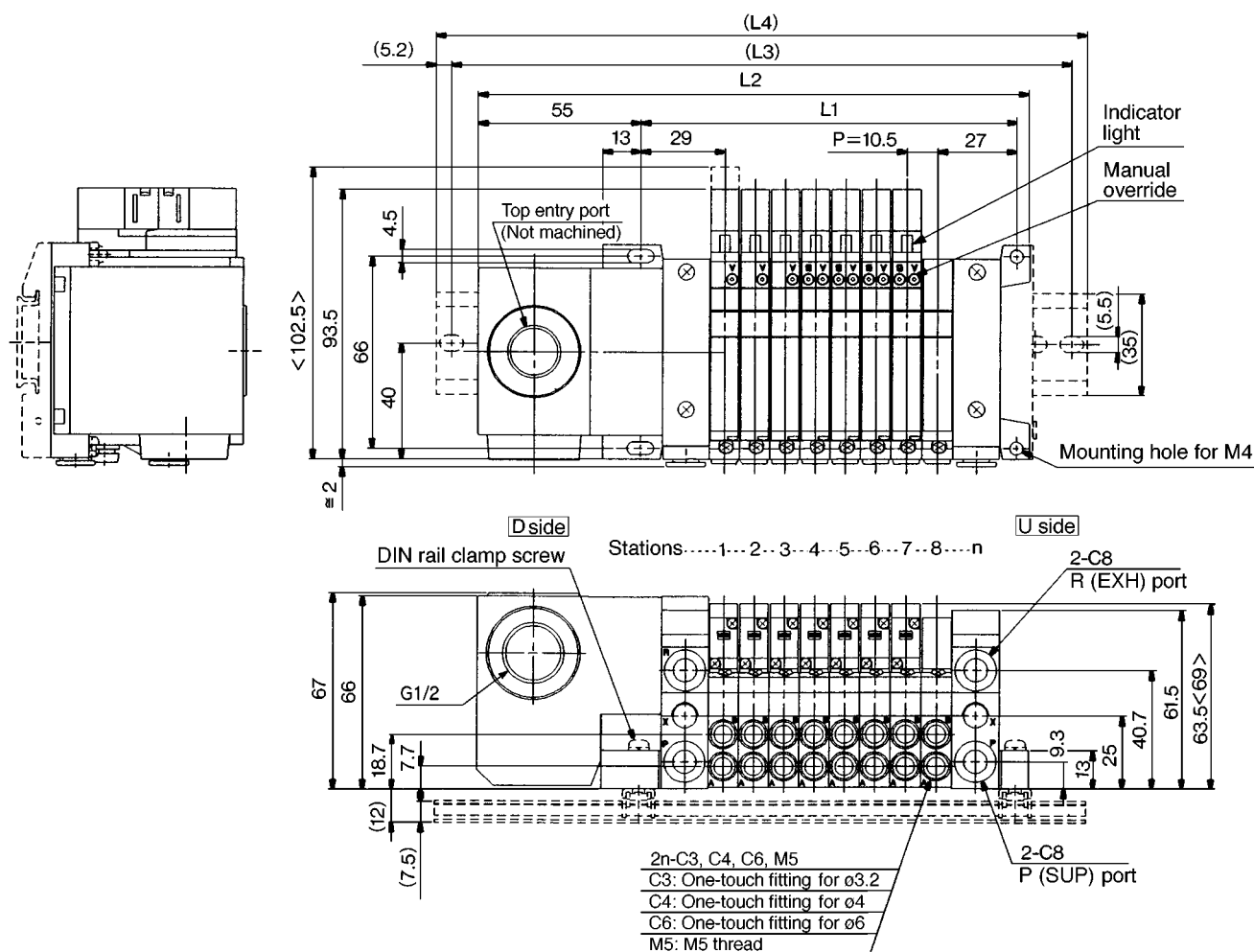


Note) Refer to "Options" on p.1.10-160 and 1.10-161 for external pilot and negative COM specifications.



VQ1000

The broken lines and dimensions in parentheses indicate DIN rail mounting style [-D].



< >: AC type and TÜV approved type

Dimensions (mm)

Equation $L1=10.5n+45.5$, $L2=10.5n+105$ n: Station (Max. 24)

L	n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L1		66.5	77	87.5	98	108.5	119	129.5	140	150.5	161	171.5	182	192.5	203	213.5	224	234.5	245	255.5	266	276.5	287	297.5
L2		126	136.5	147	157.5	168	178.5	189	199.5	210	220.5	231	241.5	252	262.5	273	283.5	294	304.5	315	325.5	336	346.5	357
(L3)		150	162.5	175	187.5	198.5	210	221.5	232.5	243.5	254.5	265.5	276.5	287.5	298.5	309.5	320.5	331.5	342.5	353.5	364.5	375.5	386.5	397.5
(L4)		160.5	173	185.5	198	210.5	223	235.5	248	260.5	273	285.5	298	310.5	323	335.5	348	360.5	373	385.5	398			

Vacuum ejector unit style: Equation $L1=10.5n+29.7$ +(number of ejector units X 26.7)

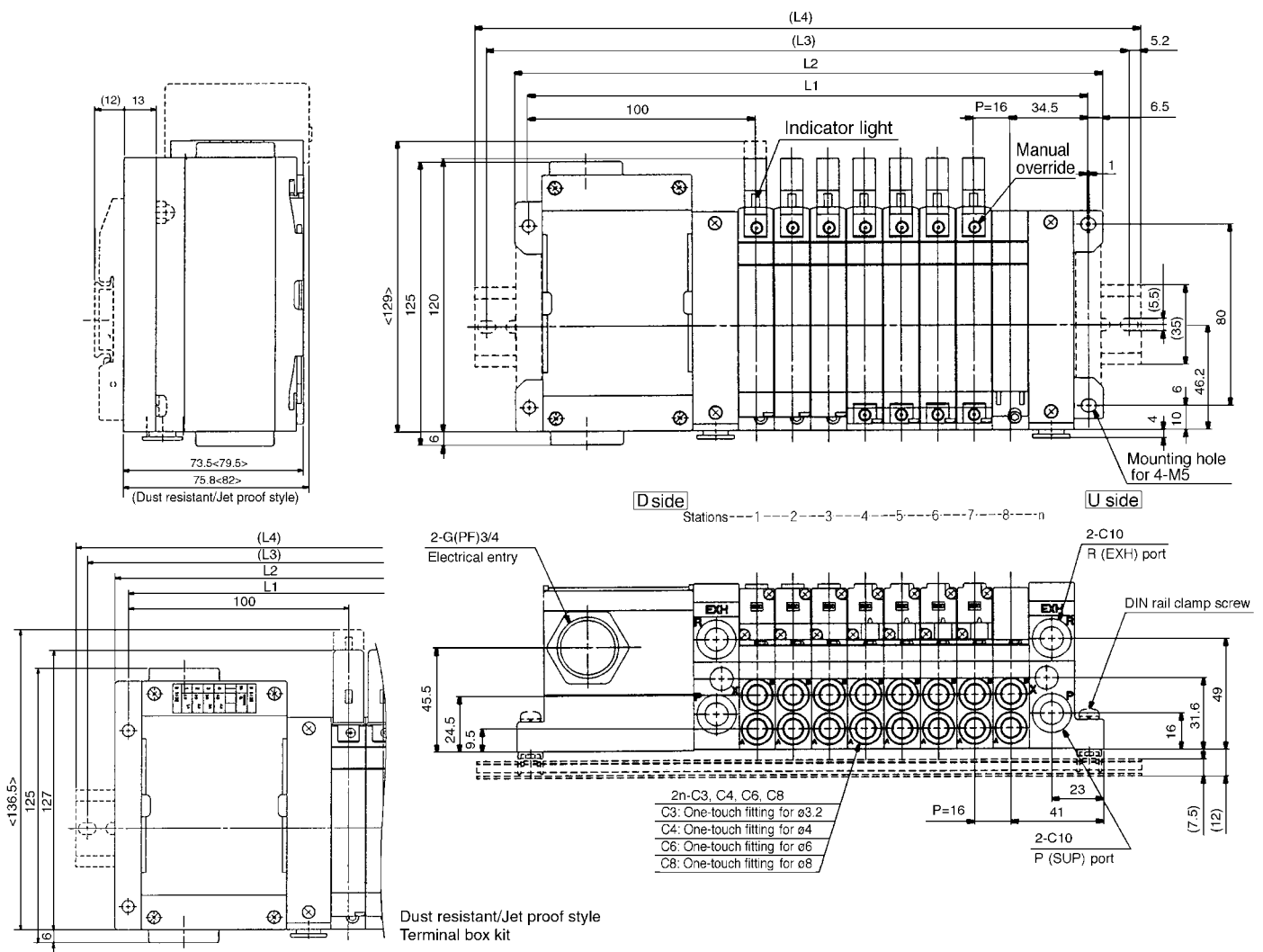
$L2=10.5n+88.8$ +(number of ejector units X 26.7)

L4 is L2 plus about 30.



- Manifold
- T kit...SV5Q11M, #6
- Valve
- 2 position single ...SV5Q11V, #9
- 2 position double...SV5Q11V, #10
- 3 positionSV5Q11V, #10

The broken lines and dimensions in parentheses indicate DIN rail mounting style [-D].



< >: AC type and TÜV approved type

Dimensions (mm)

Dimensions (mm)													Equation L1=16n+118.5 L2=16n+131 n: Station (Max. 20)						
L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1	150.5	166.5	182.5	198.5	214.5	230.5	246.5	262.5	278.5	294.5	310.5	326.5	342.5	358.5	374.5	390.5	406.5	422.5	438.5
L2	163	179	195	211	227	243	259	275	291	307	323	339	355	371	387	403	419	435	451
(L3)	187.5	200	225	237.5	250	262.5	287.5	300	312.5	337.5	350	362.5	375	400	412.5	425	450	462.5	475
(L4)	198	210.5	235.5	248	260.5	273	298	310.5	323	348	360.5	373	385.5	410.5	423	435.5	460.5	473	485.5

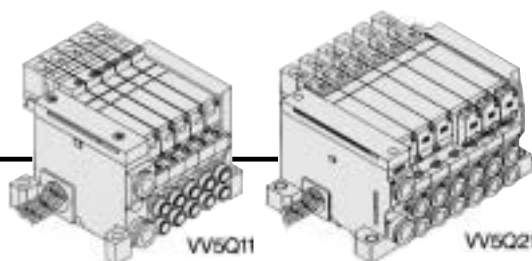
Vacuum ejector unit style: Equation $L1=10.5n+29.7+(\text{number of ejector unit} \times 26.7)$

$$L2=10.5n+88.8+(\text{number of ejector unit} \times 26.7)$$

L4 is L2 plus about 30.

L VQ1000/2000 Kit (Lead Wire Cable)

IP65 available



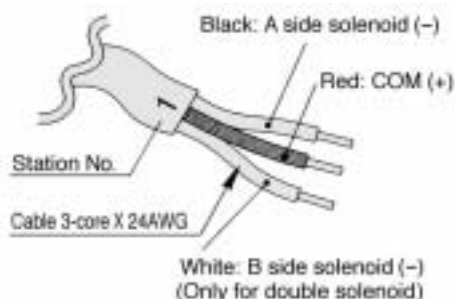
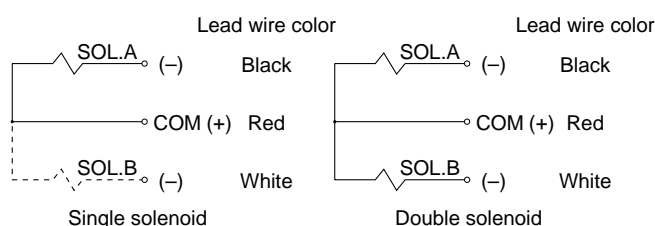
- Direct electrical entry. Models with one or more stations are available.
- P (SUP) and R (EXH) ports are provided on one side for further space savings.
- Max. 8 stations.
- Enclosure: dust resistant/Jet proof style (IP65) available. (Series VQ2000)

Manifold Specifications

Series	Porting specifications			Applicable stations
	Port location	Port size		
		P, R	A, B	
VQ1000	Side	C8	C3, C4, C6, M5	Max. 8
VQ2000	Side	C10	C6, C8	Max. 8

Wiring Specifications/Positive COM●

Irrespective of the valve mounted, three lead wires are attached to each station. The red wire is for COM connection.

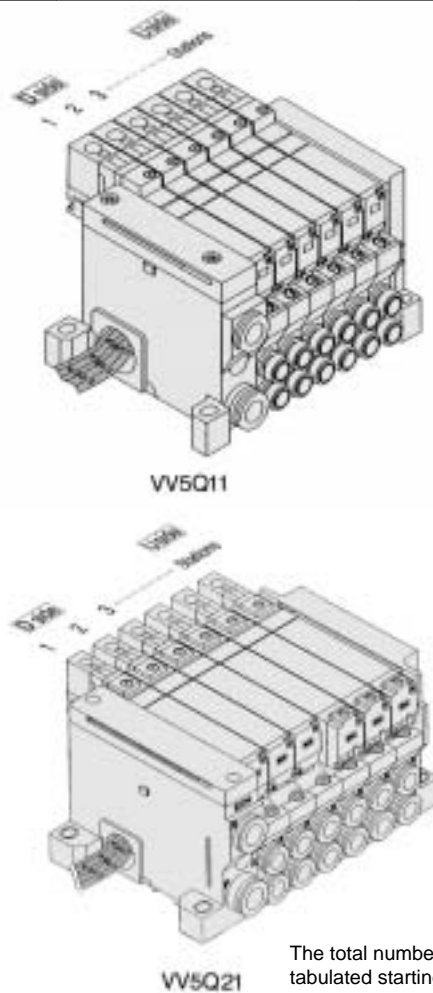


Use any of the following cable lead wire ass'ys to change the lead wire length:

Cable lead wire assembly with connector

Lead wire length (L)	Part No.
0.6m	VVQ1000-84A-6-*
1.5m	VVQ1000-84A-15-*
3m	VVQ1000-84A-30-*

* No. of stations 1 to 8



The total number of stations is tabulated starting from station one on the D side.

How to Order Manifold

VV5Q 1 1-06 C6 L 1-N

Series

1	VQ1000
2	VQ2000

Manifold

1	Plug-in unit
---	--------------

Stations

01	1 stations
...	...
08	8 stations

Cylinder ports

Symbol	Port size	VQ1000	VQ2000
C3	One-touch fitting for ø3.2	●	
C4	One-touch fitting for ø4	●	●
C6	One-touch fitting for ø6	●	●
C8	One-touch fitting for ø8		●
M5	M5 thread	●	
CM	Mixed size/with port plug	●	● ⁽³⁾

Note 1) Insert "L" (top piping) or "B" (bottom piping) for elbow type. (VQ1000 only)
Example) B6 (Elbow One-touch fittings for ø6, bottom piping.)

Note 2) Indicate "LM" for models with elbow fittings and mixed cylinder port sizes.

Note 3) Specify "Mixed size/with port plug" by means of manifold specification form.

Note 4) Refer to "Options" on p.1.10-161 for One-touch fittings in inch sizes.

Cable (length)

0	With cable (0.6m)
1	With cable (1.5m)
2	With cable (3m)

Option

Symbol	Option	VQ1000	VQ2000	Remarks
-	None	●	●	
B	Check valve for prevention of back press.	●	●	(2)
D	DIN rail mounting	●	●	(3)
G1	1 set of regulator unit	●		(3)
G2	2 sets of regulator unit	●		(3)
G3	3 sets of regulator unit	●		(4)
J	With vacuum ejector unit	●		
N	With name plate	●	●	(5)
R	External pilot capable	●	●	
S	Built-in silencer (Direct exhaust)	●	●	
W	IP65		●	

Note 1) If specifying more than one option, please list alphabetically. Example) -BRS

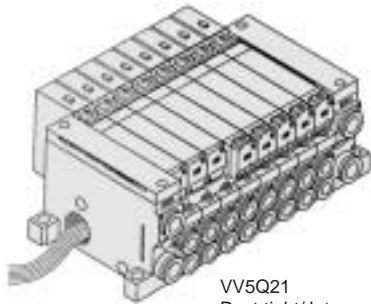
Note 2) Models with a suffix "B" have check valves for prevention of back pressure at all manifold stations. If not all stations need this check valve, specify the stations where check valves are installed by a manifold specification form.

Note 3) Specify the mounting position by means of the manifold specification form.

Note 4) Refer to p.1.10-152 for the details of ejector mounted styles. A combination of "J" and "N" is unavailable.

Note 5) Indicate "R" for the valve with external pilot.

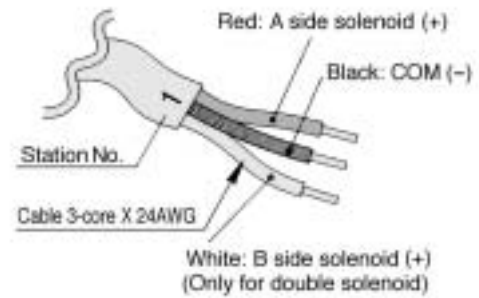
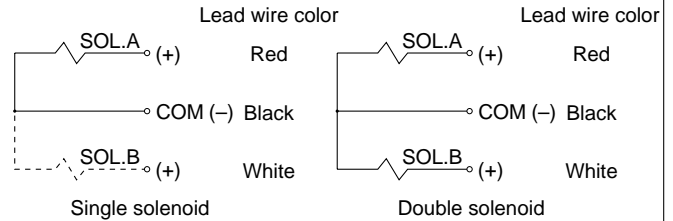
Note) Refer to "Options" on p.1.10-160 for negative COM specifications.



VV5Q21
Dust tight/Jet proof style

●Wiring Specifications/Negative COM (Options)

Irrespective of the valve mounted, three lead wires are attached to each station. The black wire is for COM connection.



Cable lead wire assembly with connector

Lead wire length (L)	Part No.
0.6m	VVQ1000-84AN-6-*
1.5m	VVQ1000-84AN-15-*
3m	VVQ1000-84AN-30-*

* No. of stations 1 to 8



Note) Use negative COM type valves for negative COM specification manifolds. See p.1.10-160 for further details.

How to Order Valve

VQ 1 1 0 0 Y 5

Series

1	VQ1000
2	VQ2000

Configuration

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

Seal

0	Metal
1	Rubber

Enclosure

—	Dust-proof
W	IP65



Note) VQ2000 only.

Manual override

—	Non-locking push style
B	Push-locking slotted style
C	Push-locking lever style

Indicator light and surge voltage suppressor

—	Yes
E	No

Coil voltage

1	100V AC(50/60Hz)
2	200V AC (50/60Hz)
3	110V AC (50/60Hz)
4	220V AC (50/60Hz)
5	24V DC
6	12V DC

Pilot valve

Symbol	Specification	DC	AC
—	Standard	(1.0W) ○	○ ⁽¹⁾
H	High pressure	(1.5W) ○	—
Y	Low wattage	(0.5W) ○	—



Note) Refer to p.1.10-122 for AC type.

How to Order Manifold Ass'y

Specify valve and option nos. below the manifold base no.

(Example)

With lead wire kit/cable (3m)

VV5Q11-06C6L2 1 set—Manifold base No.

* VQ1100-5 2 sets—Valve No. (Stations 1 to 2)

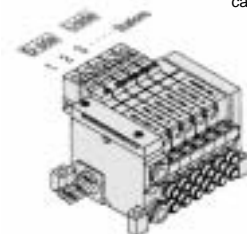
* VQ1200-5 2 sets—Valve No. (Stations 3 to 4)

* VQ1300-5 1 set—Valve No. (Station 5)

* VVQ1000-10A-1 1 set—Blank plate No. (Station 6)

Add prefix "*" to parts nos. of the solenoid valves, etc.

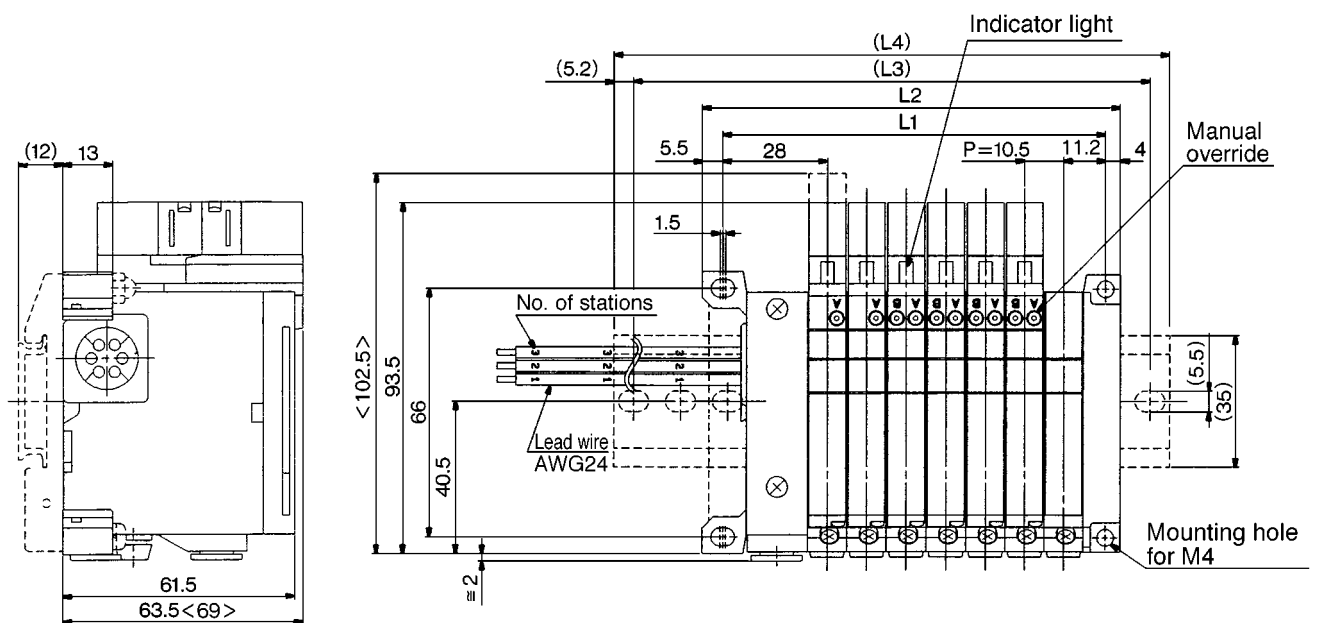
Write sequentially from the 1st station on the D side. When part nos. written collectively are complicated, specify by using manifold specification form.



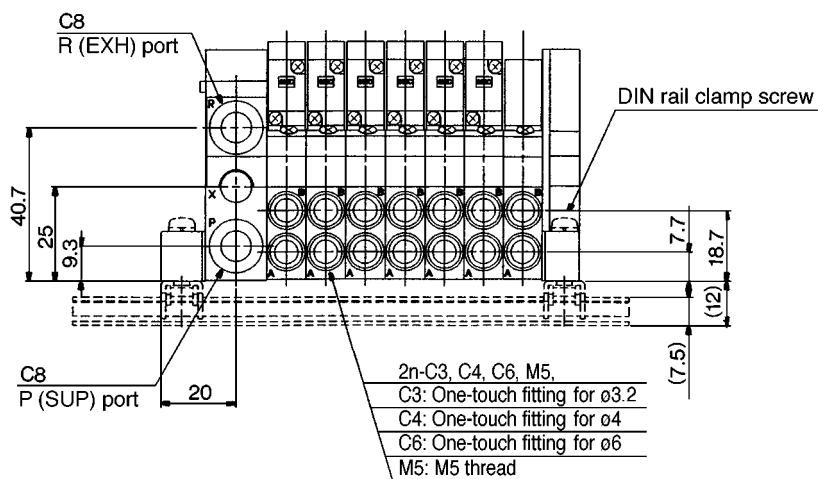
Note) Refer to "Options" on p.1.10-160 and 1.10-161 for external pilot and negative COM specifications.

VQ1000

The broken lines indicate DIN rail mounting style [-D].



[D side] Stations.....1.....2.....3.....4.....5.....6.....7.....n [U side]



< >: AC type and TÜV approved type



- Manifold
- L kit.....SV5Q11M, #7
- Valve
- 2 position singleSV5Q11V, #9
- 2 position double.....SV5Q11V, #10
- 3 positionSV5Q11V, #10

Dimensions (mm) Equation L1=10.5n+28.5, L2=10.5n+38 n: Station (Max. 8 stations)

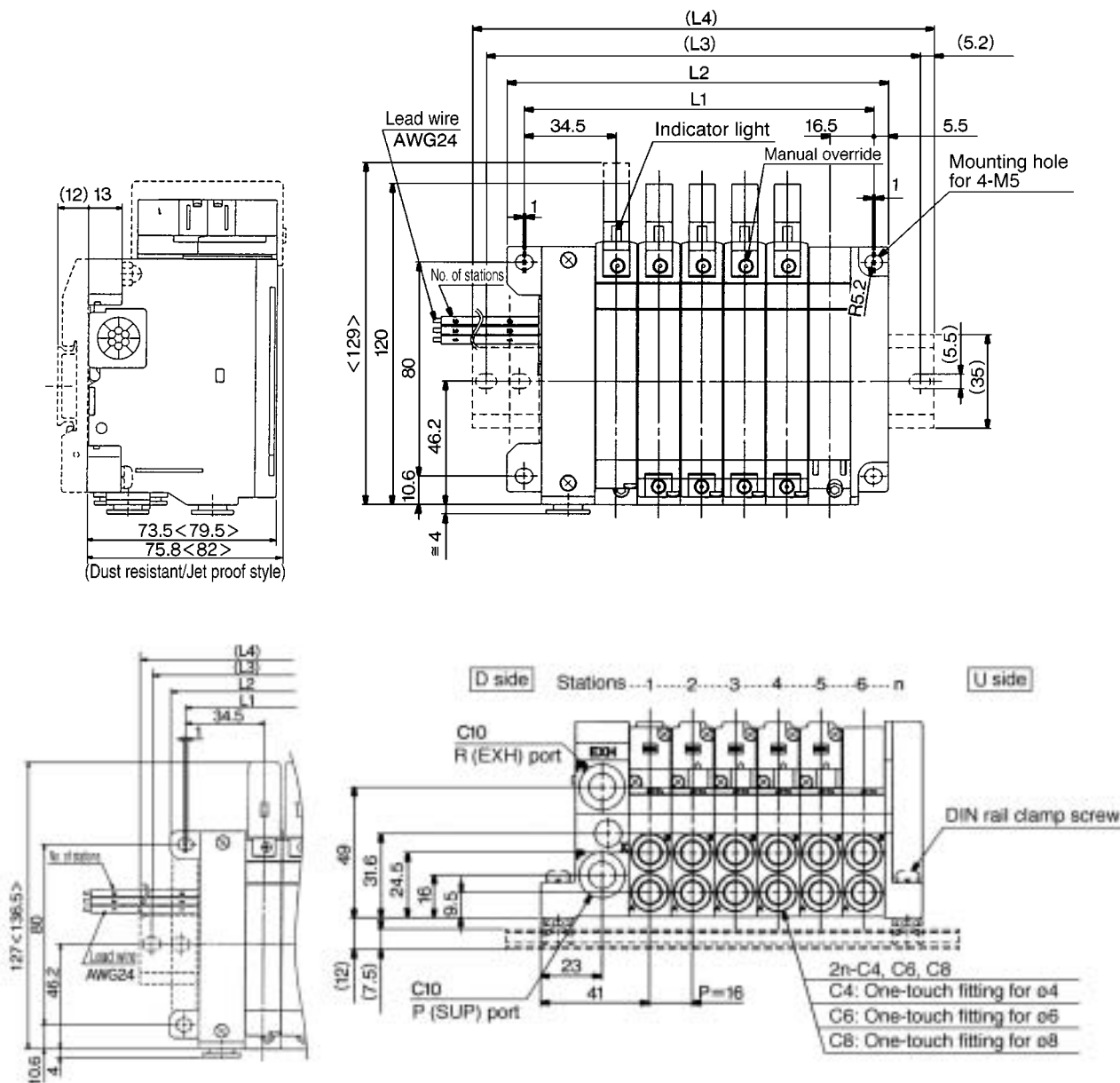
n	1	2	3	4	5	6	7	8
L1	39	49.5	60	70.5	81	91.5	102	112.5
L2	48.5	59	69.5	80	90.5	101	111.5	122
(L3)	75	87.5	87.5	100	112.5	125	137.5	150
(L4)	85.5	98	98	110.5	123	135.5	148	160.5

Vacuum ejector unit style: Equation L1=10.5n+28.5+(number of ejector units X 26.7)
L2=10.5n+38+(number of ejector units X 26.7)
L4 is L2 plus about 30.



VQ2000

The broken lines indicate DIN rail mounting style [-D].



< >: AC type and TÜV approved type

Dimensions (mm)

Equation $L1=16n+35$, $L2=16n+47$ n: Station (Max. 8 stations)

L	n	1	2	3	4	5	6	7	8
L1		51	67	83	99	115	131	147	163
L2		63	79	95	111	127	143	159	175
(L3)		87.5	100	125	137.5	150	162.5	184.5	200
(L4)		98	110.5	135.5	148	160.5	173	198	210.5

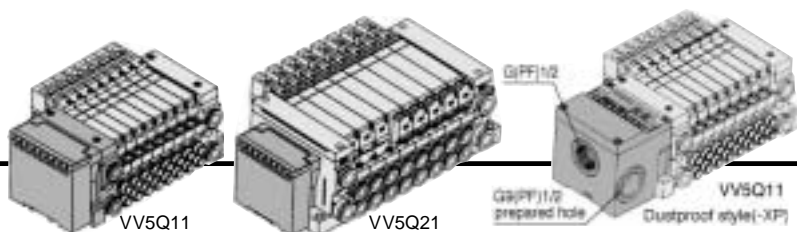


- Manifold
- L kit.....SV5Q21, #5
- Valve
- 2 position single...SV5Q21, #7
- 2 position double...SV5Q21, #8
- 3 positionSV5Q21, #8

S

VQ1000/2000 Kit (Serial Transmission Unit)

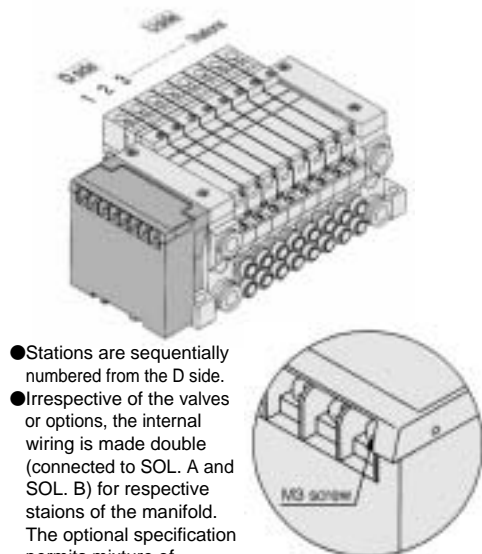
IP65 available



- The serial transmission system minimizes wire mass and wire connection labor and promotes space savings.
- The system comes in SA (general for small scale system) for equipment with a small number of I/O points, or 32 points max., SB (applicable to Mitsubishi Electric models) for controlling 512 I/O points max., SC (applicable to OMRON models), SD (applicable to Sharp models: 504 points max.), SF (applicable to NKE models: 128 points max.), SJ (applicable to Sunx models), SK (applicable to Fuji Electric models), SQ (applicable to OMRON's Compo Bus/D), and SR (applicable to OMRON's Compo Bus/S).
- Max. 16 stations. (Specify a model with 9 to 16 stations by using a manifold specification form.)
- Enclosure: dust-resistant/jet-proof style (IP65) available (Series VQ2000)

Manifold Specifications

Series	Porting specifications			Applicable stations
	Port location	Port size		
		P, R	A, B	
VQ1000	Side	C8	C3, C4, C6, M5	Max.16
VQ2000	Side	C10	C4, C6, C8	Max.16

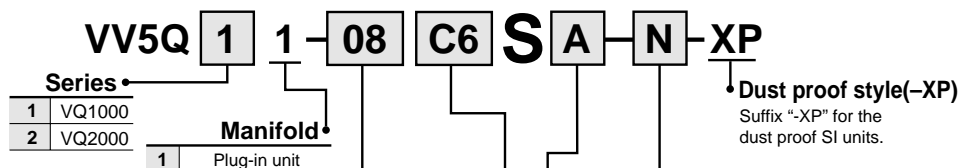


- Stations are sequentially numbered from the D side.
- Irrespective of the valves or options, the internal wiring is made double (connected to SOL. A and SOL. B) for respective stations of the manifold. The optional specification permits mixture of single and double wiring. See p.1.10-160 for details.

Item	Specifications
External power supply	24VDC+10%, -5%
Current consumption (Internal unit)	SA, SB, SBB, SD, SE, SF, SM, SG, SJ, SK, SQ, SR, SV: 0.1A SC: 0.3A

	SA applicable to Series EX300	SB applicable to MELSECNET/MINI-S3 Data Link (Mitsubishi Electric)																		
Name of terminal block (LED)	<div><table><thead><tr><th>LED name</th><th>Details</th></tr></thead><tbody><tr><td>RUN/ERROR</td><td>Blinking when received data is normal; Lighting when data is abnormal</td></tr><tr><td>TRD</td><td>Lighting during data reception</td></tr></tbody></table></div>	LED name	Details	RUN/ERROR	Blinking when received data is normal; Lighting when data is abnormal	TRD	Lighting during data reception	<div><table><thead><tr><th>LED name</th><th>Details</th></tr></thead><tbody><tr><td>POWER</td><td>Lighting when power is turned ON</td></tr><tr><td>RUN</td><td>Lighting when data transmission with the master station is normal</td></tr><tr><td>RD</td><td>Lighting during data reception</td></tr><tr><td>SD</td><td>Lighting during data transmission</td></tr><tr><td>ERR.</td><td>Lighting when reception data error occurs. Light turns off when the error is corrected.</td></tr></tbody></table></div>	LED name	Details	POWER	Lighting when power is turned ON	RUN	Lighting when data transmission with the master station is normal	RD	Lighting during data reception	SD	Lighting during data transmission	ERR.	Lighting when reception data error occurs. Light turns off when the error is corrected.
LED name	Details																			
RUN/ERROR	Blinking when received data is normal; Lighting when data is abnormal																			
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LED name	Details																			
POWER	Lighting when power is turned ON																			
RUN	Lighting when data transmission with the master station is normal																			
RD	Lighting during data reception																			
SD	Lighting during data transmission																			
ERR.	Lighting when reception data error occurs. Light turns off when the error is corrected.																			
Note	<p>●T unit</p> <p>Can be connected with PLC I/O card for serial transmission.</p> <p>EX300-TMB1...For models of Mitsubishi Electric Corp.</p> <p>EX300-TTA1...For models of OMRON Corp.</p> <p>EX300-TFU1...For models of Fuji Electric Company Ltd.</p> <p>EX300-TTO1...For general models</p> <p>* Up to 32 points per unit.</p> <p>●16 outputs.</p>	<p>●Master station:</p> <p>PLC made by Mitsubishi Electric Corp.</p> <p>Series MELSEC-A</p> <p>AJ71PT32-S3, AJ71T32-S3</p> <p>A1SJ71PT32-S3</p> <p>* Max. 64 stations, connected to remote I/O stations (Max. 512 points).</p> <p>●16 outputs, 2 stations occupied.</p>																		

How to Order Manifold



Symbol	Port size	VQ1000	VQ2000
C3	One-touch fitting for ø3.2	●	
C4	One-touch fitting for ø4	●	●
C6	One-touch fitting for ø6	●	●
C8	One-touch fitting for ø8	●	●
M5	M5 thread	●	
CM	Mixed size/with port plug	●	●(3)

Note 1) Insert "L" (top piping) or "B" (bottom piping) for elbow type. (VQ1000 only)
Example) B6 (Elbow One-touch fittings for ø6, bottom piping.)

Note 2) Specify as "LM" for models with elbow fittings and mixed cylinder port sizes.

Note 3) Specify "Mixed size/with port plug" by means of manifold specification form.

Note 4) Refer to "Options" on p.1.10-161 for One-touch fittings in inch sizes.

Note 1) The general type requires a transmission unit on CPU side.

Note 2) SBB kit is usable only for VQ2000 dust tight/jet proof style (IP65).

Option

Symbol	Option	VQ1000	VQ2000
-	None	●	●
B	Check valve for prevention of back pressure ⁽²⁾	●	●
D	DIN rail mounting	●	●
G1	1 set of regulator unit ⁽³⁾		
G2	2 sets of regulator unit ⁽³⁾	●	
G3	3 sets of regulator unit		
J□	With vacuum ejector unit ⁽⁴⁾	●	
K	Special wiring specification (Not double wiring) ⁽⁵⁾	●	●
N	With name plate	●	●
R	External pilot ⁽⁶⁾	●	●
S	Built-in silencer (Direct-exhaust)	●	●
W	Enclosure: IP65 (Except for SE and SG)		●

Note 1) If specifying more than one option, please list alphabetically. Example) -BRS

Note 2) Models with a suffix "-B" have check valves for prevention of back pressure at all manifold stations. If not all stations need this check valve, specify the stations where check valves are installed by manifold specification form.

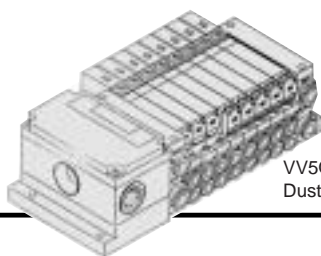
Note 3) Specify the mounting position by means of the manifold specification form.

Note 4) Refer to p.1.10-152 for the details of ejector mounted styles. A combination of "J" and "N" is unavailable.

Note 5) Specify wiring by the manifold specification form.

Note 6) Indicate "R" for the valve with external pilot.

Note 7) A combination of "W" and "XP" is unavailable.



VV5Q21
Dust-resistant/jet-proof style (-W)

VQ 1000/2000 Base Mounted Plug-in Unit

●SI unit output and coil numbering

<Wiring example 1>

SI unit output No.	0	1	2	3	4	5	6	7	8	9
	A	B	A	B	A	Void	A	Void	A	B
SI unit	Double	Double	Double	Double	Single	Single	Single	Single	Single	Single
Stations	1	2	3	4	5					

Double wiring (Standard)

<Wiring example 2>

SI unit output No.	0	1	2	3	4	5	6	7
	A	B	A	B	A	A	A	B
SI unit	Double	Double	Double	Double	Single	Single	Single	Double
Stations	1	2	3	4	5			

Single/Double mixed wiring (Option)

Mixed wiring is optional. Use the manifold specification form to specify.

	SC applicable to SYSBUS Wire System (OMRON)	SD applicable to Satellite I/O Link System (Sharp)																
Name of terminal block(LED)	<div></div> <table><tr><th>LED name</th><th>Details</th></tr><tr><td>RUN</td><td>It lights when transmission is normal and PLC is in the operation mode.</td></tr><tr><td>T/R ERR</td><td>It blinks when transmission is normal. It lights when transmission is abnormal.</td></tr></table>	LED name	Details	RUN	It lights when transmission is normal and PLC is in the operation mode.	T/R ERR	It blinks when transmission is normal. It lights when transmission is abnormal.	<div></div> <table><tr><th>LED name</th><th>Details</th></tr><tr><td>POWER</td><td>It lights when power is turned ON.</td></tr><tr><td>RUN</td><td>It lights when power is turned ON slave stations are in normal operation.</td></tr><tr><td>ERROR</td><td>It lights when slave station switch setting is abnormal, communication is abnormal, master station's PLC is at rest, and slave station unit is out of order.</td></tr><tr><td>R.SET HOLD</td><td>It lights when control input is made for the master station.</td></tr></table>	LED name	Details	POWER	It lights when power is turned ON.	RUN	It lights when power is turned ON slave stations are in normal operation.	ERROR	It lights when slave station switch setting is abnormal, communication is abnormal, master station's PLC is at rest, and slave station unit is out of order.	R.SET HOLD	It lights when control input is made for the master station.
LED name	Details																	
RUN	It lights when transmission is normal and PLC is in the operation mode.																	
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LED name	Details																	
POWER	It lights when power is turned ON.																	
RUN	It lights when power is turned ON slave stations are in normal operation.																	
ERROR	It lights when slave station switch setting is abnormal, communication is abnormal, master station's PLC is at rest, and slave station unit is out of order.																	
R.SET HOLD	It lights when control input is made for the master station.																	
Note	<ul style="list-style-type: none">●Master station unit: OMRON's PLC SYSMAC Series C (CV) C500-RM201, C200H-RM201* Max. 32 units, transmission terminal connected (Max. 512 points)●16 outputs	<ul style="list-style-type: none">●Master station unit: Sharp's PLC New Satellite Series W ZW-31LM New Satellite Series JW JW-23LM, JW-31LM* Max. 31 units, I/O slave stations connected (Max. 504 points)●16 outputs																

How to Order Valve

VQ	1	1	0	0	Y	5		
Series	1	2						
	VQ1000	VQ2000						
Configuration	1	2	3	4	5			
	2 position single	2 position double	3 position closed center	3 position exhaust center	3 position pressure center			
Seal	0	1						
	Metal	Rubber						
Enclosure	-	W						
	Dust-proof	Dust resistant/Jet proof (IP65) (1)						
Manual override	-	B	C					
	Non-locking push style	Push-locking slotted style	Push-locking lever style					
Coil voltage	5							
	24V DC/With indicator light and surge voltage suppressor							
Pilot valve	Symbol	Specification	DC					
	-	Standard	(1.0W)					
	H	High pressure	(1.5W)					
	Y	Low wattage	(0.5W)					

Note) Refer to "Options" on p.1.10-160 and 1.10-161 for external pilot and negative COM specifications.

How to Order Manifold Ass'y

Specify valve and option nos. below the manifold base no.

(Example)

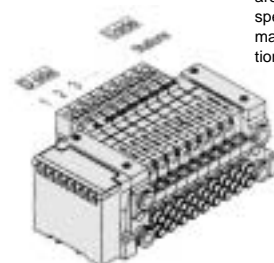
Serial transmission unit kit

VV5Q11-08C6SA.....1 set-Manifold base No.

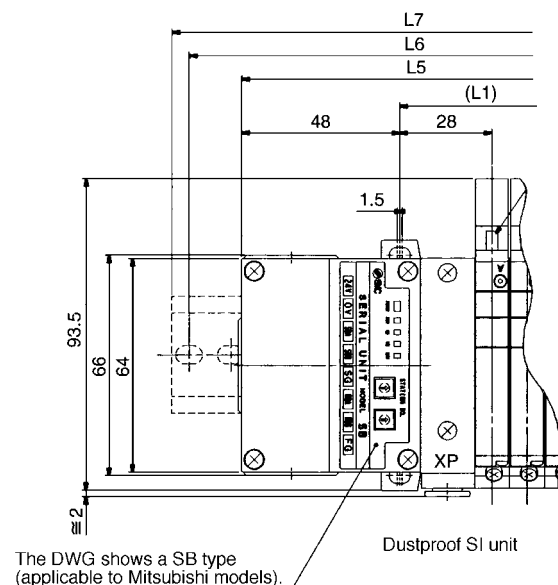
* VQ1100-52 sets-Valve No. (Stations 1 to 2)
* VQ1200-54 sets-Valve No. (Stations 3 to 6)
* VQ1300-51 set-Valve No. (Station 7)
* VVQ1000-10A-1.....1 set-Blanking plate No. (Station 8)

Add prefix "*" to parts nos. of the solenoid valves, etc.

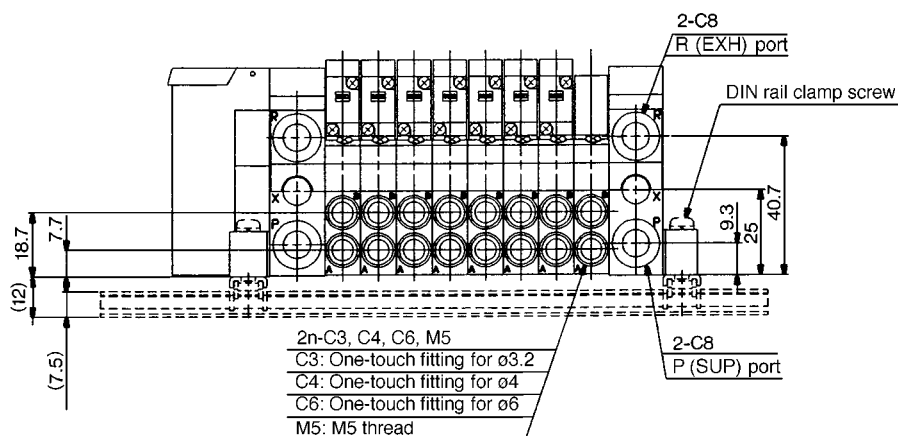
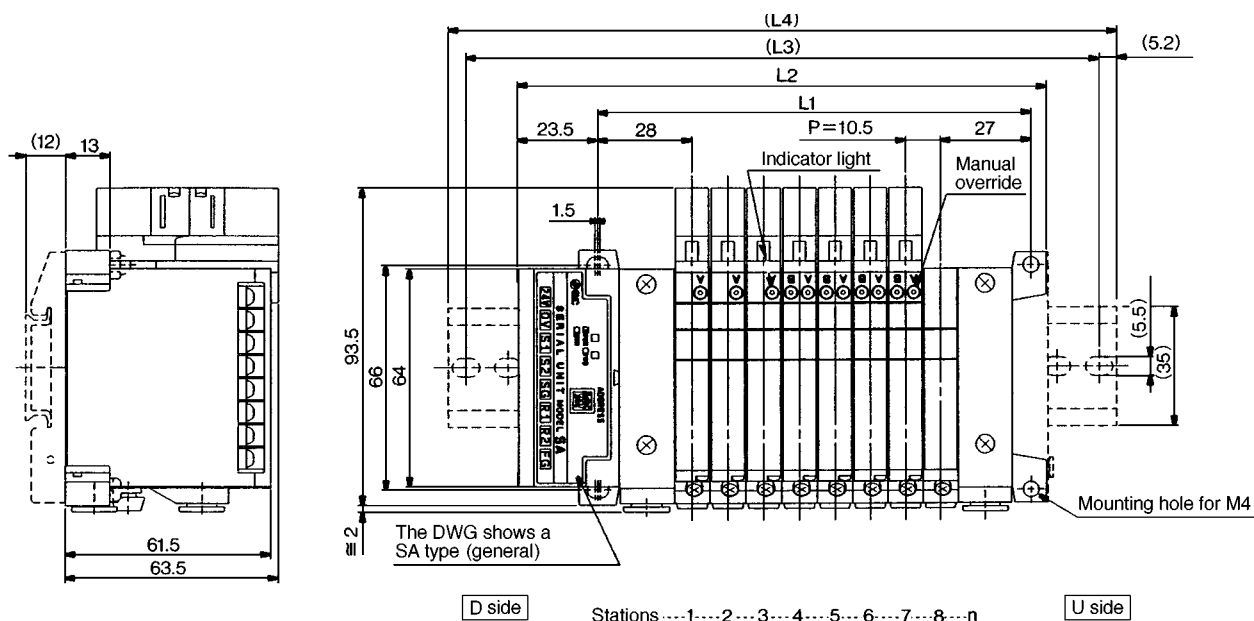
Write sequentially from the 1st station on the D side. When part nos. written collectively are complicated, specify by using a manifold specification form.



VQ1000



The broken lines indicate DIN rail mounting style [-D].



Dimensions (mm)

n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	65.5	76	86.5	97	107.5	118	128.5	139	149.5	160	170.5	181	191.5	202	212.5
L2	93.5	104	114.5	125	135.5	146	156.5	167	177.5	188	198.5	209	219.5	230	240.5
(L3)	125	125	137.5	150	162.5	175	187.5	187.5	200	212.5	225	237.5	250	250	262.5
(L4)	135.5	135.5	148	160.5	173	185.5	198	198	210.5	223	235.5	248	260.5	260.5	273

Vacuum ejector unit style: Equation $L1=10.5n+28.7+(\text{number of ejector units} \times 26.7)$
 $L2=10.5n+56.3+(\text{number of ejector units} \times 26.7)$
 $L4$ is $L2$ plus about 30.

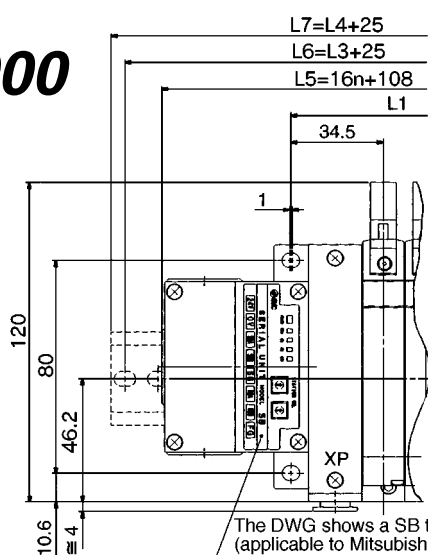


Note) Manifolds with SI unit for Matsushita's MEWNET FP and Allen Bradley Co.'s model are the same with $L5$, $L6$ and $L7$ dimensions of dust-proof SI unit.

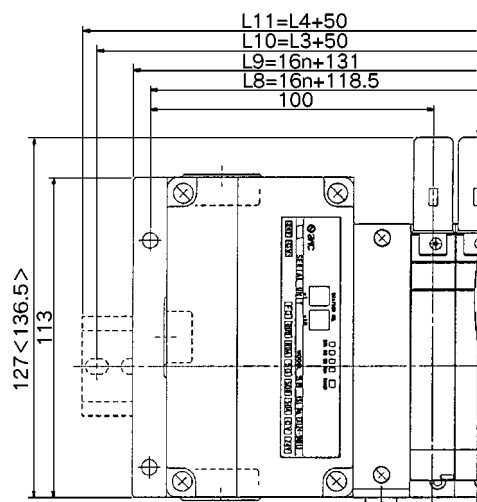
- Manifold
- S kit: SV5Q11M, #8
- Valve
- 2 position single: SV5Q11V, #9
- 2 position double: SV5Q11V, #10
- 3 position: SV5Q11V, #10



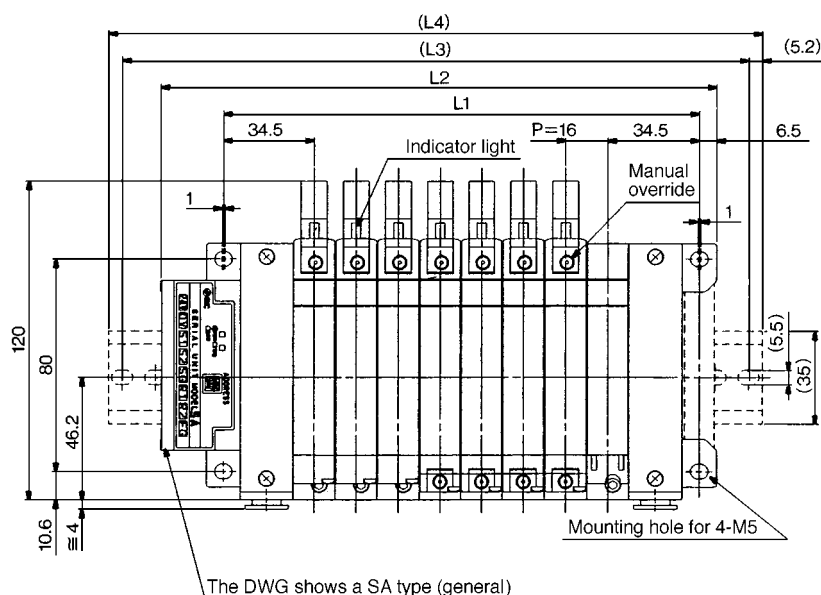
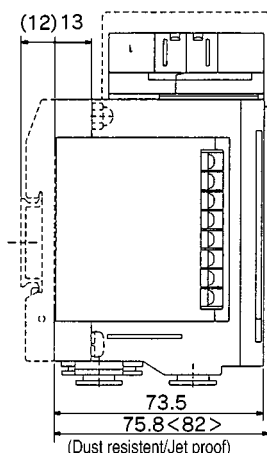
VQ2000



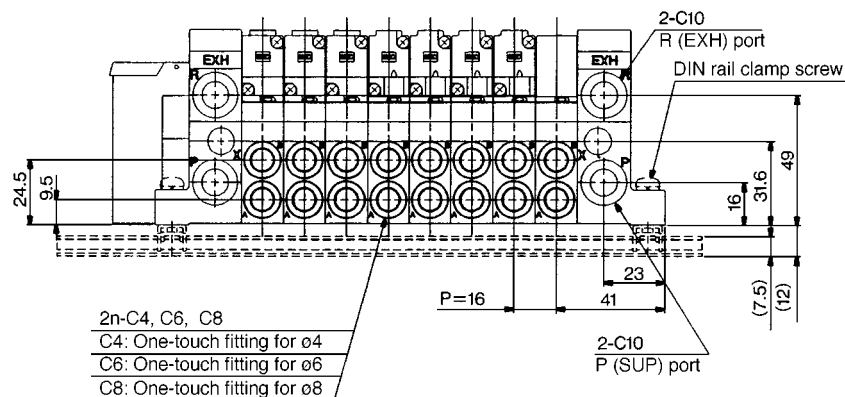
Dustproof SI unit



Dust tight/Jet proof (IP65) SI unit



D side Stations 1 2 3 4 5 6 7 8 n U side



Dustproof SI unit: L5=16+108, L6=L3+25, L7=L4+25
Dust tight/jet proof SI unit: L8=16n+118.5, L9=16n+131
L10=L3+50, L11=L4+50
Equation L1=16+53, L2=16+83 n: Station (Max. 16)

Dimensions (mm)

L	n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1		85	101	117	133	149	165	181	197	213	229	245	261	277	293	309
L2		115	131	147	163	179	195	211	227	243	259	275	291	307	323	339
(L3)		137.5	162.5	175	187.5	200	225	237.5	250	262.5	287.5	300	312.5	337.5	350	362.5
(L4)		148	173	185.5	198	210.5	235.5	248	260.5	273	298	310.5	323	348	360.5	373



Note) Manifolds with SI unit for Matsushita's MEWNET FP and Allen Bradley Co.'s model are the same with L5, L6 and L7 dimensions of dust-proof SI unit.

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

VFS

VS

VS7



- Manifold
- S kit.....SV5Q21, #6
- Valve
- 2 position single ...SV5Q21, #7
- 2 position double...SV5Q21, #8
- 3 positionSV5Q21, #8

VQ 1000/2000 Base Mounted Plug-in Unit

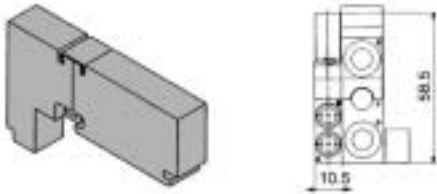
Manifold Options/For VQ1000



Blank plate assembly
VVQ1000-10A-1

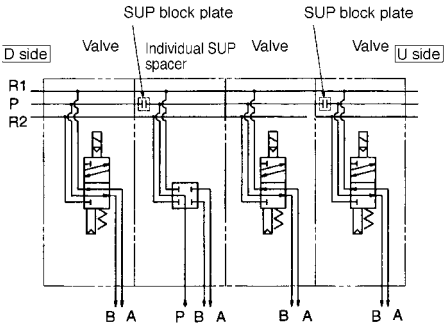
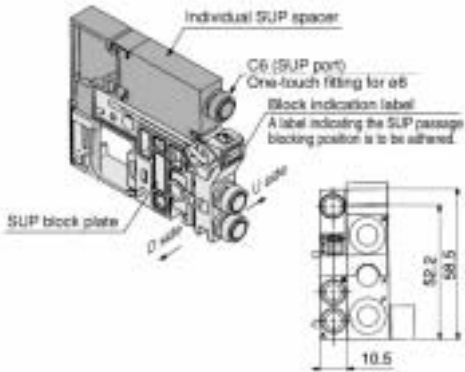


It is mounted on a specific position of a manifold block from which a valve is removed for maintenance or in which a spare valve is planned to be mounted.



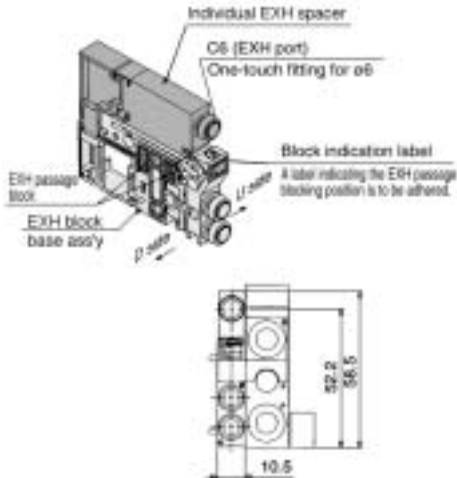
Individual SUP spacer
VVQ1000-P-1-C6

When the same manifold is to be used for different pressures, individual SUP spacers are used as SUP ports for different pressures. (One station space is occupied.)
Block both sides of the station, for which the supply pressure from the individual SUP spacer is used, with SUP block plates. (See the application ex.)
* Specify the spacer mounting position and SUP block plate position by means of the manifold specification form. The block plate are used in two places for one set. (Two SUP block plates for blocking SUP station are attached to the individual SUP spacer.)
* Electric wiring is connected to the position of the manifold station where the individual SUP spacer is mounted.

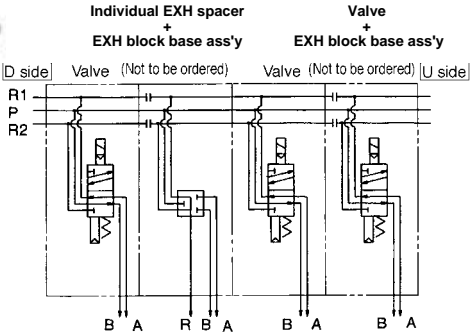


Individual EXH spacer
VVQ1000-R-1-C6

When valve exhaust affects other stations due to the circuit configuration, this spacer is used for individual valve exhaust. (One station space is occupied.)
Block both sides of the individual valve EXH station. (See the application ex.)
* Specify the mounting position, as well as the EXH block base or EXH block plate position by means of the using manifold specification form. The block plate are used in two places for one set.
* An EXH block base ass'y is used in the blocking position when ordering an EXH spacer incorporated with a manifold No. However, do not order an EXH block base ass'y because it is attached to the spacer.
When separately ordering an individual EXH spacer, separately order an EXH block base ass'y because it is not attached to the spacer.
* Electric wiring is connected to the position of the manifold station where the individual EXH spacer is mounted.

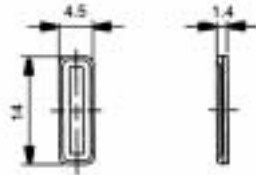
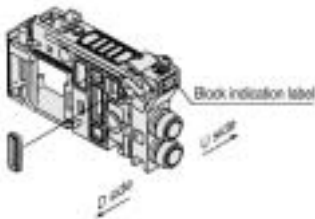


Name/Type		Stations						
Valve	Single		●	●	●			
	Option							
Individual EXH spacer VVQ1000-R-1-C6			●					
EXH cut-off location: Specify 2 places.		●		●				



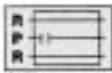
SUP block plate
VVQ1000-16A

When high and low pressures are simultaneously supplied to one manifold, a block plate is inserted between stations under different pressures.
* Specify the number of stations by using a manifold specification form.



<Blocking indication label>

When using block plates for SUP passage, indication label for confirmation of the blocking position from outside is attached. (one label of each)
* When ordering a block plate incorporated with the manifold No., a block indication label is attached to the manifold.

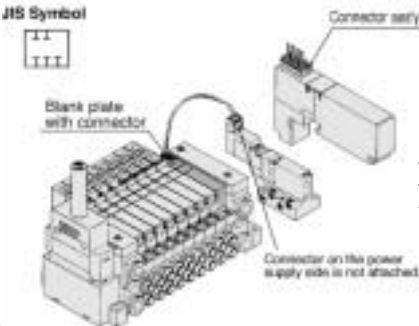


SUP passage block

SUP/EXH passage block

Blank plate with connector
VVQ1000-1C

		Lead wire length (mm)			
Manifold	Connector	—	300	20	2000
1	VV5Q11	6	600	25	2500
—	Without connector	10	1000	30	3000
1	With connector/2 wire	15	1500		
2	With connector/4 wire				



Connector assembly No.
AXT661-43 A-6

		Lead wire length			
Lead wire color	Wire	—	300mm	6	600mm
43	4 wire	10	1000mm	20	2000mm
44	2 wire	30	3000mm		

Lead wire color: Black
Lead wire color: Red
Lead wire color: White
24AWG
Cover C.D.: $\phi 1.5$

Blank plate with a connector for individually outputting electricity to drive a single valve or equipment that are not on the manifold base.
* When "N" is suffixed to the nameplate, the plate will be different from a standard shape.
Note) Electric current should be 1A or less. (Including the mounted valves.)





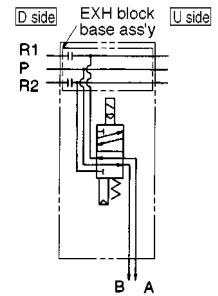
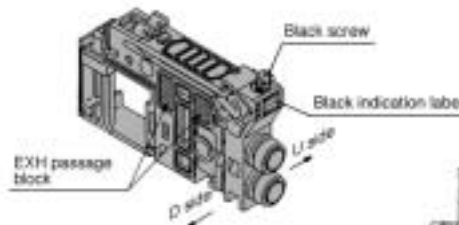
EXH block base assembly VVQ1000-19A-(C3, C4, C6, M5)

Manifold block ass'y Electrical entry

F1	For F kit (2 to 12 stations)/Double wiring
F2	For F kit (13 to 24 stations)/Double wiring
F3	For F kit (2 to 24 stations)/Single wiring
P1	For P, G, T, S kit (2 to 12 stations)/Double wiring
P2	For P, G, T, S kit (13 to 24 stations)/Double wiring
P3	For P, G, T, S kit (2 to 24 stations)/Single wiring
L0*	L0 kit
L1*	L1 kit
L2*	L2 kit

The manifold block ass'y is used between stations for which exhaust is desired to be divided when valve exhaust affects other stations due to the circuit configuration. The EXH passage on the D-side is blocked in the EXH block base ass'y. It is also used in combination with an individual EXH spacer for individual exhaust.

* When ordering by using the manifold specification form, specify the EXH block base ass'y no. by adding suffix "*" below the manifold no.
* Specify the number of stations by using the manifold specification form.



<Blocking indication label>

When blocking the EXH passage with an EXH block base ass'y, indication label for confirmation of the blocking position from outside is attached. (one label for each)

* When ordering a EXH block base incorporated with the manifold No., a block indication label is attached to the manifold.



EXH passage block



SUP/EXH passage block

Check valve for prevention of back pressure assembly [-B] VVQ1000-18A

It prevents cylinder malfunction caused by other valve exhaust. Insert it into R (EXH) port on the manifold side of a valve which is affected. It is effective when a single action cylinder is used or an exhaust center type solenoid valve is used.

Note) When a check valves for back pressure prevention is desired to be installed only in desired manifold stations, write clearly the part No. and specify the number of stations by using a manifold specification form.



* When ordering assemblies incorporated with a manifold, add suffix "-B" to the manifold No. (When installed in all manifold stations.)

(Precautions)

1. The check valves for prevention of back pressure ass'y is assembly parts with a check valve structure. However, as slight air leakage is allowed for the back pressure, take care the exhaust air will not be throttled at the exhaust port.
2. When a check valves for prevention of back pressure is mounted, the effective area of the valve will decrease, by about 20%.

Name plate [-N] VVQ1000-N-Station (1 to Max. stations)

It is a transparent resin plate for placing a label that indicates solenoid valve function, etc.
Insert it into the groove on the side of the end plate and bend it as shown in the figure.



* When ordering assemblies incorporated with a manifold, add suffix "-N" to the manifold No.

Blank plug (For One-touch fittings)

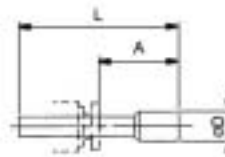
KQP-²³₀₄⁰⁶₀₈-X19

X19

Color: White

It is inserted into an unused cylinder port and SUP/EXH ports.

The minimum order quantity is 10 pcs.

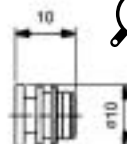
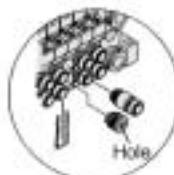


Dimensions (mm)

Fittings size ød	Model	A	L	D
3.2	KQP-23-X19	16	31.5	3.2
4	KQP-04-X19	16	32	6
6	KQP-06-X19	18	35	8
8	KQP-08-X19	20.5	39	10

Port plug VVQ0000-58A

The plug is used to block the cylinder port when using a 4 port valve as a 3 port valve.



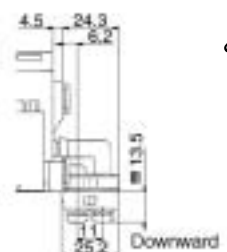
* When ordering a plug incorporated with a manifold, indicate "CM" for the port size in the manifold no., as well as, the mounting position and number of stations and cylinder port mounting positions, A and B, by means of the manifold specification form.

* Lightly screw an M3 screw in the port plug hole and pull it for removal.

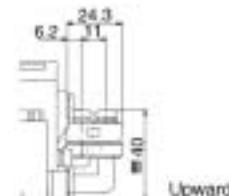
Elbow fitting assembly VVQ1000-F-L(C3, C4, C6, M5)

It is used for piping that extends upward or downward from the manifold.

When installing it in part of the manifold stations, specify the ass'y no. and the mounting position and number of stations by means of the manifold specification form.



* When ordering an assemblies incorporated with a manifold indicate "L□" or "B□" for the manifold port size. (When installed in all stations.)



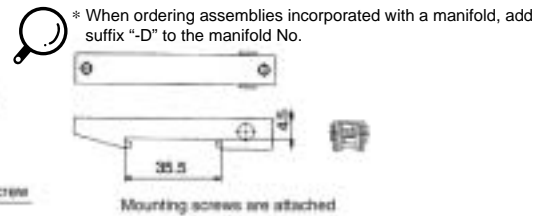
- Blank plug.....SV5Q110P, #6 to #9
- Elbow fitting ass'y.....SV5Q110P, #10

VQ 1000/2000 Base Mounted Plug-in Unit

Manifold Options/For VQ1000

DIN rail mounting bracket VVQ1000-57A

It is used for mounting a manifold on a DIN rail.
The DIN rail mounting bracket is fixed to the manifold end plate. (The specification is the same as that for the option "-D".)
1 set of DIN rail mounting bracket is used for 1 set of manifold (2 DIN rail mounting brackets).



Built-in silencer, Direct exhaust [-S]

This is an exhaust port on a top the manifold end plate.
The built-in silencer exhibits an excellent noise suppression effect. (Silencing effect: 30dB)

Note) A large quantity of drainage generated in the air source results in exhaust of air together with drainage.



● See p.1.10-158 for maintenance.

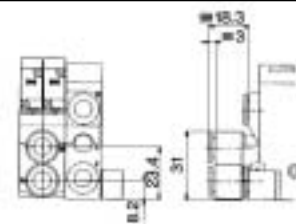
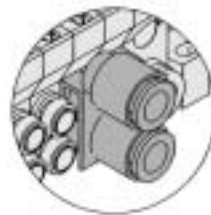


* When ordering assemblies incorporated with a manifold, add suffix "S" to the manifold No.

2 stations matching fitting assembly VVQ1000-52A-C8

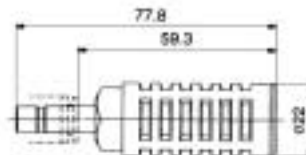
For driving a cylinder with a large bore, valves for two stations are operated to double the flow rate. This ass'y for the cylinder port is used in that case. The ass'y is equipped with one-touch fittings for a $\phi 8$ bore.

* The bore for the manifold no. is "CM." Clearly indicate the 2-station matching fittings ass'y no., and specify the number of stations and positions by means of the manifold specifications.



Silencer (EXH port)

This silencer is to be inserted into the EXH port (One-touch fittings) of the common exhaust.



Dimensions (mm)

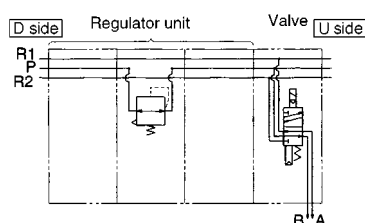
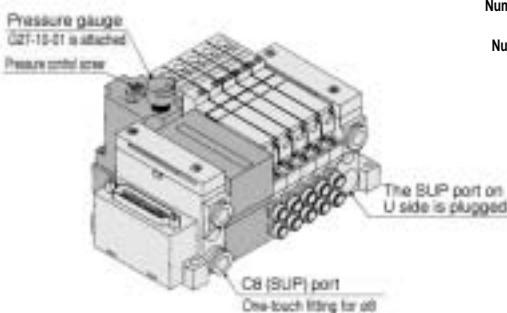
Serie	Fittings size ϕd	Model	A	L	D	Effective area (mm ²)(Cv)	Silencing effect dB
VQ1000	8	AN200-KM8	59.3	77.8	22	20(1.1)	30

Regulator unit VVQ1000-AR-1

The regulator controls the SUP air pressure in a manifold.

Specifications

Max. operating pressure	0.8MPa
Setting pressure range	0.05 to 0.7MPa
Ambient and fluid temperature	5 to 50°
Fluid	Air
Cracking pressure	0.02MPa
Structure	Relieving style

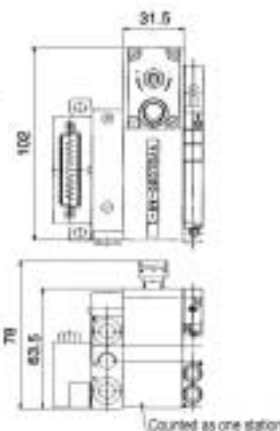


How to Order

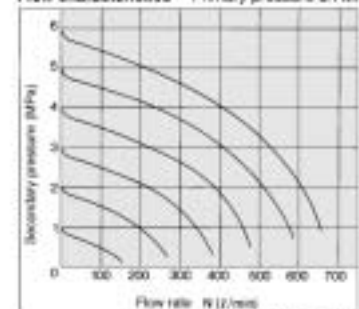
Indicate an option symbol "-G*" for the manifold no. and be sure to specify the mounting position and number of stations by means of the manifold specification form. One unit is counted as one station and occupies a space for three stations, therefore, pay attention to the manifold size. The regulator valve unit, to which no wire is connected, valves can be mounted up to the standard max. number of stations of each kit.

How to Order Manifold VV5Q11-14C6FUO-DG2

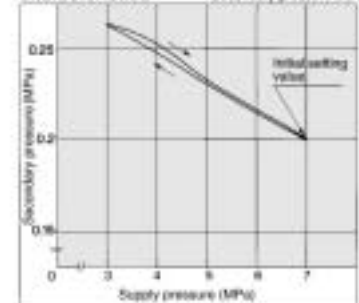
Number of manifold stations
Number of mounted valves (12)
+
Number of regulator units (2)
Number of regulator units (2)
Number of regulator units (2)
(Max. 3 units)
With regulator unit
List option symbols in alphabetical order



Flow characteristics Condition: Primary pressure 0.7MPa



Pressure characteristics Condition: Initial setting: Supply pressure 0.7MPa, Secondary pressure 0.5MPa



⚠ Caution

● Pressure setting

Check the supply pressure and then turn the pressure control screw to set the secondary pressure. Turning the screw clockwise will increase the secondary pressure while turning it counterclockwise decrease the pressure. (Set the pressure by turning the screw in the increase direction.)

● Installation

Since some level of the actuator's operational frequency may lead to a sharp pressure change, pay attention to the pressure gauge durability.

VQ0000

Base Mounted

Plug Lead Unit



How to Order Manifold

VV5Q 05 - 08 C4 F U1 - D

Series
05 VQ0000

Kit
F

Option
D

Stations
01 1 station
: :
: :

The max. number of stations differs from kit to kit. (Refer to the table below)

Cylinder ports

Symbol	Port size
C3	One-touch fitting for ø3.2
C4	One-touch fitting for ø4
M5	M5 thread
CM	Mixed size/with port plug ⁽¹⁾

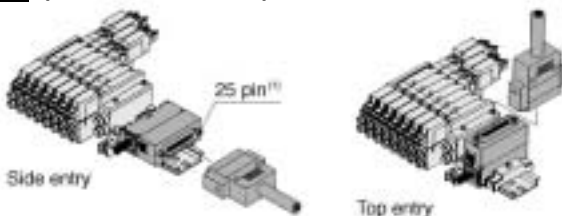
Note 1) Specify "Mixed size/with port plug" by means of manifold specification form.
Note 2) Refer to "Options" on p1.10-198 for One-touch fittings in inch sizes.
Note 3) M5 fittings for M5 thread are attached without being incorporated.

Symbol	Option
-	None
D	DIN rail mounting ⁽²⁾
K	Special wiring specification (Not double wiring) ⁽³⁾
N	With name plate
S	Built-in silencer (Direct exhaust)

Note 1) When specifying more than one option, please list alphabetically. Example)-DNS
Note 2) F, P, S, and T kits for VQ0000 are all equipped with a DIN rail, so include suffix "-D."
Note 3) Specify the wiring specifications by means of the manifold specification form. (Except for C kit.)

Kit/Electrical entry/Cable length

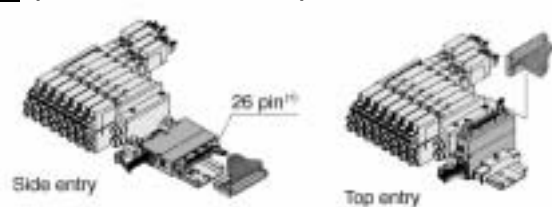
F Kit (D-sub connector)



Connector location					
Top (vertical)	Side (horizontal)				
F	U0	F	S0	Without cable	Max. 16 stations ⁽²⁾
Kit	U1	Kit	S1	With cable (1.5m)	
	U2		S2	With cable (3m)	
	U3		S3	With cable (5m)	

P.1.10-170

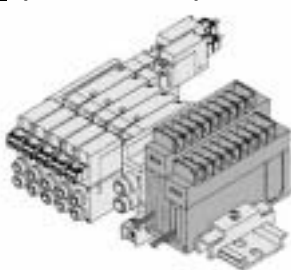
P Kit (Flat cable connector)



Connector location					
Top (vertical)	Side (horizontal)				
P	U0	P	S0	Without cable	Max. 16 stations ⁽²⁾
Kit	U1	Kit	S1	With cable (1.5m)	
	U2		S2	With cable (3m)	
	U3		S3	With cable (5m)	

P.1.10-174

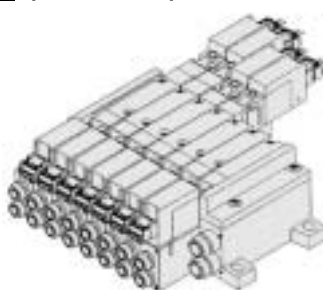
T Kit (Terminal box)



P.1.10-178

T	1	Number of terminals: 8, 1 row	Applicable stations: 1 to 8
Kit	2	Number of terminals: 16, 2 rows	Applicable stations: 5 to 16

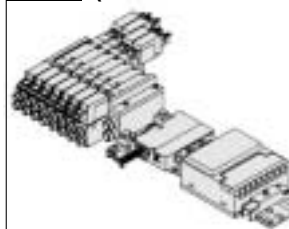
C Kit (Connector)



P.1.10-182

C	Connector	Max. 16 stations
---	-----------	------------------

S Kit (Serial transmission unit)



The valve is equipped with an indicator light and surge voltage suppressor, and the voltage is 24VDC. The dust-proof SI unit is also available. Contact SMC for details.

P.1.10-186

(3)	O	Without SI unit	Max. 16 stations ⁽²⁾
	A	With general type, Series EX300	
	B	SI unit for MELSECNET/mini-S3 Data Link System (Mitsubishi Electric)	
	C	SI unit for SYSBUS Wire System (OMRON)	
	D	SI unit for Satellite I/O Link System (Sharp)	
	F1	SI unit for 16-point Uni-wire System (NKE)	
Kit	H	SI unit for 16-point Uni-wire H System (NKE)	

Note 1) Besides the above, F and P kits with different number of pins are available. Refer to p.1.10-197 for details.

Note 2) Refer to p.1.10-198 for details.

Note 3) Consult SMC for the following transmission kits; Matsushita Electric Works Ltd., Allen-Bradley Co., Sunx, Fuji Electric Company Ltd., OMRON Corp.

How to Order Valve

VQ 0 1 5 0 Y 5 LO

Series
0 VQ0000

Configuration

1	2 position single (A/B) 5 1 3 (R1)(P)(R2)
2	2 position double (A/B) 5 1 3 (R1)(P)(R2)
3	3 position closed center (A/B) 5 1 3 (R1)(P)(R2)
4	3 position exhaust center (A/B) 5 1 3 (R1)(P)(R2)

Body
5 VQ0000

Seal

0	Metal
1	Rubber

Manual override

- Non-locking push style
- B Push-locking slotted style

Electrical entry

G: Grommet (C Kit only) (Except for AC.)	L: L plug connector With lead wire	LO: L plug connector Without connector
	*	*
	M: M plug connector With lead wire	MO: M plug connector Without connector
	*	*

Note 1) LO or MO type valve is used for F, P, T, and S kits. The plug connector and lead wire are attached to the manifold.
Note 2) In cases of L and M type the connector direction is based on the pilot valve.
* With indicator light and surge voltage suppressor.

Pilot valve

Symbol	Specification	DC	AC
—	Standard	(1.0W) ○	○ ⁽¹⁾
H	High pressure	(1.5W) ○	—
Y	Low wattage	(0.5W) ○	—

Note 1) Refer to p1.10-168 for AC.

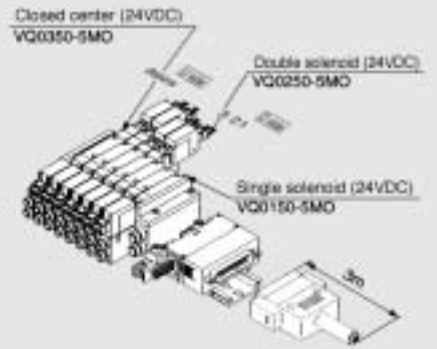
Coil voltage

1	100V AC (50/60Hz)
2	200V AC (50/60Hz)
3	110V AC (50/60Hz)
4	220V AC (50/60Hz)
5	24V DC
6	12V DC

Note) The C kit is applicable to 200/220V AC.
Contact SMC for other kits.

How to Order Manifold Ass'y (Example)

Ordering example



VV5Q05-07C4FS2-D... 1 set (F kit 7 station manifold base No.)
* VQ0150-5MO ... 3 set (Single solenoid No.)
* VQ0250-5MO ... 2 set (Double solenoid No.)
* VQ0350-5MO ... 2 set (3 position solenoid No.)

The "*" mark is an assembling mark. Prefix with "*" to parts nos. of solenoid valves, etc.

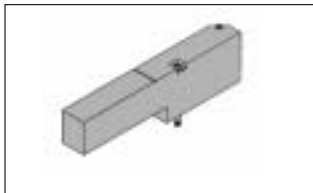
Specify valve and option nos. below the manifold base no.
When arrangement is complicated, specify the nos. by using a manifold specification form.

Note 1) Refer to "Options" on p.1.10-198 for negative COM specifications.
Note 2) F, P, T and S kits requires connector ass'y when increasing valve stations. Refer to "Options" on p1.10-198 for parts nos.

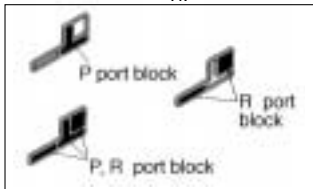
Manifold Options

P.1.10-196

Blank plate assembly VVQ0000-10A-5



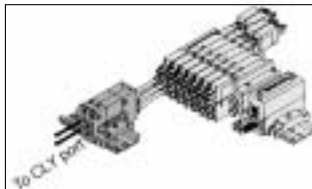
SUP/EXH block plate VVQ0000-16A-5- P R PR



Name plate [-N*] VVQ0000-N5-Station (1 to Max. stations)



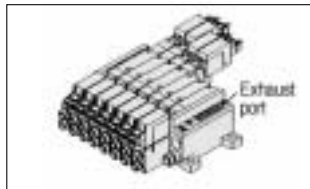
Double check block VQ1000-FPG-□□



DIN rail mounting bracket [-D] VVQ0000-57A-5



Built-in silencer, Direct exhaust [-S]



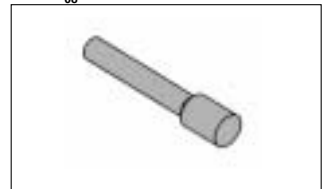
Individual SUP spacer VVQ0000-P-5-C4



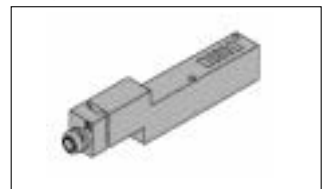
Silencer AN103-X233



Blank plug KQP- 23 04 06 X19



Individual EXH spacer VVQ0000-R-5-C4



- Refer to p.1.10-195 for cylinder port fittings.
- Refer to p1.10-213 for replacement parts.

SY
SYJ
SX
VK
VZ
VF
VFR
VP7
VP4

VQ
VQ4
VQZ
VQD
VZS
VFS
VS
VS7

VQ1000

Base Mounted

Plug Lead Unit



How to Order Manifold

VV5Q 12 - 08 C6 F U1 - D

Series
12 VQ1000

Stations
01 1 station
⋮ ⋮
The max. number of stations differs from kit to kit. (Refer to the table below)

Cylinder ports

Symbol	Port size
C3	One-touch fitting for ø3.2
C4	One-touch fitting for ø4
C6	One-touch fitting for ø6
M5	M5 thread
CM	Mixed size/with port plug
L3	Elbow One-touch fitting ø3.2 for top piping
L4	Elbow One-touch fitting ø4 for top piping
L6	Elbow One-touch fitting ø6 for top piping
L5	Elbow M5 thread for top piping
B3	Elbow One-touch fitting ø3.2 for bottom piping
B4	Elbow One-touch fitting ø4 for bottom piping
B6	Elbow One-touch fitting ø6 for bottom piping
B5	Elbow M5 thread for bottom piping
LM	Mixed size for elbow piping

Kit

Option

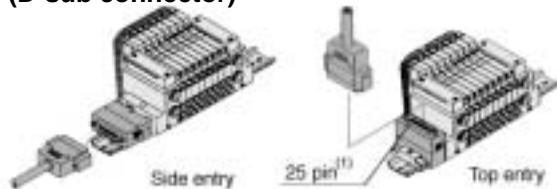
Symbol	Option
—	None
B	Check valve for prevention of back pressure
D	DIN rail mounting ⁽³⁾
K	Special wiring specification (Not double wiring) ⁽⁴⁾
N	With name plate
S	Built-in silencer (Direct exhaust)

Note 1) Specify "Mixed size/with port plug" by means of manifold specification form.
Note 2) Refer to "Options" on p.1.10-198 for One-touch fittings in inch sizes.
Note 3) M5 fittings for M5 thread are attached without being incorporated.

Note 1) If specifying more than one option, please list alphabetically.
Example) -BNS
Note 2) Models with a suffix "-B" have check valves for prevention of back pressure at all manifold stations. If not all stations need this check valve, specify the stations where check valves are installed by manifold specification form.
Note 3) Manifolds are all equipped with a DIN rail, so indicate suffix "D".
Note 4) Specify the wiring by means of the manifold specification form. (Except for C kit)

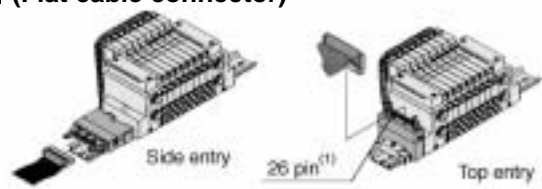
Kit/Electrical entry/Cable length

F Kit (D-sub connector)



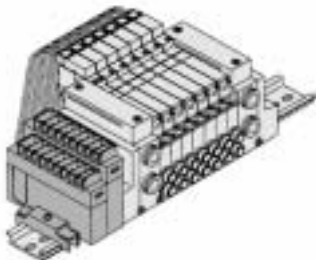
Connector location					
Top (vertical)	Side (horizontal)				
F Kit	U0	F Kit	S0	Without cable	Max. 16 stations ⁽²⁾
	U1		S1	With cable (1.5m)	
	U2		S2	With cable (3m)	
	U3		S3	With cable (5m)	

P Kit (Flat cable connector)



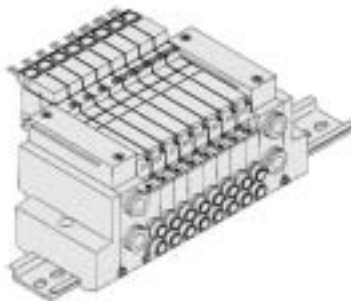
Connector location					
Top (vertical)	Side (horizontal)				
P Kit	U0	P Kit	S0	Without cable	Max. 16 stations ⁽²⁾
	U1		S1	With cable (1.5m)	
	U2		S2	With cable (3m)	
	U3		S3	With cable (5m)	

T Kit (Terminal block)



P.1.10-178

C Kit (Connector)



P.1.10-182

S Kit (Serial transmission unit)



The valve is equipped with an indicator light and surge voltage suppressor, and the voltage is 24VDC. The dust-proof type SI unit is also available. Refer to p.1.10-186 for details.

P.1.10-186

T Kit	1	Number of terminals: 8, 1row	Applicable stations: 1 to 4
	2	Number of terminals: 16, 2rows	Applicable stations: 5 to 8 ⁽²⁾

C	Connector	Max. 16 stations
---	-----------	------------------

S Kit	O	Without SI unit	Max. 16 stations ⁽²⁾
	A	With general style, Series EX300	
	B	SI unit for MELSECNET/mini-S3 Data Link System (Mitsubishi Electric)	
	C	SI unit for SYSBUS Wire System (OMRON)	
	D	SI unit for Satellite I/O Link System (Sharp)	
	E	SI unit for MEWNET/F System (Matsushita Electric Works Ltd.)	
	F1	SI unit for 16 point Uni-wire System (NKE)	
	G	SI unit for Remote I/O (RIO) System (Allen-Bradley Co.)	
	H	SI unit for 16 point Uni-wire H System (NKE.)	
	J1	SI unit for 16 point S-LINK System (Sunx)	
	J2	SI unit for 8 point S-LINK System (Sunx)	Max. 8
	K	SI unit for T-LINK Mini System (Fuji Electric)	Max. 16 stations
	Q	SI unit for Device Net and Compo Bus/D (OMRON)	
	R1	SI unit for 16 point Compo Bus/S (OMRON)	
	R2	SI unit for 8 point Compo Bus/S (OMRON)	
	V	SI unit for CC-LINK (Mitsubishi Electric)	Max. 16

Note 1) Besides the above, F and P kits with different number of pins are available. Refer to p.1.1-197 for details.
Note 2) Refer to p.1.10-196 for details.

How to Order Valve

VQ 1 1 1 0 Y 5 LO

Series
1 VQ1000

Configuration

1	2 position single (A/B) (R1)(P/R2)
2	2 position double (A/B) (R1)(P/R2)
3	3 position closed center (A/B) (R1)(P/R2)
4	3 position exhaust center (A/B) (R1)(P/R2)
5	3 position pressure center (A/B) (R1)(P/R2)

Body
1 VQ1000

Seal
0 Metal
1 Rubber

Manual override
— Non-locking push style
B Push-locking slotted style
C Push-locking lever style

Electrical entry
L: L plug connector with lead wire
LO: L plug connector without connector
With indicator light and voltage suppressor

Pilot valve

Symbol	Specification	DC
—	Standard	(1.0W) ○
H	High pressure	(1.5W) ○
Y	Low wattage	(0.5W) ○

Coil voltage

	24V DC	12V DC
5		
6		

Note) LO type valve is used for F, P, T, and S kits. The plug connector and lead wire are attached to the manifold.

Note) Refer to p.1.10-168 for AC type.

Note 1) Refer to "Options" on p.1.10-198 for negative COM specifications.

Note 2) F, P, T and S kits requires connector ass'y when increasing valve stations. Refer to "Options" on p.1.10-198 for parts nos.

How to Order Valve Manifold Ass'y (Example)

Ordering example

Single solenoid (24V DC) VQ1110-5LO
Double solenoid (24VDC) VQ1210-5LO

D-sub connector cable VVZ53000-21A-2
F kit (D-sub connector)

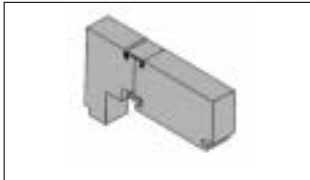
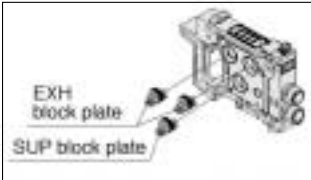
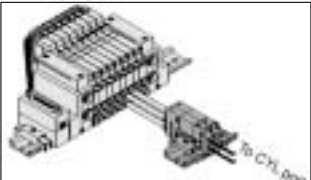
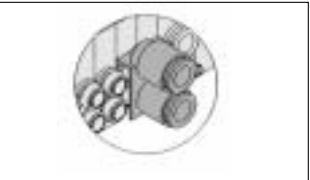
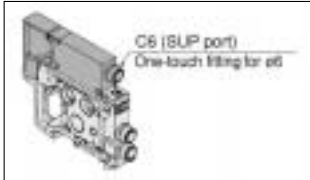

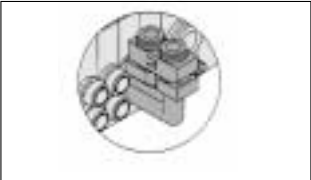
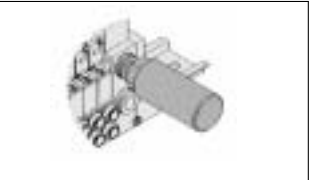
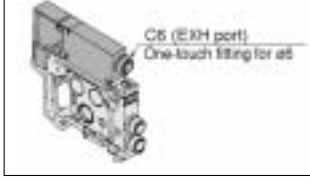

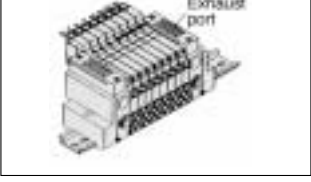
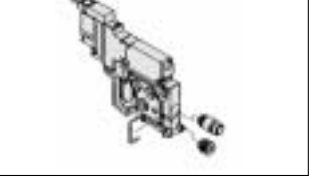

Cylinder port C6 With One-touch fitting for all
Manifold base (8 stations) VV5Q12-08C6FU2-D

VV5Q12-08C6FU2-D · 1 set (F kit 8 station manifold base No.)
***VQ1110-5LO ····· 4 sets (Single solenoid No.)**
***VQ1210-5LO ····· 4 sets (Double solenoid No.)**

The "*" mark is an assembling mark. Prefix "*" to parts nos. of solenoid valves, etc.

Specify valve and option nos. below the manifold base no.
When arrangement is complicated, specify the nos. by using a manifold specification form.

Manifold Options

Blank plate assembly VVQ1000-10A-1	SUP/EXH block plate VVQ1000-16A-2	Double check block VVQ1000-FPG-□□	2 stations matching fitting assembly VVQ1000-52A-C8
			
Individual SUP spacer VVQ1000-P-1-C6	Check valve for prevention of back pressure assembly [-B] VVQ1000-18A	Elbow fitting assembly VVQ1000-F-L	Silencer AN200-KM8
			
Individual EXH spacer VVQ1000-R-1-C6	Name plate [-N*] VVQ1000-N2-Station (1 to Max. stations)	Built-in silencer, Direct exhaust [-S]	Port plug VVQ0000-58A
			
Blank plug KQP-23-08-X19			

●Refer to p.1.10-195 for cylinder port fittings.
●Refer to p.1.10-215 for replaceable parts.

VQ0000/1000 Base Mounted Plug Lead Unit



Model

Series	Configuration	Model	Effective area (mm ²) (Cv)	Response time (ms) ⁽²⁾		Weight (g)
				Standard: 1W H: 1.5W	Low wattage AC ⁽³⁾	
VQ0000	2 position	Single	Metal seal VQ0150	2.7 (0.15)	12 or less	36
			Rubber seal VQ0151	3.6 (0.2)	15 or less	
		Double	Metal seal VQ0250	2.7 (0.15)	10 or less	50
			Rubber seal VQ0251	3.6 (0.2)	15 or less	
	3 position	Closed center	Metal seal VQ0350	2.0 (0.11)	20 or less	50
			Rubber seal VQ0351	2.7 (0.15)	25 or less	
		Exhaust center	Metal seal VQ0450	2.0 (0.11)	20 or less	50
			Rubber seal VQ0451	2.7 (0.15)	25 or less	
VQ1000	2 position	Single	Metal seal VQ1110	3.6 (0.2)	12 or less	64
			Rubber seal VQ1111	5.4 (0.3)	15 or less	
		Double	Metal seal VQ1210	3.6 (0.2)	10 or less	78
			Rubber seal VQ1211	5.4 (0.3)	15 or less	
	3 position	Closed center	Metal seal VQ1310	3.6 (0.2)	20 or less	78
			Rubber seal VQ1311	5.4 (0.3)	25 or less	
		Exhaust center	Metal seal VQ1410	3.6 (0.2)	20 or less	78
			Rubber seal VQ1411	5.4 (0.3)	25 or less	
		Pressure center	Metal seal VQ1510	3.6 (0.2)	20 or less	78
			Rubber seal VQ1511	5.4 (0.3)	25 or less	

JIS Symbol

2 position single



2 position double



3 position closed center



3 position exhaust center



3 position pressure center



Note 1) Cylinder port size C4: (VQ0000), C6: (VQ1000) without check valve option for prevention of back pressure.

Note 2) As per JISB8375-1981 (supply pressure; 0.5 MPa; with indicator light and surge voltage suppressor; clean air) The response time is subject to the pressure and quality of the air. The values at the time of ON are given for double styles.

Note 3) AC type is only for VQ0000.

Standard Specifications

Valve	Seal	Metal seal	Rubber seal
	Fluid	Air/Inert gas	Air/Inert gas
	Max. operating pressure	0.7MPa(High pressure type: 0.8MPa)	
	Min. operating pressure	Single	0.1MPa
		Double	0.1MPa
		3 position	0.1MPa
	Ambient and fluid temperature	-10 to +50°C ⁽¹⁾	
	Lubrication	Not required	
	Manual override	Non-locking push style/Push-locking slotted or lever style (Option)	
	Impact/Vibration resistance ⁽²⁾	150/30m/s ²	
Solenoid	Protection structure	Dust proof	
	Coil rated voltage	12, 24V DC, 100, 110, 200, 220V AC (50/60Hz)	
	Allowable voltage	±10% of rated voltage	
	Coil insulation	Class B or equivalent	
	Power consumption (Current value)	24V DC	1W DC (42mA), 1.5W DC (63mA), ⁽³⁾ 0.5W DC (21mA), ⁽⁴⁾
		12V DC	1W DC (83mA), 1.5W DC (125mA), ⁽³⁾ 0.5W DC (42mA), ⁽⁴⁾
		100V AC ⁽⁵⁾	Inrush 0.5VA (5mA), Holding 0.5VA (5mA)
		110V AC ⁽⁵⁾	Inrush 0.55VA (5mA), Holding 0.55VA (5mA)
		200V AC ⁽⁵⁾	Inrush 1.0VA (5mA), Holding 1.0VA (5mA)
		220V AC ⁽⁵⁾	Inrush 1.1VA (5mA), Holding 1.1VA (5mA)



Note 1) Use dry air to prevent dew condensation when operating at low temperature.

Note 2) Impact resistance: No malfunction resulted from the impact test using a drop impact tester.

The test was performed on the axis and right angle directions of the main valve and armature, for both energized and de-energized states.

Vibration resistance: No malfunction occurred in a one-sweep test between 8.3 and 2,000 Hz.

Test was performed at both energize and de-energized states to the axis and right angle directions of the main valve and armature. (Value in the initial stage.)

Note 3) Value for high pressure type (1.5W)

Note 4) Value for low pressure type (0.5W)

Note 5) AC type is available only on VQ0000.

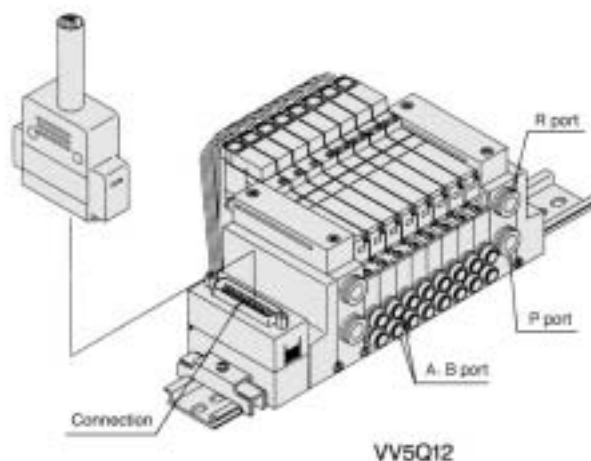
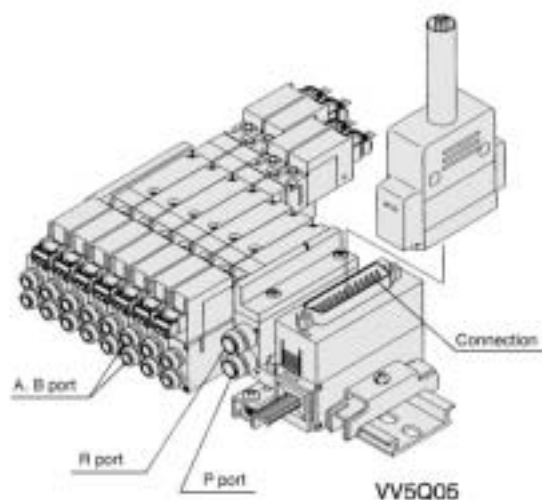
Manifold Specifications

Series	Base model	Electrical connection	Porting specifications			Applicable stations ⁽²⁾	Applicable solenoid valve	5 station weight (g)
			Port location	Port size ⁽¹⁾				
				P, R	A, B			
VQ0000	VV5Q05-□□□	■F kit: D-sub connector ■P kit: Flat cable connector ■T kit: Terminal block ■C kit: Individual connector ■S kit: Serial transmission unit	Side	C6 (ø6) Option: built-in silencer (Direct exhaust)	C3 (ø3.2) C4 (ø4) M5(M5 thread)	1 to 16 stations	VQ0□50 VQ0□51	330 (Single) 400 (Double, 3-position)
VQ1000	VV5Q12-□□□	■F kit: D-sub connector ■P kit: Flat cable connector ■T kit: Terminal block ■C kit: Individual connector ■S kit: Serial transmission unit	Side	C8 (ø8) Option: built-in silencer (Direct exhaust)	C3 (ø3.2) C4 (ø4) C6 (ø6) M5 (M5 therad)	1 to 16 stations	VQ1□10 VQ1□11	818 (Single) 885 (Double, 3-position)



Note 1) One-touch fittings in inch sizes are also available. Refer to p.1.10-198 for details.

Note 2) Refer to p1.10-198 for details.



SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

VFS

VS

VS7

F

VQ0000/1000

Kit(D-sub Connector)

VV5Q05

VV5Q12

- The D-sub connector reduces installation labor for electrical connection.
- The D-sub connector (25 pin std., 15 pin option) conforms with MIL permitting use of commercial connectors with wide interchangeability.
- Top or side connector receptacle position can be selected in accordance with the available mounting space.
- Max.16 stations.

Manifold Specifications

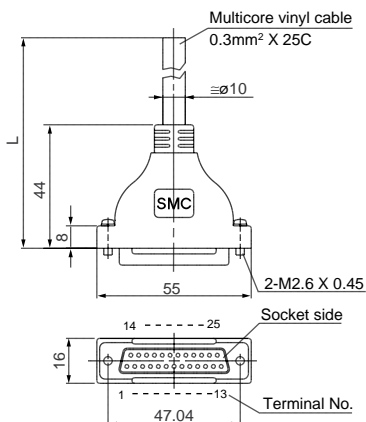
Series	Port location	Porting specifications		Applicable stations
		P, R	A, B	
VQ0000	Side	C6	C3, C4, M5	Max.16
VQ1000	Side	C8	C3, C4, C6, M5	Max.16

D-sub connector (25 pin)

AXT100-DS25-
015
030
050

Cable Assembly●

(The D-sub connector cable ass'y can be ordered individually or included in a specific manifold model No. Refer to "How to Order Manifold".)



D-sub connector cable assembly (Option)

Cable length (L)	Ass'y No	Note
1.5m	AXT100-DS25-015	Cable 25 core X 24AWG
3m	AXT100-DS25-030	
5m	AXT100-DS25-050	

* For other commercial connectors, use a 25-pin female connector made in conformity with MIL-C-24308.

Electric characteristics

Item	Characteristic
Conductor resistance Ω/km , 20°C	65 or less
Voltage limit V, 1min, AC	1000
Insulation resistance $M\Omega/\text{km}$, 20°C	5 or more

Note) The min. bending radius of D-sub cable assembly is 20mm.

Wire color table by terminal number of D-sub connector cable ass'y:

Terminal No.	Wire color	Dot marking
1	Black	—
2	Brown	—
3	Red	—
4	Orange	—
5	Yellow	—
6	Pink	—
7	Blue	—
8	Violet	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	Violet	—
18	Gray	—
19	Orange	Black
20	Red	White
21	Brown	White
22	Pink	Red
23	Gray	Red
24	Black	White
25	White	—



Note) Types with 15 pin are also available. See p.1.10-197 for details.

How to Order Manifold

VV5Q 12-08 C6 F U 1-D

Series/Manifold		
05	VQ0000	Plug lead unit
12	VQ1000	

Connector location	
U	Top (vertical)
S	Side (horizontal)

Cable (length)	
0	Without cable
1	With cable (1.5m)
2	With cable (3m)
3	With cable (5m)

Stations	
01	1 station
⋮	⋮
08	8 stations ⁽¹⁾



Note 1) As option, the maximum number of stations can be increased by special wiring specifications. Refer to p.1.10-198 for details.

Cylinder ports			
Symbol	Port size	VQ0000	VQ1000
C3	One-touch fitting for $\phi 3.2$	●	●
C4	One-touch fitting for $\phi 4$	●	●
C6	One-touch fitting for $\phi 6$	●	●
M5	M5 thread	●	●
CM	Mixed size/with port plug	●	●



Note 1) Specify "Mixed size/with port plug" by means of manifold specification form.
Note 2) Refer to "Options" on p.1.10-198 for One-touch fittings in inch sizes.

Option

Symbol	Option	VQ0000	VQ1000
B	Check valve for prevention of back perss.		● ⁽²⁾
D	DIN rail mounting	●	● ⁽³⁾
K	Special wiring specification (Not double wiring)	●	● ⁽⁴⁾
N	With name plate	●	●
S	Built-in silencer (Direct exhaust)	●	●

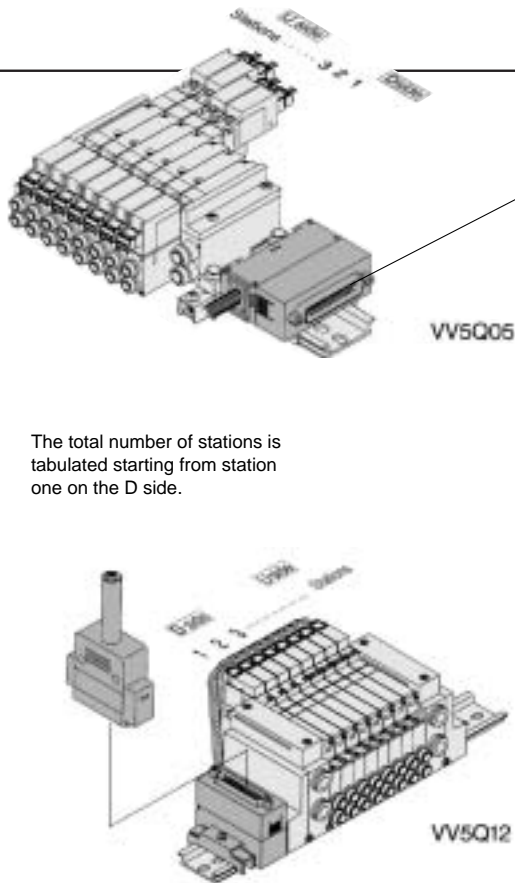


Note 1) If specifying more than one option, please list alphabetically.
Example) -BNS

Note 2) Models with a suffix "-B" have check valves for prevention of back pressure at all manifold stations. If not all stations need this check valve, specify the stations where check valves are installed by using a manifold specification form.

Note 3) F kit of VQ0000 and all of VQ1000 are equipped with a DIN rail, so indicate suffix "D".

Note 4) Specify the wiring by means of the manifold specification form.



The total number of stations is tabulated starting from station one on the D side.

Electrical Wiring Specifications

D-sub cable ass'y
(AXT100-DS25-030-050)
wire color table

D-sub connector

Terminal No. Polarity Lead wire color Dot marking

1 station	SOL.A	1	(-)	(+)	Black	—
	SOL.B	14	(-)	(+)	Yellow	Black
2 stations	SOL.A	2	(-)	(+)	Brown	—
	SOL.B	15	(-)	(+)	Pink	Black
3 stations	SOL.A	3	(-)	(+)	Red	—
	SOL.B	16	(-)	(+)	Blue	White
4 stations	SOL.A	4	(-)	(+)	Orange	—
	SOL.B	17	(-)	(+)	Purple	—
	SOL.A	5	(-)	(+)	Yellow	—
5 stations	SOL.B	18	(-)	(+)	Gray	—
	SOL.A	6	(-)	(+)	Pink	—
6 stations	SOL.B	19	(-)	(+)	Orange	Black
	SOL.A	7	(-)	(+)	Blue	—
7 stations	SOL.B	20	(-)	(+)	Red	White
	SOL.A	8	(-)	(+)	Purple	White
8 stations	SOL.B	21	(-)	(+)	Brown	White
	COM.	13	(+)	(-) ⁽¹⁾	Orange	Red

Positive
COM

Negative
COM

Connector terminal No.

Irrespective of the valves or options, the internal wiring is made double (connected to SOL. A and SOL. B) for respective stations of the manifold. The optional specification permits mixture of single and double wiring.

See p.1.10-198 for details.

Note 1) Use negative COM valves for negative COM specification manifolds.
(See p.1.10-198)

How to Order Valve

VQ 1 1 1 0 Y 5 LO									
Series		Configuration		Body		Seal		Manual override	
0	VQ0000	1	2 position single	5	VQ0000	0	Metal	—	Non-locking push style
1	VQ1000	2	2 position double	1	VQ1000	1	Rubber	B	Push-locking slotted style
		3	3 position closed center					C	Push-locking lever style ⁽¹⁾
		4	3 position exhaust center						Note 1) VQ1000 only.
		5	3 position pressure center (VQ1000 only)						
Electrical entry		Coil voltage		Pilot valve					
LO	L plug connector without connector	1	100V AC (50/60Hz)	Symbol	Specification	DC	AC		
MO	M plug connector without connector	3	110V AC (50/60Hz)	—	Standard	(1.0W) ○	○ ⁽¹⁾		
		5	24V DC	H	High pressure	(1.5W) ○	—		
		6	12V DC	Y	Low wattage	(0.5W) ○	—		

Note) Plug connector and lead wire are attached to the manifold.

Note 1) Refer to p.1.10-168 for AC.

How to Order Manifold Ass'y

Specify valve and option Nos. below the manifold base no.

(Example)

D-sub connector kit with 3m cable

VV5Q12-08C6FU2-D-1 set-Manifold base No.

* VQ1110-5LO.....4 sets-Valve No. (Stations 1 to 4)

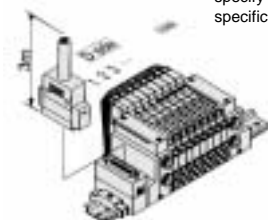
* VQ1210-5LO.....4 sets-Valve No. (Stations 5 to 8)

* VQ1310-5LO.....2 sets-Valve No. (Stations 7 to 8)

* VVQ1000-10A-1.....1 set-Blank plate No. (Station 9)

Add prefix "*" to parts nos. of the solenoid valves, etc.

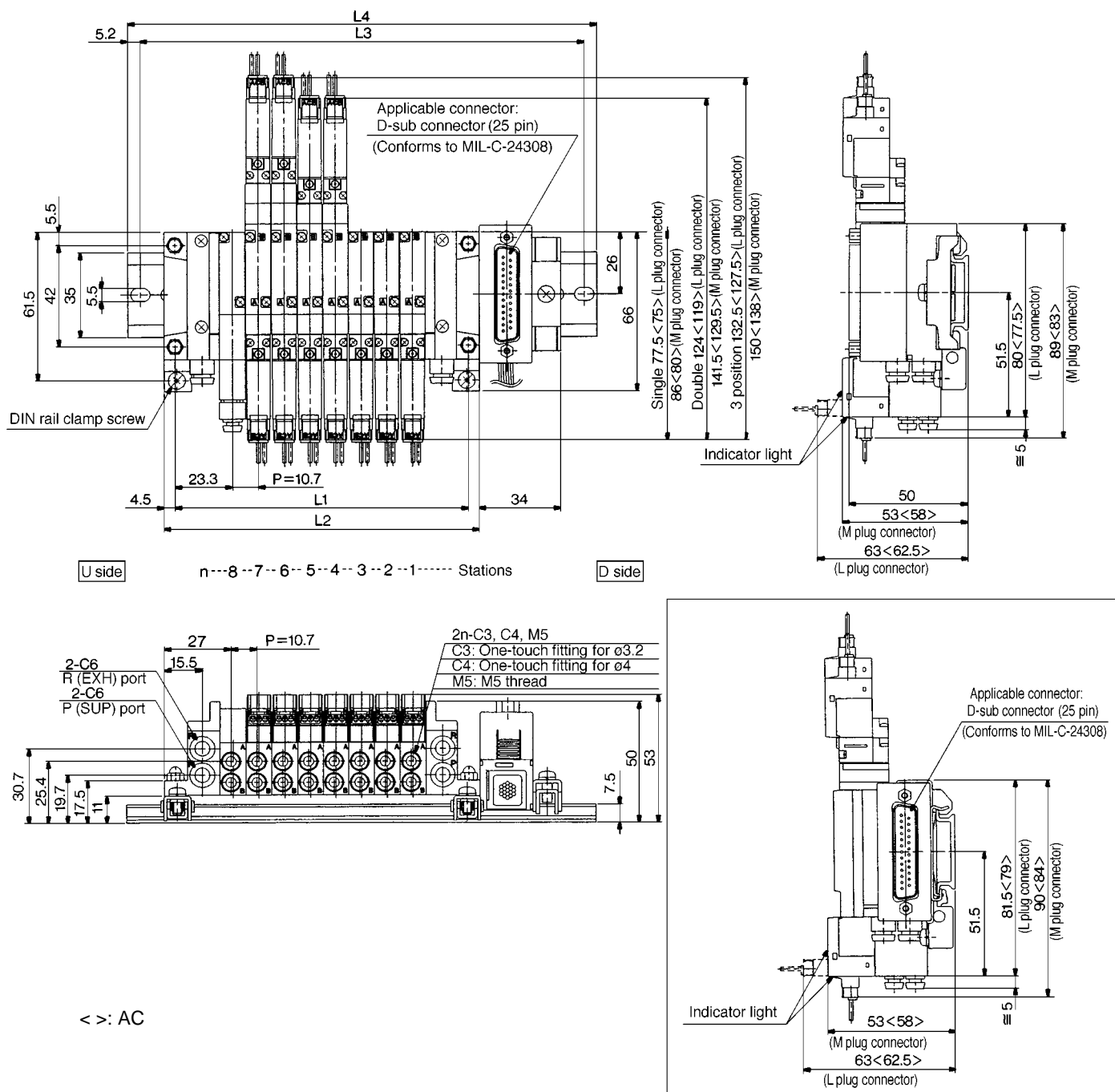
Write sequentially from the 1st station on the D side. When part nos. written collectively are complicated, specify by using a manifold specification form.



Note 1) Refer to "Options" on p.1.10-198 for negative COM specifications.
Note 2) F kit requires connector ass'y when increasing valve stations. Refer to "Options" on p.1.10-198 for part No.

Note 1) Refer to p.1.10-168 for AC.

VQ0000



- Manifold
 - F kit (Top entry connector)
 - SV5Q05M, #1
 - F kit (Side entry connector)
 - SV5Q05M, #2
- Valve
 - 2 position single ...SV5Q12V, #7
 - 2 position double ...SV5Q12V, #8
 - 3 position ...SV5Q12V, #8

Dimensions/Top entry connector [-FU] (mm)

Equation $L1=10.7n+36$, $L2=10.7n+45$ n: Station (Max. 16)

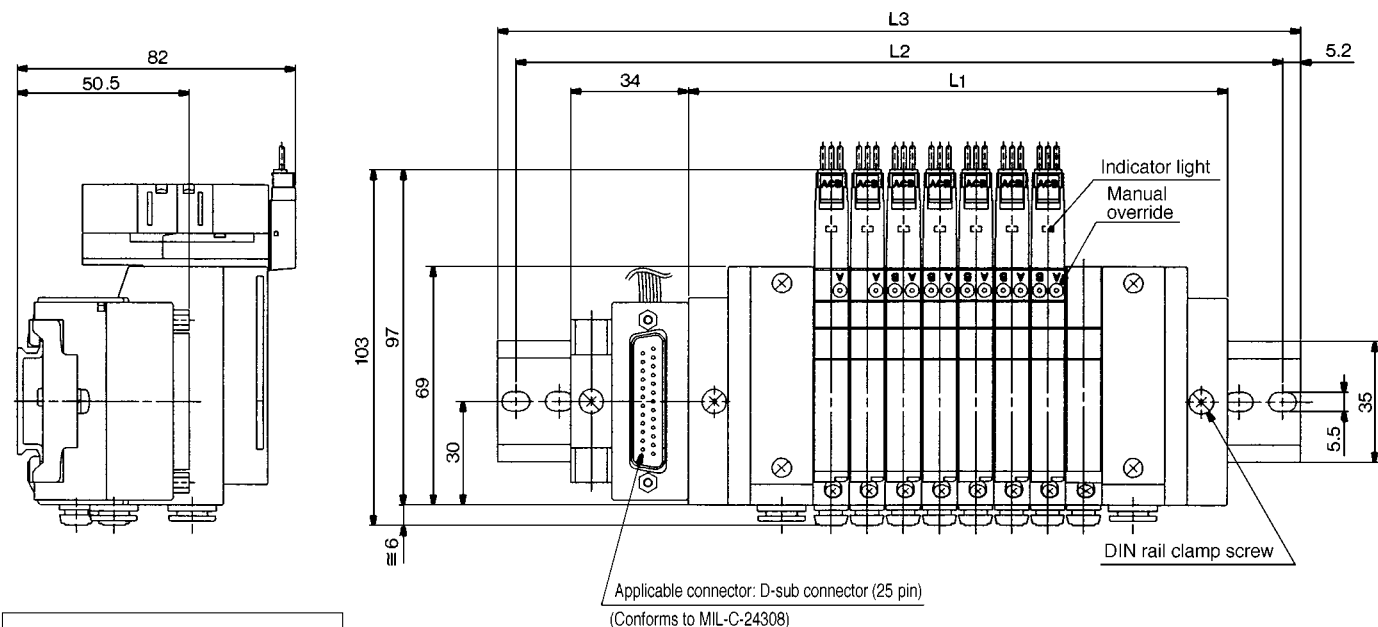
L	n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1		46.5	57.4	68.1	78.8	89.5	100.2	110.9	121.6	132.3	143	153.7	164.4	175.1	185.8	196.5	207.2
L2		55.7	66.4	77.1	87.8	98.5	109.2	119.9	130.6	141.3	152	162.7	173.4	184.1	194.8	205.5	216.2
L3		112.5	125	137.5	150	162.5	175	187.5	200	212.5	225	237.5	250	260.5	270.5	280.5	290.5
L4		123	135.5	148	160.5	173	185.5	198	210.5	223	235.5	248	260.5	273	285.5	298	310.5

Dimensions/Side entry connector [-FS] (mm)

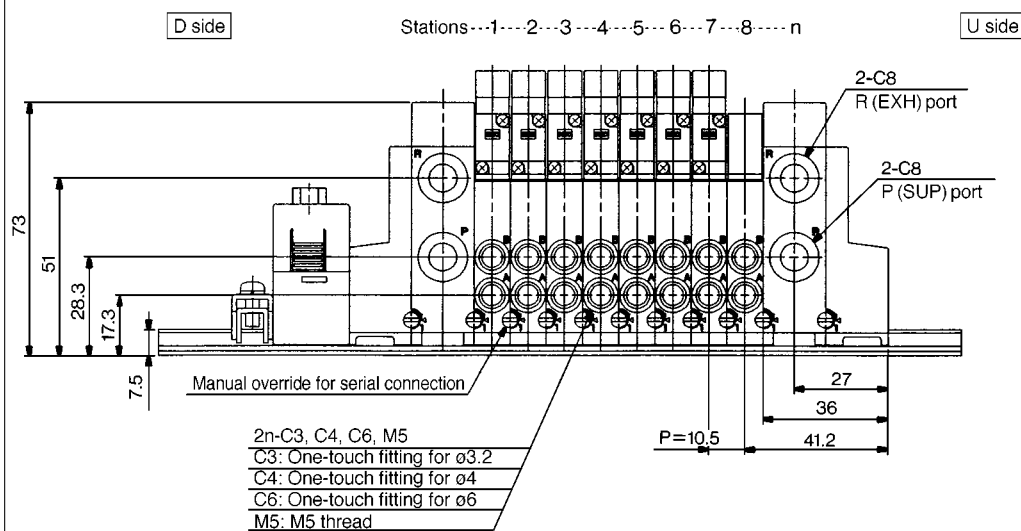
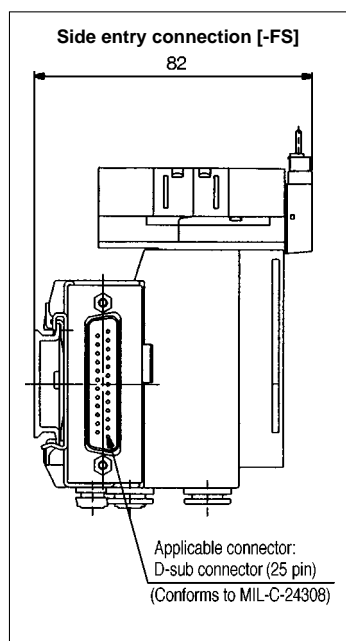
L	n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L3		137.5	150	162.5	175	187.5	200	212.5	225	237.5	250	262.5	275	287.5	300		
L4		148	160.5	173	185.5	198	210.5	223	235.5	248	260.5	273	285.5	298	310.5		



VQ1000



SY
SYJ
SX
VK
VZ
VF
VFR
VP7
VP4



VQ
VQ4
VQZ
VQD
VZS
VFS
VS
VS7

Dimensions/Top entry connector [-FU] (mm)

Equation $L1=10.5n+72$ n: Station (Standrad max. 16)

L \ n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	82.5	93	103.5	114	124.5	135	145.5	156	166.5	177	187.5	198	208.5	219	229.5	240
L2	137.5	150	162.5	175	187.5	200	200	212.5	225	237.5	250	262.5	262.5	275	287.5	300
L3	148	160.5	173	185.5	198	210.5	210.5	223	235.5	248	260.5	273	273	285.5	298	310.5

Dimensions/Side entry connector [-FS] (mm)

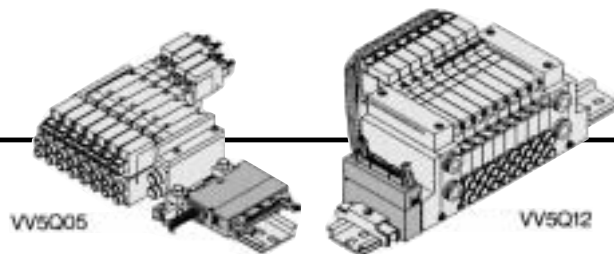
L \ n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L2	162.5	175	187.5	187.5	200	212.5	225	237.5	250	250	262.5	275	287.5	300	312.5	312.5
L3	173	185.5	198	198	210.5	223	235.5	248	260.5	260.5	273	285.5	298	310.5	323	323



- Manifold
- F kit (Top entry connector) ...SV5Q12M, #1
- F kit (Side entry connector) ...SV5Q12M, #2
- Valve
- 2 position single ...SV5Q12V, #7
- 2 position double ...SV5Q12V, #8
- 3 position ...SV5Q12V, #8

P VQ0000/1000

Kit (Flat Cable Connector)



- MIL flat cable connector reduces installation labor for electrical connection.
- The connector (26 pin; 10, 16, and 20 pin option) conforms with MIL spec. permitting use of widely interchangeable commercial connectors.
- Top or side receptacle position can be selected in accordance with the available mounting space.
- Max.16 stations.

Flat cable (26 pin)

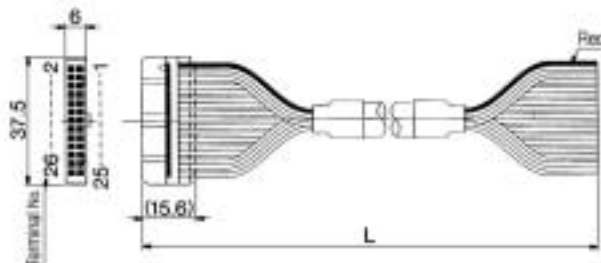
Manifold Specifications

Series	Port location	Porting specifications		Applicable stations
		P, R	A, B	
VQ0000	Side	C6	C3, C4, M5	Max.8
VQ1000	Side	C8	C3, C4, C6, M5	Max.8

Cable Assembly ●

AXT100-FC26-1 to 3

(Flat cable connector ass'y can be ordered individually or included in a specific manifold model no. Refer to "How to Order Manifold".)



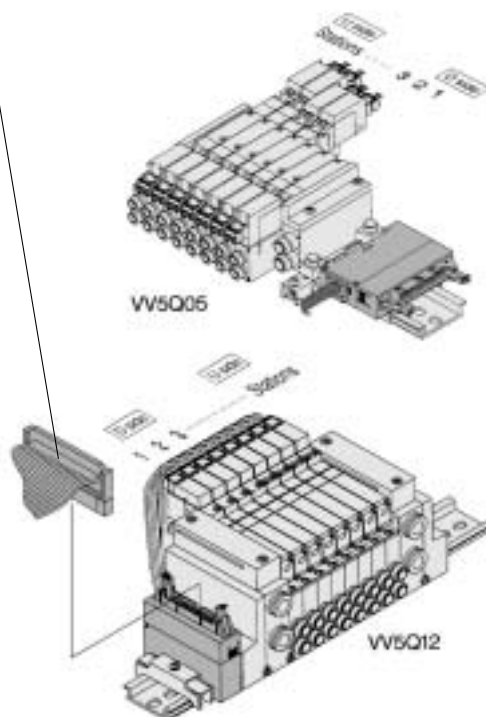
Flat cable connector assembly (Option)

Cable length (L)	Ass'y No.	Note
1.5m	AXT100-FC26-1	Cable 26 core X 28AWG
3m	AXT100-FC26-2	
5m	AXT100-FC26-3	

* For other commercial connectors, use a 26 pin type with strain relief made in conformity with MIL-C-83503.



Note) Types with 10, 16, or 20 pin are also available. See p.1.10-197 for details.



The total number of stations is tabulated starting from one on the D side.

How to Order Manifold

VV5Q 12 08 C6 P U 1 D

Series/Manifold

Symbol	Option	VQ0000	VQ1000
05	VQ0000	●	●
12	VQ1000	●	●

Stations

Symbol	Option	VQ0000	VQ1000
01	1 station	●	●
16	16 stations (1)	●	●



Note 1) As option, the maximum number of stations can be increased by special wiring specifications. Refer to p.1.10-198 for details.

Connector location

Symbol	Option	VQ0000	VQ1000
U	Top (vertical)	●	●
S	Side (horizontal)	●	●

Cylinder ports

Symbol	Port size	VQ0000	VQ1000
C3	One-touch fittings for ø3.2	●	●
C4	One-touch fittings for ø4	●	●
C6	One-touch fittings for ø6	●	●
M5	M5 thread	●	●
CM	Mixed size/with port plug	●	●



Note 1) Specify "Mixed size/with port plug" by means of manifold specification form.
Note 2) Refer to "Options" on p.1.10-198 for One-touch fittings in inch sizes.

Cable (length)

Symbol	Option	VQ0000	VQ1000
0	Without cable	●	●
1	With cable (1.5m)	●	●
2	With cable (3m)	●	●
3	With cable (5m)	●	●

Option

Symbol	Option	VQ0000	VQ1000
B	Check valve for prevention of back press.	●	● (2)
D	DIN rail mounting	●	● (3)
K	Special wiring specification (Not double wiring)	●	● (4)
N	With name plate	●	●
S	Built-in silencer (direct exhaust)	●	●



Note 1) If specifying more than one option, please list alphabetically. Example) -BNS
Note 2) Models with a suffix "B" have check valves for prevention of back pressure at all manifold stations. If not all stations need this check valve, specify the stations where check valves are installed by using a manifold specification form.
Note 3) P kit of VQ0000 and all of VQ1000 are equipped with a DIN rail, so indicate suffix "D".
Note 4) Specify the wiring by means of the manifold specification form.

Electrical Wiring Specifications

Flat cable connector

Terminal No.	Polarity
SOL.A 1	(-)
SOL.B 2	(+)
SOL.A 3	(-)
SOL.B 4	(+)
SOL.A 5	(-)
SOL.B 6	(+)
SOL.A 7	(-)
SOL.B 8	(+)
SOL.A 9	(-)
SOL.B 10	(+)
SOL.A 11	(-)
SOL.B 12	(+)
SOL.A 13	(-)
SOL.B 14	(+)
SOL.A 15	(-)
SOL.B 16	(+)
COM. 25	(+)
COM. 26	(-)

Electrical wiring specifications

Irrespective of the valves or options, the internal wiring is made double (connected to SOL.A and SOL.B) for respective stations of the manifold. The optional specification permits mixture of single and double wiring. See p.1.10-198 for details.

Note 1) Use negative COM valves for negative COM specification manifolds. (See p.1.10-198)

How to Order Valve

VQ 1 1 1 0 Y 5 LO

Series

0	VQ0000
1	VQ1000

Configuration

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center (VQ1000 only)

Body

5	VQ0000	Plug lead unit
1	VQ1000	

Seal

0	Metal
1	Rubber

Manual override

—	Non-locking push style
B	Push-locking slotted style
C	Push-locking lever style ⁽¹⁾

Note 1) VQ1000 only.

Electrical entry

		VQ0000	VQ1000
LO	L plug connector without connector	●	●
MO	M plug connector without connector	●	—

Note) Plug connector and lead wire are attached to the manifold.

Pilot valve

Symbol	Specification	DC	AC
—	Standard	(1.0W) ○	(1) ○
H	High pressure	(1.5W) ○	—
Y	Low wattage	(0.5W) ○	—

Coil voltage

		VQ0000	VQ1000
1	100V AC (50/60Hz)	●	—
3	110V AC (50/60Hz)	●	—
5	24V DC	●	●
6	12V DC	●	●

Note 1) Refer to p.1.10-168 for AC.

How to Order Manifold Ass'y

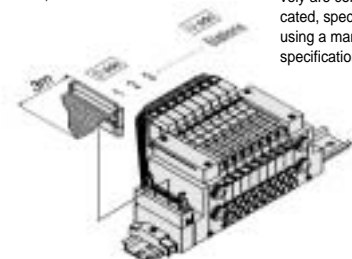
Specify valve and option nos. below the manifold base no.

(Example)
Flat cable kit with 3m cable

VV5Q12-08C6PU1-D ...1 set—Manifold base No.
* VQ1110-5LO4 sets—Valve No. (Stations 1 to 4)
* VQ1210-5LO4 sets—Valve No. (Stations 5 to 8)

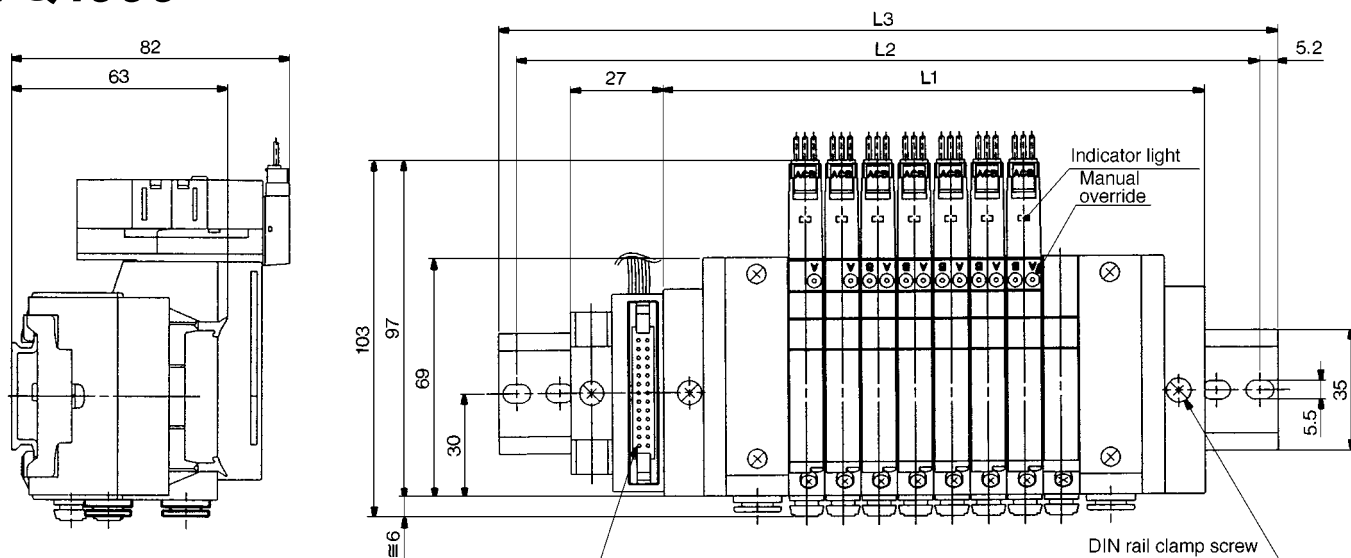
Add prefix "*" to parts nos. of the solenoid valves, etc.

Write sequentially from the 1st station on the D side. When part Nos. written collectively are complicated, specify by using a manifold specification form.





VQ1000

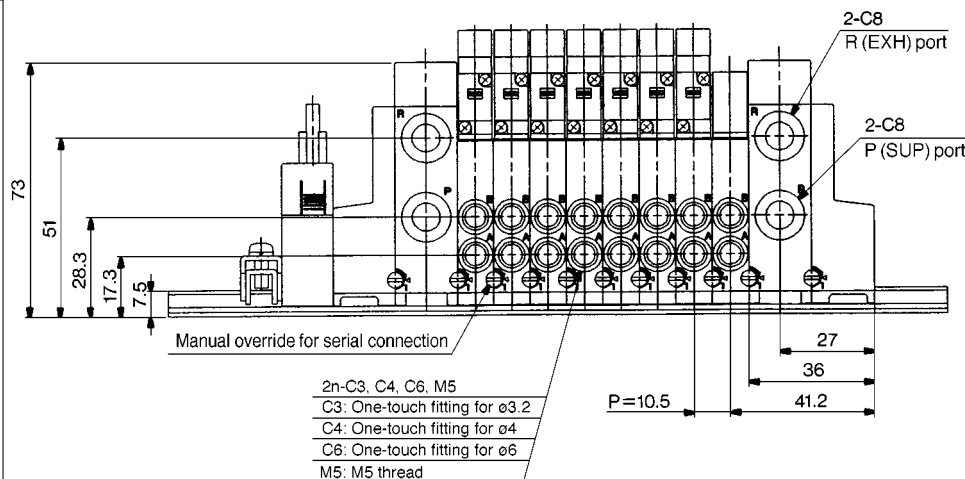
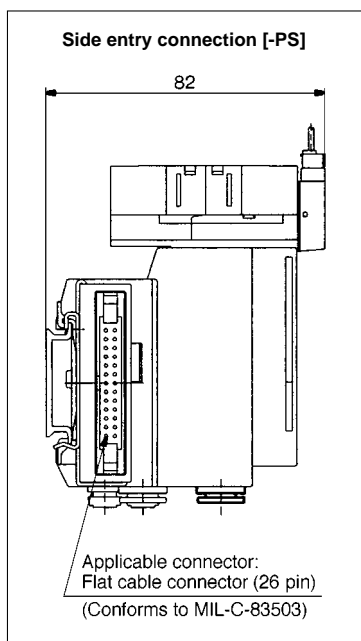


D side

Stations ---1---2---3---4---5---6---7---8---n

U side

SY
SYJ
SX
VK
VZ
VF
VFR
VP7
VP4



VQ
VQ4
VQZ
VQD
VZS
VFS
VS
VS7

Dimensions/Top entry connector [-PU] (mm)

Equation $L1=10.5n+72$ n: Station (Max. 16)

L \ n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	82.5	93	103.5	114	124.5	135	145.5	156	166.5	177	187.5	198	208.5	219	229.5	240
L2	137.5	150	162.5	175	187.5	200	212.5	225	237.5	250	262.5	275	287.5	300	312.5	325
L3	148	160.5	173	185.5	198	210.5	223	235.5	248	260.5	273	285.5	298	310.5	323	335.5

Dimensions/Side entry connector [-PS] (mm)

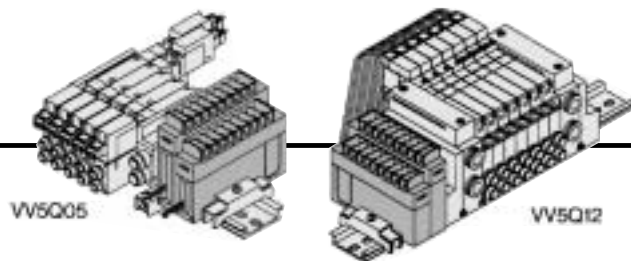
L \ n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	162.5	175	187.5	200	212.5	225	237.5	250	262.5	275	287.5	300	312.5	325	337.5	350
L2	173	185.5	198	210.5	223	235.5	248	260.5	273	285.5	298	310.5	323	335.5	348	360.5



- Manifold
 - P kit (Top entry connector).....SV5Q12M, #3
 - P kit (Side entry connector).....SV5Q12M, #4
- Valve
 - 2 position singleSV5Q12V, #7
 - 2 position double.....SV5Q12V, #8
 - 3 positionSV5Q12V, #8

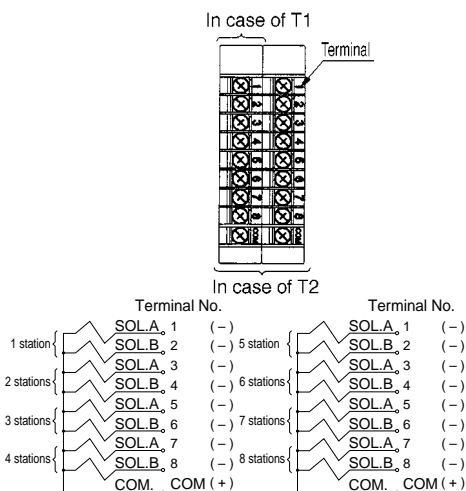
T VQ0000/1000

Kit (Terminal Block)



- It is a standard terminal block style.
- Two quantities of terminals can be selected in accordance with the number of stations. (8 terminals/16 terminals)
- Standard max. 8 stations. (Optional 16 stations possible.)

Electrical Wiring Specifications



In case of double wiring (standard spec.)
 T1 (Terminal block of 1 row): 1-4 stations
 T2 (Terminal block of 2 rows): 5-8 stations
 T1 and T2 can be optionally chosen by adopting the combinations of single and double wiring(option spec.)etc.



The quantity of terminal blocks used depends on the number of manifold stations:

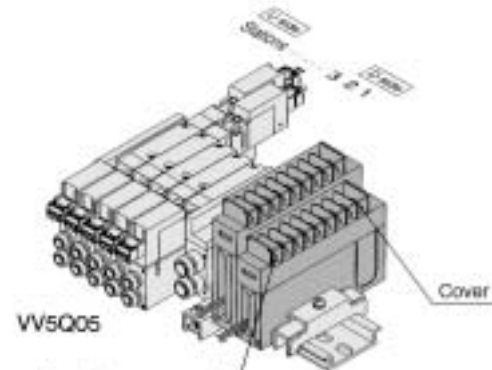
Manifold	Terminal blocks
1 to 4 stations	1 row
5 to 8 stations	2 rows

Note) Wiring other than those above is possible.
 See p.1.10-198 for details.

Irrespective of the valves or options, the internal wiring is made double (connected to SOL.A and SOL.B)for respective stations of the manifold.
 The optional specification permits mixture of single and double wiring.
 See p.1.10-198 for details.

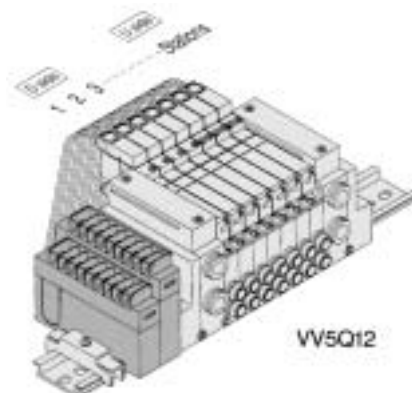
Manifold Specifications

Series	Porting specifications			Applicable stations
	Port location	Port size	Port size	
VQ0000	Side	C6	C3, C4, M5	Max. 8
VQ1000	Side	C8	C3, C4, C6, M5	Max. 8



How to connect wires to terminal block

Open the terminal block cover to connect the wires to the terminal block. (With M3 thread)



How to Order Manifold

VV5Q 12 08 C6 T 2 D

Series/Manifold

05	VQ0000	Plug lead unit
12	VQ1000	

Stations

01	1 station
...	...
16	16 stations (1)

Note1) Refer to p.1.10-198 for details.



Cylinder ports

Symbol	Port size
C3	One-touch fitting for ø3.2
C4	One-touch fitting for ø4
C6	One-touch fitting for ø6
M5	M5 thread
CM	Mixed size/with port plug (1)



Note 1) Specify "Mixed size/with port plug" by means of manifold specification form.
 Note 2) Refer to "Options" on p.1.10-198 for One-touch fittings in inch sizes.

Option

Symbol	Option	VQ0000	VQ1000
B	Check valve for prevention of back press.		● (2)
D	DIN rail mounting	●	● (3)
K	Special wiring spec. (Not double wiring)	●	● (4)
N	With name plate	●	●
S	Built-in silencer (Direct exhaust)	●	●



Note 1) If specifying more than one option, please list alphabetically. Example) -BNS
 Note 2) Models with a suffix "B" have check valves for prevention of back pressure at all manifold stations. If not all stations need this check valve, specify the stations where check valves are installed by using a manifold specification form.
 Note 3) T kit of VQ0000 and all of VQ1000 are equipped with a DIN rail, so indicate suffix "D".
 Note 4) Specify the wiring by means of the manifold specification form.

Number of terminals

1	8 terminals in 1 row	1 to 4 stations (Double wiring), 8 stations (Single wiring) applicable
2	16 terminals in 2 rows	5 to 8 stations (Double wiring), 16 stations (Single wiring) applicable



Note) The number of terminal blocks can be chosen regardless of station qty. Suffix the option symbol, "K," when the wiring specification is special.

- SY
- SYJ
- SX
- VK
- VZ
- VF
- VFR
- VP7
- VP4

- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7

How to Order Valve

VQ

1

1

1

0

Y

5

Series

0

VQ0000

1

VQ1000

Configuration

1

2 position single

2

2 position double

3

3 position closed center

4

3 position exhaust center

5

3 position pressure center (VQ1000 only)

Body

5

VQ0000

Plug lead unit

1

VQ1000

Seal

0

Metal

1

Rubber

Manual override

—

Non-locking push style

B

Push-locking slotted style

C

Push-locking lever style ⁽¹⁾

Electrical entry

LO

L plug connector without connector

VQ0000

●

VQ1000

●

MO

M plug connector without connector

VQ0000

●

VQ1000

—

Pilot valve

Symbol

Specification

DC

AC

—

Standard

(1.0W)

○ ⁽¹⁾

H

High pressure

(1.5W)

○

Y

Low wattage

(0.5W)

○

Coil voltage

VQ0000

VQ1000

1

100V AC (50/60Hz)

●

—

3

110V AC (50/60Hz)

●

—

5

24V DC

●

●

6

12V DC

●

●

Note 1) VQ1000 only.

Note) Plug connector and lead wire are attached to the manifold.

Note 1) Refer to "Options" on p.1.10-198 for negative COM specifications.

Note 2) T kit requires connector ass'y when increasing valve stations. Refer to "options" on p.1.10-198 for parts No.

Note 1) Refer to p.1.10-168 for AC.

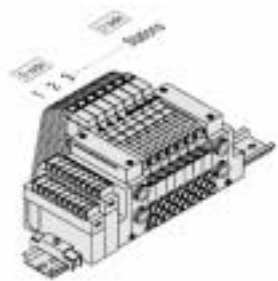
How to Order Manifold Ass'y

Specify valve and option nos. below the manifold base no.

(Example)
Flat cable kit with 3m cable
VV5Q12-07C6T2-D ...1 set—Manifold base No.
* VQ1110-5LO 4 sets—Valve No. (Stations 1 to 4)
* VQ1210-5LO 3 sets—Valve No. (Stations 5 to 8)

Add prefix " * " to parts nos. of the solenoid valves, etc.

Write sequentially from the 1st station on the D side. When part nos. written collectively are complicated, specify by using a manifold specification form.



- SY
- SYJ
- SX
- VK
- VZ
- VF
- VFR
- VP7
- VP4

- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7

How to Order Valve

VQ

1

1

1

0

Y

5

Series

0

VQ0000

1

VQ1000

Configuration

1

2 position single

2

2 position double

3

3 position closed center

4

3 position exhaust center

5

3 position pressure center (VQ1000 only)

Body

5

VQ0000

Plug lead unit

1

VQ1000

Seal

0

Metal

1

Rubber

Manual override

—

Non-locking push style

B

Push-locking slotted style

C

Push-locking lever style ⁽¹⁾

Electrical entry

LO

L plug connector without connector

VQ0000

●

VQ1000

●

MO

M plug connector without connector

VQ0000

●

VQ1000

—

Pilot valve

Symbol

Specification

DC

AC

—

Standard

(1.0W)

○ ⁽¹⁾

H

High pressure

(1.5W)

—

Y

Low wattage

(0.5W)

—

Coil voltage

VQ0000

VQ1000

1

100V AC (50/60Hz)

●

—

3

110V AC (50/60Hz)

●

—

5

24V DC

●

●

6

12V DC

●

●

Note 1) VQ1000 only.

Note) Plug connector and lead wire are attached to the manifold.

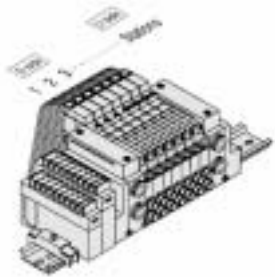
How to Order Manifold Ass'y

Specify valve and option nos. below the manifold base no.

(Example)
Flat cable kit with 3m cable
VV5Q12-07C6T2-D ...1 set—Manifold base No.
* VQ1110-5LO 4 sets—Valve No. (Stations 1 to 4)
* VQ1210-5LO 3 sets—Valve No. (Stations 5 to 8)

Add prefix " * " to parts nos. of the solenoid valves, etc.

Write sequentially from the 1st station on the D side. When part nos. written collectively are complicated, specify by using a manifold specification form.



Note 1) Refer to "Options" on p.1.10-198 for negative COM specifications.

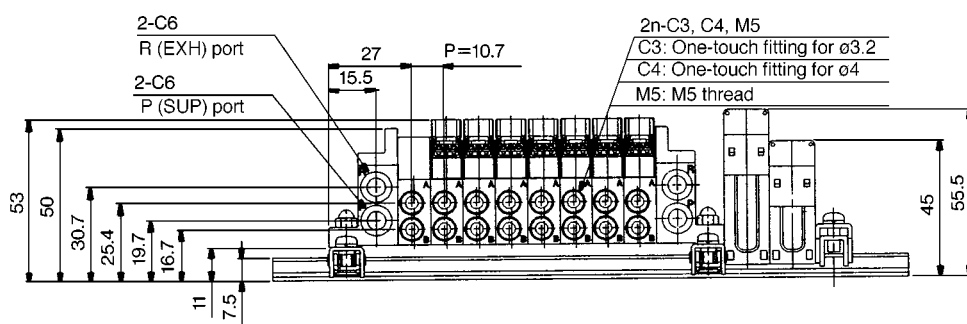
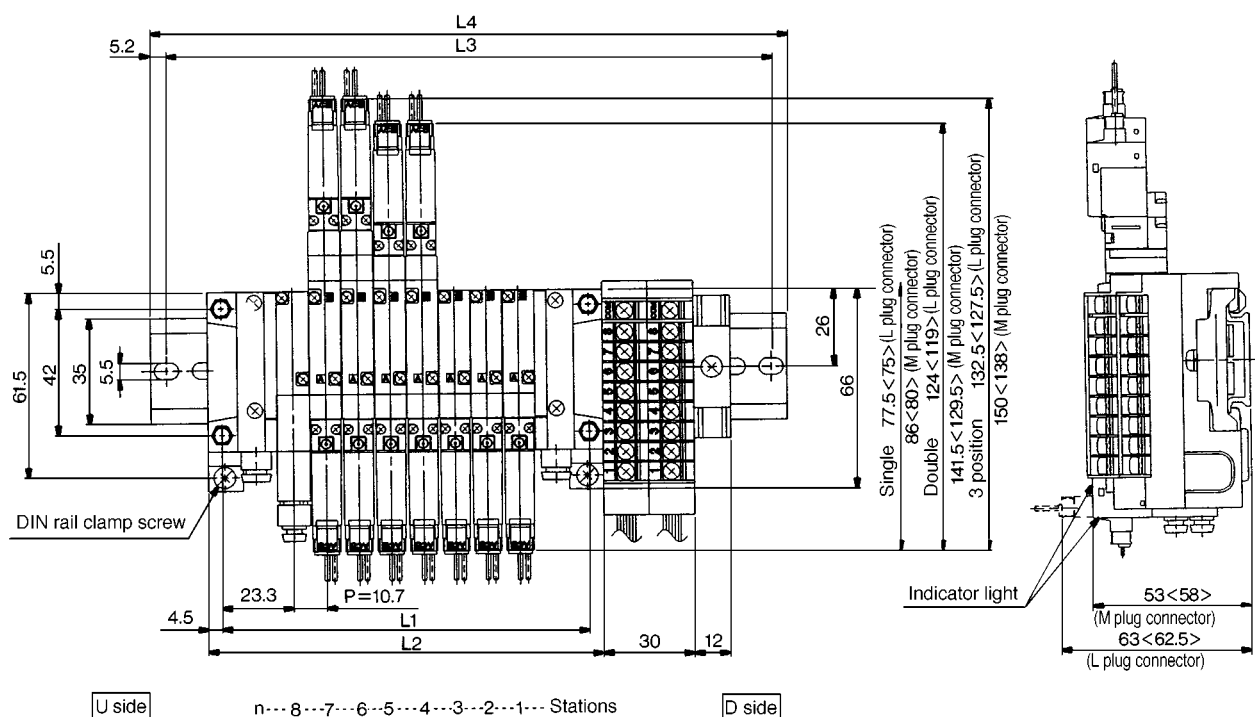
Note 2) T kit requires connector ass'y when increasing valve stations. Refer to "options" on p.1.10-198 for parts No.

Note 1) Refer to p.1.10-168 for AC.

T VQ0000/1000

Kit (Terminal Block)

VQ0000



This DWG shows the case of VV5Q05-□□T2-D□

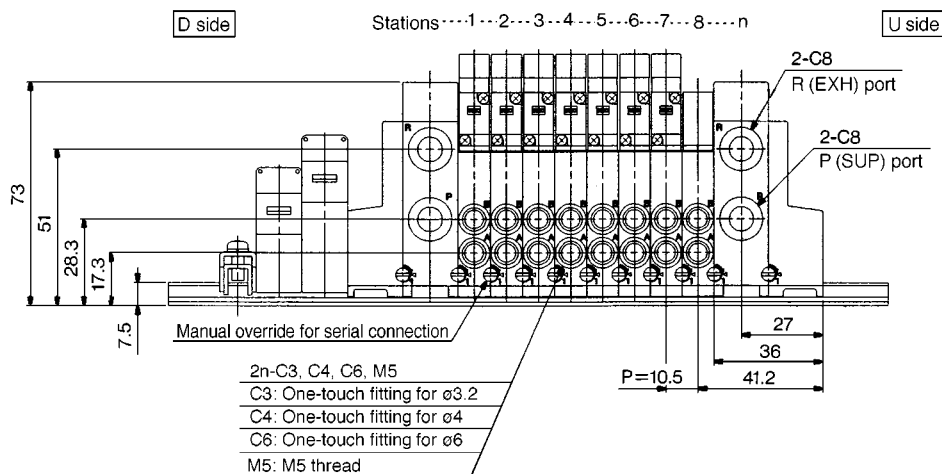
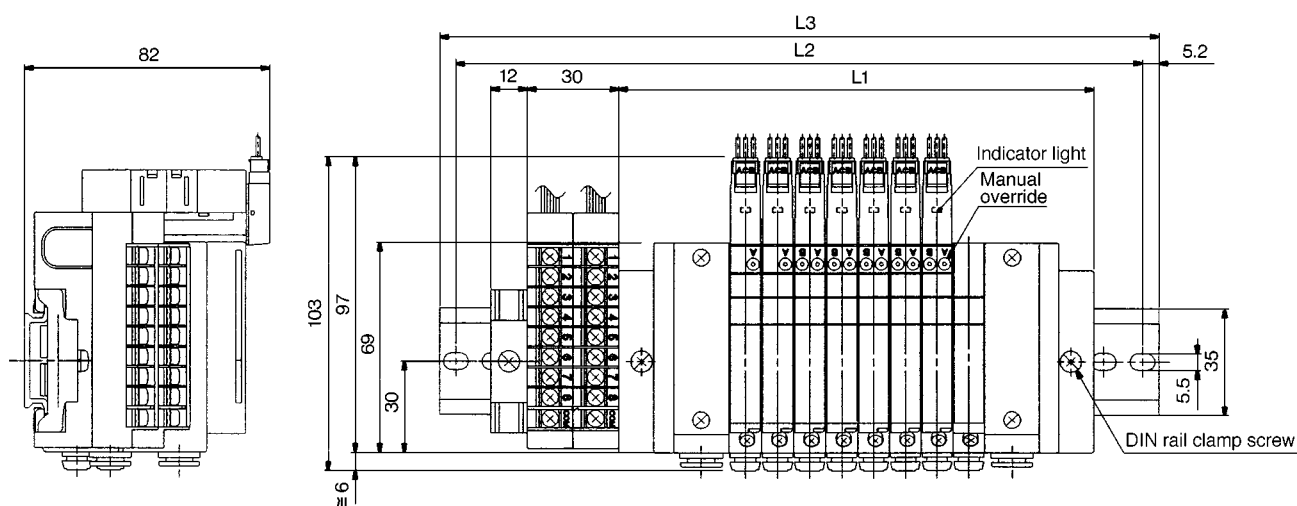
< >: AC

Dimensions (mm)

Equation $L1=10.7n+36$, $L2=10.7n+45$ n: Station (Max.16)

L	n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1		46.7	57.4	68.1	78.8	89.5	100.2	110.9	121.6	132.3	143	153.7	164.4	175.1	185.8	196.5	207.2
L2		55.7	66.4	77.1	87.8	98.5	109.2	119.9	130.6	141.3	152	162.7	173.4	184.1	194.8	205.5	216.2
L3		125	137.5	150	150	162.5	175	187.5	200	212.5	225	225	237.5	250	262.5	275	287.5
L4		135.5	148	160.5	160.5	173	185.5	198	210.5	223	235.5	235.5	248	260.5	273	285.5	298

VQ1000



This DWG shows the case of VV5Q12-□□T2-D□

Dimensions (mm)

Equation $L1=10.5n+72$ n: Station (Max.16)

L \ n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	82.5	93	103.5	114	124.5	135	145.5	156	166.5	177	187.5	198	208.5	219	229.5	240
L2	150	162.5	175	187.5	187.5	200	212.5	225	237.5	250	250	262.5	275	287.5	300	312.5
L3	160.5	173	185.5	198	198	210.5	223	235.5	248	260.5	260.5	273	285.5	298	310.5	323

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

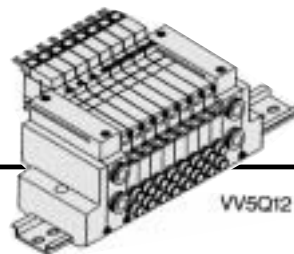
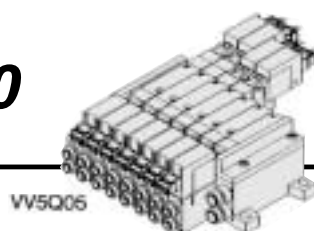
VZS

VFS

VS

VS7

C VQ0000/1000 Kit (Connector)



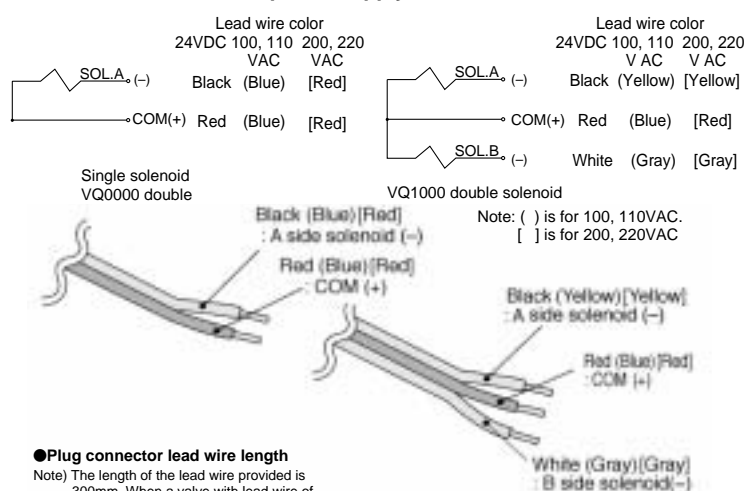
- Standard with lead wires plug-connected to each valve individually.
- Max. 16 stations.

Manifold Specifications

Series	Porting specifications			Applicable stations
	Port location	Port size	Port size	
VQ0000	Side	C6	C3, C4, M5	Max. 16
VQ1000	Side	C8	C3, C4, C6, M5	Max. 16

Wiring Specifications/Positive COM ●

- The lead wires are connected to the valve as shown below.
Connect each to the power supply side.



●Plug connector lead wire length

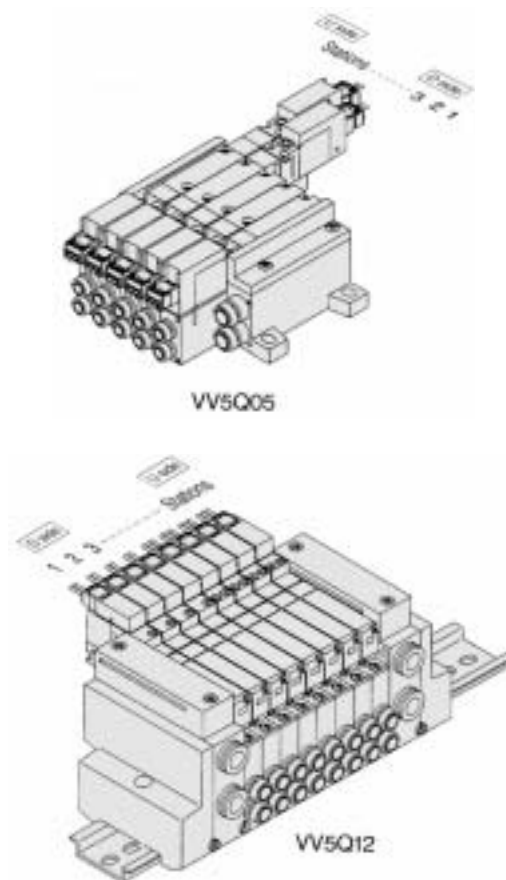
Note) The length of the lead wire provided is 300mm. When a valve with lead wire of 600mm or more is needed, specify both the valve without connector and the longer connector ass'y no.

Example) Lead wire length 1000mm
VQ1110-5LO3 pcs.
AXT661-14A-10.....3 pcs.

Connector assembly (DC)

Lead wire length	No. for single & VQ0000 double	No. for VQ1000 double
Socket (3 pcs.)	AXT661-12A	
300mm	AXT661-14A	AXT661-13A
600mm	AXT661-14A-6	AXT661-13A-6
1000mm	AXT661-14A-10	AXT661-13A-10
2000mm	AXT661-14A-20	AXT661-13A-20
3000mm	AXT661-14A-30	AXT661-13A-30

Note) 100/110V AC for single: AXT661-31A-; for double: AXT661-32A-
200/220V AC for single: AXT661-34A-; for double: AXT661-35A-



How to Order Manifold

VV5Q 12 — 08 C6 C — N

Series/Manifold

05	VQ0000	Plug lead unit
12	VQ1000	

Stations

01	1 station
⋮	⋮
16	16 stations

Cylinder ports

Symbol	Port size	VQ0000	VQ1000
C3	One-touch fitting for ø3.2	●	●
C4	One-touch fitting for ø4	●	●
C6	One-touch fitting for ø6	●	●
M5	M5 thread	●	●
CM	Mixed size/with port plug	●	● (Note)



Note 1) Specify "Mixed size/with port plug" by means of manifold specification form.

Note 2) Refer to "Option" on p.1.10-198 for One-touch fittings in inch sizes.

Option

Symbol	Option	VQ0000	VQ1000
—	Note	●	
B	Check valve for prevention of back press.		● (2)
D	DIN rail mounting	●	● (3)
N	With nameplate	●	●
S	Built-in silencer (Direct exhaust)	●	●



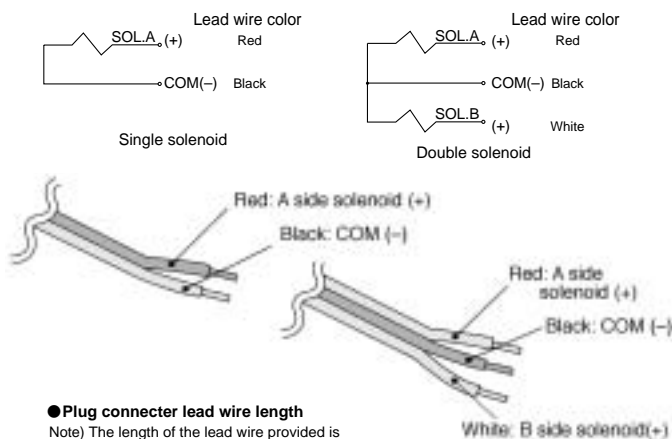
Note 1) If specifying more than one option, please list alphabetically. Example) -BNS

Note 2) Models with a suffix "-B" have check valves for prevention of back pressure at all manifold stations. If not all stations need this check valve, specify the stations where check valves are installed by using a manifold specification form.

Note 3) VQ1000 are all equipped with a DIN rail, so indicate suffix "D".

●Wiring Specifications/Negative COM (Option)

●The lead wires are connected to the valve as shown below.
Connect each to the power supply side.



●Plug connector lead wire length

Note) The length of the lead wire provided is 300mm. When a valve with lead wire of 600mm or more is needed, specify both the valve without connector and the longer connector ass'y no.

Example) Lead wire length 1000mm
VQ1110N-5LO 3 pcs.
AXT661-14AN-10..... 3 pcs.

Connector assembly

Lead wire length	No. for single & VQ0000 double	No. for VQ1000 double
Socket (3 pcs.)	AXT661-12A	
300mm	AXT661-14AN	AXT661-13AN
600mm	AXT661-14AN-6	AXT661-13AN-6
1000mm	AXT661-14AN-10	AXT661-13AN-10
2000mm	AXT661-14AN-20	AXT661-13AN-20
3000mm	AXT661-14AN-30	AXT661-13AN-30

Note) Use negative COM valves for negative COM specification manifolds.

How to Order Valve

VQ 1 1 1 0 Y 5 L

Series

0	VQ0000
1	VQ1000

Configuration

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center (VQ1000 only)

Body

5	VQ0000	Plug lead unit
1	VQ1000	

Seal

0	Metal
1	Rubber

Manual override

—	Non-locking push style
B	Push-locking slotted style
C	Push-locking lever style (1)

Note 1) Available only for VQ1000.

Electrical entry

		VQ0000	VQ1000
G	Grommet (Except for AC)	●	—
L	L plug connector with lead wire	●	●
LO	L plug connector without connector	●	●
M	M plug connector with lead wire	●	—
MO	M connector without connector	●	—

Coil voltage

		VQ0000	VQ1000
1	100V AC (50/60Hz)	●	—
2	200V AC (50/60Hz) (VQ0000 only)	●	—
3	110V AC (50/60Hz)	●	—
4	220V AC (50/60Hz) (VQ0000 only)	●	—
5	24V DC	●	●
6	12V DC	●	●

Pilot valve

Symbol	Specification	DC	AC
—	Standard	(1.0W) ○	(1) ○
H	High pressure	(1.5W) ○	—
Y	Low wattage	(0.5W) ○	—

Note) Refer to "Options" on p.1.10-198 for negative COM specifications.

Note 1) Refer to p.1.10-168 for AC.

How to Order Manifold Ass'y

Specify valve and option nos. below the manifold base no.

(Example)

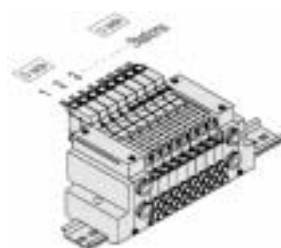
Connector kit

VV5Q12-08C6C-D-1 set—Manifold base No.

* VQ1110-5..... 4 sets—Valve No. (Stations 1 to 3)
* VQ1210-5..... 4 sets—Valve No. (Stations 4 to 7)
* VVQ1000-10A-1...1 set—Blank plate No. (Stations 8)

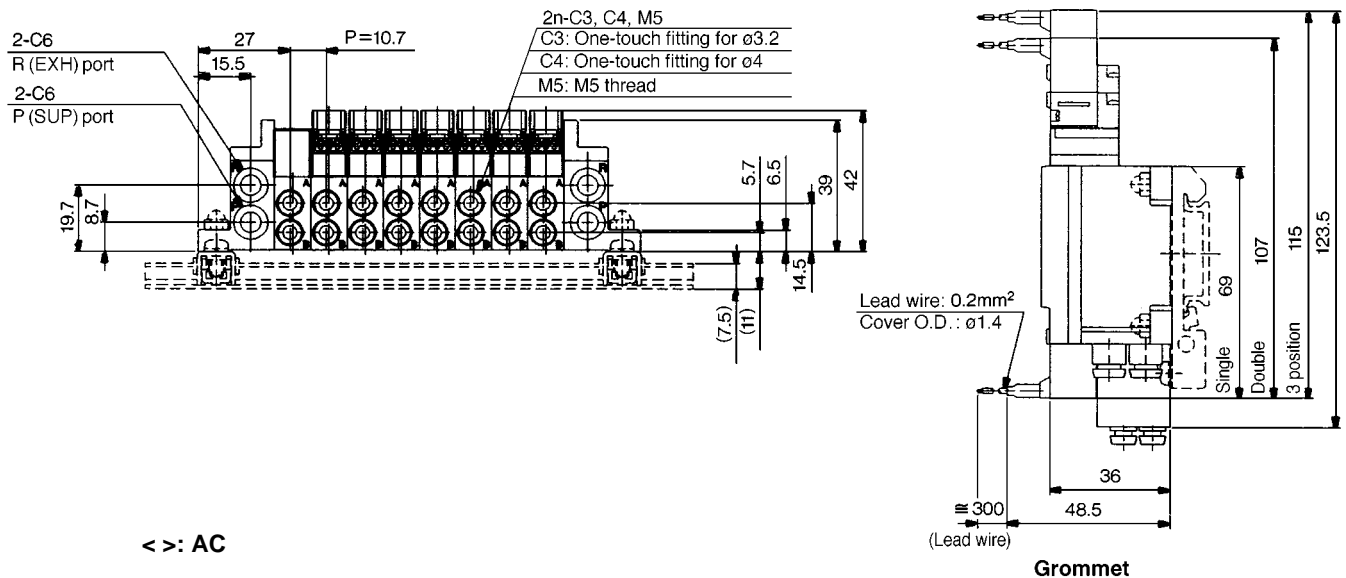
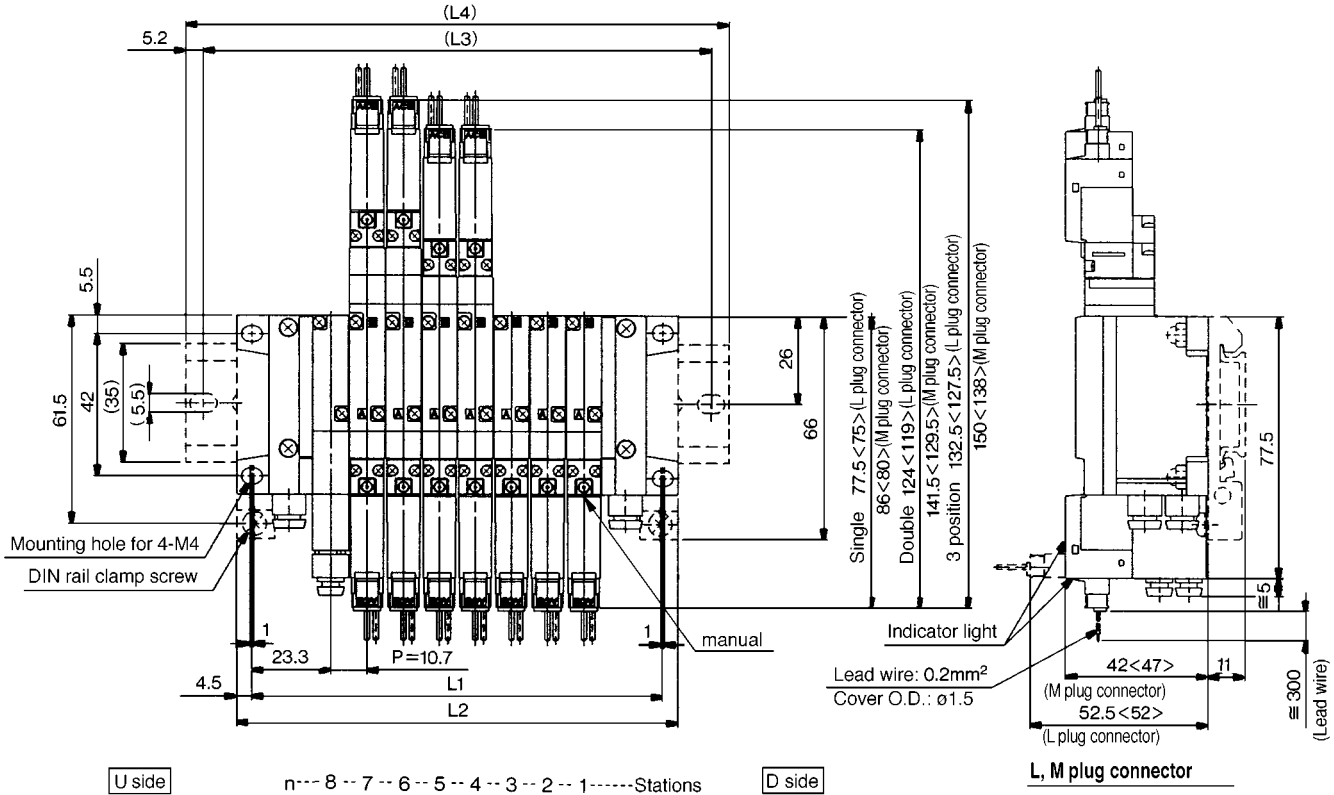
Add prefix "*" to parts nos. of the solenoid valves, etc.

Write sequentially from the 1st station on the D side. When part nos. written collectively are complicated, specify by using a manifold specification form.



VQ0000

The broken line indicate DIN rail mounting style [-D].



< >: AC

Dimensions (mm)

Equation L1=10.7n+36, L2=10.7n+45 n: Station (Max. 16)

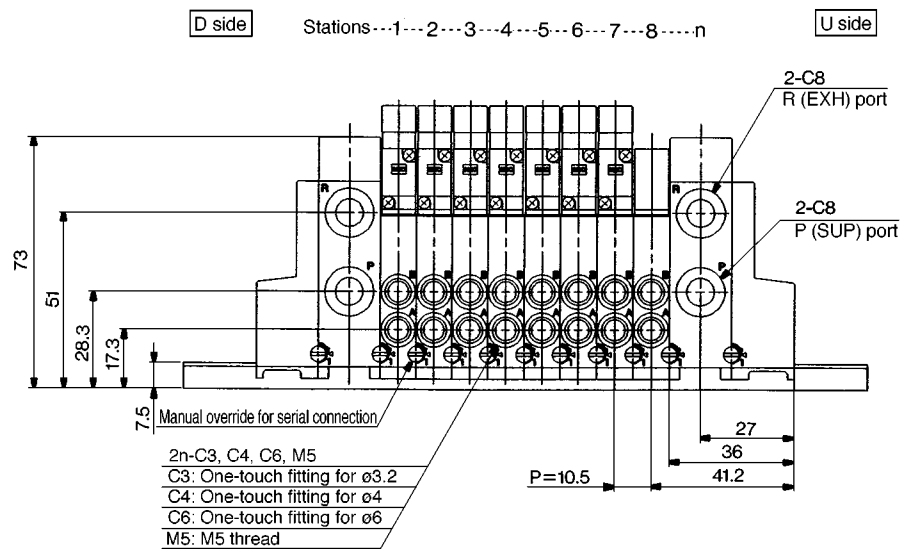
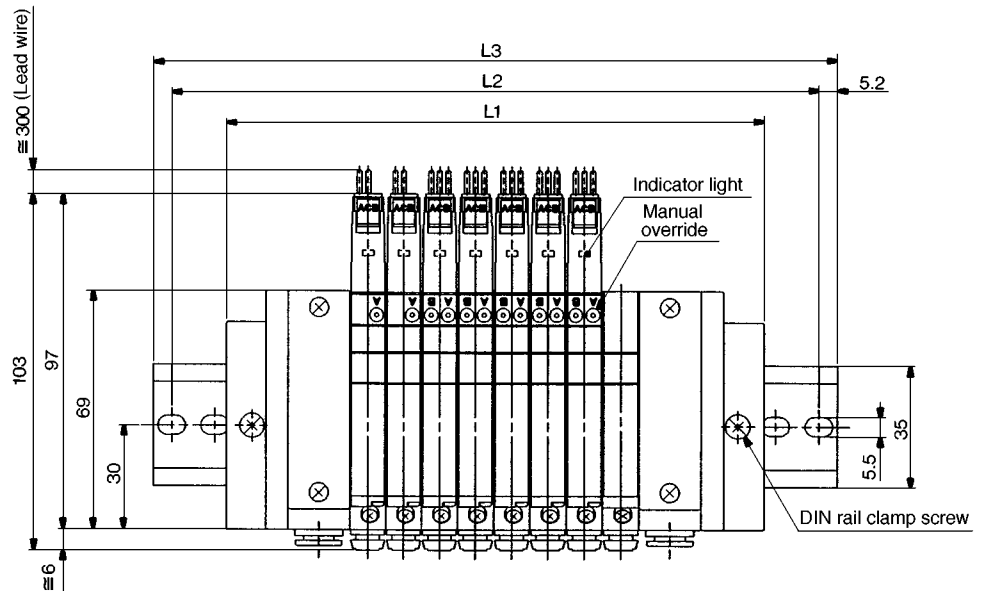
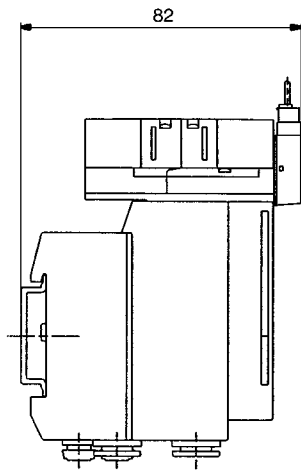
L	n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1		46.7	57.4	68.1	78.8	89.5	100.2	110.9	121.6	132.3	143	153.7	164.4	175.1	185.8	196.5	207.2
L2		55.7	66.4	77.1	87.8	98.5	109.2	119.9	130.6	141.3	152	162.7	173.4	184.1	194.8	205.5	216.2
(L3)		87.5	87.5	100	112.5	125	137.5	150	162.5	162.5	175	187.5	200	212.5	225	225	237.5
(L4)		98	98	110.5	123	135.5	148	160.5	173	173	185.5	198	210.5	223	235.5	235.5	248



- Manifold
- C kit SV5Q05M, #5
- Valve
- 2 position single SV5Q05V, #7
- 2 position double SV5Q05V, #8
- 3 position closed center SV5Q05V, #9
- 3 position exhaust center SV5Q05V, #9



VQ1000



Dimensions (mm)

Equation $L1=10.5n+72$ n: Station (MAX.16)

L	n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1		82.5	93	103.5	114	124.5	135	145.5	156	166.5	177	187.5	198	208.5	219	229.5	240
L2		112.5	112.5	125	137.5	150	162.5	175	187.5	187.5	200	212.5	225	237.5	250	250	262.5
L3		123	123	135.5	148	160.5	173	185.5	198	198	210.5	223	235.5	248	260.5	260.5	273



- Manifold
- C kit SV5Q12V, #5
- Valve
- 2 position single SV5Q12V, #7
- 2 position double SV5Q12V, #8
- 3 position SV5Q12V, #8

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

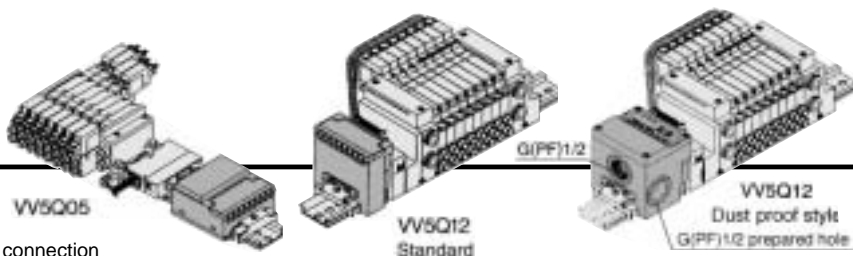
VFS

VS

VS7

S VQ0000/1000

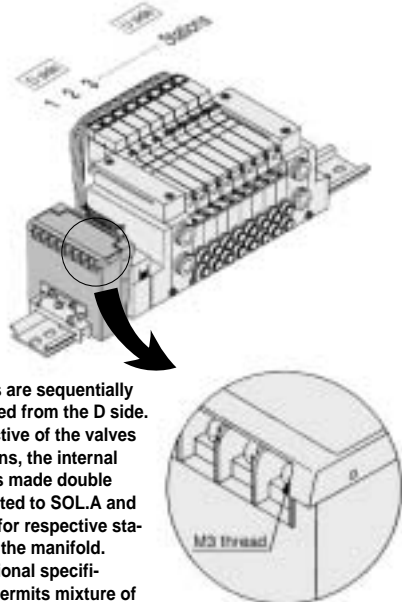
Kit (Serial Transmission Unit)



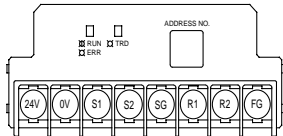
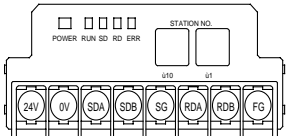
- The serial transmission system minimizes wire mass and wire connection labor and promotes space savings.
- The system comes in SA (general type for small scale system) for equipment with a small number of I/O points, or 32 points max., SB (applicable to Mitsubishi Electric models) for controlling 512 I/O points max., SC (applicable to OMRON models), SD (applicable to Sharp models: 504 points max.), SF (applicable to NKE models: 128 points max.), SJ (applicable to Sunx models), SK (applicable to Fuji Electric models), SQ (applicable to OMRON's Compo Bus/D), and SR (applicable to OMRON's Compo Bus/S).
- Max. 8 stations. (Specify a option model with 9 to 16 stations by using a manifold specification form.)

Manifold Specifications

Series	Porting specifications		Applicable stations
	Port location	Port size	
VQ0000	Side	C6	Max. 16
VQ1000	Side	C8	Max. 16



- Stations are sequentially numbered from the D side.
- Irrespective of the valves or options, the internal wiring is made double (connected to SOL.A and SOL.B) for respective stations of the manifold. The optional specification permits mixture of single and double wiring. See p.1.10-198 for details.

	<p>SA applicable to Series EX300</p>	<p>SB applicable to MELSECNET/mini-S3 Data Link (Mitsubishi Electric Corp.)</p>																		
Name of terminal block(LED)	<div></div> <table><tr><th>LED name</th><th>Details</th></tr><tr><td>RUN/ERROR</td><td>Blinking when received data is normal; Lighting when data is abnormal</td></tr><tr><td>TRD</td><td>Lighting during data reception</td></tr></table>	LED name	Details	RUN/ERROR	Blinking when received data is normal; Lighting when data is abnormal	TRD	Lighting during data reception	<div></div> <table><tr><th>LED name</th><th>Details</th></tr><tr><td>POWER</td><td>Lighting when power is turned ON</td></tr><tr><td>RUN</td><td>Lighting when data transmission with the master station is normal</td></tr><tr><td>RD</td><td>Lighting during data reception</td></tr><tr><td>SD</td><td>Lighting during data transmission</td></tr><tr><td>ERROR</td><td>Lighting when reception data error occurs. Lighting off when the error is corrected.</td></tr></table>	LED name	Details	POWER	Lighting when power is turned ON	RUN	Lighting when data transmission with the master station is normal	RD	Lighting during data reception	SD	Lighting during data transmission	ERROR	Lighting when reception data error occurs. Lighting off when the error is corrected.
LED name	Details																			
RUN/ERROR	Blinking when received data is normal; Lighting when data is abnormal																			
TRD	Lighting during data reception																			
LED name	Details																			
POWER	Lighting when power is turned ON																			
RUN	Lighting when data transmission with the master station is normal																			
RD	Lighting during data reception																			
SD	Lighting during data transmission																			
ERROR	Lighting when reception data error occurs. Lighting off when the error is corrected.																			
Note	<ul style="list-style-type: none">● T unit Can be connected with PLC I/O card for serial transmission. EX300-TMB1.....For models of Mitsubishi Electric Corp. EX300-TTA1..... For models of OMRON Corp. EX300-TFU1.....For models of Fuji Electric Company Ltd. EX300-TTO1.....For general models * Up to 32 points per unit.● 16 outputs.	<ul style="list-style-type: none">● Master station: PLC made by Mitsubishi Electric Corp. Series MELSEC-A AJ71PT32-S3, AJ71T32-S3 A1SJ71PT32-S3 * Max.64 stations, connected to remote I/O stations (Max. 512 points).● 16 outputs, 2 stations occupied.																		

Item	Specifications
External power supply	24V DC, +10%, -5%
Current consumption (Internal unit)	SA, SB, SD, SE, SF, SG, SJ, SK, SQ, SR: 0.1A SC: 0.3A

How to Order Manifold

VV5Q 12-08 C6 S A-D -XP

Series/Manifold

05	VQ0000	Plug lead unit
12	VQ1000	

Stations

01	1 station
16	16 stations (1)

Cylinder ports

Symbol	port size	VQ0000	VQ1000
C3	One-touch fittings for ø3.2	●	●
C4	One-touch fittings for ø4	●	●
C6	One-touch fittings for ø6	●	●
M5	M5 thread	●	●
CM	Mixed size/with port plug	●	●

Style

Symbol	Without SI unit	Max. stations
O	With general type, Series EX300	
A (1)	SI unit for MELSECNET/mini-S3 Data Link System (Mitsubishi Electric)	
B	SI unit for SYSBUS Wire System (OMRON)	
C	SI unit for Satellite I/O Link System (Sharp)	
D	SI unit for 16-point Uni-wire H System (NKE)	
E (2)	SI unit for MEWNET, F System (Matsushita Electric Works Ltd.)	
F1	SI unit for 16-point Uni-wire System (NKE)	
G (2)	SI unit for Remote I/O (RIO) System (Allen-Bradley Co.)	
H	SI unit for 16-point Uni-wire H System (NKE)	
J1 (2)	SI unit for 16-point S-LINK System (Sunx)	Max. 8
J2 (2)	SI unit for 8-point S-LINK System (Sunx)	Max. 8
K (2)	SI unit for T-LINK Mini System (Fuji Electric)	Max. 16
Q (2)	SI unit for Device Net and Compo Bus/D (OMRON)	Max. 16
R1 (2)	SI unit for 16-point Compo Bus/S (OMRON)	Max. 8
R2 (2)	SI unit for 8-point Compo Bus/S (OMRON)	Max. 8
V (2)	SI unit for CC-LINK (Mitsubishi Electric)	Max. 16

Option

Symbol	Option	VQ0000	VQ1000
B	Check for prevention of back press.		● (2)
D	DIN rail mounting	●	● (3)
K	Special wiring specification (Not double wiring)	●	● (4)
N	With name plate	●	●
S	Built silencer (Direct exhaust)	●	●

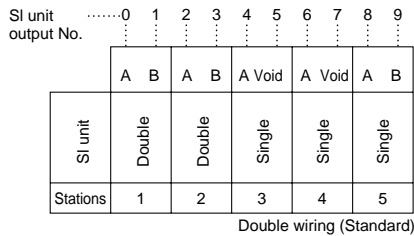
Note 1 Specify "Mixed size/with port plug" by means of manifold specification form.
Note 2 Refer to "Options" on p.1.10-198 for One-touch fittings in inch sizes.
Note 1 The general type requires a transmission unit on CPU side.
Note 2 Usable only for VQ1000.

Dust proof styl (-XP)(VQ1000 only)
 Suffix "-XP" for the dust proof SI unit. (Except for SE, SG and SQ.)

Note 1 If specifying more than one option, please list alphabetically. Example) -BNS
Note 2 Models with a suffix "-B" have check valves for prevention of back pressure at all manifold stations. If not all stations need this check valve, specify the stations where check valves are installed by using a manifold specification form.
Note 3 S kit of VQ0000 and all of VQ1000 are equipped with a DIN rail, so indicate suffix "-D".
Note 4 Specify wiring by the manifold specification form.

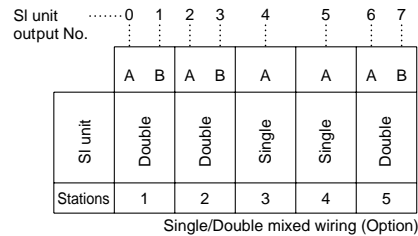
● SI unit output and coil numbering

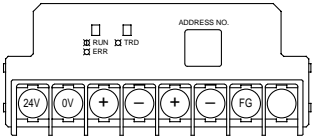
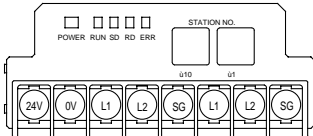
<Wiring example 1>



<Wiring example 2>

Mixed wiring is optional. Use the manifold specification form to specify.



	SC applicable to SYSBUS Wire System (OMRON)	SD applicable to Satellite I/O Link System (Sharp)																		
Name of terminal block (LED)	 <table><thead><tr><th>LED name</th><th>Details</th></tr></thead><tbody><tr><td>RUN</td><td>It lights when transmissions is normal and PLC is in the operation mode.</td></tr><tr><td>T/R</td><td>It blinks when transmission is normal.</td></tr><tr><td>ERR</td><td>It lights when transmission is abnormal.</td></tr></tbody></table>	LED name	Details	RUN	It lights when transmissions is normal and PLC is in the operation mode.	T/R	It blinks when transmission is normal.	ERR	It lights when transmission is abnormal.	 <table><thead><tr><th>LED name</th><th>Details</th></tr></thead><tbody><tr><td>POWER</td><td>It lights when power is turned ON.</td></tr><tr><td>RUN</td><td>It lights when power is turned ON and slave stations are in normal operation.</td></tr><tr><td>ERROR</td><td>It lights when slave station switch setting is abnormal, communication is abnormal, master station's PLC is at rest, and slave station unit is out of order.</td></tr><tr><td>R.SET HOLD</td><td>It lights when control input is made for the master station.</td></tr></tbody></table>	LED name	Details	POWER	It lights when power is turned ON.	RUN	It lights when power is turned ON and slave stations are in normal operation.	ERROR	It lights when slave station switch setting is abnormal, communication is abnormal, master station's PLC is at rest, and slave station unit is out of order.	R.SET HOLD	It lights when control input is made for the master station.
	LED name	Details																		
RUN	It lights when transmissions is normal and PLC is in the operation mode.																			
T/R	It blinks when transmission is normal.																			
ERR	It lights when transmission is abnormal.																			
LED name	Details																			
POWER	It lights when power is turned ON.																			
RUN	It lights when power is turned ON and slave stations are in normal operation.																			
ERROR	It lights when slave station switch setting is abnormal, communication is abnormal, master station's PLC is at rest, and slave station unit is out of order.																			
R.SET HOLD	It lights when control input is made for the master station.																			
Note	<ul style="list-style-type: none">● Master station unit: OMRON's PLC SYSMAC Series C(CV) C500-RM201, C200H-RM201* Max. 32 units, transmission terminal connected (Max. 512 points)● 16 outputs	<ul style="list-style-type: none">● Master station unit: Sharp's PLC New Satellite Series W ZW-31LM New Satellite Series JW JW-23LM, JW-31LM* Max. 31 units, I/O slave stations connected (Max. 504 points)● 16 outputs																		

How to Order Valve

VQ 1 1 1 0 Y - 5 LO

Series

0	VQ0000
1	VQ1000

Configuration

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center (VQ1000 only)

Body

5	VQ0000	Plug lead unit
1	VQ1000	Plug lead unit

Seal

0	Metal
1	Rubber

Manual override

—	Non-locking push style
B	Push-locking slotted style
C	Push-locking lever style (1)

Note 1) Available only for VQ1000.

Electrical entry

	VQ0000	VQ1000
LO	L plug connector without connector	●
MO	M plug connector without connector	●

Note) Plug connector and lead wire layers are attached to the manifold.

Coil voltage

5	24V DC; With indicator light and surge voltage suppressor
---	---

Pilot valve

Symbol	Specification	DC
—	Standard	(1.0W) ○
H	High pressure	(1.5W) ○
Y	Low wattage	(0.5W) ○

How to Order Manifold Ass'y

Specify valve and option nos. below the manifold base no.

(Example)

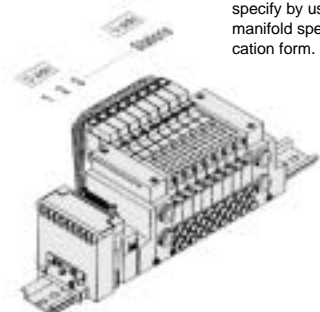
Serial transmission unit kit

VV5Q12-08C6SA-D...1 set —Manifold base No.

* VQ1110-5LO.....4 sets—Valve No. (Stations 1 to 4)

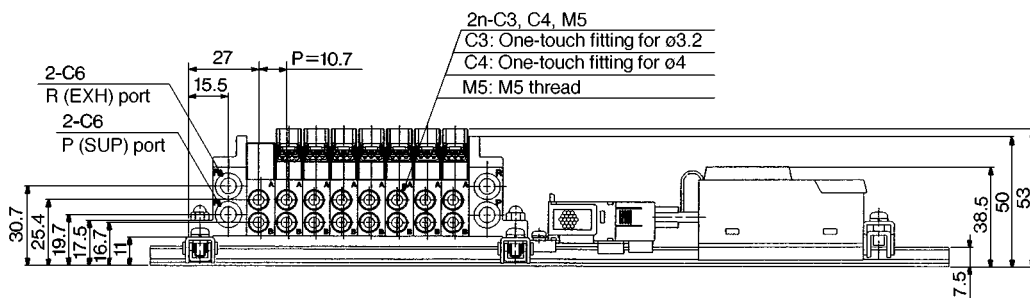
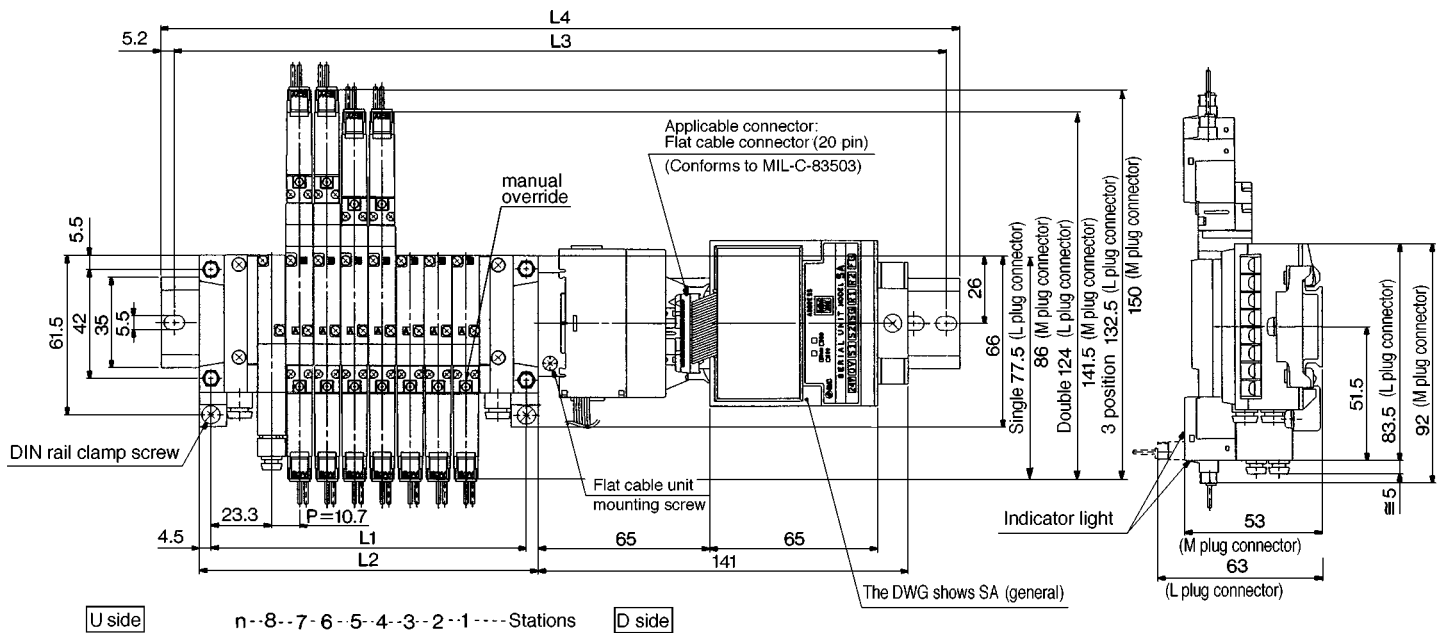
* VQ1210-5LO.....4 sets—Valve No. (Stations 5 to 8)

Add prefix "*" to parts nos. Write sequentially from the 1st station on the D side. When part nos. written collectively are complicated, specify by using a manifold specification form.



Note) S kit requires connector ass'y when increasing valve stations. Refer to "Options" on p.1.10-198.

VQ0000



Dimensions (mm)

Equation $L1=10.7n+36$, $L2= 10.7n+45$ n: Station (Max. 16)

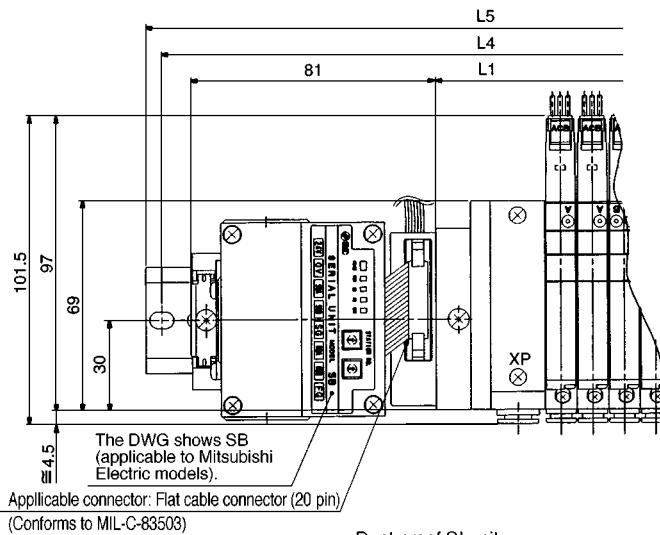
L \ n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	46.7	57.4	68.1	78.8	89.5	100.2	110.9	121.6	132.3	143	153.7	164.4	175.1	185.8	196.5	207.2
L2	55.7	66.4	77.1	87.8	98.5	109.2	119.9	130.6	141.3	152	162.7	173.4	184.1	194.8	205.5	216.2
L3	225	237.5	250	250	262.5	275	287.5	300	312.5	325	325	337.5	350	362.5	375	387.5
L4	235.5	248	260.5	260.5	273	285.5	298	310.5	323	335.5	335.5	348	360.5	373	385.5	398



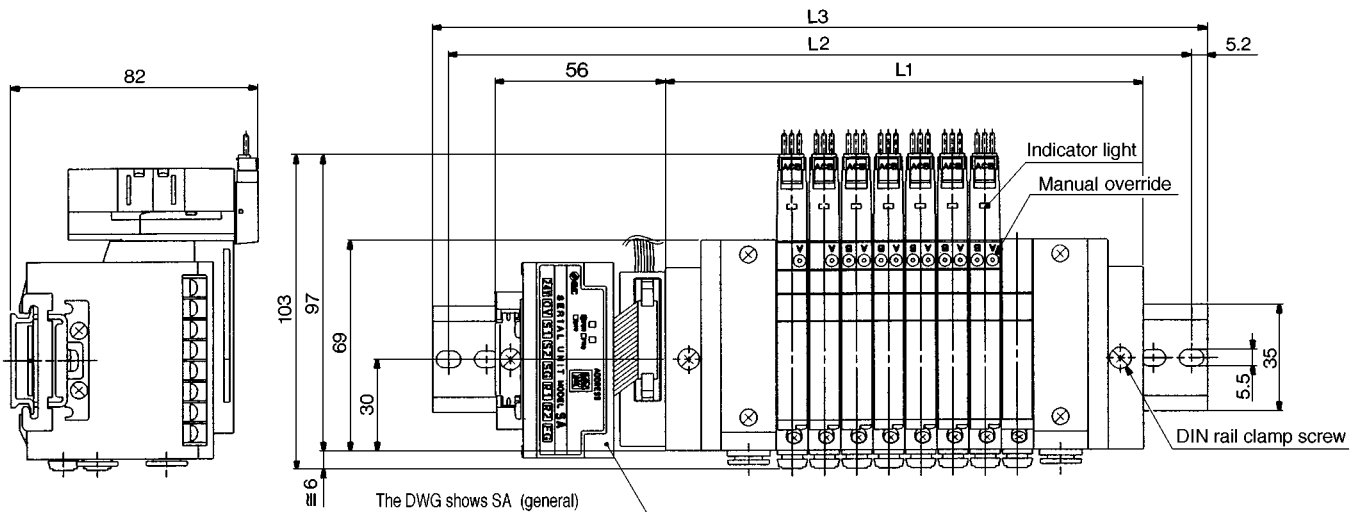
- Manifold
- S kitSV5Q05M, #6
- Valve
- 2 position singleSV5Q05V, #7
- 2 position double.....SV5Q05V, #8
- 3 position closed centerSV5Q05V, #9
- 3 position exhaust center ...SV5Q05V, #9



VQ1000



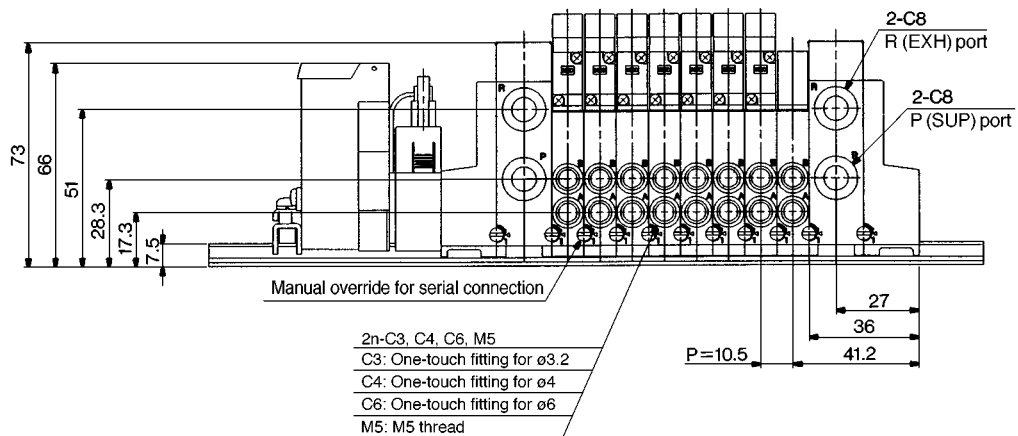
Dust proof SI unit



D side

Stations---1---2---3---4---5---6---7---8---n

U side



Dust proof SI unit: L4=L3+25 L5=L4+25

Dimensions (mm)

Equation L1=10.5n+72 n: Station (Max.16)

L	n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1		82.5	93	103.5	114	124.5	135	145.5	156	166.5	177	187.5	198	208.5	219	229.5	240
L2		162.5	175	187.5	200	200	212.5	225	237.5	250	262.5	275	275	287.5	300	312.5	325
L3		173	185.5	198	210.5	210.5	223	235.5	248	260.5	273	285.5	285.5	298	310.5	323	335.5

Note) Manifolds with SI unit for Matsushita's MEWNET FP and Allen Bradley Co.'s model are the same with L4 and L5 dimensions of dust proof SI unit.



- Manifold
- S kitSV5Q12M, #6
- Valve
- 2 position single.....SV5Q12V, #7
- 2 position doubleSV5Q12V, #8
- 3 position.....SV5Q12V, #8

VQ 0000/1000 Base Mounted Plug Lead Unit

Manifold Options/For VQ1000

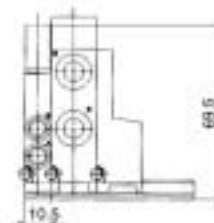
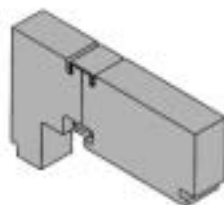


Blank plate assembly VVQ1000-10A-1

JIS Symbol



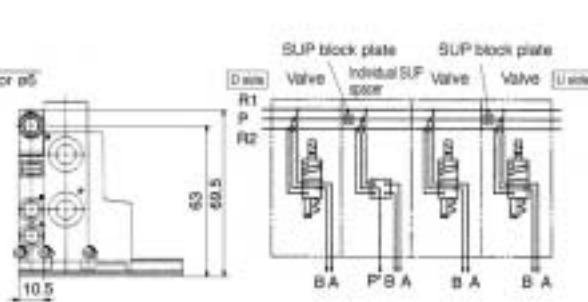
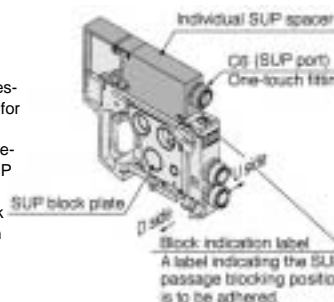
It is mounted on a specific position of a manifold block from which a valve is removed for maintenance or in which a spare valve is planned to be mounted.



Individual SUP spacer VVQ1000-P-2-C6

When the same manifold is to be used for different pressures, individual SUP spacers are used as SUP ports for different pressures. (One station space is occupied.) Block both sides of the station, for which the supply pressure from the individual SUP spacer is used, with SUP block plates. (See the application ex.)

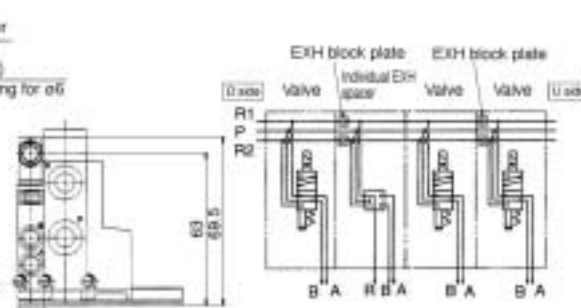
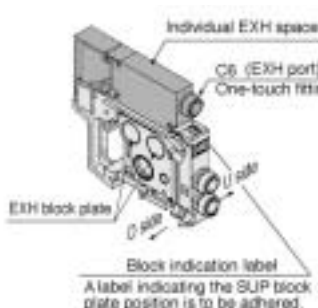
* Specify the spacer mounting position and SUP block plate position by means of the manifold specification form. The block plate are used in two places for one set. (Two SUP block plates for blocking SUP station are attached to the individual SUP spacer.)



Individual EXH spacer VVQ1000-R-2-C6

When valve exhaust affects other stations due to the circuit configuration, this spacer is used for individual valve exhaust. (One station space is occupied.) Block both sides of the individual valve EXH station. (See the application ex.)

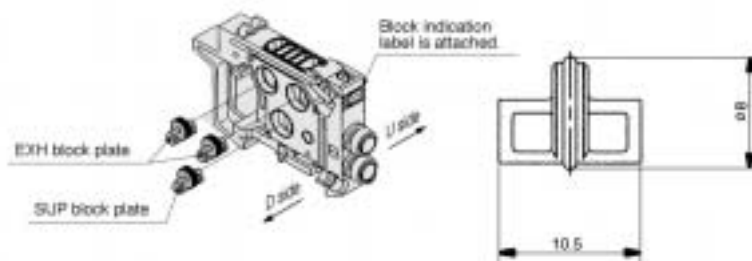
* Specify the mounting position, as well as EXH block base or EXH block plate position by means of the using manifold specification form. The block plate are used in two places for one set.



SUP/EXH block plate VVQ1000-16A-2

When high and low, different pressures are supplied to one manifold, a SUP block plate is inserted between the stations under different pressures. When a valve exhaust affects other stations due to the circuit configuration, this plate is also used between the stations where exhaust should be separated. It is also used for individual exhaust by combining an EXH block plate with an individual EXH spacer. (2 EXH plates are necessary for 1 station.)

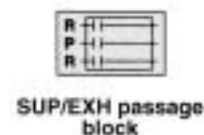
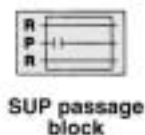
Note) The SUP/EXH block plate is common.
* Specify the station's qty and position by using a manifold specification form.



<Blocking indication label>

When using block plates for SUP/EXH passage, indication label for confirmation of the blocking position from outside is attached. (one label for each)

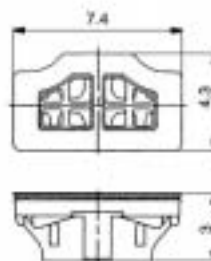
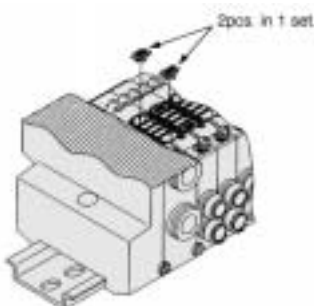
* When ordering a block plate incorporated with the manifold no., a block indication label is attached to the manifold.



Check valve for prevention of back pressure assembly [-B] VVQ1000-18A

It prevents cylinder malfunction caused by other valve exhaust. Insert it into R (EXH) port on the manifold side of a valve which is affected. It is effective when a single-actuation cylinder is used or an exhaust center type solenoid valve is used.

Note) When a check valves for back pressure prevention is desired to be installed only in desired manifold stations, write clearly the part No. and specify the number of stations by using manifold specification form.



* When ordering assemblies incorporated with a manifold, add suffix "-B" to the manifold No.

<Precautions>

1. The check valves prevention of back pressure ass'y is assembly parts with a check valve structure. However, as slight air leakage is allowed for the back pressure, take the exhaust air will not be throttled at the exhaust port.
2. When a check valve for prevention of back pressure is mounted, the effective orifice of the valve will decrease by about 20%.



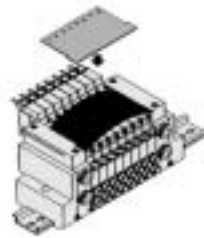
Manifold options.....SV5Q12OP, #1 to #11



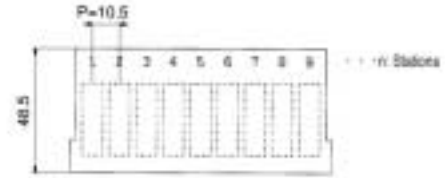
Name plate [-N*]

VVQ1000-N2-Station (1 to Max. stations)

It is transparent resin plate for placing a label that indicates solenoid valve function, etc.
Insert it into the groove on the side of the end plate and bend it as shown in the figure.



* When ordering assemblies incorporated with a manifold, add suffix "-N" to the manifold No.



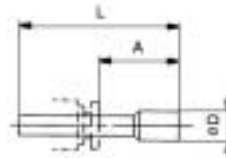
Blank plug (For One-touch fittings)

KQP-²³₀₄₀₆₀₈-X19

Color: White

It is inserted into an unused cylinder port and SUP/EXH ports.

The minimum order quantity is 10 pcs.



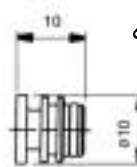
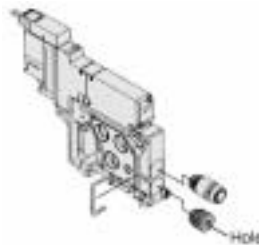
Dimensions (mm)

Fittings size ød	Model	A	L	D
3.2	KQP-23-X19	16	31.5	3.2
4	KQP-04-X19	16	32	6
6	KQP-06-X19	18	35	8
8	KQP-08-X19	20.5	39	10

Port plug

VVQ0000-58A

The plug is used to block the cylinder port when using a 4 port valve as a 3 port valve.



* When ordering a plug incorporated with a manifold, indicate "CM" for the port size in the manifold no., as well as, the mounting position and number of stations and cylinder port mounting positions, A and B, by means of the manifold specification form.

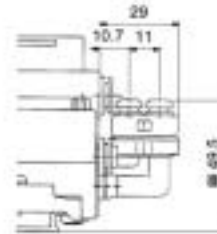
* Lightly screw an M3 screw in the port plug hole and pull it for removal.

Elbow fitting assembly

VVQ1000-F-L^{C3}_{C4}_{C5}_{M5}

It is used for piping that extends upward or downward from the manifold.

When not mounting it to all manifold stations, clearly write the elbow type fitting ass'y no. and specify the station's qty and position by manifold specifications.



* When ordering assemblies incorporated with a manifold, indicate "L□" or "B□" for the manifold port size.

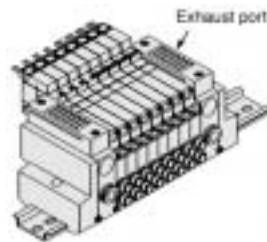
Built-in silencer, Direct exhaust [-S]

This is an exhaust port on the manifold end plate.

The built-in silencer exhibits an excellent noise suppression effect. (silencing effect: 30dB)

Note) A large quantity of drainage generated in the air source results in exhaust of air together with drainage.

● See p.1.10-196 for maintenance.



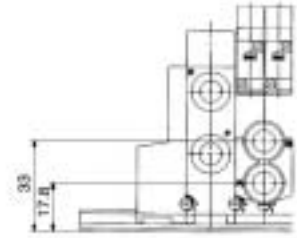
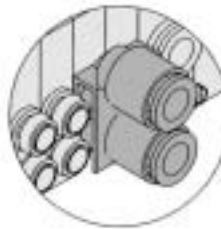
* When ordering assemblies incorporated with a manifold, add suffix "-S" to the manifold No.

2 stations matching fitting assembly

VVQ1000-52A-C8

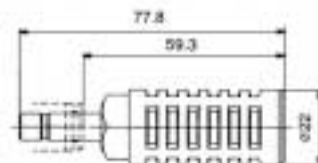
For driving a cylinder with a large bore, valves for two stations are operated to double the flow rate. This ass'y for the cylinder port is used in that case. The ass'y is equipped with One-touch fittings for a ø8 bore.

* The bore for the manifold no. is "CM." Clearly indicate the 2-station matching fittings ass'y No., and specify the number of stations and positions by means of the manifold specifications.



Silencer (EXH port)

This silencer is inserted into the EXH port (One-touch fittings) of the common exhaust type.



Dimensions

						(mm)	
Series	Fitting size ød	Model	A	L	D	Effective area (mm ²)(Cv)	Silencing effect dB
VQ1000	8	AN200-KM8	59.3	77.8	22		30



VQ 0000/1000 **Base Mounted** Plug Lead Unit

Manifold Option Parts/VQ0000/VQ1000

Double check block (Separate style): For VQ0000, VQ1000
VQ1000-FPG-□□

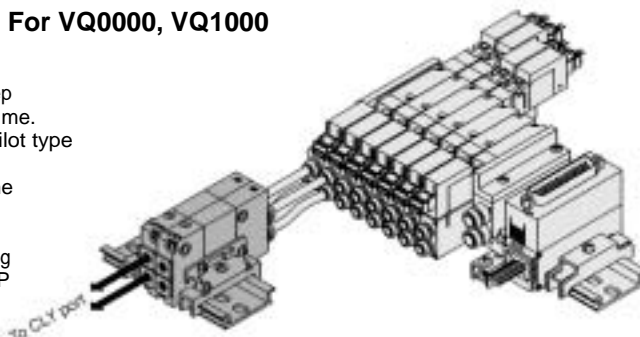
It is used on the way of the secondary side piping keep the cylinder in the intermediate position for a long time. Combining a double check block with a built-in pilot type double check valve and a 3 position EXH center solenoid valve will enable the cylinder to stop in the middle or maintain its position for a long time. The combination with a 2 position single/double solenoid valve will permit this block to be used for preventing the dropping at the cylinder stroke end when the SUP residual pressure is released.

Specifications

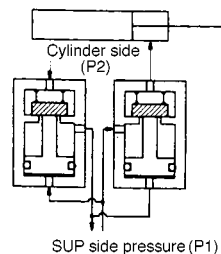
Max. operating pressure	0.8MPa
Min. operating pressure	0.1MPa
Ambient and fluid temperature	-5 to 50°C
Effective area (Cv factor) ^{Note}	2.7mm ² (0.15)
Max. operating frequency	180CPM

VVQ1000-FPG-02 1set
* VQ1000-FPG-C6M5-D 2 pcs.

Note) As per JISB8375-1981
(Supply pressure: 0.5 MPa)

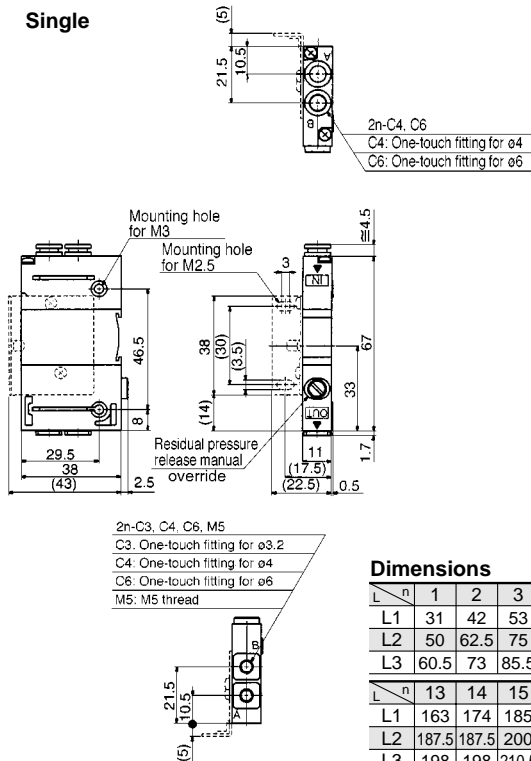


<Check Valve Operation Principle>

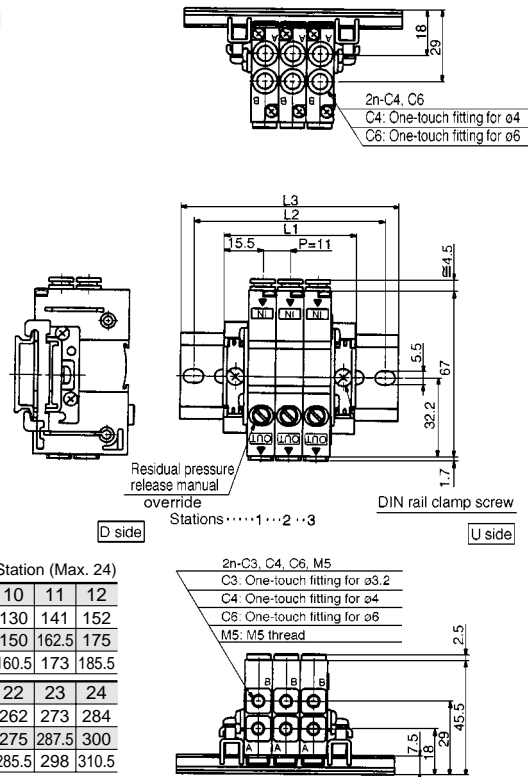


Dimensions

Single



Manifold



Dimensions

Equation $L1=11n+20$ n: Station (Max. 24)

L	n	1	2	3	4	5	6	7	8	9	10	11	12
L1	31	42	53	64	75	86	97	108	119	130	141	152	
L2	50	62.5	75	87.5	100	112.5	125	125	137.5	150	162.5	175	
L3	60.5	73	85.5	98	110.5	123	135.5	135.5	148	160.5	173	185.5	

L	n	13	14	15	16	17	18	19	20	21	22	23	24
L1	163	174	185	196	207	218	229	240	251	262	273	284	
L2	187.5	187.5	200	212.5	225	237.5	250	250	262.5	275	287.5	300	
L3	198	198	210.5	223	235.5	248	260.5	260.5	273	285.5	298	310.5	

How to Order

Double check block

VQ1000-FPG-**C4** **M5**-**F**

IN side port size

C4	One-touch fitting for ø4
C6	One-touch fitting for ø6

● OUT side port size

M5	M5 thread
C3	One-touch fitting for $\varnothing 3.2$
C4	One-touch fitting for $\varnothing 4$
C6	One-touch fitting for $\varnothing 6$

- **Option**

—	None
F	With bracket
D	DIN rail mounting (for manifold)
N	With name plate

Note 1) When specifying more than one option, please list alphabetically. Example)-DIN

Manifold

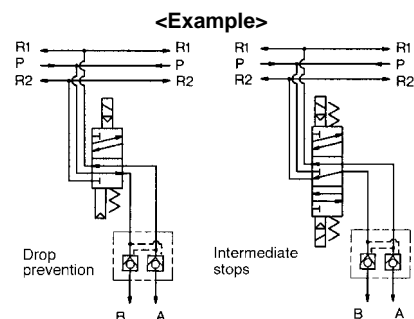
VVQ1000-FPG-06

● Stations

01	1 station
:	:
16	16 stations

<Example>

VVQ1000-FPG-06.....6 stations of manifold
 * VQ1000-FPG-C4M5-D, 3 sets
 * VQ1000-FPG-C6M5-D, 3 sets } Double check block



- Air leakage from the pipe between the valve and cylinder or from the fittings will prevent the cylinder from stopping for a long time. Check the leakage using neutral household detergent, such as dish washing soap. Also, check the cylinder's tube gasket, piston packing and rod packing for leakage.
- Since One-touch fittings allow slight air leakage, screw piping (with M5 thread) is recommended when stopping the cylinder in the middle for a long time.
- Combining double check block with 3 position closed center or pressure center solenoid valve will not work.
- M5 fitting assembly is attached, not incorporated into the double check block.
After screwing in the M5 fittings, mount the ass'y on the double check block.
(Tightening torque: 0.8 to 1.2Nm)
- If the exhaust of the double check block is throttled too much, the cylinder may not operate properly and may not stop intermediately.

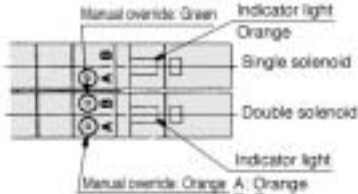
⚠ Precautions

Be sure to read before handling. Refer to p.0-33 to 0-36 for Safety Instructions and common precautions.

⚠ Caution

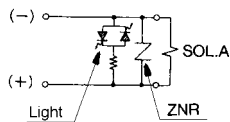
Indicator Light and Surge Voltage Suppressor

In case of VQ1000, the standard model is equipped with an indicator light and surge voltage suppressor. The lighting positions are concentrated on one side for both single solenoid style and double solenoid style. In the double solenoid style, A-side and B-side energization are indicated by two colors which match the colors of the manual overrides.

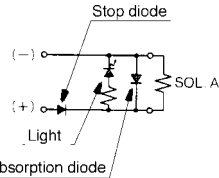


* In case of VQ0000, solenoid and manual override on both sides.

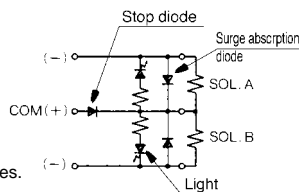
VQ0000 (DC)



VQ1000 (DC) Single solenoid



VQ1000 Double solenoid



* In case of VQ0000, solenoid and manual override on both sides.

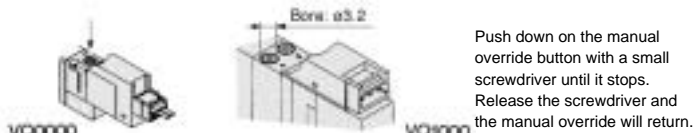
Note) A-side energization: A light (orange) illuminates. B-side energization: B-light (green) illuminates.
Equipped with a wiring error prevention (stop diode) mechanism and a surge absorption (surge absorption diode) mechanism.

⚠ Warning

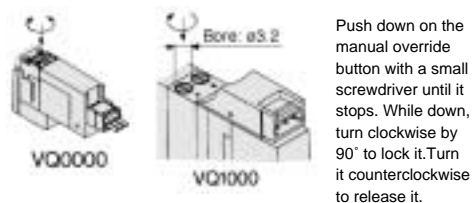
Manual Override

Without an electric signal for the solenoid valve the manual override is used for switching the main valve.
Standard model: Non-locking push style
Option: Push-locking slotted/lever style

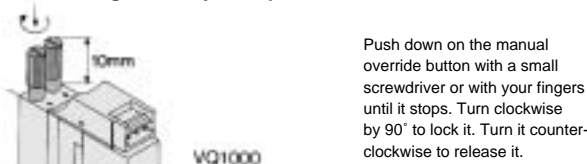
■ Non-locking push style



■ Push-locking slotted style <Option>



■ Push-locking lever style <Option>

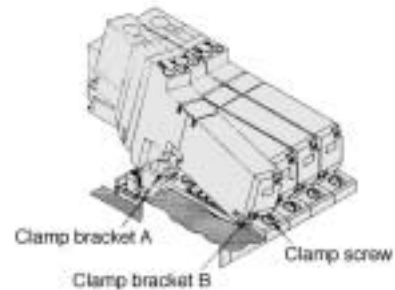


⚠ Caution

Do not apply too much torque when turning the lock style manual override.
(0.1Nm or less)

⚠ Caution

How to Mount/Remove Solenoid Valve



How to remove

- ① Loosen the clamp screw until it turns freely. (The screw is captive)
- ② Lift the coil side of the valve body while pressing down slightly on the screw head and remove it from the clamp bracket. When the screw head cannot be pressed easily, gently press the area near the manual override of the valve.

How to mount

- ① Press down on the clamp screw. → Clamp bracket A opens. Diagonally insert the hook on the valve end plate side into clamp B.
- ② Press the valve body downward. (When the screw is released, it will be locked by clamp bracket A.)
- ③ Tighten the clamp screw. (Appropriate clamping torque: 2.5 to 0.35Nm)

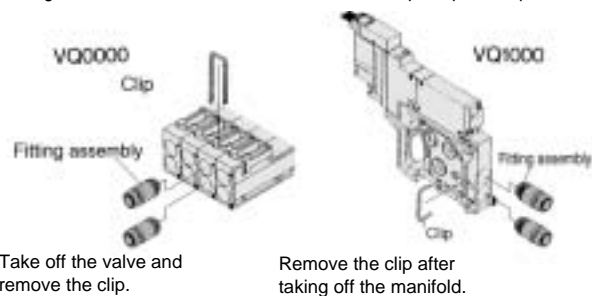
⚠ Caution

- 1) Dust on the sealing surface of the gasket or solenoid valve can cause air leakage.
- 2) In case of VQ0000, valve mounting screw clamping torque is 0.18 to 0.25Nm

⚠ Caution

Replacement of Cylinder Port Fittings

The cylinder port fitting are in a cassette for easy replacement. The fittings are blocked by a clip inserted from the top of manifold. Remove the clip with a screwdriver to remove fittings. For replacement, insert the fitting assembly until it strikes against the inside wall and then re-insert the clip to specified position.



Applicable tube O.D	Fitting ass'y No.	
	VQ0000	VQ1000
Applicable tube ø3.2	VVQ1000-51A-C3	VVQ1000-50A-C3
Applicable tube ø4	VVQ1000-51A-C4	VVQ1000-50A-C4
Applicable tube ø6	—	VVQ1000-50A-C6
M5 female thread	—	VVQ1000-50A-M5

* Refer to "Options" on p.1.10-190 to 1.10-193 for other types of fittings.

⚠ Caution

- 1) Protect O rings from scratches and dust to prevent air leakage.
- 2) The tightening torque for inserting fittings to the M5 thread assembly should be 0.8 to 1.2Nm. When inserting operation is difficult, the M5 thread assembly can be removed from the manifold block, attach the fitting, and then reinstall to the manifold.
- 3) The minimum order quantity is 10 pcs.

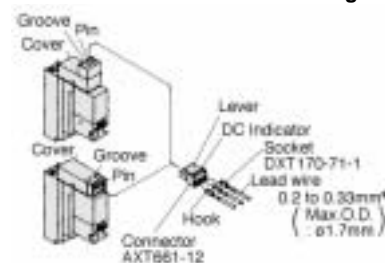
⚠ Precautions

Be sure to read before handling. Refer to p.0-33 to 0-36 for Safety Instructions and common precautions.

⚠ Caution

How to Use Plug Connector

Connection/Disconnection of Plug

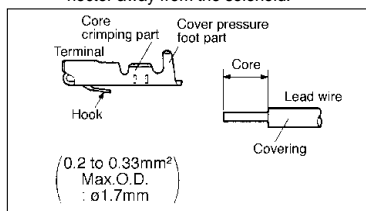


Push the connector straight onto the pins of the solenoid, making sure the lip of the lever is securely positioned in the groove on the solenoid cover.

Crimping the Lead Wire and Socket

Peel 3.2 to 3.7mm of the tip of lead wire, enter the core wires neatly into a socket and press contact it by a press tool. Be careful so that the cover of lead wire does not enter into the core press contacting part.

Crimp the lever against the connector and pull the connector away from the solenoid.

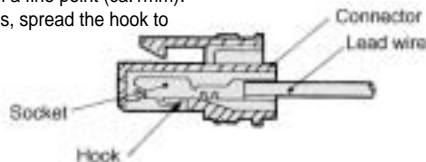


Socket with Lead Wire Connection

Insert a socket into the square hole (Indicated +, -) of connector, push in the lead wire and lock by hanging the hook of socket to the seat of connector. (Pushing-in can open the hook and lock it automatically.) Then confirm the lock by lightly pulling on the lead wire.

Disconnection

For pulling-out the socket from the connector, pull out the lead wire with pushing the hook of socket by a stick with a fine point (ca.1mm). If the socket is re-used as it is, spread the hook to the outside.

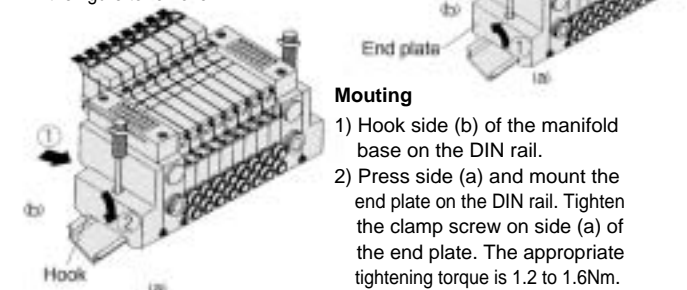


⚠ Caution

Mounting/Removing from the DIN Rail (VQ1000)

Removing

- 1) Loosen the clamp screw on side (a) of the end plate on both sides.
- 2) Lift side(a) of the manifold base and slide the end plate in the direction of ② shown in the figure to remove.



Mounting

- 1) Hook side (b) of the manifold base on the DIN rail.
- 2) Press side (a) and mount the end plate on the DIN rail. Tighten the clamp screw on side (a) of the end plate. The appropriate tightening torque is 1.2 to 1.6Nm.

⚠ Caution

Enclosure IP65

Wires, cables, connectors, etc. used for models conforming to IP65 should also have enclosures equivalent to or of stricter rating than IP65.

⚠ Caution

Built-in Silencer Replacement Element



A silencer element is incorporated in the end plate on both sides of the manifold base. A dirty and choked element may reduce cylinder speed and cause malfunction. Clean or replace the dirty element.

Remove the cover from the top of the end plate and remove the old element with a screwdriver, etc

Element part No.

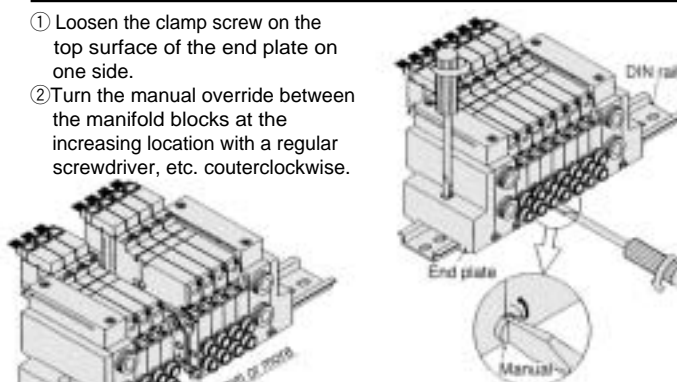
Model	Element part No.	
	VQ0000	VQ1000
Built-in Silencer, Direct exhaust(-S)	VVQ0000-82A-1	VVQ1000-82A-1

* The minimum order quantity is 10 pcs.

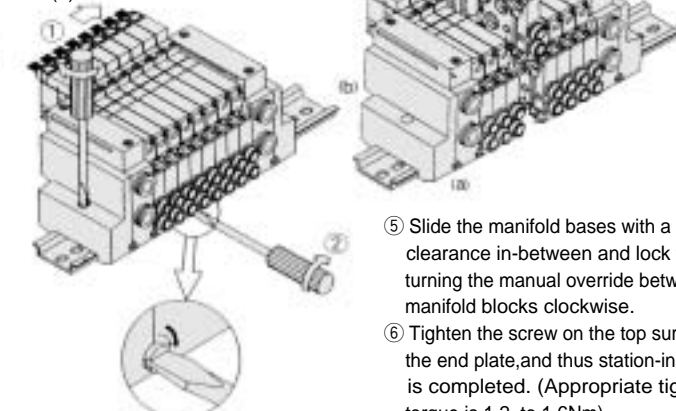
⚠ Caution

Manifold Base Station Increasing Procedure(VQ1000)

- ① Loosen the clamp screw on the top surface of the end plate on one side.
- ② Turn the manual override between the manifold blocks at the increasing location with a regular screwdriver, etc. counterclockwise.



- ④ Mount the station-increasing manifold block ass'y and solenoid valve on the DIN rail. Install it to the DIN rail by applying the hook on the (b) side of the manifold block and pushing down the (a) side.



- ③ Slide the manifold base to the side where the screw is loosened. Make a clearance of 15mm or more.

- ⑤ Slide the manifold bases with a slight clearance in-between and lock them by turning the manual override between the manifold blocks clockwise.
- ⑥ Tighten the screw on the top surface of the end plate, and thus station-increasing is completed. (Appropriate tightening torque is 1.2 to 1.6Nm)

Manifold block assembly

VQ1000	Port size
VVQ1000-1A-2-C3	One-touch fitting for ø3.2
VVQ1000-1A-2-C4	One-touch fitting for ø4
VVQ1000-1A-2-C6	One-touch fitting for ø6
VVQ1000-1A-2-M5	M5 thread

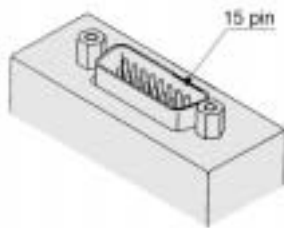
Options

Different Number of Connector Pins

When an F kit or P kit with a different number of pins (standard pins: F=25; P=26) is desired, the cable assembly will not be provided. Place an order for the cable assembly separately. Select the desired number of pins and cable length from the cable assembly list.

F

Kit (D-sub connector) 15 pin



How to Order Manifold

VV5Q12—**06** **F** **SA**—**D**

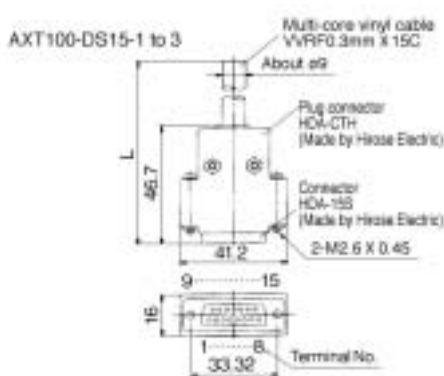
Stations

Option

How to order
D-sub connector, 15 pin
Connector location
—Side(horizontal)
Without cable

Kit/Electrical entry

Pins	Location	Top (vertical)		Side (horizontal)	
15 pin (Max. 7stations)		F Kit	suffix: UA	F Kit	suffix: SA



Wire color table by terminal number of D-sub connector cable assembly

Terminal No.	Lead wire color	Dot marking
1	Black	—
2	Brown	—
3	Red	—
4	Orange	—
5	Yellow	—
6	Pink	—
7	Blue	—
8	Violet	White
9	Gray	Black
10	White	Black
11	White	Red
12	Yellow	Red
13	Orange	Red
14	Yellow	Black
15	Pink	Black

* In the same way as the 25 pin (standard) products, the terminal No.1 for is SOL.A at the 1st station, the terminal No.9 for SOL.B at the 1st station, and the terminal No.8 for COM.

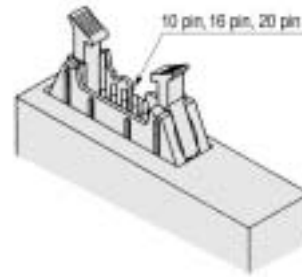
D-sub connector cable assembly

Length(L)	Pins	15 pin
1.5m		AXT100-DS15-1
3m		AXT100-DS15-2
5m		AXT100-DS15-3

* When using other commercially available connectors, select models that conform to MIL-C-24308.

P

Kit (Flat cable connector) 10 pin, 16 pin, 20 pin



How to Order Manifold

VV5Q12—**06** **P** **SC**—**D**

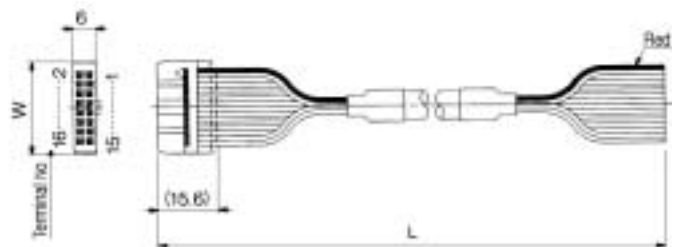
Number of stations

Option

How to order
Flat cable, 20 pin
Connector location
—Side (horizontal)
Without cable

Kit/Electrical entry

Pins	Location	Top (vertical)		Side (horizontal)	
10 pin (Max. 4 stations)			suffix: UA		suffix: SA
16 pin (Max. 7 stations)		P Kit	suffix: UB	P Kit	suffix: SB
20 pin (Max. 9 stations)			suffix: UC		suffix: SC



* In the same way as the 26 pin (standard) products, the terminal No.1 is SOL.A at the 1st station, the terminal No.2 for SOL.B at the 1st station, and two pins from the max. terminal numbers are for COM.

Flat cable assembly

Length(L)	Pins	10 pin	16 pin	20 pin
1.5m		AXT100-FC10-1	AXT100-FC16-1	AXT100-FC20-1
3m		AXT100-FC10-2	AXT100-FC16-2	AXT100-FC20-2
5m		AXT100-FC10-3	AXT100-FC16-3	AXT100-FC20-3
Connector width (W)		17.2mm	24.8mm	30mm

* When using other commercially available connectors, select models with strain relief that conform to MIL-C-83503.

SY
SYJ
SX
VK
VZ
VF
VFR
VP7
VP4
VQ
VQ4
VQZ
VQD
VZS
VFS
VS
VS7

VQ 0000/1000 **Base Mounted** Plug Lead Unit

Made to Order

Special Wiring Specifications

Regardless of the valve or option, the standard internal wiring for double solenoid capability is provided to each station of F/P/T/S kit. As made-to-order combinations of single and double wiring (connected to SOL A, B) are available.

1. How to Order

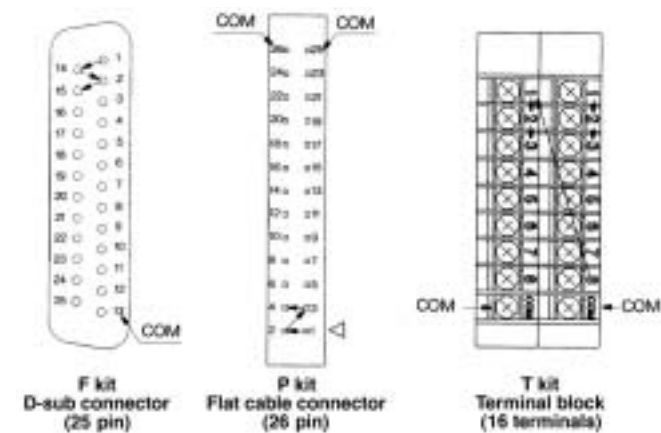
Indicate an option symbol, “-K,” for the manifold no. and be sure to specify the mounting position and number of stations of the single and double wiring by means of the manifold specification form.

How to order manifold **VV5Q05-08C4FU1-D K S**

List option symbols in alphabetical order

2. Wiring specification

With the A side solenoid of the 1st station as no.1 (meaning, to be connected to no.1 terminal), wires are connected in the order indicated by the arrow in the DWG without making any terminals vacant.



3. Max. number of stations

The max. number of stations depends upon the number of solenoids. Assuming one for a single and two for a double, determine the number of stations so that the total number is not more than the max. number given in the following table.

Kit	F kit (D-sub connector)		P kit (Flat cable connector)				T kit (Terminal block)		S kit (Serial transmission)
Model	F _s ^U □ 25P	F _s ^U A 15P	P _s ^U □ 26P	P _s ^U C 20P	P _s ^U B 16P	P _s ^U A 10P	T1	T2	S□
Max. number	(1) 16	14	(1) 16	(1) 16	14	8	8	16	16

Note 1) Due to the limitation of internal wiring.

Negative COM Specifications [Series VQ1□10]

Order the valves and manifolds with negative COM specification as follows.

VQ1110 N — 5M

Negative COM specification

* Series VQ0□50 has no polarity, so the negative common is applicable to standard models.

Inch-size One-Touch Fitting

The valve with inch-size One-touch fittings is shown below.

VV5Q12-06 N7 PSO-D

Number of stations •

Cylinder ports •

Kit/Electrical entry •

Option •

Symbol	N1	N3	N7	M5T	NM
Applicable tube O.D.(Inch)	ø1/8"	ø5/32"	ø1/4"	10-32UNF (M5)	Mixed size
A, B port	○	○	○	○	○

Note) When inch-size fittings are selected for a cylinder port, use inch-size fittings for both P and R port.

P, R port size
VQ0000..... ø1/4"
VQ1000..... ø5/16"

Plug Connector Assembly Model

F, P, and S kits need connector assembly when adding a valve station. Specify the style of valve and connector assembly.

Connector assembly No.

Specifications		No.
Single VQ0000 (2 wire)	Positive COM	AXT661-14A-F
	Negative COM	AXT661-14AN-F
Double(latching) (3 wire)	Positive COM	AXT661-13A-F
	Negative COM	AXT661-13AN-F

Note) Lead wire length: 300mm
The parts numbers above are applicable to 2 to 10 stations.
11 to 16 stations: "AXT661-13₁₃A(N)-F-425".

DIN Rail Mounting Style

Each manifold can be mounted on a DIN rail. Order it by indicating a DIN rail mounting option symbol, “-D.” In this case, a DIN rail which is approx. 30mm longer than the manifold with the specified number of stations is attached. Other than this, it is applicable for the following cases.

● When DIN rail is unnecessary (C kit VQ0000 only)

Indicate the option symbol, “-DO,” for the manifold No.

Example)

VV5Q05-08C4C-D0S

• List option symbols
in alphabetical order

● When using DIN rail longer than the manifold with specified number of stations (VQ0000/VQ1000)

Clearly indicate the necessary number of stations next to the option symbol. “D” for the manifold No.

Example)

VV5Q05-08C4FU1-D09S

DIN rail for 9 stations

• List option symbols
in alphabetical order

● When changing the manifold style into a DIN rail mounting (VQ0000 only)

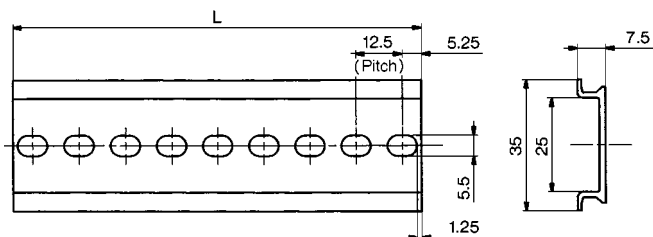
Order brackets for mounting a DIN rail. (See Options on p.1.10-191)

No. VVQ0000-57A-5 2 pcs. per one set.

● When ordering DIN rail only (VQ0000 only)

DIN rail No.: AXT100-DR-□

* Put no. in the square using the DIN rail dimensional table.
Refer to the each kit dimensional drawing for L dimension.



L dimension (mm)

$$L=12.5 \times n+10.5$$

No.	1	2	3	4	5	6	7	8	9	10
L	23	35.5	48	60.5	73	85.5	98	110.5	123	135.5
No.	11	12	13	14	15	16	17	18	19	20
L	148	160.5	173	185.5	198	210.5	223	235.5	248	260.5
No.	21	22	23	24	25	26	27	28	29	30
L	273	285.5	298	310.5	323	335.5	348	360.5	373	385.5
No.	31	32	33	34	35	36	37	38	39	40
L	398	410.5	423	435.5	448	460.5	473	485.5	498	510.5

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

VFS

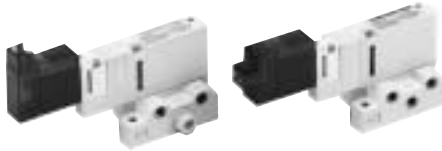
VS

VS7

Series VQ Single Unit



For individual use of a single valve



VQ0000

Model

Series	Configuration	Model	Effective area ⁽¹⁾ (mm ²)(Cv)	Response time ⁽²⁾ (ms)		Weight (g)
				Standard: 1W H: 1.5W	Low wattage AC	
Base mounted	2 position	Single	Metal seal VQ0150	2.7 (0.15)	12 or less	50 ⁽³⁾
			Rubber seal VQ0151	3.6 (0.2)	15 or less	
		Double	Metal seal VQ0250	2.7 (0.15)	10 or less	
			Rubber seal VQ0251	3.6 (0.2)	15 or less	
	3 position	Closed center	Metal seal VQ0350	2.0 (0.11)	20 or less	65 ⁽³⁾
			Rubber seal VQ0351	2.7 (0.15)	25 or less	
		Exhaust center	Metal seal VQ0450	2.0 (0.11)	20 or less	
			Rubber seal VQ0451	2.7 (0.15)	25 or less	



Note 1) Cylinder port size C4: (VQ0000)

Note 2) As per JIS8375-1981(supply pressure: 0.5 MPa; with indicator light and surge voltage suppressor; clean air) The response time is subject to the pressure and quality of the air. The valves at the time of ON are given for double types.

Note 3) Weight including sub-plate.

Standard Specifications

Valve	Seal	Metal seal	Rubber seal
	Fluid	Air/Inert gas	Air/Inert gas
	Max.operating pressure	0.7MPa (High pressure type: 0.8MPa)	
	Min. operating pressure	Single	0.1MPa
		Double	0.1MPa
		3 position	0.1MPa
	Ambient and fluid temperature	-10 to +50°C ⁽¹⁾	
	Lubrication	Not required	
	Manual override	Non-locking push style/Push-locking slotted or lever style (Option)	
	Impact/Vibration resistance ⁽²⁾	150/30 m/s ²	
Solenoid	Protection structure	Dust proof	
	Coil rated voltage	12, 24V DC, 100, 110, 200, 220V AC (50/60Hz)	
	Allowable voltage	±10% of rated voltage	
	Coil insulation	Class B or equivalent	
	Power consumption (Current value)	24V DC	1W DC (42mA), 1.5W DC (63mA), ⁽³⁾ 0.5W DC (21mA) ⁽⁴⁾
		12V DC	1W DC (83mA), 1.5W DC (125mA), ⁽³⁾ 0.5W DC (42mA) ⁽⁴⁾
		100V AC	Inrush, Holding
		110V AC	Inrush, Holding
		200V AC	Inrush, Holding
		220V AC	Inrush, Holding



Note 1) Use dry air to prevent condensation when operating at low temperature.

Note 2) Impact resistance: No malfunction resulted from the impact test using a drop impact tester. The test was performed on the axis and right angle directions of the main valve and armature, for both energized and deenergized states.

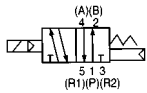
Vibration resistance: No malfunction occurred in a one-sweep test between 8.3 and 2,000 Hz. Test was performed at both energize and de-energized states to the axis and right angle directions of the main valve and armature. (Value in the initial stage.)

Note 3) Value for high pressure type (1.5W)

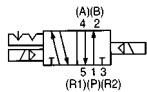
Note 4) Value for low wattage type (0.5W)

JIS Symbol

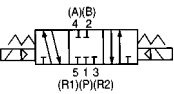
2 position single



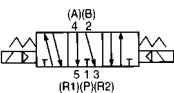
2 position double



3 position closed center



3 position exhaust center



How to Order Valve

VQ0 1 5 0 Y 5 L C4

Series VQ0000

Configuration

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center

Seal

0	Metal
1	Rubber

Pilot valve (Option)

Symbol	Specification	DC	AC
—	Standard	(1.0W) ○	○ ⁽¹⁾
H	High pressure	(1.5W) ○	—
Y	Low wattage	(0.5W) ○	—

Note 1) Refer to p.1.10-200 for AC.

Sub-plate SUP/CYL ports

—	Without subplate
C3	One-touch fitting for ø3.2
C4	One-touch fitting for ø4
M5	M5 thread

Note) EXH port: M5 thread

Manual override

—	Non-locking push style
B	Push-locking slotted style *

* Option

Electrical entry

G	Grommet (Except for AC)
L	L plug connector with lead wire
LO	L plug connector without connector
M	M plug connector with lead wire
MO	M plug connector without connector

Coil rated voltage

1	100V AC (50/60Hz)
2	200V AC (50/60Hz)
3	110V AC (50/60Hz)
4	220V AC (50/60Hz)
5	24V DC
6	12V DC

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

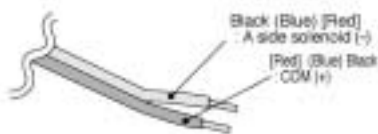
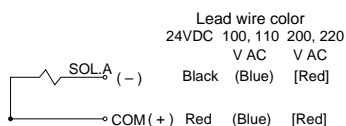
VFS

VS

VS7

Wiring Specifications

- The lead wires are connected to the valve as shown below.
Connect each to the power supply side.



● Plug connector lead wire length

Note) The length of the lead wire provided is 300mm. When a valve with lead wire of 600mm or more is needed, specify both the valve without connector and the longer connector ass'y no.

Example) Lead wire length 1000mm
VQ1110N-5LO 3 pcs.
AXT661-14A-10 3 pcs.

Connector assembly

Lead wire length	Ass'y part No.
Socket (3 pcs.)	AXT661-12A
300mm	AXT661-14A
600mm	AXT661-14A-6
1000mm	AXT661-14A-10
2000mm	AXT661-14A-20
3000mm	AXT661-14A-30

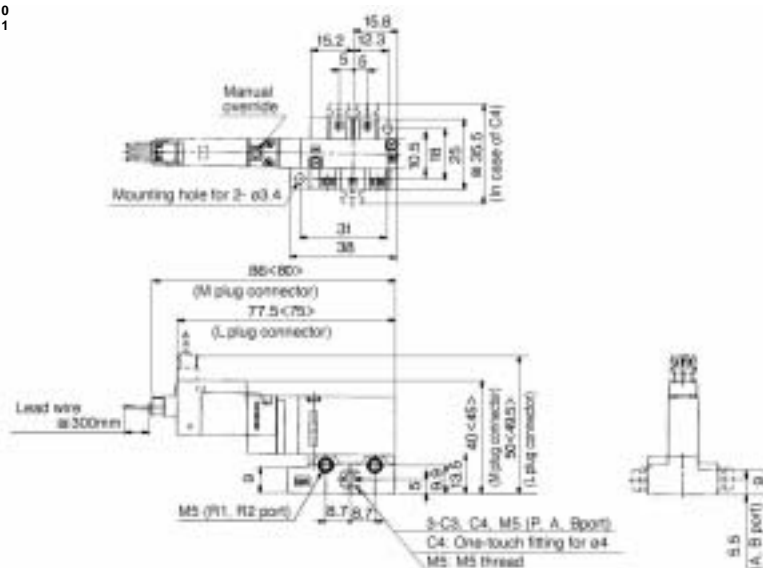
Note) AXT661-31A-* for 100/110V AC,
AXT661-34A-* for 200/220V AC.

Single Unit



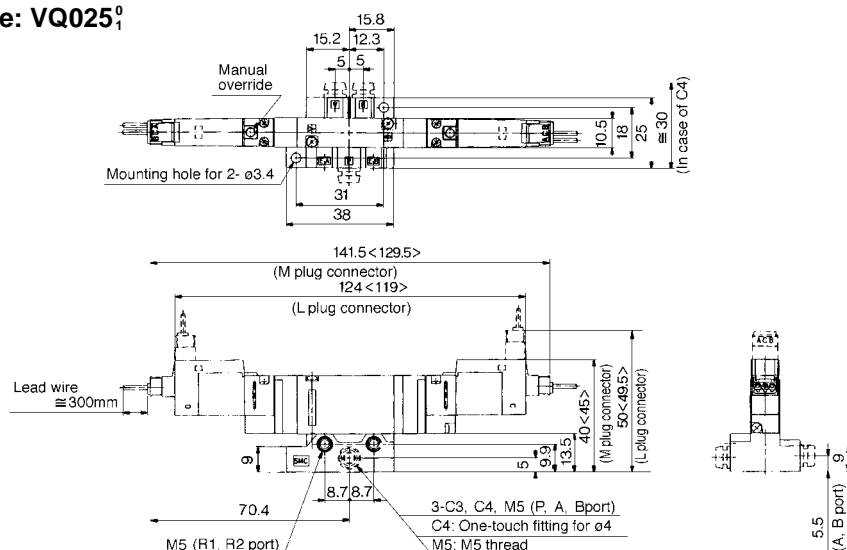
Dimensions

2 position single: VQ015⁰₁

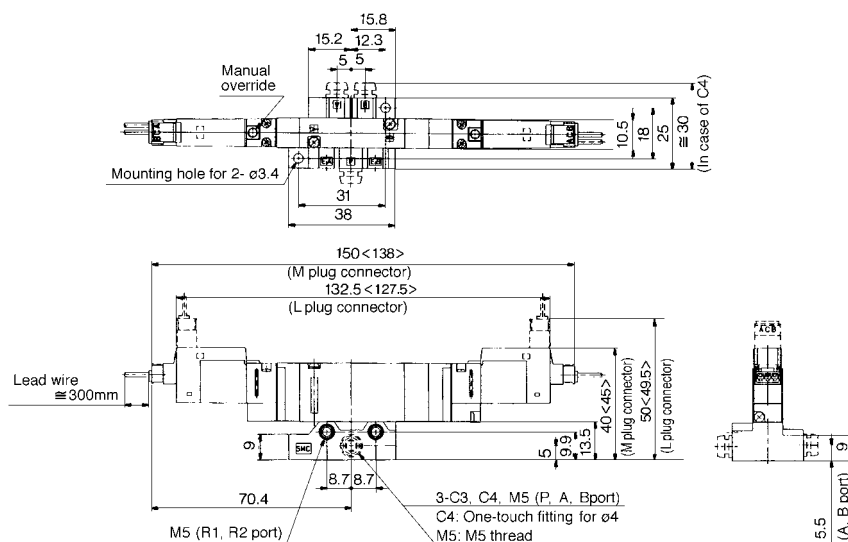



< >: AC

2 position double: VQ025⁰



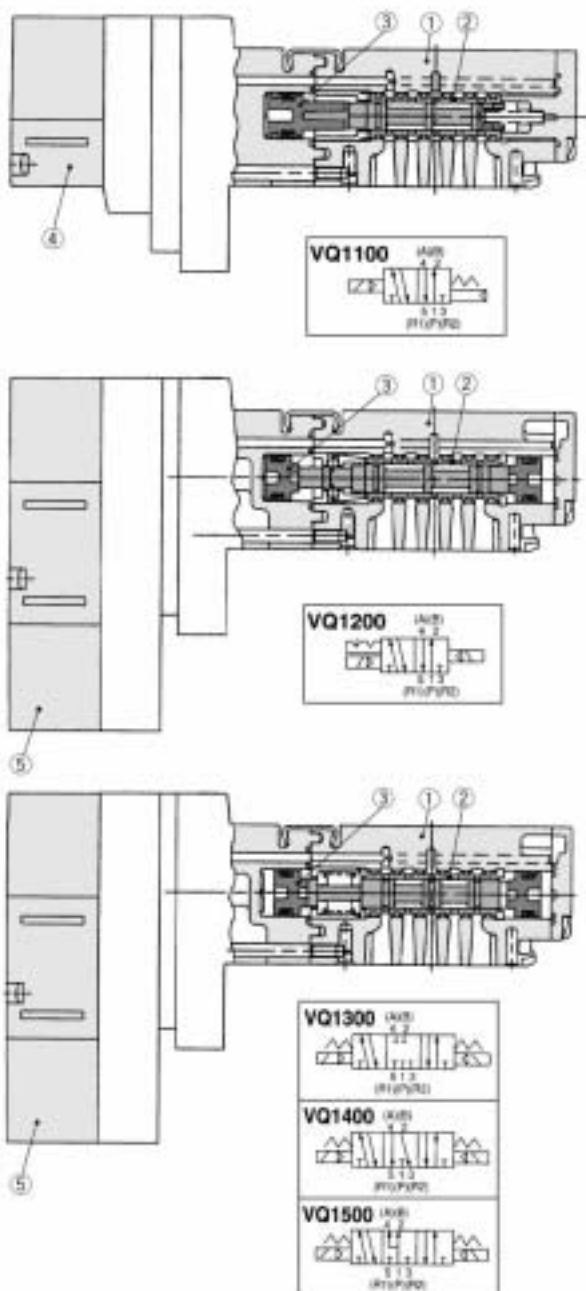
3 position closed center/exhaust center: VQ0₄5₁



	2 position single (M).....	SV5Q05V, #7	} Grommet: #10 and L plug connector: #11 are added.
	2 position double (M).....	SV5Q21V, #8	
	3 position closed center (M).....	SV5Q05V, #9	
	3 position exhaust center	SV5Q05V, #9	

Construction: Plug-in Unit/VQ1000

Metal seal



Component Parts

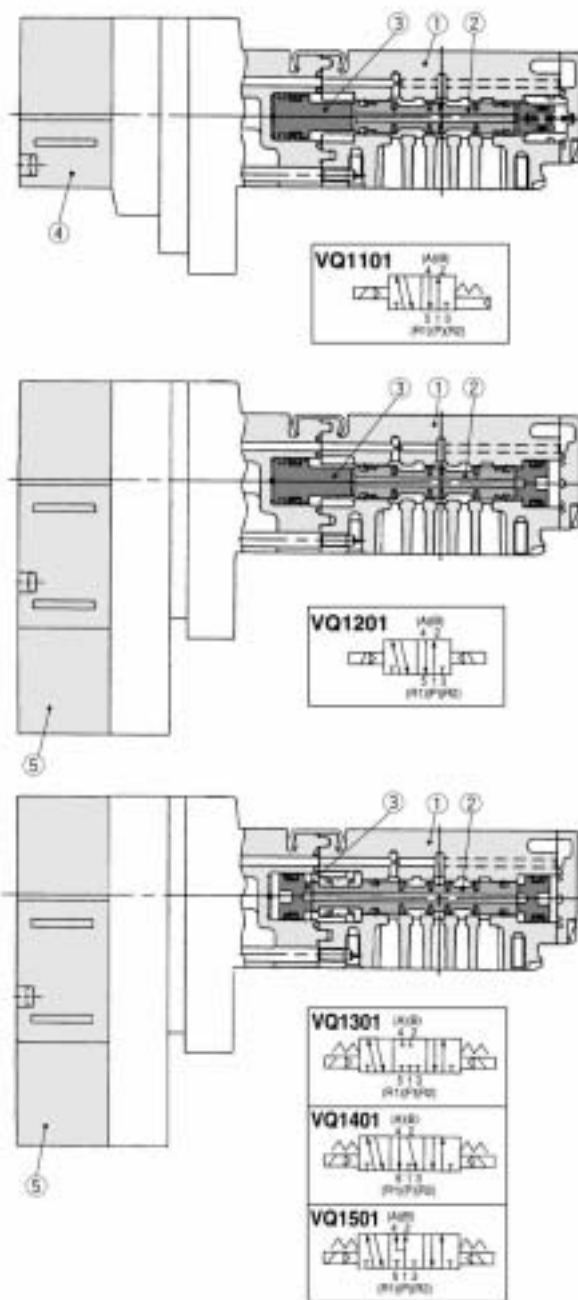
No.	Description	Material	Note
①	Body	Zinc die cast	
②	Spool/Sleeve	Stainless steel	
③	Piston	Resin	

Replacement Parts

④	Pilot valve assembly	VQ111 ^(H) - □ - 1 ⁽¹⁾ Voltage1 to 6	Single
⑤	Pilot valve assembly	VQ131 ^(H) - □ - 1 ⁽¹⁾ Voltage1 to 6	Double/ 3 position

Note 1) (Y): 0.5W
(H): 1.5W

Rubber seal



Component Parts

No.	Description	Material	Note
①	Body	Zinc die cast	
②	Spool valve	Aluminum/NBR	
③	Piston	Resin	

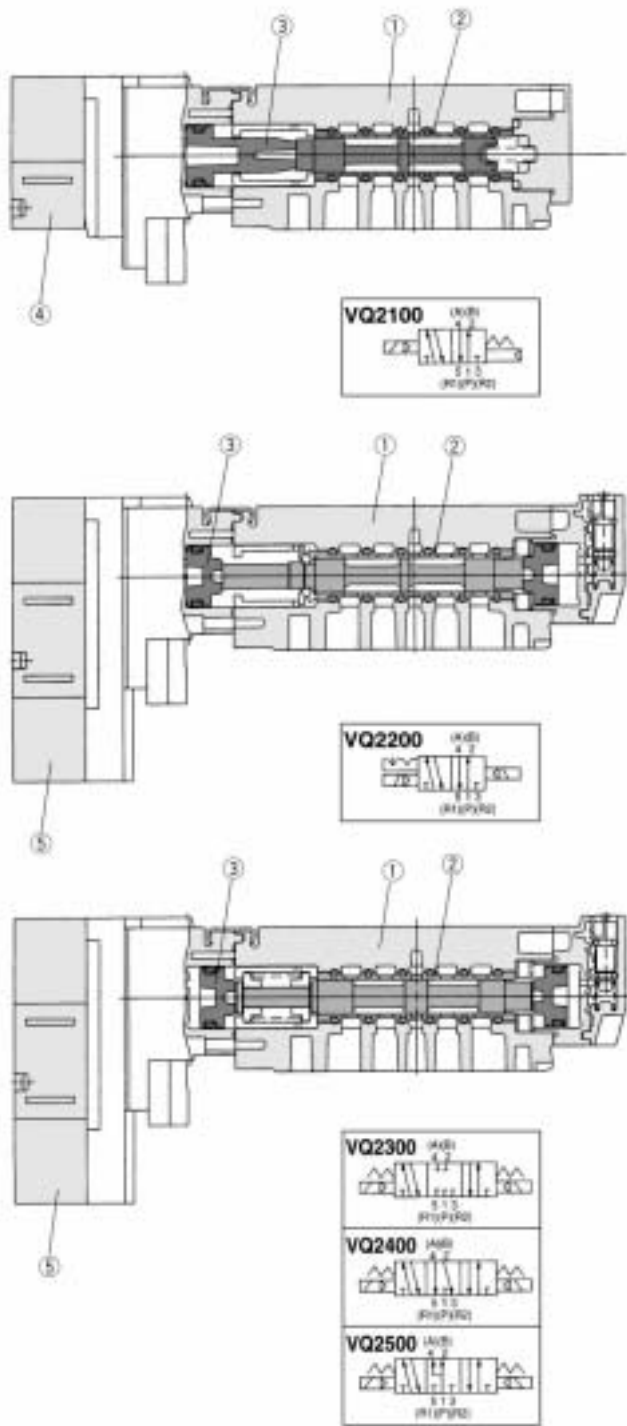
Replacement Parts

④	Pilot valve assembly	VQ111 ^(H) - □ - 1 ⁽¹⁾ Voltage1 to 6	Single
⑤	Pilot valve assembly	VQ131 ^(H) - □ - 1 ⁽¹⁾ Voltage1 to 6	Double/ 3 position

Note 1) (Y): 0.5W
(H): 1.5W

Construction: Plug-in Unit/VQ2000

Metal seal



Component Parts

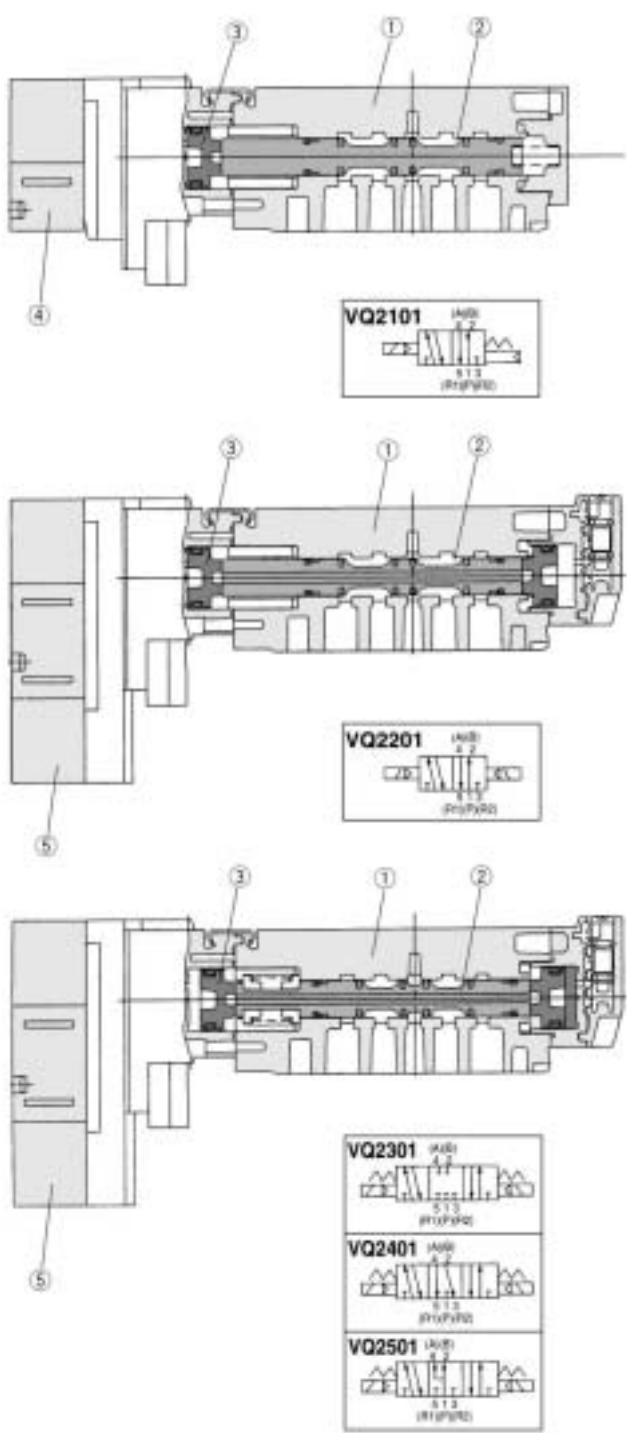
No.	Description	Material	Note
①	Body	Aluminum die cast	
②	Spool/Sleeve	Stainless steel	
③	Piston	Resin	

Replacement Parts

④	Pilot valve assembly	VQ111 ^(H) - □-1 ⁽¹⁾ (Y) Voltage1 to 6	Single
⑤	Pilot valve assembly	VQ131 ^(H) - □-1 ⁽¹⁾ (Y) Voltage1 to 6	Double/ 3 position

Note 1) (Y): 0.5W
(H): 1.5W

Rubber seal



Component Parts

No.	Description	Material	Note
①	Body	Aluminum die cast	
②	Spool valve	Aluminum/NBR	
③	Piston	Resin	

Replacement Parts

④	Pilot valve assembly	VQ111 ^(H) - □-1 ⁽¹⁾ (Y) Voltage1 to 6	Single
⑤	Pilot valve assembly	VQ131 ^(H) - □-1 ⁽¹⁾ (Y) Voltage1 to 6	Double/ 3 position

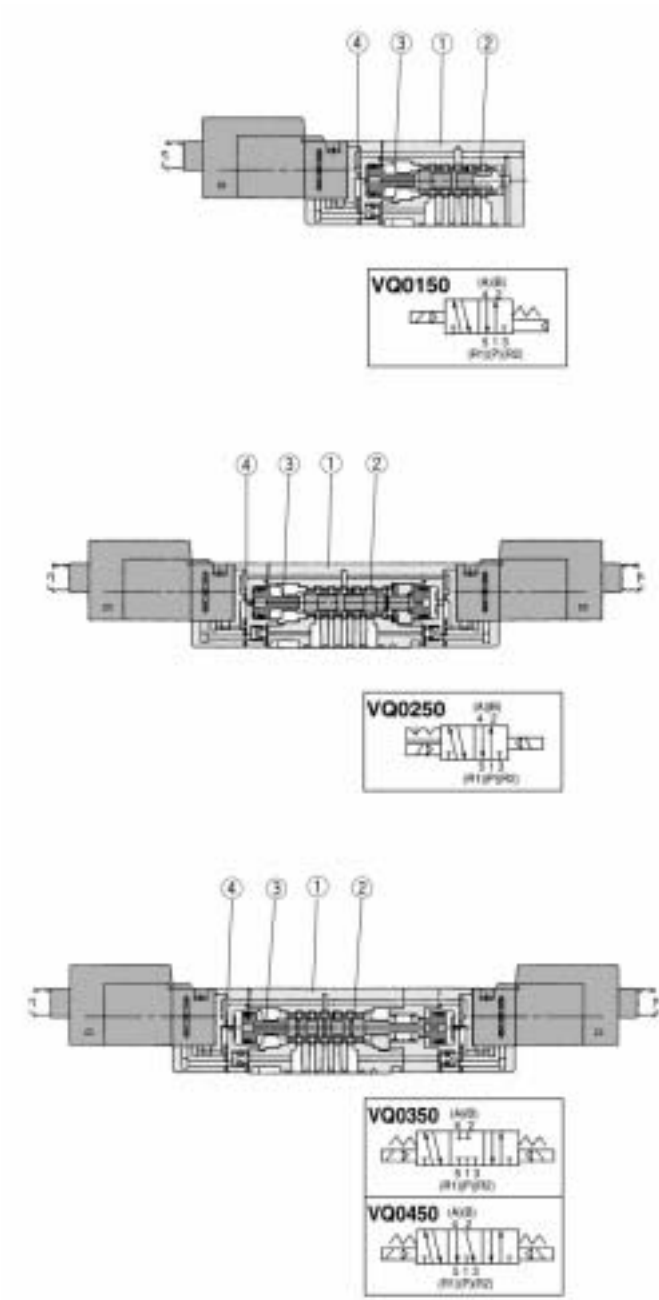
Note 1) (Y): 0.5W
(H): 1.5W

- SY
- SYJ
- SX
- VK
- VZ
- VF
- VFR
- VP7
- VP4
- VQ
- VQ4
- VQZ
- VQD
- VZS
- VFS
- VS
- VS7

Construction

Construction: Plug Lead Unit/VQ0000

Metal seal



Component Parts

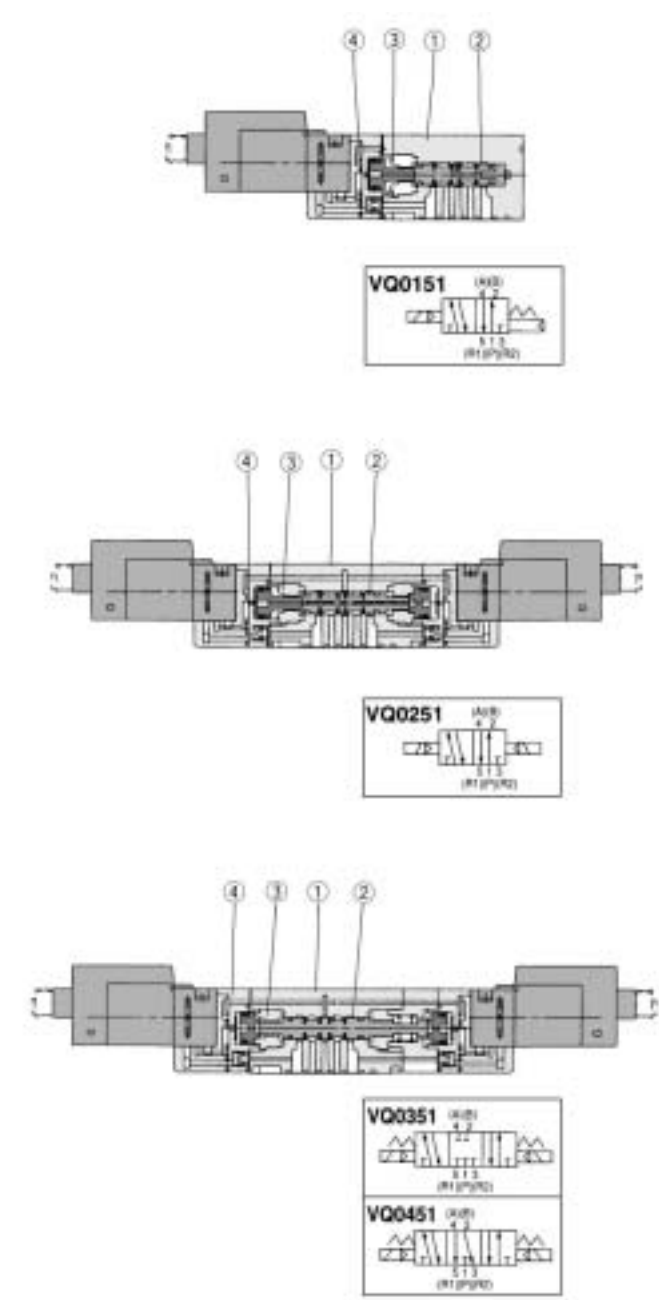
No.	Description	Material	Note
①	Body	Aluminum die cast	
②	Spool/Sleeve	Stainless steel	
③	Piston	Resin	

Replacement Parts

④	Pilot valve assembly	VQ110P ^(H) -(Y)-□-1 ^L _G ^M ⁽¹⁾	↓ Voltage1 to 6
---	----------------------	--	--------------------

Note 1) (Y): 0.5W, (H): 1.5W
DC only for G type.

Rubber seal



Component Parts

No.	Description	Material	Note
①	Body	Aluminum die cast	
②	Spool valve	Aluminum/NBR	
③	Piston	Resin	

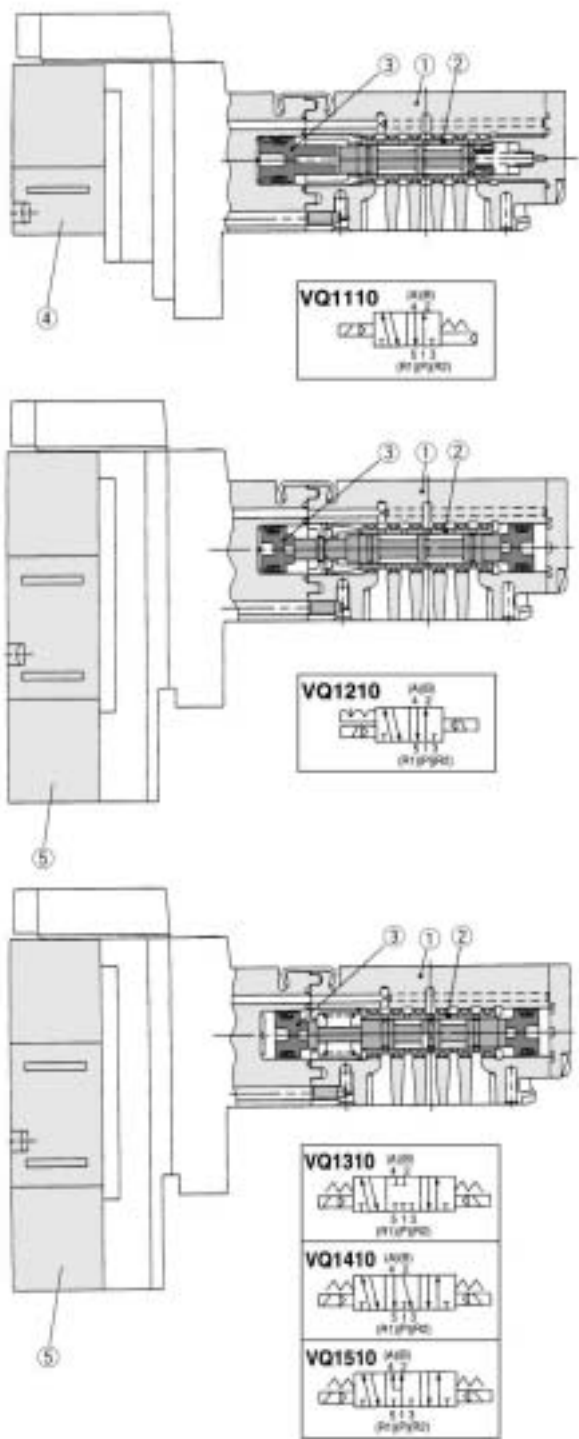
Replacement Parts

④	Pilot valve assembly	VQ110P ^(H) -(Y)-□-1 ^L _G ^M ⁽¹⁾	↓ Voltage1 to 6
---	----------------------	--	--------------------

Note 1) (Y): 0.5W, (H): 1.5W
DC only for G type.

Construction: Plug Lead Unit/VQ1000

Metal seal



Component Parts

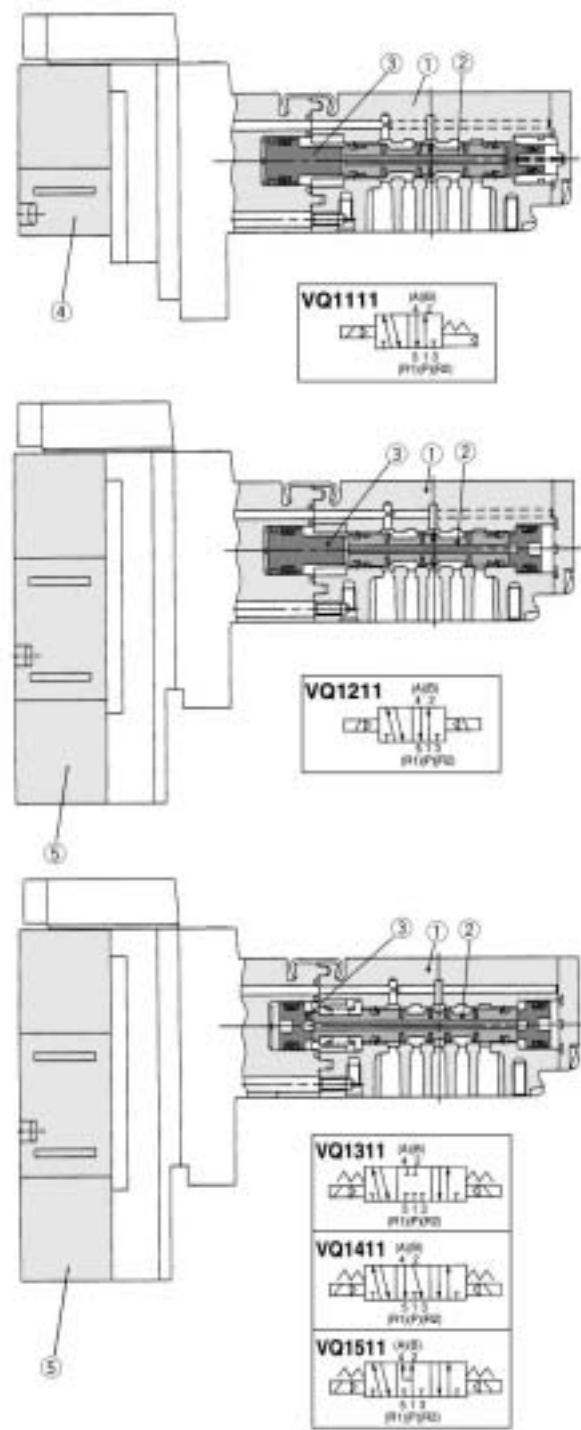
No.	Description	Material	Note
①	Body	Zinc die cast	
②	Spool/Sleeve	Stainless steel	
③	Piston	Resin	

Replacement Parts

④	Pilot valve assembly	VQ111 ^(H) _(Y) -□-1 ⁽¹⁾ Voltage1 to 6	Single
⑤	Pilot valve assembly	VQ131 ^(H) _(Y) -□-1 ⁽¹⁾ Voltage1 to 6	Double/ 3 position

Note 1) (Y): 0.5W
(H): 1.5W

Rubber seal



Component Parts

No.	Description	Material	Note
①	Body	Zinc die cast	
②	Spool valve	Aluminum/NBR	
③	Piston	Resin	

Replacement Parts

④	Pilot valve assembly	VQ111 ^(H) _(Y) -□-1 ⁽¹⁾ Voltage1 to 6	Single
⑤	Pilot valve assembly	VQ131 ^(H) _(Y) -□-1 ⁽¹⁾ Voltage1 to 6	Double/ 3 position

Note 1) (Y): 0.5W
(H): 1.5W

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

VFS

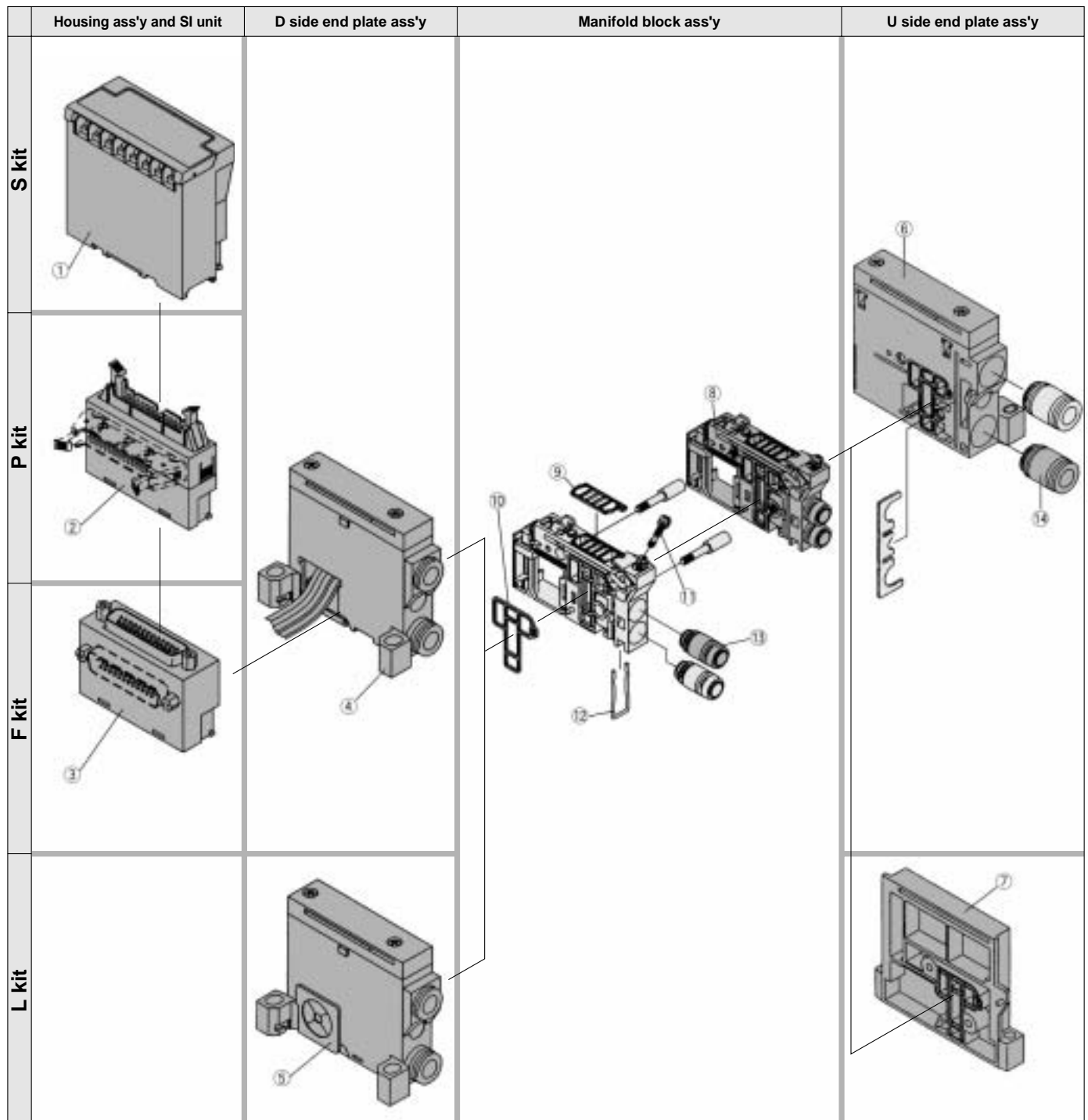
VS

VS7

Exploded View of Manifold

Plug-in Unit/VQ1000

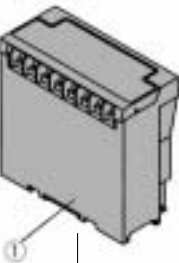
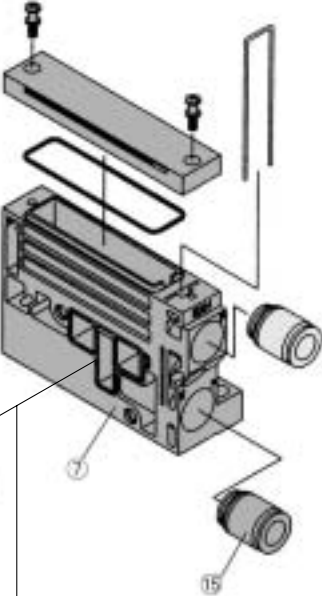
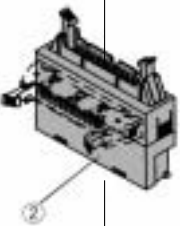
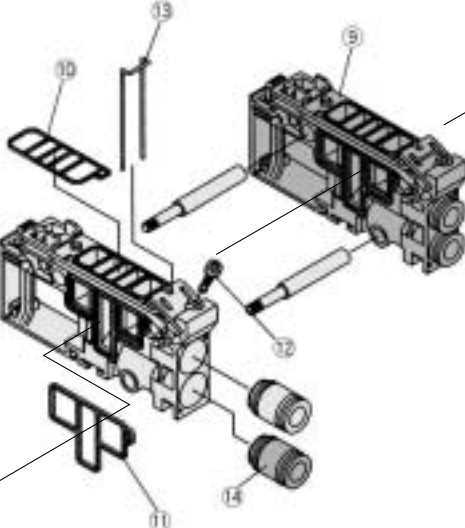
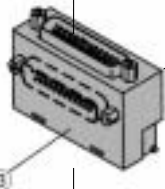
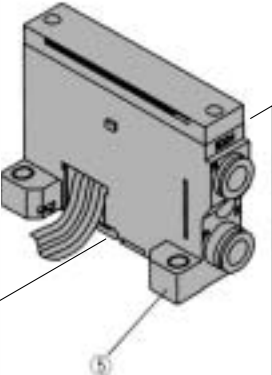
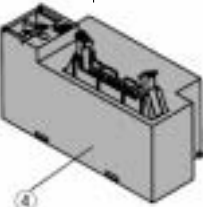
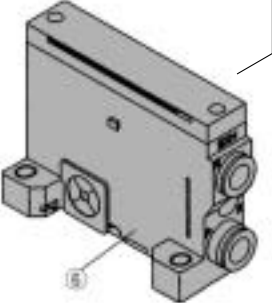
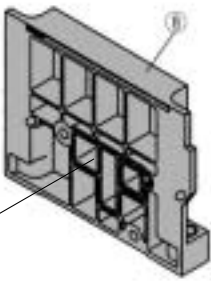
(F, P, L, S kit)



Exploded View of Manifold

Plug-in Unit/VQ2000

(F, P, L, G, S kit)

	Housing ass'y and SI unit	D side end plate ass'y	Manifold block ass'y	U side end plate ass'y
S kit				
P kit				
F kit				
G kit				
L kit				

Exploded View of Manifold

<Housing Assembly and SI Unit>

Housing Assembly and SI Unit No.

No.	Manifold	No.	Name
	(SA kit)	EX320-S001(-XP) ⁽¹⁾ [EX323-S001] ⁽²⁾	General style SI unit, Series EX300
	(SB kit)	EX120-SMB1(-XP) ⁽¹⁾ [EX123-SMB1] ⁽²⁾	SI unit for MELSECNET/MINI-S3 Data Link System (Mitsubishi Electric)
	(SBB kit)	[EX124-SMB1] ⁽³⁾	SI unit for MELSECNET/MINI-S3 Data Link System (2 power supply lines) (Mitsubishi Electric)
	(SC kit)	EX120-STA1(-XP) ⁽¹⁾ [EX123-STA1] ⁽²⁾	SI unit for SYSBUS Wire System (OMRON)
	(SD kit)	EX120-SSH1(-XP) ⁽¹⁾ [EX123-SSH1] ⁽²⁾	SI unit for Satellite I/O Link System (Sharp)
	(SE kit)	EX120-SPA1	SI unit for MEWNET-F System (Matsushita Electric Works Ltd.)
	(SF1 kit)	EX120-SUW1(-XP) ⁽¹⁾ [EX123-SUW1] ⁽²⁾	SI unit for 16 point Uni-wire System (NKE)
	(SG kit)	EX120-SAB1	SI unit for Remote I/O (RIO) System (Allen-Bradley Co.)
①	(SH kit)	EX120-SUH1(-XP) ⁽¹⁾ [EX123-SUH1] ⁽²⁾	SI unit for 16 point Uni-wire H System (NKE)
	(SJ1 kit)	EX120-SSL1(-XP) ⁽¹⁾ [EX123-SSL1] ⁽²⁾	SI unit for 16 point S-LINK System (Sunx)
	(SJ2 kit)	EX120-SSL2(-XP) ⁽¹⁾ [EX123-SSL2] ⁽²⁾	SI unit for 8 point S-LINK System (Sunx)
	(SK kit)	EX120-SFU1(-XP) ⁽¹⁾ [EX123-SFU1] ⁽²⁾	SI unit for T-LINK Mini System (Fuji Electric)
	(SQ kit)	EX120-SDN1 [EX124-SDN1] ⁽²⁾	SI unit for Device Net and Compo Bus/D (OMRON)
	(SR1 kit)	EX120-SCS1(-XP) ⁽¹⁾ [EX124-SCS1] ⁽²⁾	SI unit for 16 point Compo Bus/S (OMRON)
	(SR2 kit)	EX120-SCS2(-XP) ⁽¹⁾ [EX124-SCS2] ⁽²⁾	SI unit for 8 point Compo Bus/S (OMRON)
	(SV kit)	EX120-SMJ1(-XP) ⁽¹⁾ [EX124-SMJ1] ⁽²⁾	SI unit for CC-LINK (Mitsubishi Electric)
②	P ³ kit	AXT100-1-P ⁴ □ ⁽⁴⁾	Flat cable housing ass'y □=Number of pins: 26, 20, 16, 10
③	F ³ kit	AXT100-1-F ⁴ □ ⁽⁴⁾	D-sub connector housing ass'y □=Number of pins: 25, 15
④	Gkit	AXT100-1-GU20	Flat cable housing ass'y with terminal block

Note 1) Suffix "-XP" for dust-proof SI unit.

Note 2) Dust tight/jet proof style (IP65).

Note 3) SBB kit is usable only for dust tight/jet proof style (IP65).

Note 4) Top entry connector for FU and PU while side entry connector for FS and PS.

<D Side End Plate Assembly>

⑤⑥ D Side End Plate Assembly No.

VVQ2000-3A-1□-□

Electrical entry

F	For F kit
P	For P kit
L	For L kit
G	For G kit
S	For S kit

Option

—	Common EXH
R ⁽¹⁾	External pilot
S ⁽¹⁾	Built-in silencer, Direct exhaust



Note 1) Specify as "RS" when both conditions are applicable.

Note 2) The housing assembly and SI unit of F/P/G/S kit are not included.

Separately place an order for ①, ②, ③ and ④.

Note 3) Consult SMC for dust tight/jet proof style (IP65).

<U Side End Plate Assembly>

⑦ U Side End Plate Assembly No. (For F/P/G/S kits)

VVQ2000-2A-1□

Option

—	Common EXH
R	External pilot
S	Built-in silencer, Direct exhaust



Note 1) The ⑮ fitting assembly is included.

Note 2) The housing assembly and SI unit of F/P/G/S kit are not included.

Separately place an order for ①, ②, ③ and ④.

Note 3) Consult SMC for dust tight/jet proof style (IP65).

⑧ U Side End Plate Assembly No. (For L kit)

VVQ2000-2A-1-L

<Manifold Block Assembly>

Note) Tie-rod (2 pcs.) and lead wire ass'y for extensions are attached

⑨ Manifold Block Assembly No.

VVQ2000-1A-□-□-□

Electrical entry

F1	F kit for 2 to 12 stations/Double wiring
F2	F kit for 13 to 24 stations/Double wiring
F3	F kit for 2 to 24 stations/Single wiring
P1	P, S kit for 2 to 12 stations/Double wiring
P2	S kit for 13 to 24 stations/Double wiring
P3	S kit for 2 to 24 stations/Single wiring
L0□	L0 kit □ Stations (1 to 8)
L1□	L1 kit □ Stations (1 to 8)
L2□	L2 kit □ Stations (1 to 8)

Port size

C4	One-touch fitting for ø4
C6	One-touch fitting for ø6
C8	One-touch fitting for ø8

Enclosure

—	Dust-proof
W	Dust-resistant/jet-proof (IP65)

<Replacement Parts for Manifold Block>

Replacement Parts

No.	Ass'y No.	Name	Material	Number
⑩	VVQ2000-80A-1	Gasket	NBR	12
⑪	VVQ2000-80A-2	Packing	NBR	12
⑫	VVQ2000-80A-3	Clamp screw	Carbon steel	12
⑬	VVQ2000-80A-4	Clip	Stainless steel	12



Note) A set of parts containing 12 pcs. each are enclosed.

<Fitting Assembly>

⑭ Fitting Assembly No. (For cylinder port)

VVQ1000-51A-□

Port size

C4	Applicable tube ø4
C6	Applicable tube ø6
C8	Applicable tube ø8



Note) 10 pcs. per one set.

⑮ Fitting Ass'y No. (For P, R ports)

VVQ2000-51A-C10

Applicable tube ø10



Note) 10 pcs. per one set.

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

VFS

VS

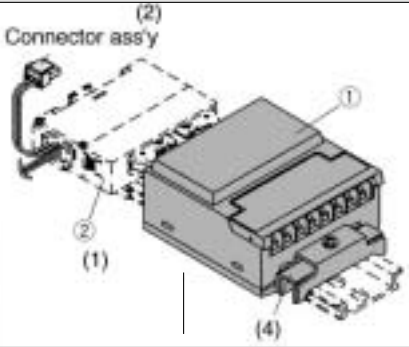
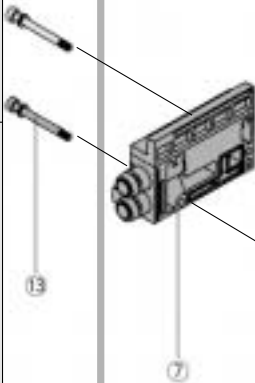
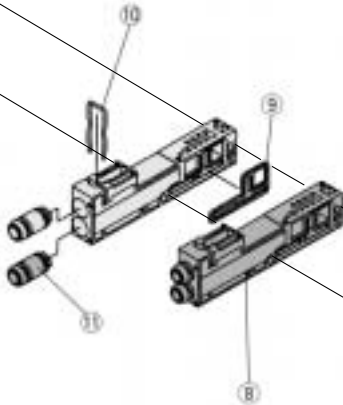
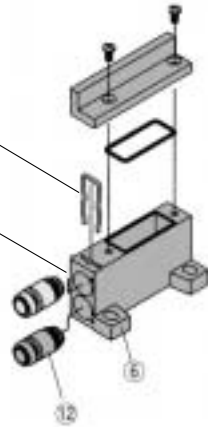
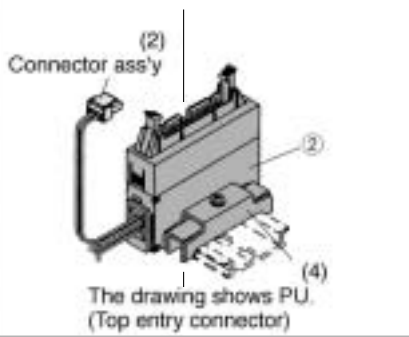
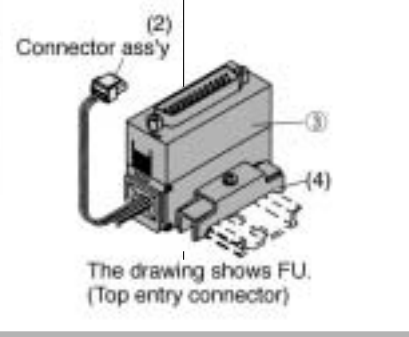
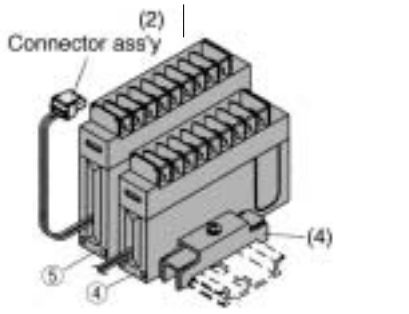
VS7

Exploded View of Manifold

Plug Lead Unit/VQ0000

(F, P, C, S kit)

* Refer to the instruction manual for the way of increasing stations.

	Tie-rod	U side end block ass'y	Manifold block ass'y	D side end block ass'y	Housing ass'y and SI unit Note 3)	
S kit						S kit
P kit					 <p>The drawing shows PU. (Top entry connector)</p>	P kit
F kit					 <p>The drawing shows FU. (Top entry connector)</p>	F kit
T kit						T kit



- Note 1) S kit is composed of a flat cable housing ass'y (AXT100-2-PS20) of ① SI unit and ② P kit (20 pin).
Note 2) Since no connector ass'y is included, order it separately. (See p.1.10-198)
Note 3) Housing ass'y is not used for a C kit.
Note 4) A DIN rail clamping bracket is attached to each.

Exploded View of Manifold

<Housing Assembly and SI Unit>

Housing Assembly and SI Unit No.

No.	Manifold	No.	Name
①	(SA kit)	EX330-S001	General style SI unit
	(SB kit)	EX130-SMB1	SI unit for MELSEC-A (Mitsubishi Electric)
	(SC kit)	EX130-STA1	SI unit for SYSMAC (OMRON)
	(SD kit)	EX130-SSH1	SI unit for New Satellite (Sharp)
	(SF1 kit)	EX130-SUW1	SI unit for 16 point Uni-wire System (NKE)
	(SH kit)	EX130-SUH1	SI unit for 16 point Uni-wire H System (NKE)
②	P _S ^U kit	AXT100-2-P _S ^U □ ⁽²⁾	Flat cable housing ass'y □=Number of pins: 26, 20, 16, 10
③	F _S ^U kit	AXT100-2-F _S ^U □ ⁽²⁾	D-sub connector housing ass'y □=Number of pins: 25, 15
④	T kit	AXT100-2-TB1 ⁽⁴⁾	Terminal block assembly (8 terminals)
⑤	T kit	AXT100-2-TB2 ⁽⁴⁾	Terminal block assembly (8 terminals)

Note 1) S kit is composed of a flat cable housing ass'y (AXT100-2-PS20) of ① SI unit and ② P kit (20 pin). Order AXT100-2-PS20 separately.

Note 2) Top vertical entry connector for FU and PU while side (horizontal) entry connector for FS and PS.

Note 3) Since no connector assembly is included, order it separately. (See p.1.10-198)

Note 4) In case of standard specifications and double wiring. ④ is for 1 to 4 stations and ⑤ is for 5 to 8 stations.

<D Side End Plate Assembly>

⑥ D Side End Plate Assembly No.

VVQ0000-3A-5-□

Option

—	Common EXH
S	Built-in silencer, Direct exhaust



Note) The ⑫'s fitting assembly is included.

<U Side End Plate Assembly>

⑦ U Side End Plate Assembly No.

VVQ0000-2A-5-□

Option

—	Common EXH
S	Built-in silencer, Direct exhaust

<Manifold Block Assembly>

⑧ Manifold Block Assembly No.

VVQ0000-1A-5-□

Port size

C3	One-touch fitting for ø3.2
C4	One-touch fitting for ø4
M5	M5 thread

<Replacement Parts for Manifold Block>

Replacement Parts

No.	Ass'y No.	Name	Material	Number
⑨	VVQ0000-80A-5-2	Packing	NBR	12
⑩	VVQ0000-80A-5-4	Clip	NBR	12



Note) A set of parts containing 12 pcs. each is enclosed.

<Fittings Assembly>

⑪ Fittings Assembly No. (For cylinder port)

VVQ0000-50A-□

Port size

C3	Applicable tube ø3.2
C4	Applicable tube ø4



Note) 10 pcs. per one set.

⑫ Fitting Ass'y No. (For P, R ports)

VVQ1000-50A-C6

Applicable tube ø6



Note) 10 pcs. per one set.

<Tie-rod Bolt>

⑬ Tie-rod Bolt

VVQ0000-103A-5-□

Stations

1	For 1 station
2	For 2 stations
⋮	⋮
16	For 16 stations



Note) 2 bolts per one set.

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

VFS

VS

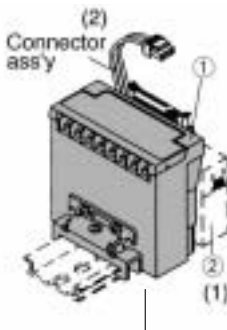
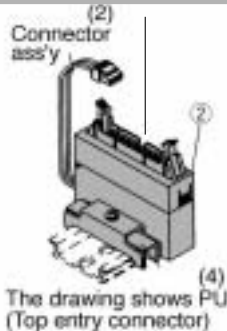
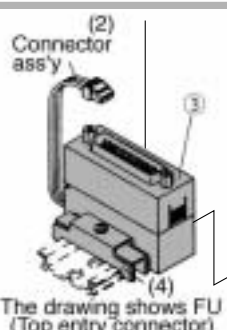
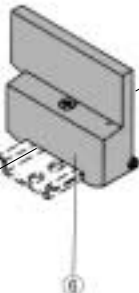
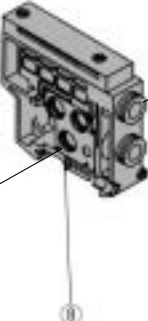
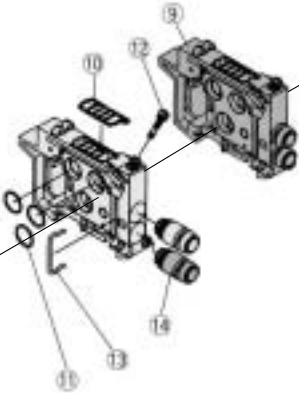
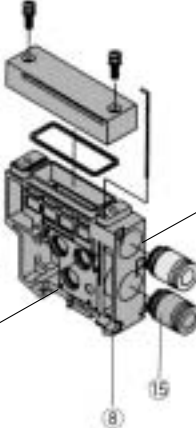
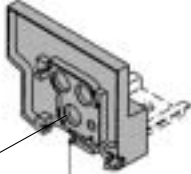
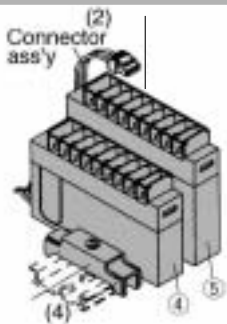
VS7


Exploded View of Manifold


Plug Lead Unit/VQ1000

(F, P, T, S kit)

* Refer to the instruction manual for the way of increasing stations

	Housing ass'y and SI unit ⁽³⁾	D side end block ass'y	Air SUP/EXH block ass'y	Manifold block ass'y	Air SUP/EXH block ass'y	U side end block ass'y
S kit						
P kit						
F kit						
T kit						

- 

Note 1) S kit is composed of a flat cable housing ass'y (AXT100-2-PU20) of ① SI unit and ② P kit (20 pin).
- 

Note 2) Since no connector ass'y is included, order it separately. (See p.1.10-198)
- Note 3) Housing ass'y is not used for a C kit.
- Note 4) A DIN rail clamping bracket is attached to each.

Exploded View of Manifold

<Housing Assembly and SI Unit>

Housing Assembly and SI Unit No.

No.	Manifold	No.	Name
①	(SA kit)	EX321-S001	General style SI unit, Series EX300
	(SB kit)	EX121-SMB1	SI unit for MELSECNET/MINI-S3 Data Link System (Mitsubishi Electric)
	(SC kit)	EX121-STA1	SI unit for SYSBUS Wire System (OMRON)
	(SD kit)	EX121-SSH1	SI unit for Satellite I/O Link System (Sharp)
	(SE kit)	EX121-SPA1	SI unit for MEWNET-F System (Matsushita Electric Works Ltd.)
	(SF1 kit)	EX121-SUW1	SI unit for 16 point Uni-wire System (NKE)
	(SG kit)	EX121-SAB1	SI unit for Remote I/O (RIO) System (Allen-Bradley Co.)
	(SH kit)	EX120-SUH1	SI unit for 16 point Uni-wire H System (NKE)
	(SJ1 kit)	EX121-SSL1	SI unit for 16 point S-LINK System (Sunx)
	(SJ2 kit)	EX121-SSL2	SI unit for 8 point S-LINK System (Sunx)
	(SK kit)	EX121-SFU1	SI unit for T-LINK Mini System (Fuji Electric)
	(SQ kit)	EX121-SDN1	SI unit for Device Net and Compo Bus/D (OMRON)
	(SR1 kit)	EX121-SCS1	SI unit for 16 point Compo Bus/S (OMRON)
	(SR2 kit)	EX121-SCS2	SI unit for 8 point Compo Bus/S (OMRON)
	(SV kit)	EX120-SMJ1	SI unit for CC-LINK (Mitsubishi Electric)
②	P _S kit	AXT100-2-P _S □ ⁽²⁾	Flat cable housing ass'y □=Number of pins: 26, 20, 16, 10
③	F _S kit	AXT100-2-F _S □ ⁽²⁾	D-sub connector housing ass'y □=Number of pins: 25, 15
④	T kit	AXT100-2-TB1 ⁽⁴⁾	Terminal block assembly (8 terminals)
⑤	T kit	AXT100-2-TB2 ⁽⁴⁾	Terminal block assembly (8 terminals)

Note 1) S kit is composed of a flat cable housing ass'y (AXT100-2-PU20) of ① SI unit and ① P kit (20 pin). Order AXT100-2-PV20 separately.

Note 2) Top (vertical) entry connector for FU and PU while side (horizontal) entry connector for FS and PS.

Note 3) Since no connector assembly is included, order it separately. (See p.1.10-198) Contact SMC for 200/220VAC specifications.

Note 4) In case of standard specifications and double wiring, ④ is for 1 to 4 stations and ⑤ is for 5 to 8 stations.

<D Side End Plate Assembly>

⑥D Side End Plate Assembly No.

VVQ1000-3A-2

<U Side End Plate Assembly>

⑦U Side End Plate Assembly No.

VVQ1000-2A-2

<Air Supply/EXH Block Assembly>

⑧Air Supply/EXH Block Assembly No.


VVQ1000-PR-2-C8  Note) The ⑮'s fitting assembly is included.

Option

—	Common EXH
S	Built in Silencer, Direct exhaust

<Manifold Block Assembly>

⑨Manifold Block Assembly No.

VVQ1000-1A-2 

Port size

C3	One-touch fitting for ø3.2
C4	One-touch fitting for ø4
C6	One-touch fitting for ø6
M5	M5 thread

<Replacement Parts for Manifold Block>

Replaceable Parts

No.	Ass'y No.	Name	Material	Number
⑩	VVQ1000-80A-1	Gasket	NBR	12
⑪	VVQ1000-80A-2-2	O ring	NBR	12
⑫	VVQ1000-80A-3	Clamp screw	Carbon steel	12
⑬	VVQ1000-80A-2-4	Clip	Stainless steel	12

Note) A set of parts containing 12 pcs. each is enclosed.

<Fitting Assembly>

⑭Fitting Assembly No. (For cylinder port)

VVQ1000-50A 


Port size

C3	Applicable tube ø3.2
C4	Applicable tube ø4
C6	Applicable tube ø6
M5	M5 thread



Note) 10 pcs. per one set.

⑮Fitting Assembly No. (For P, R ports)

VVQ1000-51A-C8 

Applicable tube ø8



Note) 10 pcs. per one set.

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VP4

VQ

VQ4

VQZ

VQD

VZS

VFS

VS

VS7