

Wireless System



Noise resistance

Uses the 2.4 GHz ISM frequency band
Frequency hopping: Every 2 ms (Fastest)

Communication cables not required

Reduced wiring work, space, and cost
Minimized disconnection risk

Communication distance/speed, Response time

	Communication distance	Communication speed	Response time
Compact Type EXW1	100 m	1 Mbps	2 ms
		250 kbps	5 ms
Modular Type EX600-W	10 m	250 kbps	5 ms

* For the EXW1 construction, it depends on the operating environment.

New Compact Type EXW1 Series p. 10

Compatible protocol

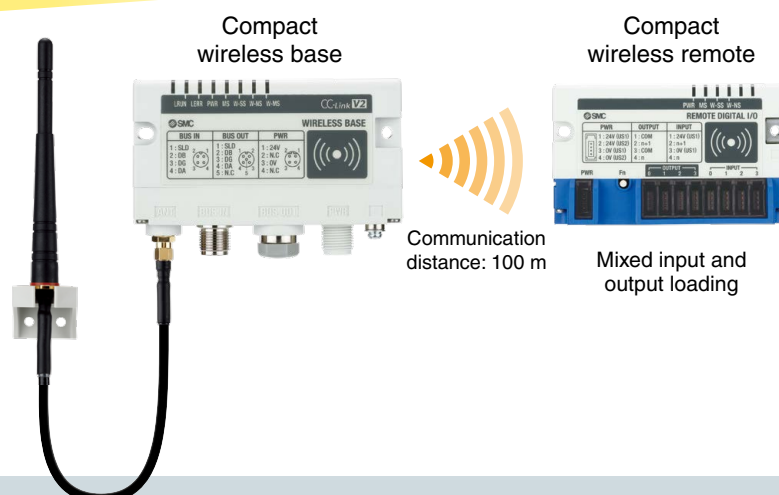
CC-Link

Compact and lightweight

Volume **Approx. 86% reduction***1

Weight **Approx. 87% reduction***1

*1 For the e-CON type
(Compared with the existing remote, M8 connector/8 digital inputs specification)



Modular Type EX600-W Series p. 24

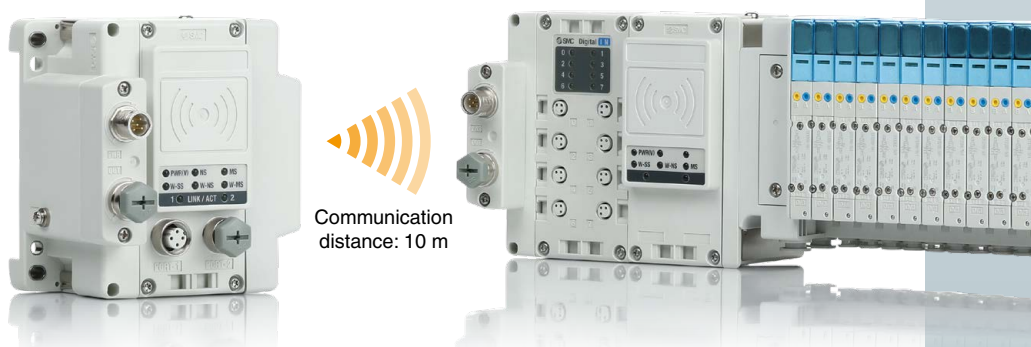
Compatible protocols

EtherNet/IP

PROFINET

Modular connection is possible.

- Up to 9 stations can be connected to the digital/analog unit.
- Connector type: M12/M8, D-sub, Spring type terminal block



For countries/regions in which wireless is supported

This product cannot be used in countries/regions where wireless is not supported. Refer to page 44 for details on countries/regions in which the product can be used.

EXW1/EX600-W Series



CAT.E02-28C

Provides communication stability in FA environments

Compact
EXW1

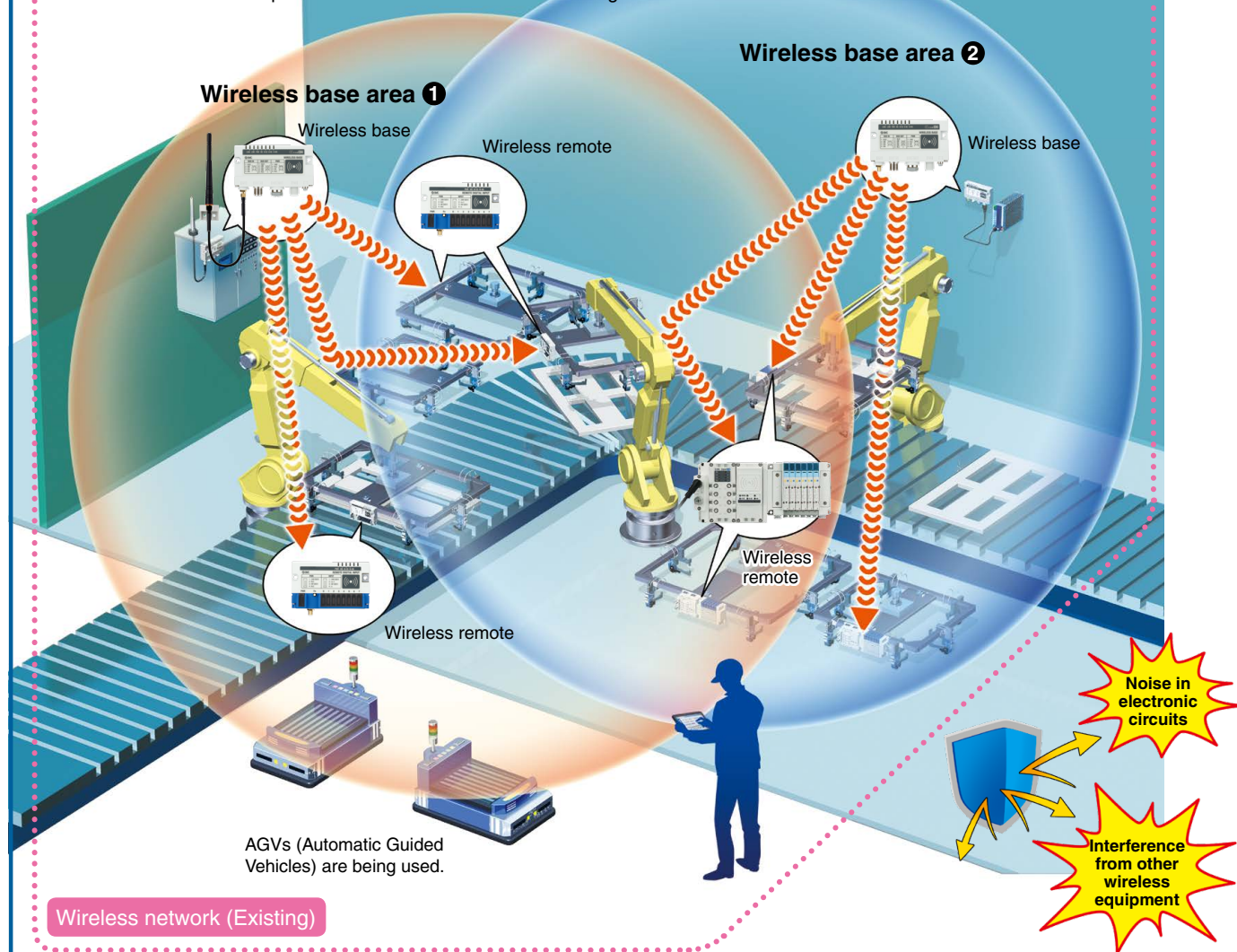
Modular
EX600-W

- Even if multiple wireless bases are in use in the same communication area, each wireless base is able to effectively communicate with the remotes they are paired with. Each wireless base is able to identify its wireless remotes by their P.I.D.

* P.I.D.: Product I.D.

Stable communication is possible.

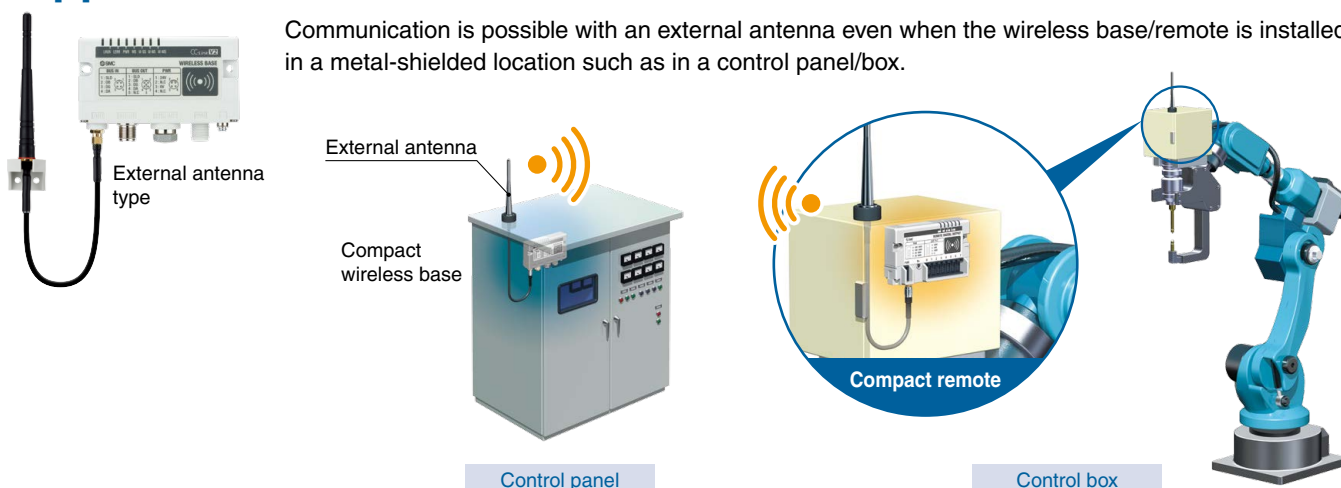
- Communication is possible in environments with various forms of propagation (transmission, reflection, etc.).
- Communication is also possible within the same area as existing wireless networks such as wireless LANs and AGVs.



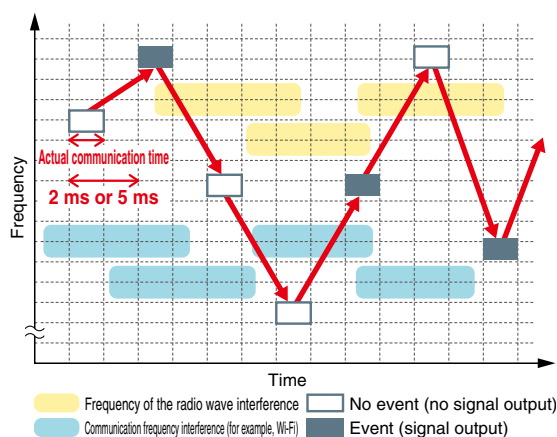
Supports external antennas

Compact
EXW1

Communication is possible with an external antenna even when the wireless base/remote is installed in a metal-shielded location such as in a control panel/box.



Frequency hopping/Event communication system

Compact
EXW1Modular
EX600-W

Frequency hopping

A stable wireless environment is established using an original protocol which is not affected by interference. Interference from other wireless equipment is reduced.

Frequency
hopping cycle2 ms*¹
or
5 ms

Event communication system ^{*1} For the EXW1 only

Wireless communication is performed only when there is a variation in the information, thereby suppressing the frequency of radio wave output in wireless communication and reducing interference with other wireless devices.

F.C.S. (Frequency channel select) function supported

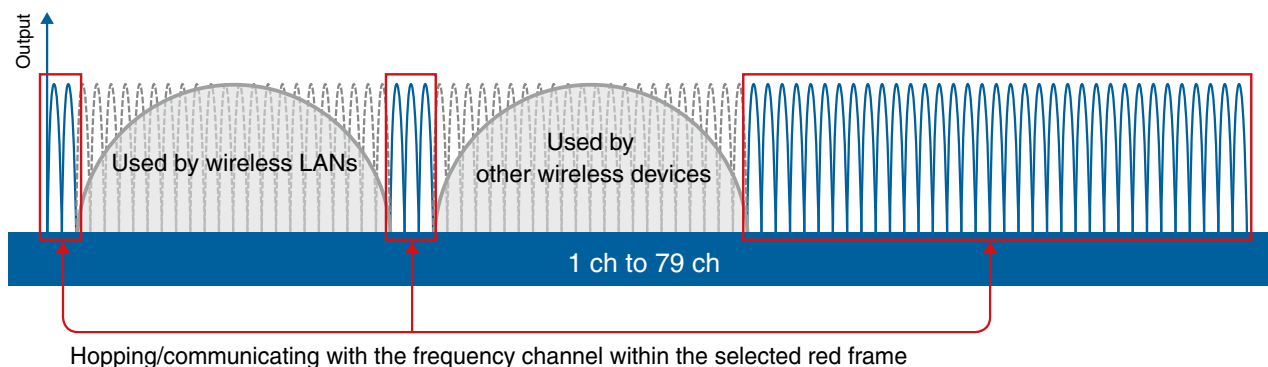
Compact
EXW1

This is a function that allows for the selection of the frequency channel to be hopped to via frequency hopping. When the frequency used by wireless LANs, AGVs, or other wireless devices is known, selecting a different frequency channel will allow for hopping only to the selected frequency channel, thereby reducing communication collisions with other wireless devices and stabilizing communication.

* The number of selectable frequency channels varies depending on the country of use.

- Countries other than the U.S., Canada, and South Korea: 5 to 79 ch
- U.S., Canada, and South Korea: 15 to 79 ch

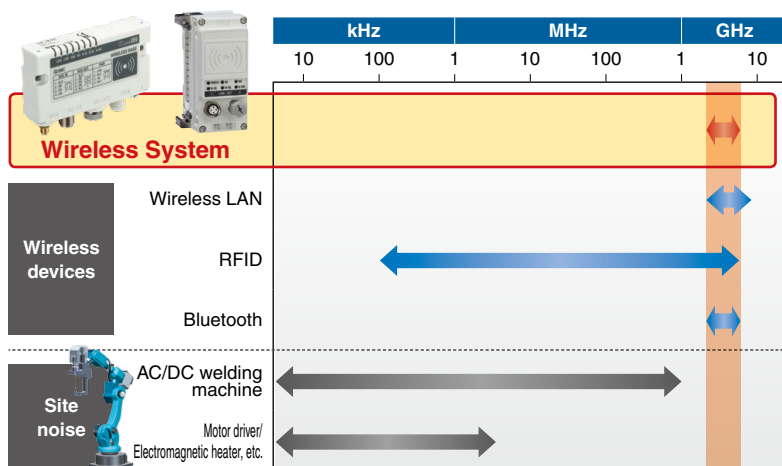
* If no channel is selected, hopping/communication is established on 79 ch by default.



Frequency band used

Compact
EXW1Modular
EX600-W

Uses the 2.4 GHz ISM frequency band

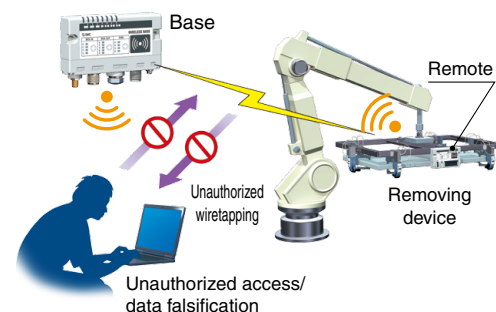


* ISM (Industrial, Scientific, and Medical) radio bands: Frequency bands allocated for industrial, scientific, and medical applications

High security using encryption

Compact
EXW1Modular
EX600-W

Unauthorized access from outside is prevented by using data encryption.



Remote high-speed connection

Compact
EXW1Modular
EX600-W

To start of communication: Min. 250 ms

* Depends on the communication environment

Product diagnosis

Compact
EXW1

Modular
EX600-W

Diagnostic signals, **LEDs on the base/remote**, **Web function**, and **setting software (IO Configurator)** can be used for product diagnostics.

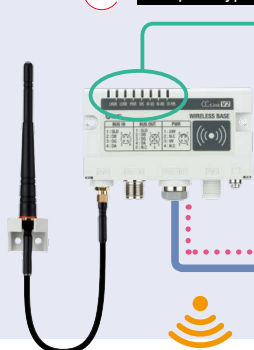


Wireless base

New

Compact Type EXW1

Modular Type EX600-W



LED display for bases

The LED display can be used to identify the installation location and communication status according to the received signal strength level.

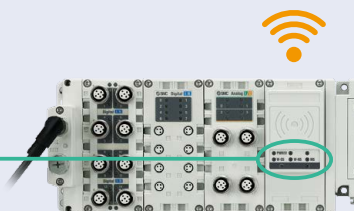
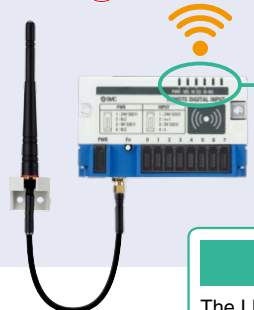
W-SS (Radio wave receiving intensity (For communication from remote to base))	
Green LED is ON.	The received power level of all remotes is 3.
Green LED flashes. (1 Hz)	There are connected remotes with a received power level of 2.
Green LED flashes. (2 Hz)	There are connected remotes with a received power level of 1.
Red LED flashes.	No remotes are connected.
OFF	The remote module is not registered.

Wireless remote

New

Compact Type EXW1

Modular Type EX600-W



Solenoid valve

LED display for remotes

The LED display can be used to identify the installation location and communication status according to the received signal strength level.

W-SS (Radio wave receiving intensity (For communication from base to remote))	
Green LED is ON.	The received power level is 3.
Green LED flashes. (1 Hz)	The received power level is 2.
Green LED flashes. (2 Hz)	The received power level is 1.
Red LED flashes.	Wireless communication is not connected.
OFF	The base module is not registered.

NFC reader/
writer

PC + Setting software

Setting software
(IO Configurator)

Diagnostic signal

The connection status of the wireless system can be judged by the PLC during operation by the diagnostic signal.

<Diagnostic signal output conditions>

- When communication from the remote cannot be received
- When the number of communication retries has exceeded the upper limit

Web function

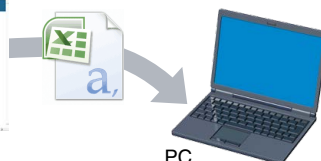
By connecting the base and PC, you can set up the product/wireless communication and check the communication status on the web screen. Log data of the number of wireless communication retries and of the received signal strength can be generated from the web screen and downloaded in a CSV file. The wireless environment and installation location can be optimized by checking the number of retries and the received radio wave intensity.

* Refer to the logging function on page 4.

The log files showing the number of retries or the received radio wave intensity can be downloaded in the form of a CSV file.



Web screen example



PC

Compact EXW1

Modular
EX600-W

Setting software (IO Configurator)

The NFC reader/writer can be used with the setting software to perform various checks and setting without contact.
(NFC: Near Field Communication)

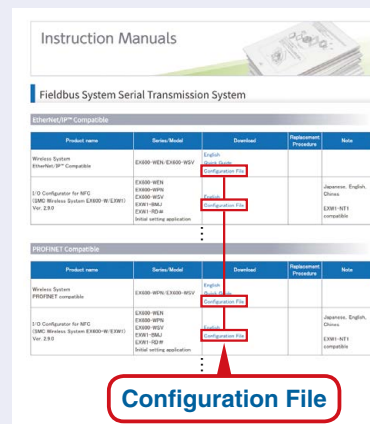
- Base communication configuration
- Setting of the I/O points for the system, base, and remote
- Pairing of the base and remote
- I/O monitoring
- Monitoring of diagnostic data

* Refer to the logging function.



Setting software

Download the setting software from the “configuration file.”



From the SMC website

Documents/Download

Instruction Manuals

Fieldbus System
Serial Transmission System

EtherNet/IP™ Compatible
or

PROFINET Compatible
↓
I/O Configurator for NFO

Configuration File

Logging function

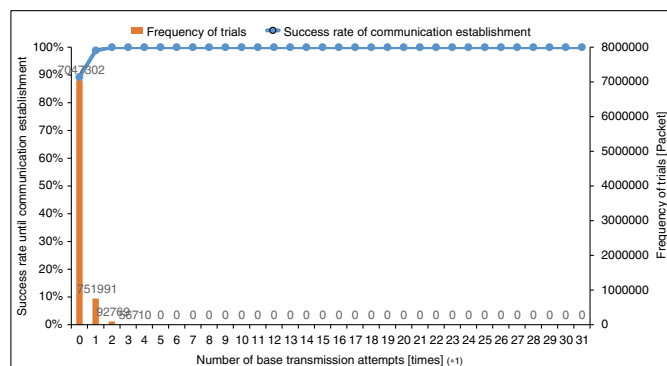
Compact
EXW1

Modular
EX600-W

The following information is saved in the internal memory of the product. It can be downloaded and visualized from the web function or the setting software (IO Configurator).

Number of retries

The number of retries (communication attempts) can be checked.

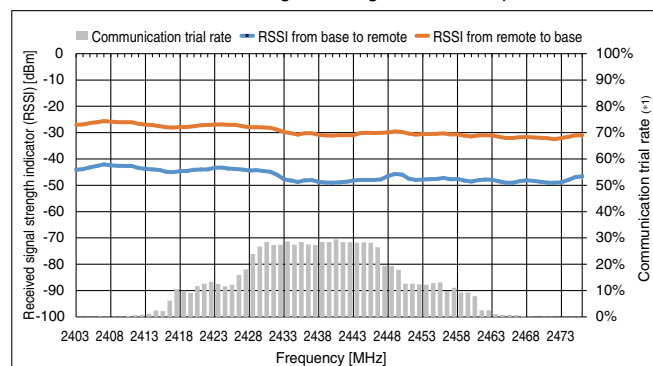


Graph 1. Communication response characteristics

Received signal strength indicator

The communication trial rate and received signal strength indicator (RSSI) can be checked for every frequency channel.

Number of retries, Received signal strength indicator, Operation status



Graph 2. Received signal strength indicator and communication trial rate characteristics with respect to frequency

Operation status

Error details, time information (timestamp), and remote numbers can be checked.

* Up to 30 pieces can be displayed.

Information	I/O monitor	Properties	Event	Wireless	
-------------	-------------	------------	-------	----------	--

ALL

CLEAR

Export

Refresh

Power on

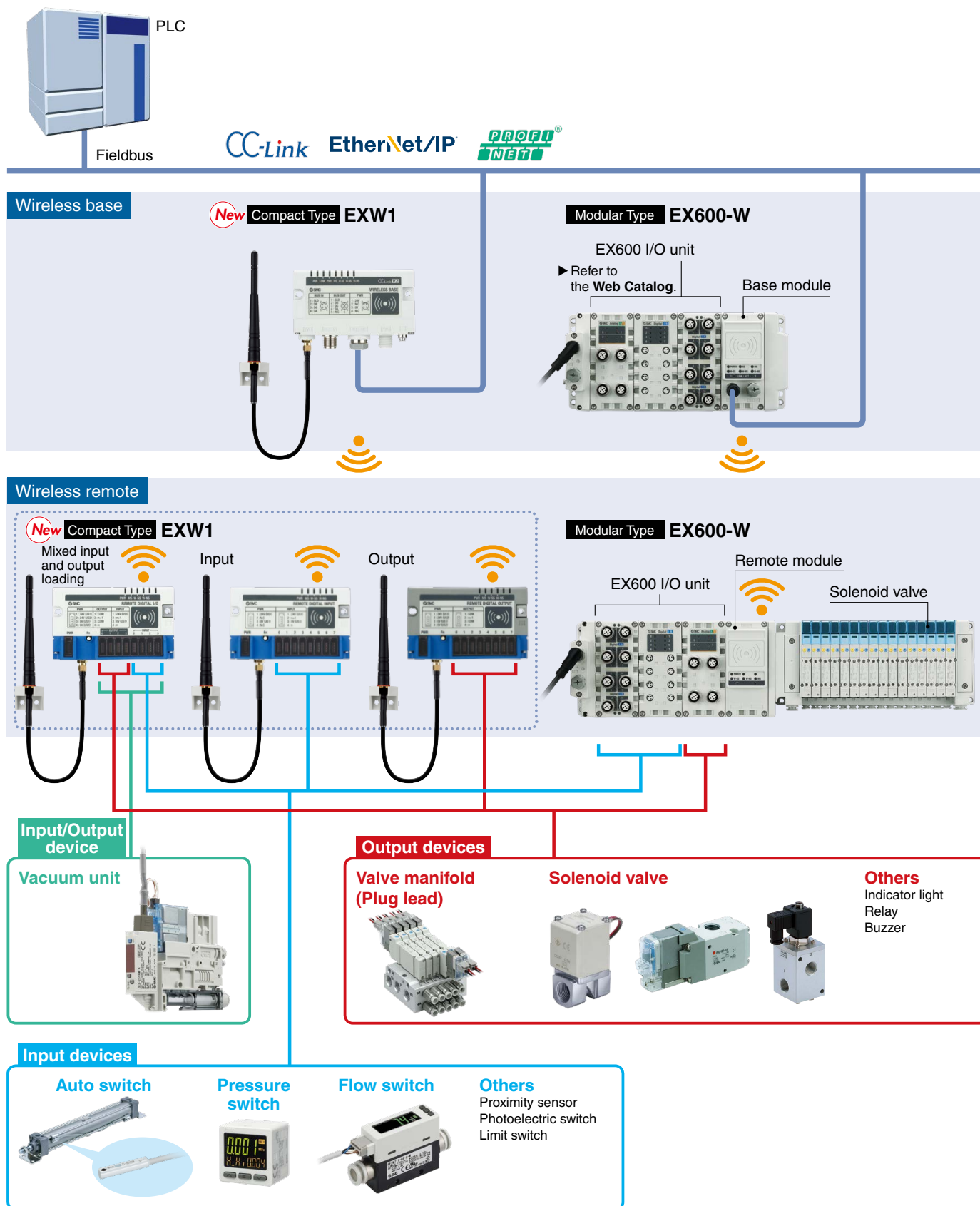
R/W detected

Timestamp	WCh	TAG	Unit	Channel	Status
2020/12/28 10:26:25	5	EX600-WSV1	3	5	0x00000001
2020/12/26 8:00:00	3	LINE4-S5-R-HAND	1	2	0x00000002
2020/12/24 5:33:35	2	LINE4-S5-L-HAND	1	2	0x00000002
2020/12/22 3:07:10	3	LINE4-S5-R-HAND	1	4	0x00000003
2020/12/20 0:40:45	1	LINE4-S2-R-HAND	1	4	0x00000004
2020/12/17 22:14:20	5	EX600-WSV1	3	5	0x00000005
2020/12/15 19:47:55	4	LINE4-S3-R-HAND	3	5	0x00000006

The compact EXW1 and the modular EX600-W can be mixed.*1

*1 When they are mixed, the communication speed/response time is limited to the EX600-W's specifications. (Refer to the system configuration examples.)

System Examples

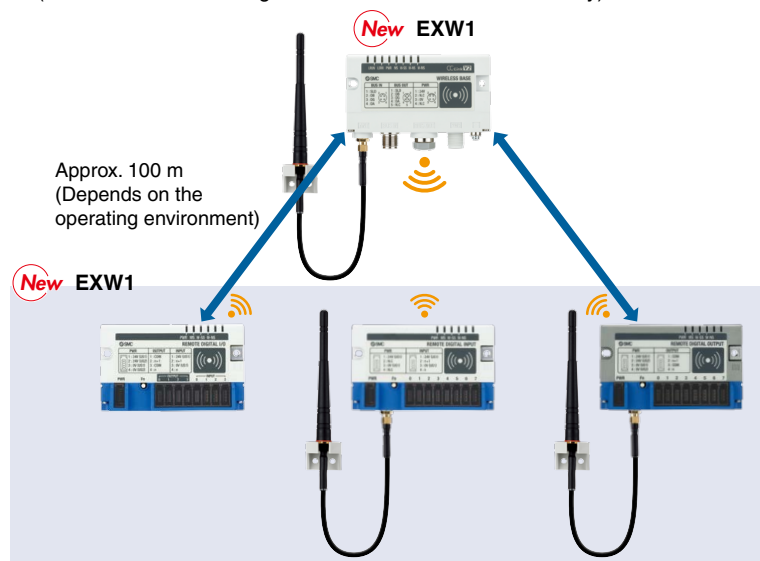


* While limited to radio-enabled countries (Japan, the United States, Canada, and the EU), compact remote types are available for connecting IO-Link devices. For further details, refer to the SMC website, and contact your local sales representative.

System Configuration Examples

■ Compact Type Configuration example when using the EXW1 series base ①

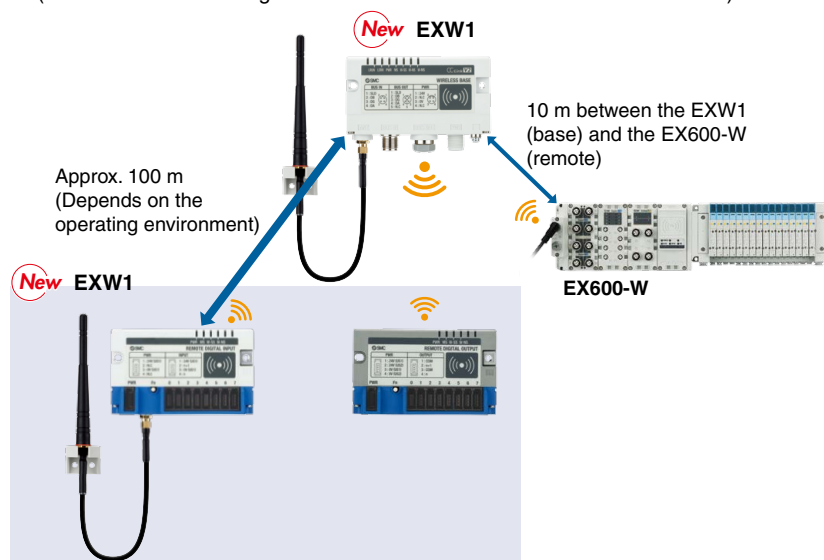
(When the remote configuration is for the EXW1 series only)



Applicable functions	
Frequency channel select (F.C.S.)	Applicable
Communication speed	Select from 1 Mbps or 250 kbps.
Response speed	Select from 2 ms or 5 ms.
Communication distance	Approx. 100 m (Depends on the operating environment)
External antenna	Applicable

■ Compact Type Configuration example when using the EXW1 series base ②

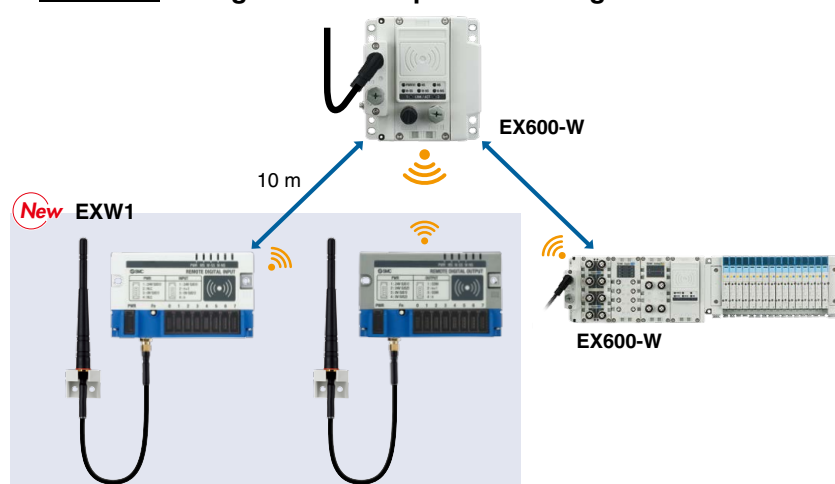
(When the remote configuration is for the EX600-W and the EXW1 series)



Applicable functions	
Frequency channel select (F.C.S.)	Not applicable
Communication speed	250 kbps
Response speed	5 ms
Communication distance	Approx. 100 m between the EXW1 base and remote (Depends on the operating environment) 10 m*1 between the EXW1 (base) and the EX600-W (remote)
External antenna	Applicable

*1 The communication distance varies depending on the base/remote combination.

■ Modular Type Configuration example when using the EX600-W series base



Applicable functions	
Frequency channel select (F.C.S.)	Not applicable
Communication speed	250 kbps
Response speed	5 ms
Communication distance	10 m
External antenna	Applicable

The specifications are the same as those of the EX600-W series.

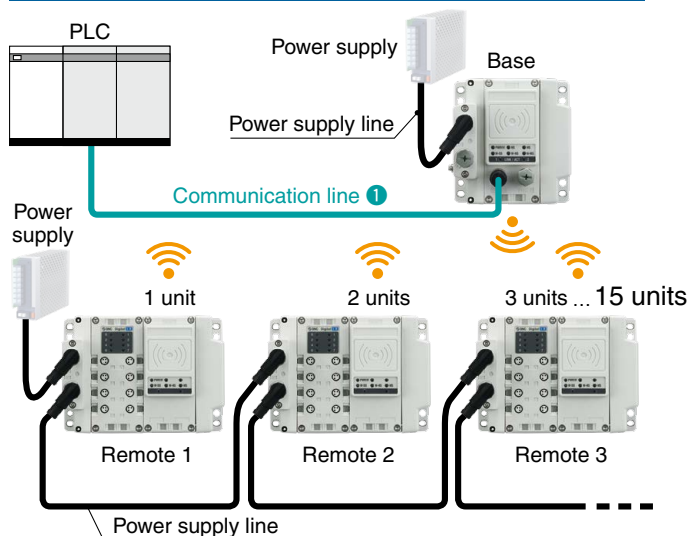
Wiring material cost and installation time can be reduced.*1

Compact
EXW1

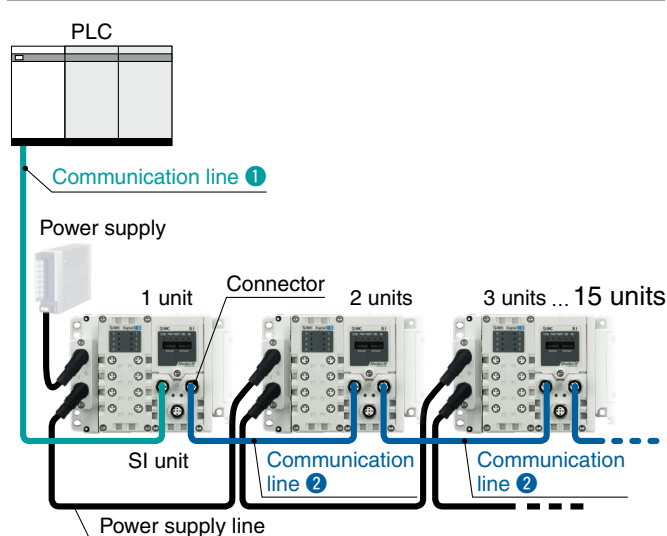
Modular
EX600-W

*1 For the EX600-W modular type

Wireless System



Existing (Wired) System



SI unit: Comparison when 15 units are connected

	Number of communication devices	Communication line		Communication connectors required
		①	②	
Wireless system	Base: 1 unit Remote: 15 units	1 line (Connector at one end)	—	1 location
Existing (Wired) system	SI unit: 15 units	1 line (Connector at one end)	14 lines (Connector at both ends)	29 locations

Interchangeability maintained

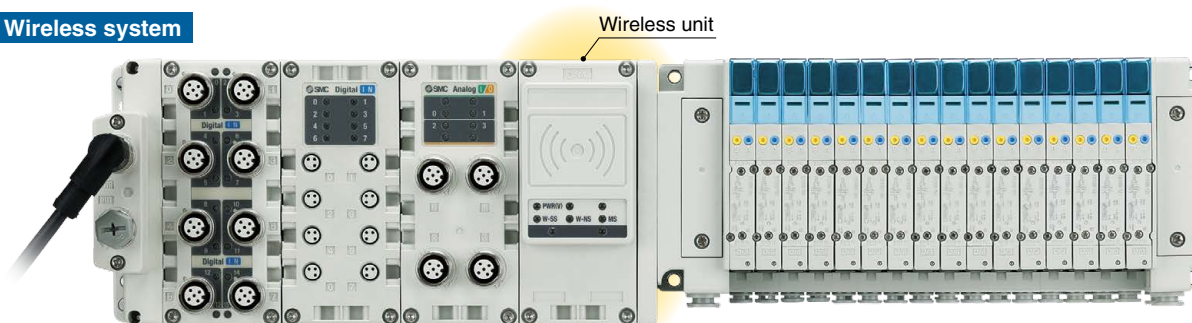
Modular
EX600-W

Connection interchangeability between EX600 series SI units is maintained.

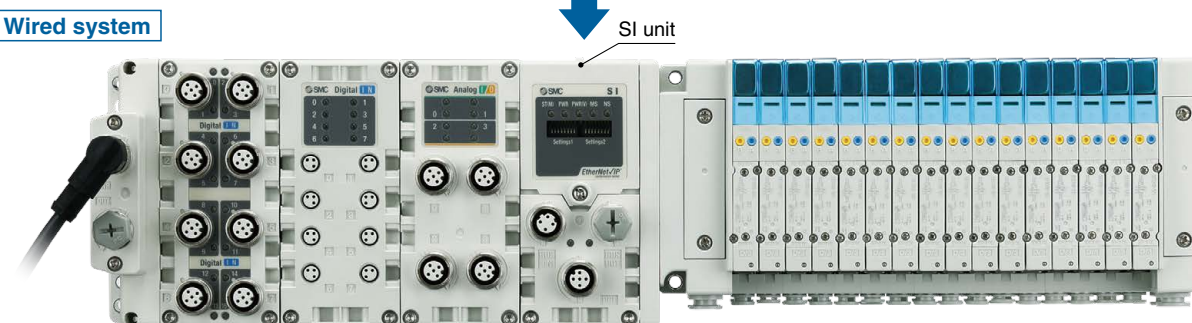
The replacement of wireless and wired systems is possible.

* The max. I/O points of the base/remote module is limited to 128 points.

Wireless system



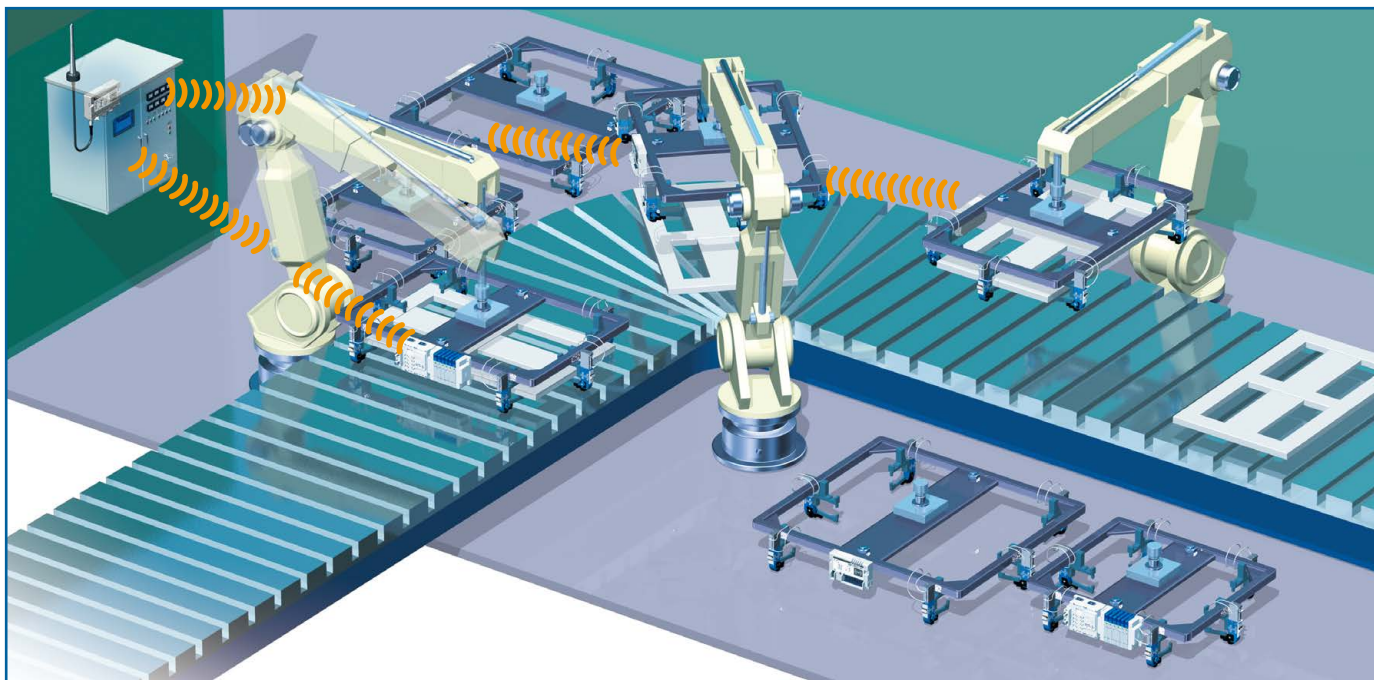
Wired system



Application Examples

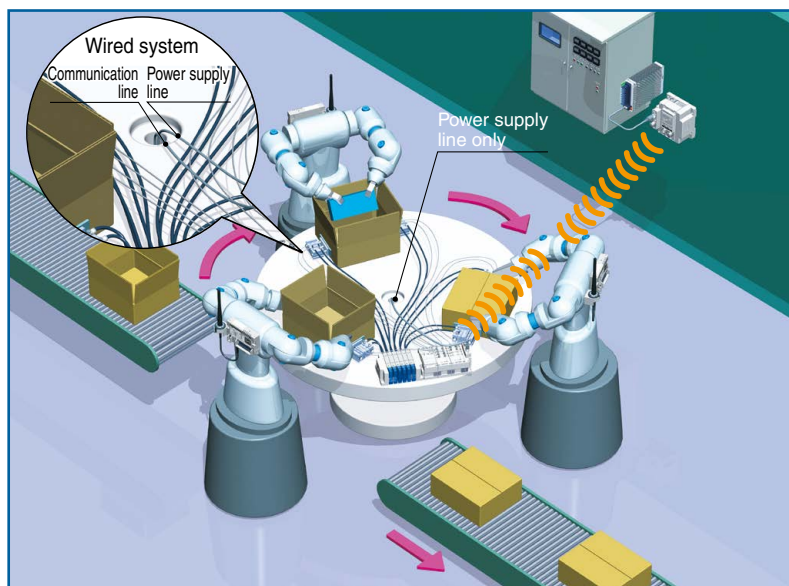
For tool changing

- A communication cable is not necessary for moving parts.
- Minimized disconnection risk
- Shorter time for establishing communication (startup time)



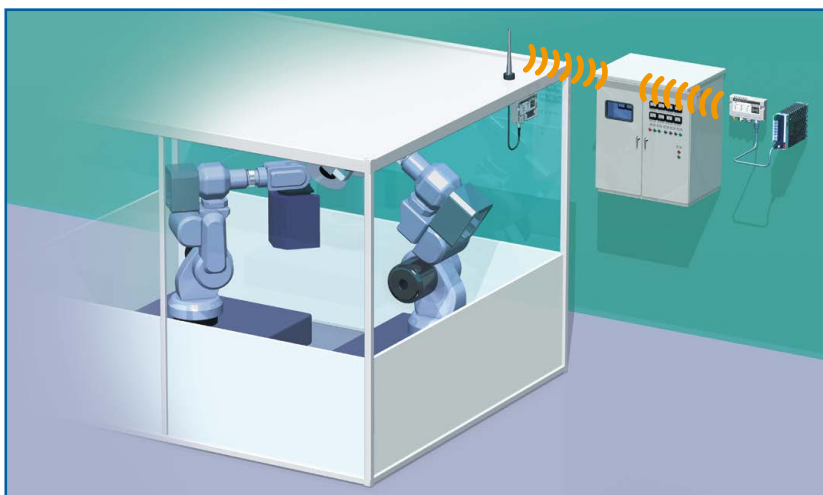
For rotary tables

- Minimized disconnection risk
- Smaller diameter communication cable/tubing



For the blocking of radio waves

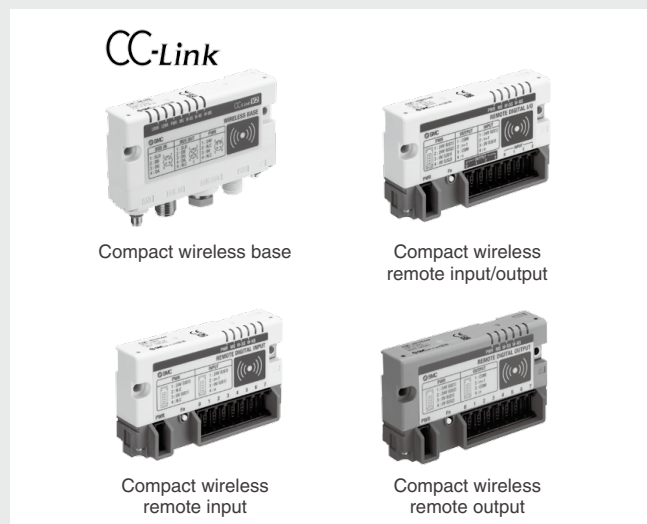
Communication is possible by placing the external antenna outside the control panel when the unit is installed in a metal box, etc.



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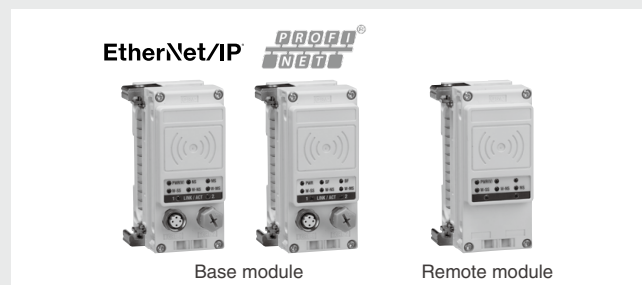
Compact Type *EXW1 Series*



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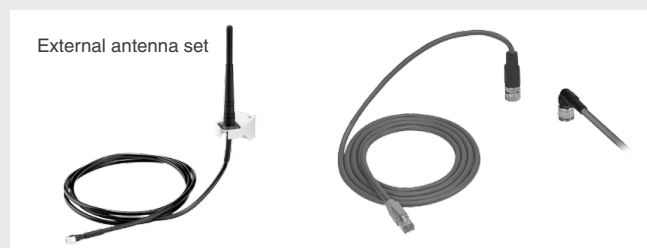
Modular Type *EX600-W Series*



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Wireless System

Compact Type

EXW1 Series



How to Order

Compact Wireless Base

CC-Link



Compact wireless

Base

EXW1 - B M J A B E

Communication protocol

Symbol	Protocol
MJ	CC-Link

Connector

Symbol	Connector interface
A	M12

Frequency channel select function

Symbol	Number of selectable frequency channels	Applicable countries
E	5 to 79 ch	Countries with Radio Law certification outside the U.S./Canada/Korea
N	15 to 79 ch	U.S., Canada, and South Korea

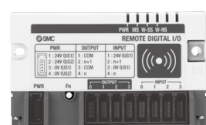
* Select this according to the country of use.

Antenna specification for wireless communication

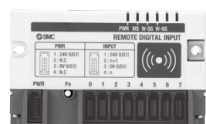
Symbol	Antenna specification*5
A *6	Internal antenna
B *7, *8	External antenna

External antenna set

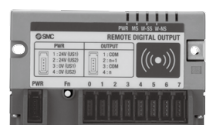
Compact Wireless Remote



Input/Output



Input



Output

Compact wireless

Remote

EXW1 - R D M P E3 B E

Type

Symbol	Description
D	Digital

Type

Symbol	Description
X	Input
Y	Output
M	Input/Output

Polarity

Symbol	Description
P *1	PNP
N *2	NPN

*1 Can be selected with type "M"

*2 Available for all types

*5 The antenna specification selected cannot be changed after purchase.

*6 The external antenna set cannot be used for the internal antenna specification.

*7 An external antenna set is included with the external antenna specification.

*8 It is not possible to use the external antenna set without connecting it with the external antenna specification.

Frequency channel select function

Symbol	Number of selectable frequency channels	Applicable countries
E	5 to 79 ch	Countries with Radio Law certification outside the U.S./Canada/Korea
N	15 to 79 ch	U.S., Canada, and South Korea

* Select this according to the country of use.

Antenna specification for wireless communication

Symbol	Antenna specification*5
A *6	Internal antenna
B *7, *8	External antenna

Connector and number of points/ports

Symbol	Connector	Number of points/ports
E3 *3	e-CON	8 points
E4 *4	e-CON	16 points

*3 Can be selected with type "M"

*4 Can be selected with types "X" and "Y"

External antenna set

NFC Reader/Writer

EXW1 - NT1

* Order a fixing bracket.

* A USB cable (3 m) is also included.



Fixing bracket (Option)

When only optional parts are required, order with the part number below.

EXW1-AB 2

Variations

Symbol	Description	Appearance	
		Single unit	Product mounting view
2	For the EXW1		

EXW1 Series

Specifications: Compact Wireless Base

Wireless Communication Specifications

Item	Specifications
Protocol	SMC original protocol (SMC encryption)
Between compact EXW1 remote	V.2.0 or V.1.0 (Selectable)
Between modular EX600-W remote	V.1.0
Radio wave type (spread)	Frequency Hopping Spread Spectrum (FHSS)
Frequency	2.4 GHz (2403 to 2481 MHz)
Number of frequency channels	5 to 79 ch (Countries other than the U.S., Canada, and South Korea), 15 to 79 ch (U.S., Canada, and South Korea)
Frequency channel selection	Applicable (Refer to page 2.)
Channel bandwidth	1.0 MHz
Communication speed	1 Mbps
V.1.0	250 kbps
Communication distance	Approx. 100 m (Depends on the operating environment)
Countries in which Radio Law certified	Refer to the SMC website for the latest information regarding in which countries the product is certified.
Number of connected wireless remotes	Max. 127 units (15/31/62/127 units)

CC-Link Communication Specifications (EXW1-BMJA□)

Item	Specifications
Protocol	CC-Link (Ver. 1.10, Ver. 2.00)
Station type	Remote device station
Device type	Wireless equipment (Code 0x4B)
Station number	1 to 64
Communication speed	156/625 kbps 2.5/5/10 Mbps
Configuration file	CSP+ file*1
Occupation area (Number of inputs/outputs)	Max. (896 inputs/896 outputs)
Max. number of occupied stations	4 stations
Supported functions	Cyclic transmission Extended cyclic transmission (Only when Ver. 2.00 is specified) Longer cable between stations

*1 The configuration file can be downloaded from the SMC website: <https://www.smcworld.com>

Electrical Specifications

Item	Specifications
US1 (for control) power supply voltage range	24 VDC $\pm 10\%$
Internal current consumption	100 mA or less

General Specifications

Item	Specifications
Enclosure	IP67
Vibration resistance	EN 61131-2 compliant $5 \leq f < 8.4$ Hz 3.5 mm $8.4 \leq f < 150$ Hz 9.8 m/s ²
Impact resistance	EN 61131-2 compliant, 147 m/s ² , 11 ms
Standards	CE marking
Weight	150 g (Body), 100 g (External antenna set)

Specifications: Compact Wireless Remote**Communication Specifications (Common)**

Item	Specifications
Protocol	SMC original protocol (SMC encryption)
Between compact EXW1 bases	V.2.0 or V.1.0 (Selectable)
Between modular EX600-W bases	V.1.0
Radio wave type (spread)	Frequency Hopping Spread Spectrum (FHSS)
Frequency	2.4 GHz (2403 to 2481 MHz)
Number of frequency channels	5 to 79 ch (Countries other than the U.S., Canada, and South Korea), 15 to 79 ch (U.S., Canada, and South Korea)
Frequency channel selection	Applicable (Refer to page 2.)
Channel bandwidth	1.0 MHz
Communication speed	V.2.0 1 Mbps V.1.0 250 kbps
Communication distance	Approx. 100 m (Depends on the operating environment)
Countries in which Radio Law certified	Refer to the SMC website for the latest information regarding in which countries the product is certified.

Electrical Specifications (Input/Output Type)

Item	Specifications
	EXW1-RDMPE3□□ EXW1-RDMNE3□□
US1 (for control/input) power supply voltage range	24 VDC $\pm 10\%$
US2 (for output) power supply voltage range	24 VDC $\pm 10\%$
Internal current consumption	100 mA or less
Isolation	Yes (between US1 and US2)
Number of points	8 points (2 points/connector)
Type	PNP (-COM) NPN (+COM)
Max. sensor supply current	0.3 A/connector, 1 A/unit
ON current	Typ. 5 mA
OFF current	2 mA or less
ON voltage	11 V or more
OFF voltage	5 V or less
Over current protection/detection function	Applicable
Number of points	8 points (2 points/connector)
Type	PNP (-COM) NPN (+COM)
Max. output current	0.3 A/point, 2 A/unit
Over current protection/detection function	Applicable

Electrical Specifications (Input Type)

Item	Specifications
US1 (for control/input) power supply voltage range	24 VDC $\pm 10\%$
Internal current consumption	100 mA or less
Number of points	16 points (2 points/connector)
Type	NPN (+COM)
Max. sensor supply current	0.3 A/connector, 2 A/unit
ON current	Typ. 5 mA
OFF current	2 mA or less
ON voltage	11 V or more
OFF voltage	5 V or less
Over current protection/detection function	Applicable

Electrical Specifications (Output Type)

Item	Specifications
US1 (for control/input) power supply voltage range	24 VDC $\pm 10\%$
US2 (for output) power supply voltage range	24 VDC $\pm 10\%$
Internal current consumption	100 mA or less
Isolation	Yes (between US1 and US2)
Number of points	16 points (2 points/connector)
Type	NPN (+COM)
Max. output current	0.3 A/point, 2 A/unit
Over current protection/detection function	Applicable

General Specifications (Common)

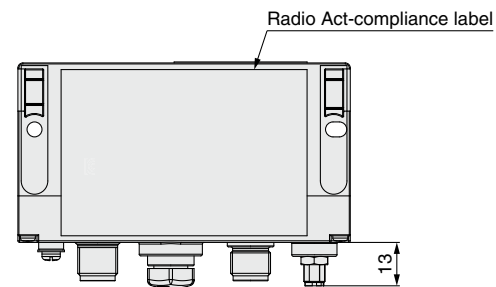
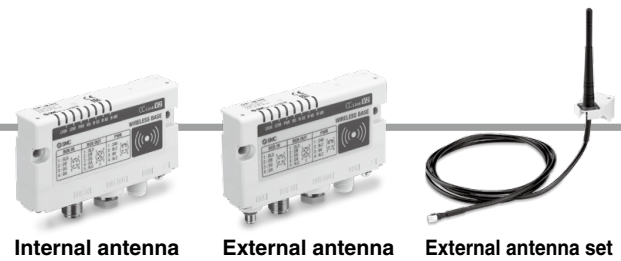
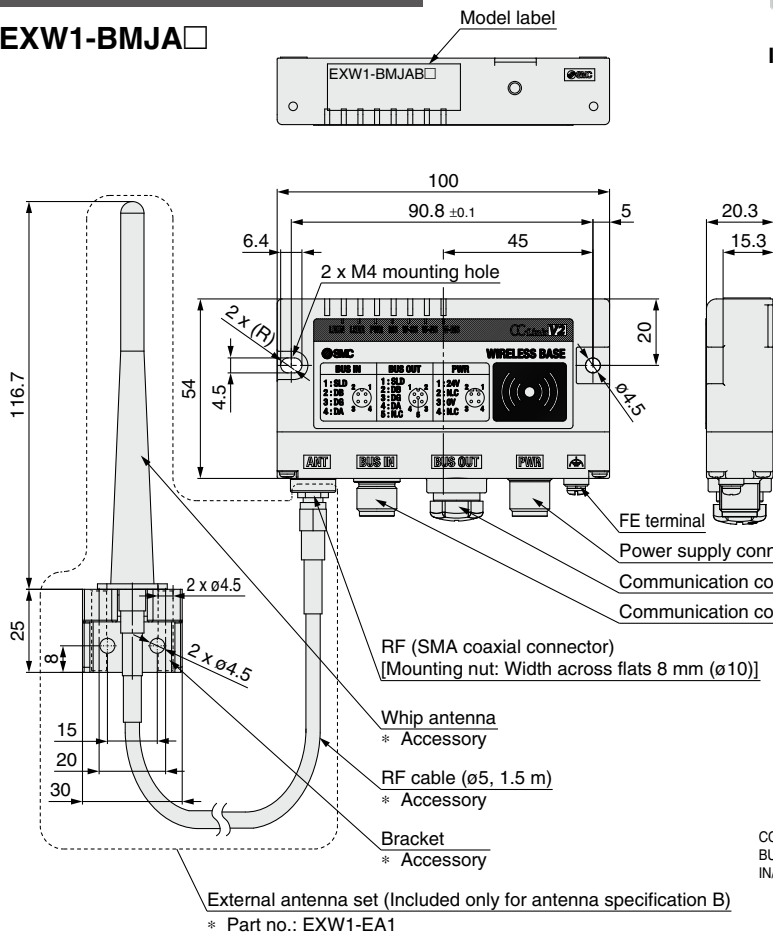
Item	Specifications
Connector type	e-CON (4-pin, Socket)
Enclosure	IP20
Standards	CE marking
Vibration resistance	EN 61131-2 compliant $5 \leq f < 8.4$ Hz 3.5 mm $8.4 \leq f < 150$ Hz 9.8 m/s ²
Impact resistance	EN 61131-2 compliant, 147 m/s ² , 11 ms
Weight	130 g (Body), 100 g (External antenna set)

EXW1 Series

Dimensions/Parts Description

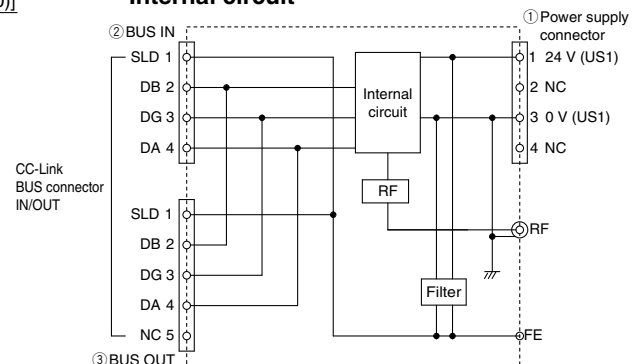
Compact Wireless Base

EXW1-BMJA□



* The seal cap is attached when shipped.

Internal circuit



* The metal housing part of the RF (SMA coaxial connector) is connected to 0 V (US1).

① Power supply connector

No.	Signal	M12, 4-pin, plug B-coded
1	24 V (US1)	
2	N.C.	
3	0 V (US1)	
4	N.C.	

②③ CC-Link BUS connector

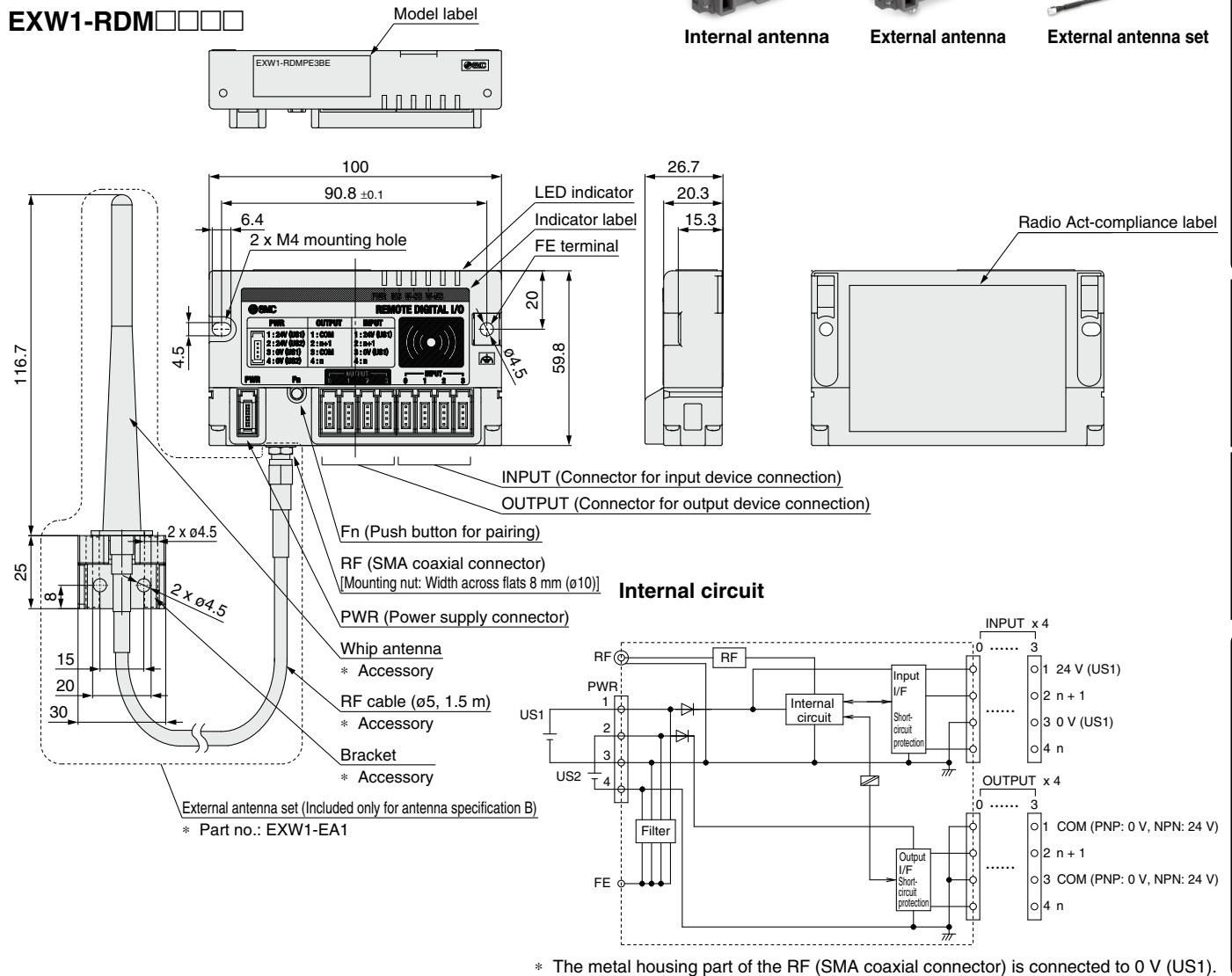
No.	Signal	② BUS IN M12, 4-pin, plug A-coded
1	SLD	
2	DB	
3	DG	
4	DA	

No.	Signal	③ BUS OUT M12, 5-pin, socket A-coded
1	SLD	
2	DB	
3	DG	
4	DA	
5	N.C.	

Dimensions/Parts Description

Compact Wireless Remote Input/Output

EXW1-RDM□□□□



PWR (Power supply connector)

Pin no.	Description
1	24 V (US1)
2	24 V (US2)
3	0 V (US1)
4	0 V (US2)

INPUT (Connector for input device connection)

Pin no.	Description
1	24 V (US1)
2	n + 1
3	0 V (US1)
4	n

OUTPUT (Connector for output device connection, EXW1-RDMPE3□□)*1

Pin no.	Description
1	-COM (US2_0 V)
2	n + 1
3	-COM (US2_0 V)
4	n

OUTPUT (Connector for output device connection, EXW1-RDMNE3□□)*1

Pin no.	Description
1	+COM (US2_24 V)
2	n + 1
3	+COM (US2_24 V)
4	n

*1 The specifications of pin numbers ① and ③ differ depending on the part number system.

EXW1 Series

Accessories

Made to Order

EX600-W Series

Accessories

Technical Data

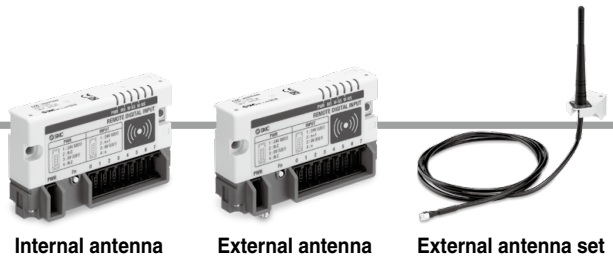
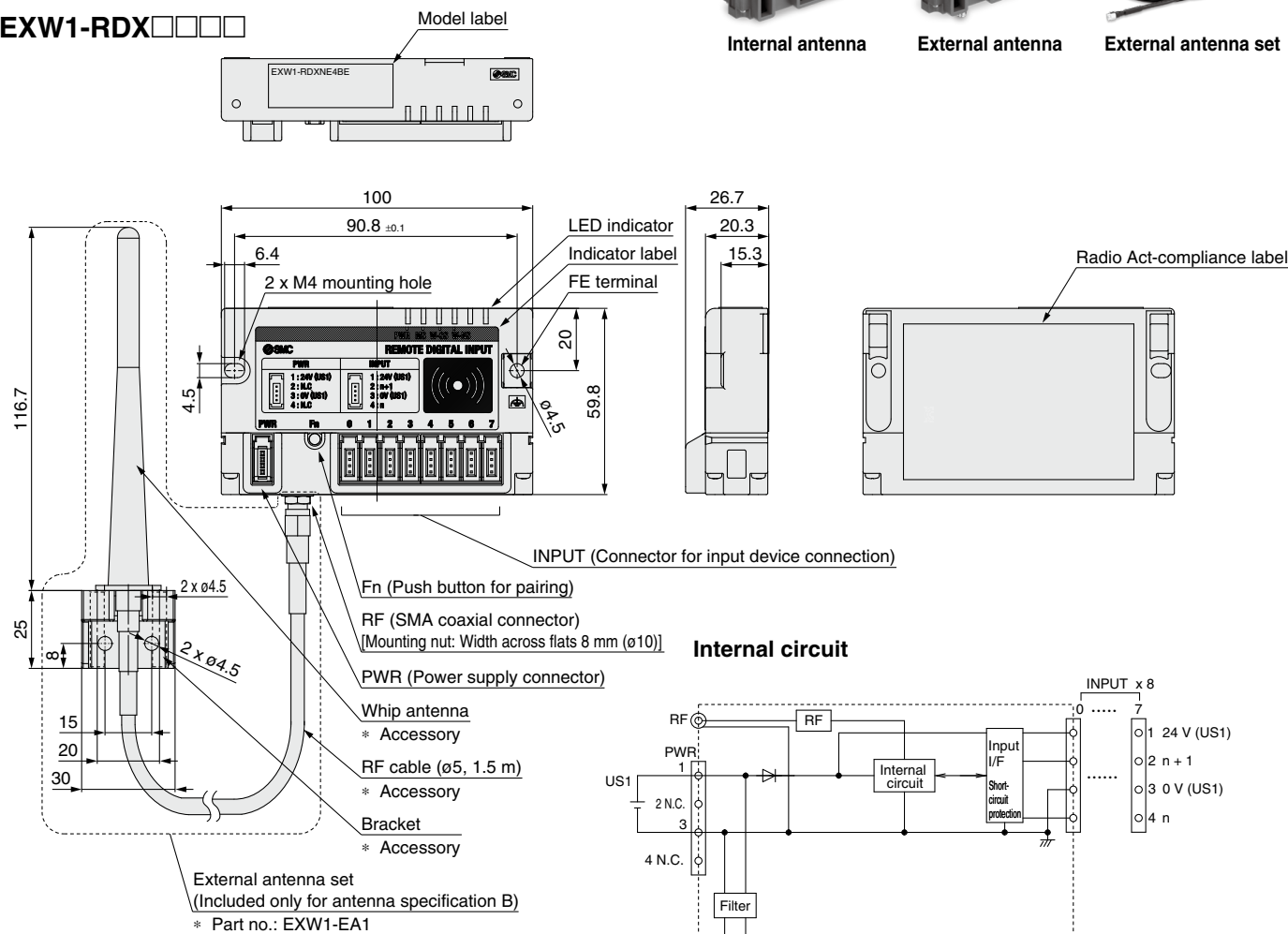
Specific Product Precautions

EXW1 Series

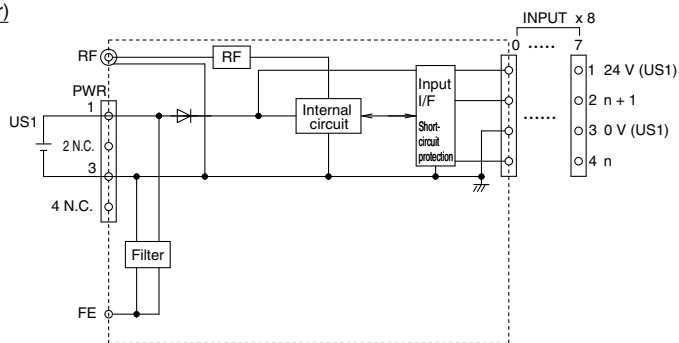
Dimensions/Parts Description

Compact Wireless Remote Input

EXW1-RDX□□□□



Internal circuit



* The metal housing part of the RF (SMA coaxial connector) is connected to 0 V (US1).

PWR (Power supply connector)

Pin no.	Description
1	24 V (US1)
2	N.C.
3	0 V (US1)
4	N.C.

INPUT (Connector for input device connection)

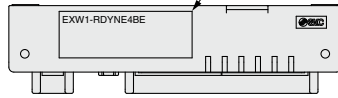
Pin no.	Description
1	24 V (US1)
2	n + 1
3	0 V (US1)
4	n

Dimensions/Parts Description

Compact Wireless Remote Output

EXW1-RDY□□□□

Model label



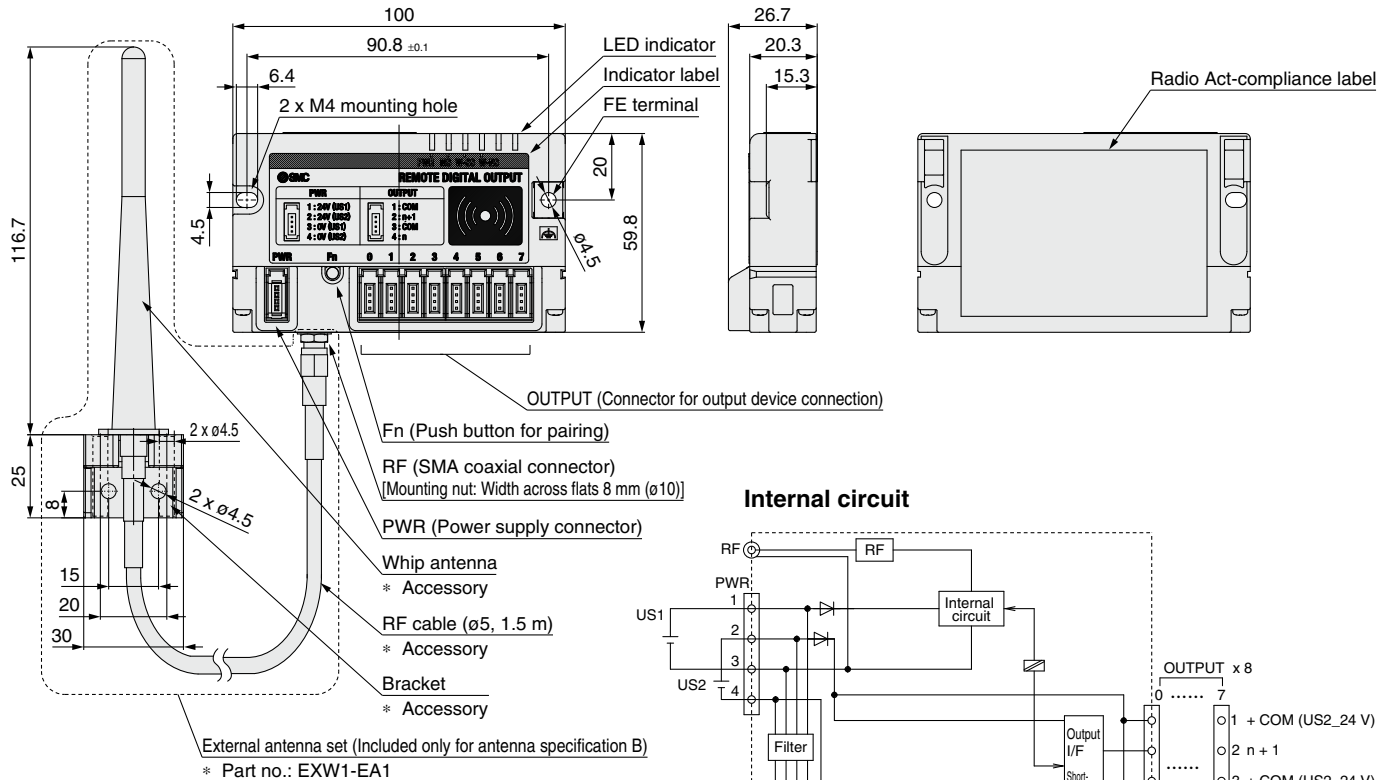
Internal antenna



External antenna



External antenna set



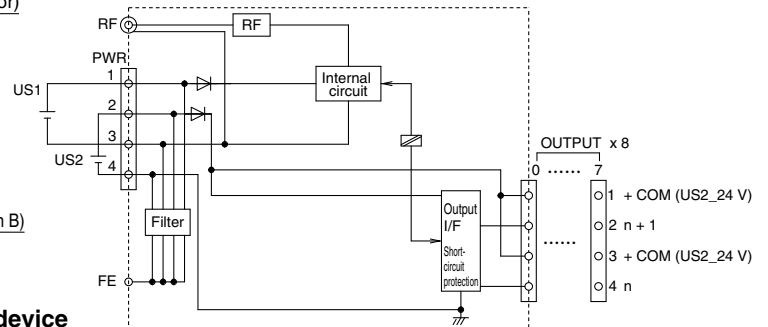
PWR (Power supply connector)

Pin no.	Description
1	24 V (US1)
2	24 V (US2)
3	0 V (US1)
4	0 V (US2)

OUTPUT (Connector for output device connection)

Pin no.	Description
1	+ COM (US2_24 V)
2	n + 1
3	+ COM (US2_24 V)
4	n

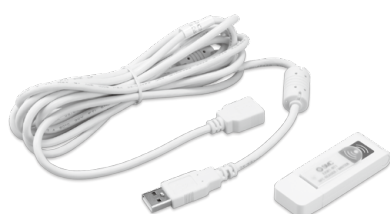
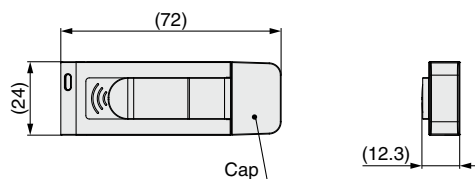
Internal circuit



* The metal housing part of the RF (SMA coaxial connector) is connected to 0 V (US1).

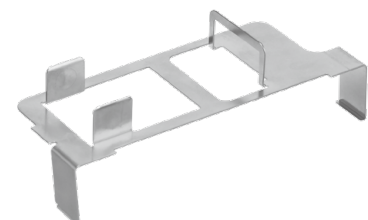
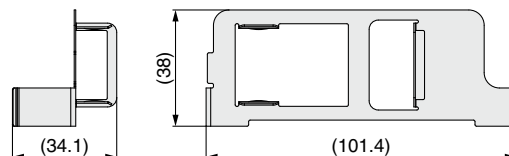
NFC Reader/Writer

EXW1-NT1



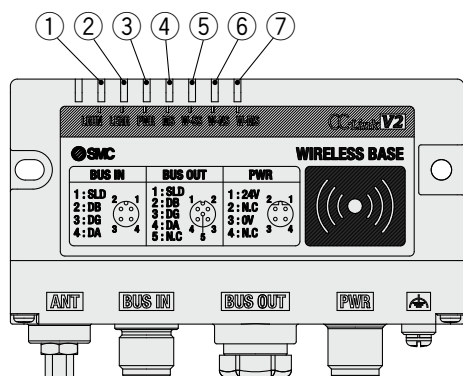
Fixing Bracket

EXW1-AB2 (Option, For EXW1)



LED Display

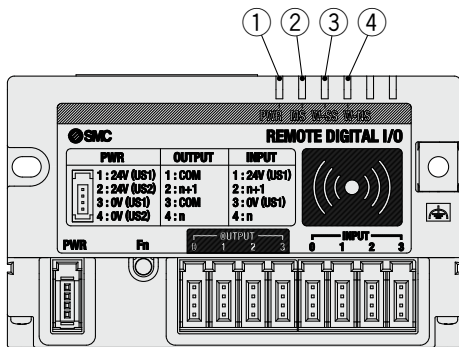
Compact wireless base



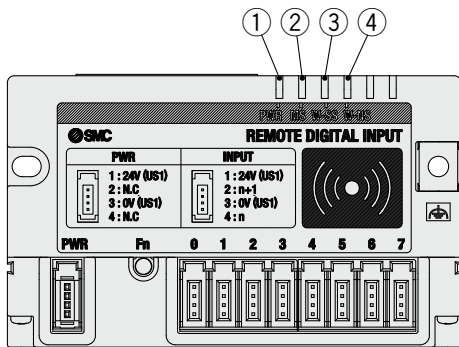
No.	LED name	Function	LED status		Description
			Color of LED	ON/Flashing	
1	LRUN	Data link status indication	Green	ON	Communication is normal.
			—	OFF	Communication is not established or the US1 (for control) power supply is OFF.
2	LERR	Error status indication	Red	ON	A communication error has occurred.
			—	OFF	No communication error
3	PWR	US1 (for control) power supply status indication	Green	ON	The US1 (for control) power supply is ON.
			—	OFF	The US1 (for control) power supply is OFF.
4	MS	Base system status indication	Green	ON	The compact wireless base is operating normally.
			Red	Flashing	Restorable error is detected. (LED flashes when one diagnostic information item or more is detected.) · US1 (for control) power supply voltage level is abnormal. · Number of system inputs/outputs setting error · Network setting error · Abnormal number of remote connections
			Red	ON	Non-restorable error is detected.
			—	OFF	The US1 (for control) power supply is OFF.
5	W-SS	Radio wave receiving intensity	Green	ON	The received power level of all remotes is 3.
			Green	Flashing (1 Hz)	There are connected remotes with a received power level of 2.
			Green	Flashing (2 Hz)	There are connected remotes with a received power level of 1.
			Red	Flashing	All the remotes that support protocol V.1.0 are not connected.
			Orange	Flashing	All the remotes that support protocol V.2.0 are not connected.
			—	OFF	The remote module is not registered.
6	W-NS	Wireless communication connection status indication	Green	ON	All the remote connections are normal.
			Green	Flashing	Some remotes are not connected.
			Red	Flashing	No remotes are connected.
			Red	ON	No remotes are connected. (Non-restorable error in wireless communication)
			Red	Alternate flashing	Wireless communication connection is under construction. (Pairing)
			—	OFF	The remote module is not registered.
7	W-MS	Remote system status indication	Green	ON	Wireless remote is normal.
			Red	Flashing	Restorable error is detected. (LED flashes when one diagnostic information item or more is detected.) · US1 (for control/input) power supply voltage level is abnormal. · US2 (for output) power supply voltage level is abnormal. · Excessive I/O setting inputs/outputs · Analog I/O upper set limit exceeded · Analog input range upper and lower limit exceeded · Error in communication between units · EX600 I/O unit detects diagnostic information. · Valve diagnostic information detected
			Red	ON	Non-restorable error is detected.
			—	OFF	Wireless remote not connected

LED Display

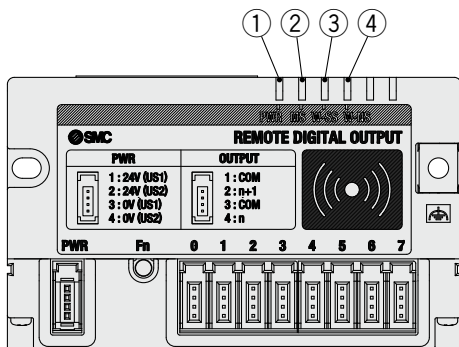
Compact wireless remote input/output



Compact wireless remote input



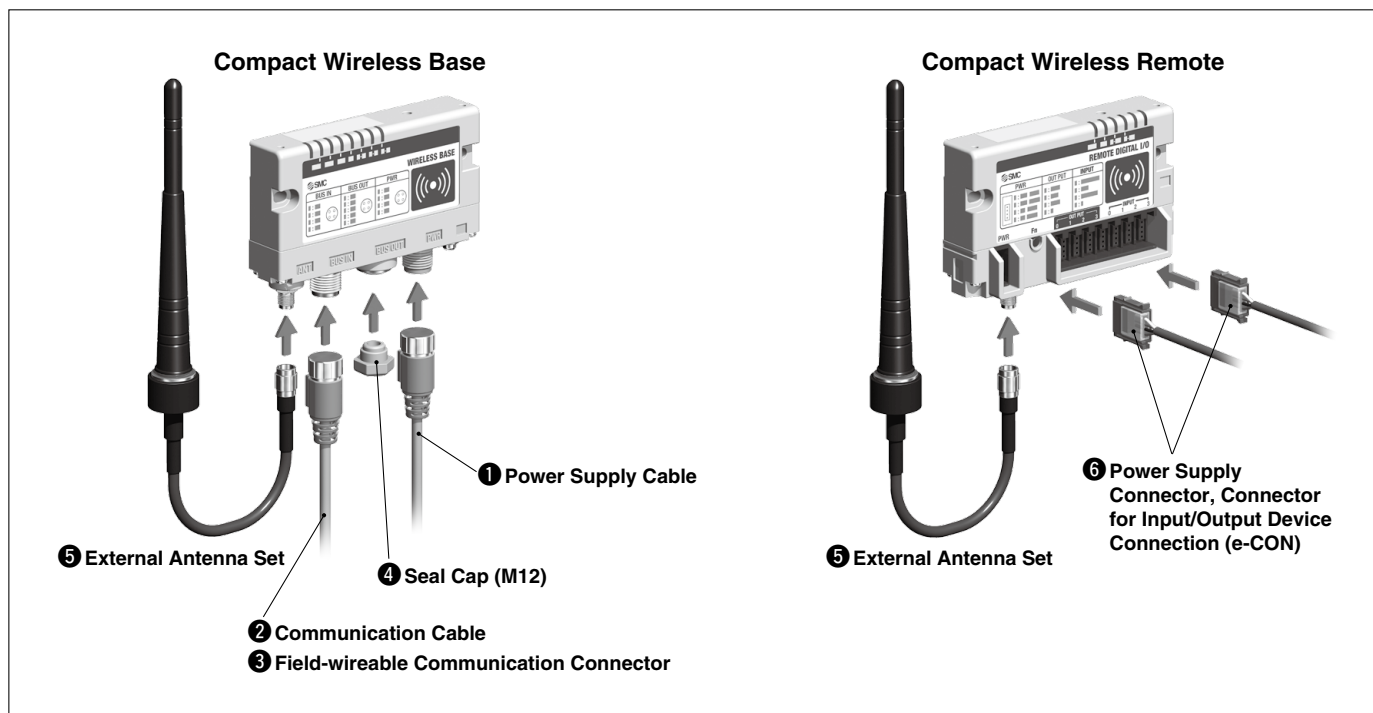
Compact wireless remote output



No.	LED name	Function	LED status		Description
			Color of LED	ON/Flashing	
1	PWR	Power supply voltage (US1/US2) status indication	Green	ON	The US1 (for control/input) power supply is ON.
			Red	Flashing	The US2 (for output) power supply voltage level is abnormal (when the setting is enabled).
			—	OFF	The US1 (for control/input) power supply is OFF.
2	MS	Remote status indication	Green	ON	Operating normally
			Red	Flashing	Restorable error is detected. (LED flashes when one diagnostic information item or more is detected.) · The US1 (for control/input) power supply voltage level is abnormal (when the setting is enabled). · Short-circuit detection of the US1 (for control/input) power supply · Short-circuit detection of the US2 (for output) power supply
			Red	ON	Non-restorable error is detected.
			—	OFF	The US1 (for control/input) power supply is OFF.
3	W-SS	Radio wave receiving intensity	Green	ON	The received power level is 3.
			Green	Flashing (1 Hz)	The received power level is 2.
			Green	Flashing (2 Hz)	The received power level is 1.
			Red	Flashing	Protocol V.1.0 wireless communication is not established.
			Orange	Flashing	Protocol V.2.0 wireless communication is not established.
			—	OFF	The base module is not registered.
			Green	ON	Base is connected correctly.
4	W-NS	Wireless communication connection status indication	Red	Flashing	No bases are connected.
			Orange	Flashing (1 Hz)	Pairing operation is in progress.
			Red	ON	No bases are connected. (Non-restorable error in wireless communication)
			Red Green	Alternate flashing	Wireless communication connection is under construction. (Pairing)
			—	OFF	The base module is not registered.
			—	OFF	The US1 (for control/input) power supply is OFF.

EXW1 Series

Accessories (Optional Parts)



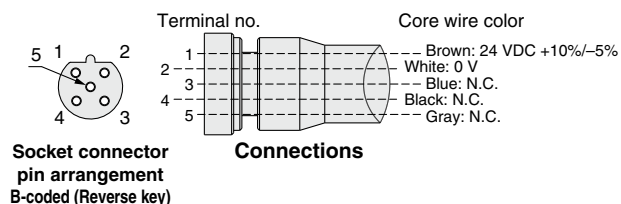
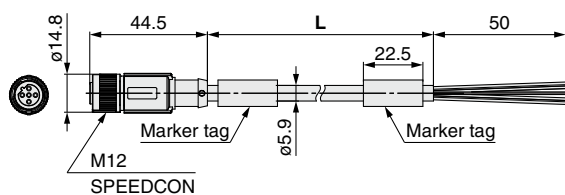
① Power Supply Cable (M12 connector)

* The shape of the M12 connector is B-coded (Reverse key).

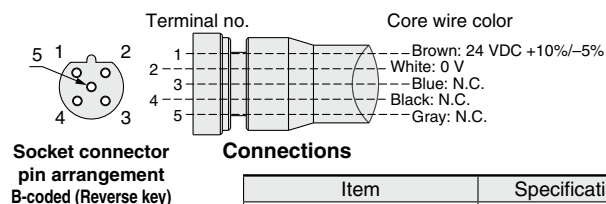
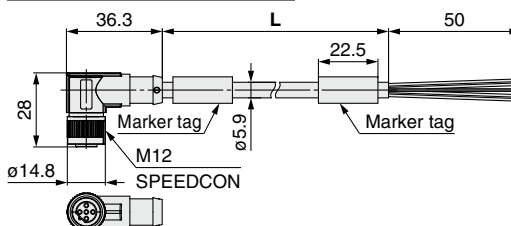
PCA-1564927	Straight 2 m
PCA-1564930	Straight 6 m
PCA-1564943	Right angled 2 m
PCA-1564969	Right angled 6 m



Straight connector type



Angled connector type



Item	Specifications
Cable O.D.	ø5.9 mm
Conductor nominal cross section	0.34 mm ² /AWG22
Wire O.D. (Including insulator)	1.27 mm
Min. bending radius (Fixed)	59 mm

② Communication Cable

For CC-Link

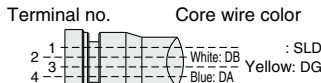
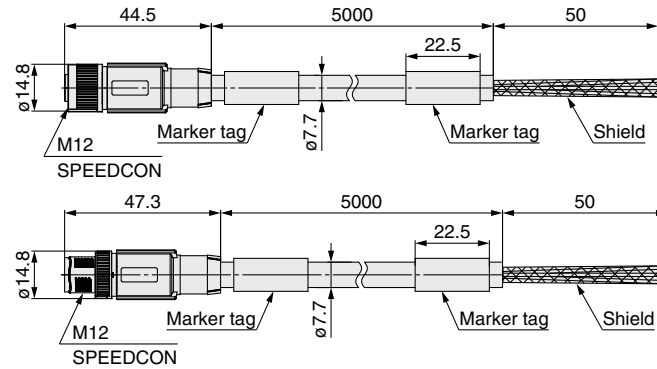
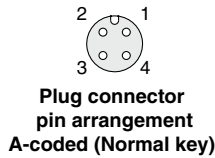
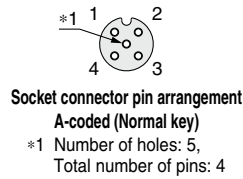
PCA-1567720
(Socket)

PCA-1567717
(Plug)



Made to Order

Cable length	10000 mm	Refer to page 23.
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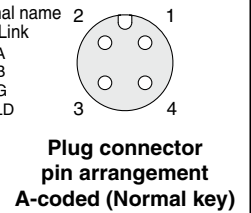
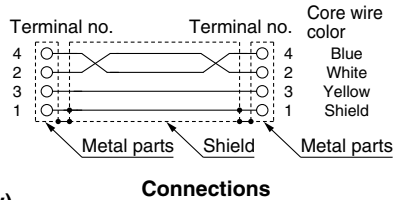
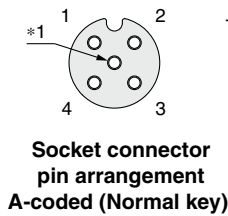
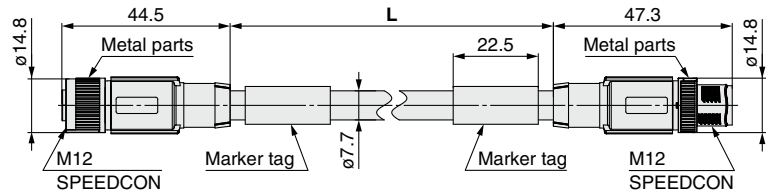
Connections

Item	Specifications
Cable O.D.	ø7.7 mm
Conductor nominal cross section	Data pair 0.5 mm ² /AWG20 Drain 0.34 mm ² /AWG22
Wire O.D. (Including insulator)	2.55 mm
Min. bending radius (Fixed)	77 mm

EX9-AC 005 MJ-SSPS (With connector on both sides (Socket/Plug))

• Cable length (L)

005	500 mm
010	1000 mm
020	2000 mm
030	3000 mm
050	5000 mm
100	10000 mm

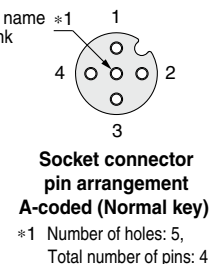
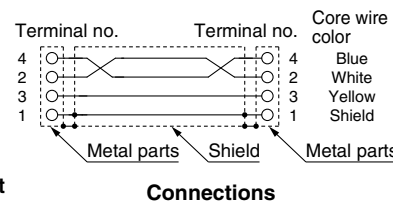
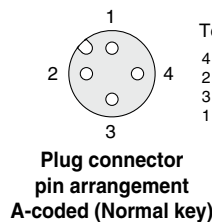
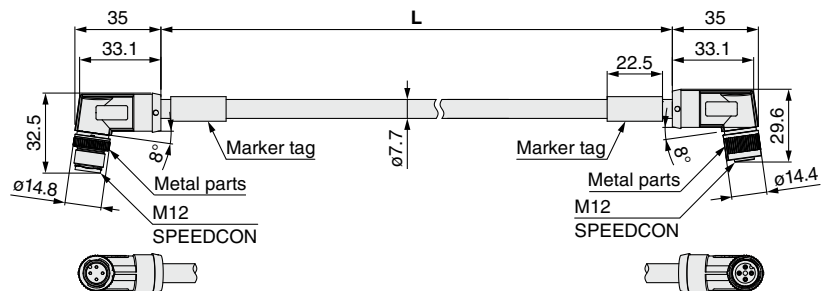


Item	Specifications
Cable O.D.	ø7.7 mm
Conductor nominal cross section	Data pair 0.5 mm ² /AWG20 Drain 0.34 mm ² /AWG22
Wire O.D. (Including insulator)	2.55 mm
Min. bending radius (Fixed)	77 mm

EX9-AC 005 MJ-SAPA (With angled connector on both sides (Socket/Plug))

• Cable length (L)

005	500 mm
010	1000 mm
020	2000 mm
030	3000 mm
050	5000 mm
100	10000 mm



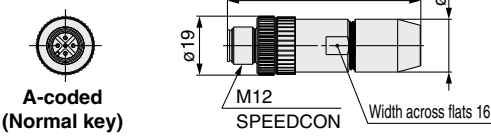
Item	Specifications
Cable O.D.	ø7.7 mm
Conductor nominal cross section	Data pair 0.5 mm ² /AWG20 Drain 0.34 mm ² /AWG22
Wire O.D. (Including insulator)	2.55 mm
Min. bending radius (Fixed)	77 mm

EXW1 Series

③ Field-wireable Communication Connector

Plug

For CC-Link
PCA-1075526

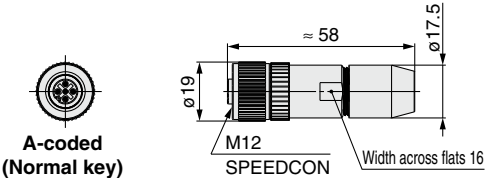


Applicable Cable

Item	Specifications
Cable O.D.	4.0 to 8.0 mm
Wire gauge (Stranded wire cross section)	0.14 to 0.75 mm²/AWG26 to 18 (Solid cable/Flexible cable) 0.08 to 0.5 mm²/AWG28 to 20 (With ferrule)

Socket

For CC-Link
PCA-1075527



Applicable Cable

Item	Specifications
Cable O.D.	4.0 to 8.0 mm
Wire gauge (Stranded wire cross section)	0.14 to 0.75 mm²/AWG26 to 18 (Solid cable/Flexible cable) 0.08 to 0.5 mm²/AWG28 to 20 (With ferrule)

④ Seal Cap (10 pcs.)

Be sure to mount a seal cap on any unused communication connectors. Otherwise, the specified enclosure cannot be maintained.
* One cap is included with the wireless base (EXW1-BMJA□).

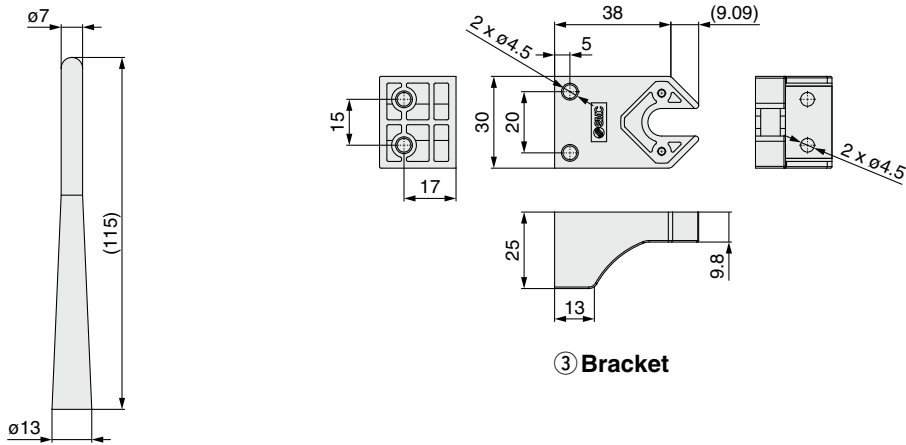
EX9-AWTS
For M12



⑤ External Antenna Set

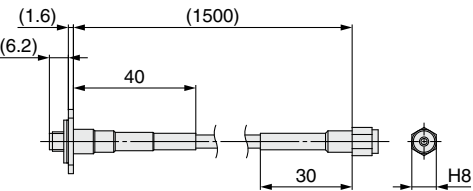
EXW1-EA1

(A set containing a whip antenna, coaxial cable, and bracket)
* The set is included with the external antenna specification. Only the included whip antenna and coaxial cable can be used with the product. Be sure to use them as a set.
* The external antenna set cannot be used for the internal antenna specification.
* It is not possible to use the external antenna set without connecting it with the external antenna specification.



① Whip antenna

③ Bracket



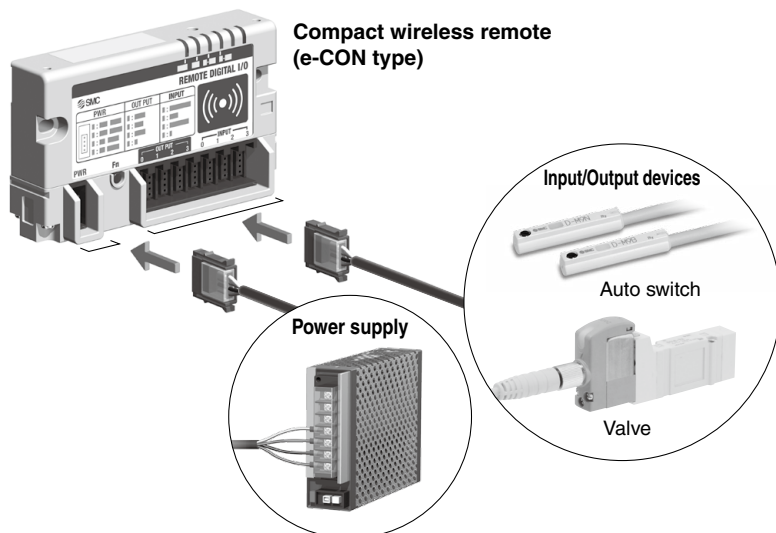
② Coaxial cable

⑥ Power Supply Connector, Connector for Input/Output Device Connection (e-CON)

Select the applicable e-CON connectors based on the lead wire specifications of the components to be connected.

Both the power supply and I/O connectors have the same shape as the e-CON (4-pin, socket).

The lead wire specifications of each of our I/O devices are shown below for reference.

Connecting the remote and I/O devices**e-CON Part Nos. List**

Part no.	AWG No.	Conductor cross section [mm ²]	Finished outside diameter [mm]	Cover color
ZS-28-C-1	24 to 26	0.14 to 0.2	ø1.0 to ø1.2	Yellow
ZS-28-C-2			ø1.2 to ø1.6	Orange
ZS-28-C-3	22 to 20	0.3 to 0.5	ø1.0 to ø1.2	Green
ZS-28-C-4			ø1.2 to ø1.6	Blue
ZS-28-C-5	—	0.1 to 0.5	ø1.6 to ø2.0	Gray
ZS-28-CA-1			ø0.6 to ø0.9	Orange
ZS-28-CA-2			ø0.9 to ø1.0	Red
ZS-28-CA-3			ø1.0 to ø1.15	Yellow
ZS-28-CA-4			ø1.15 to ø1.35	Blue
ZS-28-CA-5			ø1.35 to ø1.6	Green

Input/Output	Product	Series	Appearance	Conductor cross section [mm ²]	Insulator O.D. [mm]	Applicable e-CON part no.
Output	Valve	JSY1000 Plug lead (V050-30-4A-□)		0.3	ø1.55	ZS-28-C-4 ZS-28-CA-5
		JSY3000, 5000/SYJ/SJ Plug lead (SY100-30-4A-□)		0.3	ø1.55	ZS-28-C-4 ZS-28-CA-5
		SY/SYJ M8 connector (V100-49-1-□)		0.16 (AWG25)	ø1.2	ZS-28-C-1 ZS-28-CA-4
	Ejector	ZB (AXT661-13A/14A-□)		AWG24	ø1.4	ZS-28-C-2 ZS-28-CA-5
		ZL/ZM (SY100-30-4A-□)		0.3	ø1.55	ZS-28-C-4 ZS-28-CA-5
		ZK2 (ZK2-LV□□-A)		0.2 (AWG24)	ø1.4	ZS-28-C-2 ZS-28-CA-5
Input	Pressure	Z/ISE10, 20		0.15 (AWG26)	ø1.0	ZS-28-C-1 ZS-28-CA-2
		PS1000		0.18	ø0.96	ZS-28-CA-2
	Auto switch	D-M9		0.15	ø0.88	ZS-28-CA-1
	Flow	PF2M		AWG26 (0.13)	ø1	ZS-28-CA-2

EXW1 Series

Accessories

Made to Order

EX600-W Series

Accessories

Technical Data

Specific Product Precautions

EXW1 Series

Made to Order

Please contact SMC for detailed specifications and lead times.



① Communication Cable

With connector on one side (Socket)

Cable length: 10000 mm

For CC-Link

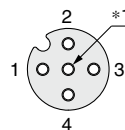
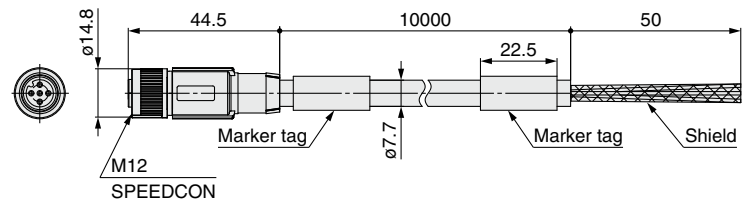
EX9-AC100 MJ -X12

• Applicable protocol

MJ CC-Link

Dimensions

For CC-Link



Socket connector
pin arrangement
A-coded (Normal key)

Connections

Terminal no.	Core wire color: Signal name (CC-Link)
1	Shield: SLD
2	White: DB
3	Yellow: DG
4	Blue: DA

*1 Number of holes: 5, Total number of pins: 4

Item	Specifications
Cable O.D.	ø7.7 mm
Conductor nominal cross section	Data pair 0.5 mm ² /AWG20 Drain 0.34 mm ² /AWG22
Wire O.D. (Including insulator)	2.55 mm
Min. bending radius (Fixed)	77 mm

Wireless System

Modular Type

EX600-W Series



RoHS

How to Order

Wireless Unit

EX600-W EN 1

Wireless compatible

Protocol

Symbol	Specifications	Note
EN	Base module	For EtherNet/IP™
PN	Base module	For PROFINET
SV	Remote module	—

Output type

Symbol	Specifications
1	PNP
2	NPN

EtherNet/IP



PROFINET



Base module

Remote module

EXW1 Series

Accessories

Made to Order

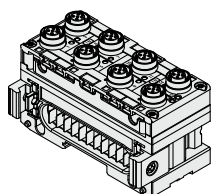
EX600-W Series

Accessories

Technical Data

Specific Product Precautions

Digital Input Unit*1



EX600-DX P D

Digital input

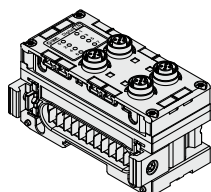
Input type

Symbol	Description
P	PNP
N	NPN

Number of inputs and connector

Symbol	Number of inputs	Connector
B	8 inputs	M12 connector (5 pins) 4 pcs.
C	8 inputs	M8 connector (3 pins) 8 pcs.
C1	8 inputs	M8 connector (3 pins) 8 pcs., With open-circuit detection
D	16 inputs	M12 connector (5 pins) 8 pcs.
E	16 inputs	D-sub connector (25 pins)
F	16 inputs	Spring type terminal block (32 pins)

Digital Output Unit*1



EX600-DY P B

Digital output

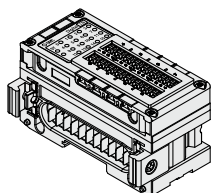
Output type

Symbol	Description
P	PNP
N	NPN

Number of outputs and connector

Symbol	Number of outputs	Connector
B	8 outputs	M12 connector (5 pins) 4 pcs.
E	16 outputs	D-sub connector (25 pins)
F	16 outputs	Spring type terminal block (32 pins)

Digital Input/Output Unit*1



EX600-DM P F

Digital input/output

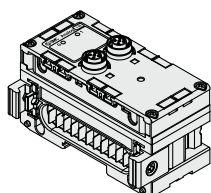
Input/Output type

Symbol	Description
P	PNP
N	NPN

Number of inputs/outputs and connector

Symbol	Number of inputs	Number of outputs	Connector
E	8 inputs	8 outputs	D-sub connector (25 pins)
F	8 inputs	8 outputs	Spring type terminal block (32 pins)

Analog Input Unit*1



EX600-AX A

Analog input

Number of input channels and connector

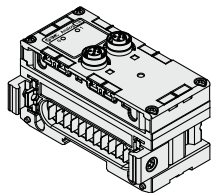
Symbol	Number of input channels	Connector
A	2 channels	M12 connector (5 pins) 2 pcs.

*1 For specifications, refer to the Fieldbus system EX600 series in the Web Catalog.

EX600-W Series

How to Order

Analog Output Unit*1



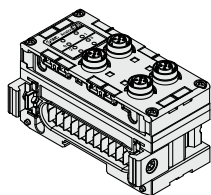
EX600 – AY A

Analog output

Number of output channels and connector

Symbol	Number of output channels	Connector
A	2 channels	M12 connector (5 pins) 2 pcs.

Analog Input/Output Unit*1



EX600 – AM B

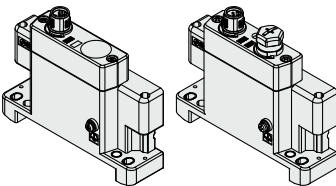
Analog input/output

Number of input/output channels and connector

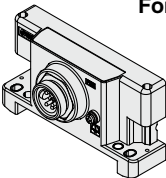
Symbol	Number of input channels	Number of output channels	Connector
B	2 channels	2 channels	M12 connector (5 pins) 4 pcs.

*1 For specifications, refer to the Fieldbus system EX600 series in the Web Catalog.

End Plate (D side)



For M12



For 7/8 inch

EX600 – ED 2 – 2

End plate

End plate mounting position: D side

Power supply connector

Symbol	Power supply connector	Specifications
2	M12 (5 pins) B-coded	IN
3	7/8 inch (5 pins)	IN
4	M12 (4/5 pins) A-coded*1	IN/OUT
5	M12 (4/5 pins) A-coded*1	IN/OUT

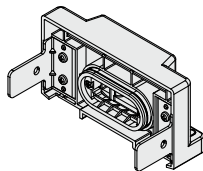
*1 The pin layout for "4" and "5" pin connector is different.
Refer to the dimensions on page 32.

Mounting method

Symbol	Description	Note
Nil	Without DIN rail mounting bracket	—
2	With DIN rail mounting bracket	For SV, S0700, VQC series
3	With DIN rail mounting bracket	For SY series

* When the end plate (U side) is used, the symbol for the mounting method must be the same as the D side.

End Plate (U side)



EX600 – EU 1 – 2

End plate

End plate mounting position: U side

Specifications

Symbol	Specifications
1	Waterproof cover

Mounting method

Symbol	Description	Note
Nil	Without DIN rail mounting bracket	—
2	With DIN rail mounting bracket	For EX600-ED□-2
3	With DIN rail mounting bracket	For EX600-ED□-3

* When the end plate (D side) is used, the symbol for the mounting method must be the same as the U side.

NFC Reader/Writer

EXW1 – NT1

* Order a fixing bracket.
* A USB cable (3 m) is also included.



Fixing bracket (Option)

When only optional parts are required, order with the part number below.

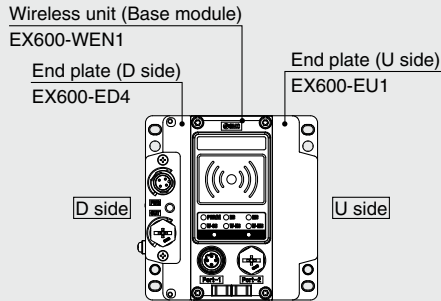
EXW1-AB 1

Variations

Symbol	Description	Appearance	
		Single unit	Product mounting view
1	For EX600-W		

Ordering Example of the Base Module

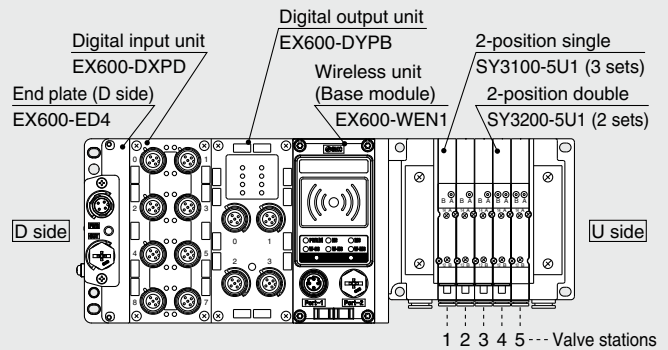
Base module: Without valve manifold and input/output unit



EX600-ED4	1 set
EX600-WEN1	1 set
EX600-EU1	1 set

· Products should be ordered separately and assembled by the customer.

Manifold with base module: With input/output unit



SS5Y3-10S6WE72-05B-C6

(Type 10 5-station manifold base, Base EtherNet/IP™ compatible)

Negative common, M12 connector IN/OUT pin arrangement 1, I/O unit: 2 stations

* SY3100-5U1 3 sets (2-position single part no.)

* SY3200-5U1 2 sets (2-position double part no.)

* EX600-DXPD 1 set I/O unit part no. (Stations 1)

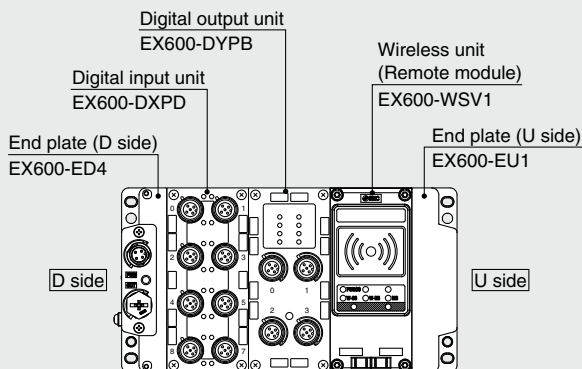
* EX600-DYPB 1 set I/O unit part no. (Stations 2)

→ The asterisk denotes the symbol for the assembly.
Prefix it to the part numbers of the valve, etc.

· For details, refer to the catalog of each valve series.
· The manifold part number cannot be selected when ordering from Malaysia according to Malaysian laws. The wireless unit (base module) needs to be ordered separately.

Ordering Example of the Remote Module

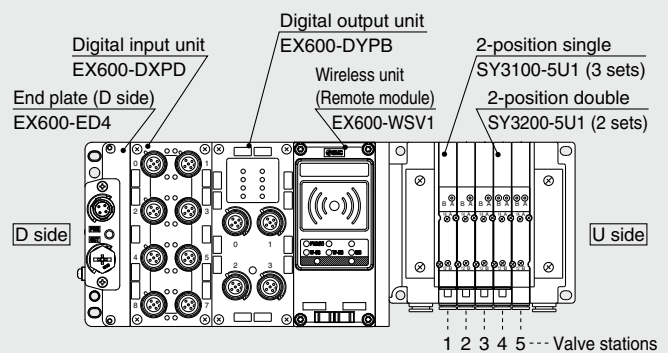
Remote module: Without valve manifold and with input/output unit



EX600-ED4	1 set
EX600-DXPD	1 set
EX600-DYPB	1 set
EX600-WSV1	1 set
EX600-EU1	1 set

· Products should be ordered separately and assembled by the customer.

Manifold with remote module: With input/output unit



SS5Y3-10S6WS72-05B-C6

(Type 10 5-station manifold base, remote)

Negative common, M12 connector IN/OUT pin arrangement 1, I/O unit: 2 stations

* SY3100-5U1 3 sets (2-position single part no.)

* SY3200-5U1 2 sets (2-position double part no.)

* EX600-DXPD 1 set I/O unit part no. (Stations 1)

* EX600-DYPB 1 set I/O unit part no. (Stations 2)

→ The asterisk denotes the symbol for the assembly.
Prefix it to the part numbers of the valve, etc.

· For details, refer to the catalog of each valve series.
· The manifold part number cannot be selected when ordering from Malaysia according to Malaysian laws. The wireless unit (remote module) needs to be ordered separately.

EXW1 Series

Accessories

Made to Order

EX600-W Series

Accessories

Technical Data

Specific Product Precautions

EX600-W Series

Specifications

Base Module: EX600-WEN□

Item		Specifications
EtherNet/IP™ communication	Communication protocol	EtherNet/IP™ (Conformance test version: Composit 12)
	Transmission medium (cable)	Standard Ethernet cable (CAT5 or higher, 100BASE-TX)
	Communication speed	10 Mbps/100 Mbps
	Communication method	Full duplex/Half duplex
	Configuration file	EDS file*1
	IP address setting	Manual/BOOTP, DHCP
	Device information	Vendor ID: 7 (SMC Corp.) Device type: 12 (Communication Adaptor) Product code: 186
	Topology	Star, Bus, Ring (DLR), Line, Tree
	QuickConnect™ function	Applicable
	DLR function	Applicable
	Web server function	Applicable
Wireless communication	Protocol	SMC original protocol (SMC encryption) V.1.0
	Radio wave type (spread)	Frequency Hopping Spread Spectrum (FHSS)
	Frequency	2.4 GHz (2403 to 2481 MHz)
	Number of frequency channels	79 ch (Bandwidth: 1.0 MHz)
	Communication speed	250 kbps
	Communication distance	10 m (Depending on the operating environment)
	Radio Law certificate	Refer to the SMC website for the latest information regarding in which countries the product is certified.
Electrical	For control/input (US1)	Power supply voltage 24 VDC ±10% Current consumption 150 mA or less
	For output (US2)	Power supply voltage 24 VDC ±10% Max. supply current 4 A
	Number of inputs	System input size Max. 1280 points together with the registered remote modules Input size Max. 128 points (increase or decrease by 16 points)
	Number of outputs	System output size Max. 1280 points together with the registered remote modules Output size Max. 128 points (increase or decrease by 16 points)
Input/Output	Analog input/output	AD refresh time 10 ms or less (the input connected to the base module) 0.1/0.2/0.5/1/2/5/10/30/60 s (the input connected to the remote module)*2
		DA refresh time 10 ms or less (the output connected to the base module) 0.1/0.2/0.5/1/2/5/10/30/60 s (the output connected to the remote module)*2
	Valve output	Output type EX600-WEN1: Source/PNP (–COM) EX600-WEN2: Sink/NPN (+COM)
		Number of outputs Max. 32 points (0/8/16/24/32 points)
		Connected load Solenoid valve with surge voltage suppressor of 24 VDC and 1.5 W or less (manufactured by SMC)
	Number of remote modules connected Max. 127 units (0/15/31/63/127 units)	
	Number of connected EX600 I/O units Max. 9 EX600 series I/O units (I/O = 128. I/O above 128 cannot be recognized.)	
	Enclosure Conforms to IP67 (with manifold assembled)	
General	Ambient temperature (Operating temperature) –10 to +50°C	
	Ambient temperature (Storage temperature) –20 to +60°C	
	Ambient humidity 35 to 85% RH (No condensation)	
	Withstand voltage 500 VAC for 1 minute between external terminals and metallic parts	
	Insulation resistance 10 MΩ or more (500 VDC between external terminals and metallic parts)	
	Vibration resistance	Conforms to EN 61131-2 5 ≤ f < 8.4 Hz 3.5 mm 8.4 ≤ f < 150 Hz 9.8 m/s² (Excludes valve manifold)
		Conforms to EN 61131-2 147 m/s², 11 ms (Excludes valve manifold)
	Impact resistance Conforms to EN 61131-2 147 m/s², 11 ms (Excludes valve manifold)	
	Standards CE marking	
	Weight 300 g	
	Communication standard ISO/IEC 14443B (Type-B)	
NFC communication*3	Frequency 13.56 MHz	
	Communication speed 20 to 100 kHz (I2C)	
	Communication distance Up to 1 cm	

*1 The configuration file can be downloaded from the SMC website: <https://www.smcworld.com>

*2 Varies depending on the wireless communication status and the surrounding environment

*3 The NFC communication RFID tag of the 13.56 MHz passive type

■ Trademark

EtherNet/IP® is a registered trademark of ODVA, Inc.

Specifications**Base Module: EX600-WPN□**

Item			Specifications
PROFINET communication	Communication protocol		PROFINET IO
	Conformance class		Class C (Only for IRT switch function)
	Transmission medium (cable)		Standard Ethernet cable (CAT5 or higher, 100BASE-TX)
	Transmission speed		100 Mbps
	Configuration file		GSDML file*1
	FSU (Fast Start Up)		Applicable
	MRP (Media Redundancy Protocol)		Applicable
	Web server function		Applicable
Wireless communication	Protocol		SMC original protocol (SMC encryption) V.1.0
	Radio wave type (spread)		Frequency Hopping Spread Spectrum (FHSS)
	Frequency		2.4 GHz (2403 to 2481 MHz)
	Number of frequency channels		79 ch (Bandwidth: 1.0 MHz)
	Communication speed		250 kbps
	Communication distance		10 m (Depending on the operating environment)
	Radio Law certificate		Refer to the SMC website for the latest information regarding in which countries the product is certified.
Electrical	For control/input (US1)	Power supply voltage	24 VDC ±10%
		Current consumption	150 mA or less
	For output (US2)	Power supply voltage	24 VDC ±10%
		Max. supply current	4 A
Input/Output	Number of inputs	System input size	Max. 1280 points together with the registered remote modules
		Input size	Max. 128 points (increase or decrease by 16 points)
	Number of outputs	System output size	Max. 1280 points together with the registered remote modules
		Output size	Max. 128 points (increase or decrease by 16 points)
	Analog input/output	AD refresh time	10 ms or less (the input connected to the base module) 0.1/0.2/0.5/1/2/5/10/30/60 s (the input connected to the remote module)*2
		DA refresh time	10 ms or less (the output connected to the base module) 0.1/0.2/0.5/1/2/5/10/30/60 s (the output connected to the remote module)*2
	Valve output	Output type	EX600-WPN1: Source/PNP (–COM) EX600-WPN2: Sink/NPN (+COM)
		Number of outputs	Max. 32 points (0/8/16/24/32 points)
		Connected load	Solenoid valve with surge voltage suppressor of 24 VDC and 1.5 W or less (manufactured by SMC)
	Number of remote modules connected		Max. 31 units (0/15/31 units)
	Number of connected EX600 I/O units		Max. 9 EX600 series I/O units (I/O = 128. I/O above 128 cannot be recognized.)
General	Enclosure		Conforms to IP67 (with manifold assembled)
	Ambient temperature (Operating temperature)		–10 to +50°C
	Ambient temperature (Storage temperature)		–20 to +60°C
	Ambient humidity		35 to 85% RH (No condensation)
	Withstand voltage		500 VAC for 1 minute between external terminals and metallic parts
	Insulation resistance		10 MΩ or more (500 VDC between external terminals and metallic parts)
	Vibration resistance		Conforms to EN 61131-2 5 ≤ f < 8.4 Hz 3.5 mm 8.4 ≤ f < 150 Hz 9.8 m/s² (Excludes valve manifold)
	Impact resistance		Conforms to EN 61131-2 147 m/s², 11 ms (Excludes valve manifold)
	Standards		CE marking
	Weight		300 g
	NFC communication*3	Communication standard	
Frequency		13.56 MHz	
Communication speed		20 to 100 kHz (I2C)	
Communication distance		Up to 1 cm	

*1 The configuration file can be downloaded from the SMC website: <https://www.smcworld.com>

*2 Varies depending on the wireless communication status and the surrounding environment

*3 The NFC communication RFID tag of the 13.56 MHz passive type

EXW1 Series

Accessories

Made to Order

EX600-W Series

Accessories

Technical Data

Specific Product Precautions

EX600-W Series

Specifications

Remote Module: EX600-WSV□

Item			Specifications	
Electrical	For control/input (US1)	Power supply voltage	24 VDC ±10%	
		Current consumption	70 mA or less	
	For output (US2)	Power supply voltage	24 VDC ±10%	
		Max. supply current	4 A	
Input/Output	Number of inputs	Input size	Max. 128 points (increase or decrease by 16 points)	
	Number of outputs	Output size	Max. 128 points (increase or decrease by 16 points)	
	AD/DA refresh time		0.1/0.2/0.5/1/2/5/10/30/60 s*1	
	Number of connected EX600 I/O units		Max. 9 EX600 I/O units (I/O = 128. I/O above 128 cannot be recognized.)	
	Valve output	Output type	EX600-WSV1: Source/PNP (–COM) EX600-WSV2: Sink/NPN (+COM)	
		Number of outputs	Max. 32 points (0/8/16/24/32 points)	
		Connected load	Solenoid valve with surge voltage suppressor of 24 VDC and 1.5 W or less (manufactured by SMC)	
Wireless communication	Protocol		SMC original protocol (SMC encryption) V.1.0	
	Radio wave type (spread)		Frequency Hopping Spread Spectrum (FHSS)	
	Frequency		2.4 GHz (2403 to 2481 MHz)	
	Number of frequency channels		79 ch (Bandwidth: 1.0 MHz)	
	Communication speed		250 kbps	
	Communication distance		10 m (Depending on the operating environment)	
General	Radio Law certificate		Refer to the SMC website for the latest information regarding in which countries the product is certified.	
	Enclosure		Conforms to IP67 (with manifold assembled)	
	Ambient temperature (Operating temperature)		–10 to +50°C	
	Ambient temperature (Storage temperature)		–20 to +60°C	
	Ambient humidity		35 to 85% RH (No condensation)	
	Withstand voltage		500 VAC for 1 minute between external terminals and metallic parts	
	Insulation resistance		10 MΩ or more (500 VDC between external terminals and metallic parts)	
	Vibration resistance		Conforms to EN 61131-2 5 ≤ f < 8.4 Hz 3.5 mm 8.4 ≤ f < 150 Hz 9.8 m/s² (Excludes valve manifold)	
	Impact resistance		Conforms to EN 61131-2 147 m/s², 11 ms (Excludes valve manifold)	
	Standards		CE marking	
	Weight		280 g	
	NFC communication*2	Communication standard		ISO/IEC 14443B (Type-B)
		Frequency		13.56 MHz
Communication speed		20 to 100 kHz (I2C)		
Communication distance		Up to 1 cm		

^{*1} Varies depending on the wireless communication status and the surrounding environment

^{*2} The NFC communication RFID tag of the 13.56 MHz passive type

End Plate (D side)

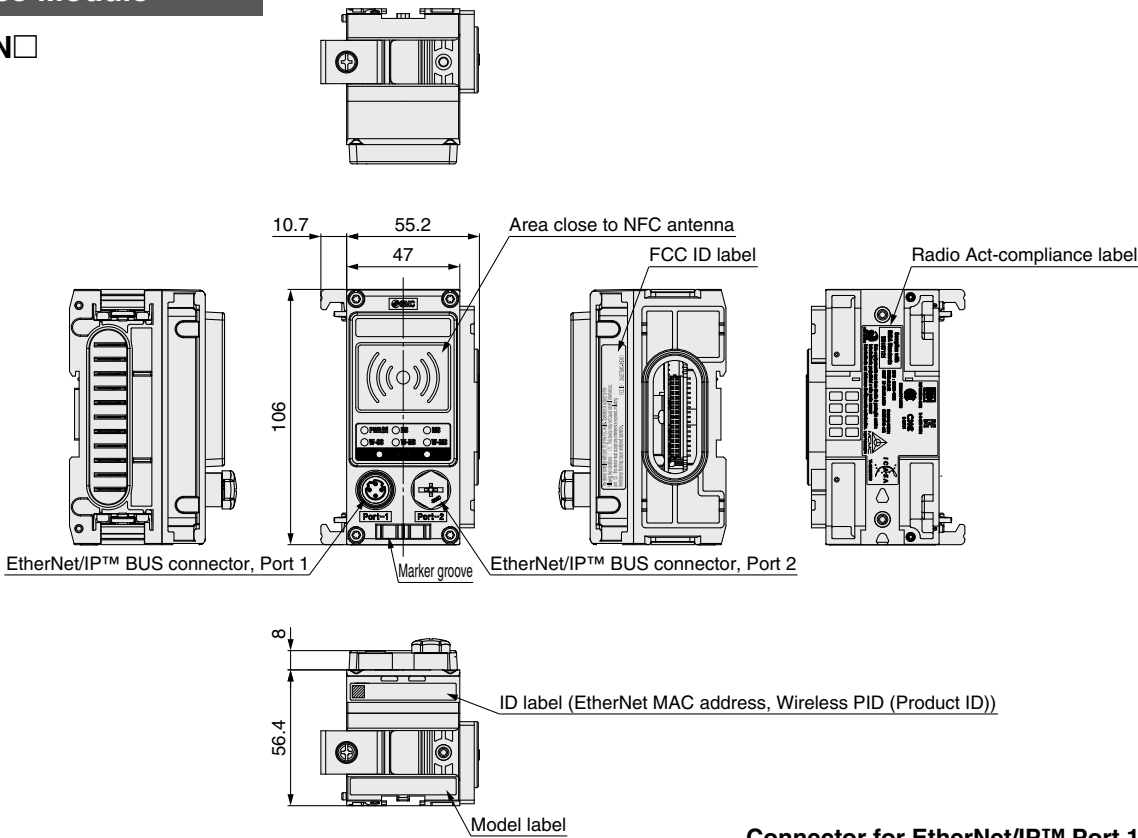
Model			EX600-ED2-□	EX600-ED3-□	EX600-ED4/5-□
Electrical	Power supply connector	PWR IN	M12 (5-pin) plug	7/8 inch (5-pin) plug	M12 (4-pin) plug
		PWR OUT	—	—	M12 (5-pin) socket
	Rated voltage	Power supply for control/input	24 VDC ±10%		
		Power supply for output	24 VDC +10/–5%		
	Rated current	Power supply for control/input	Max. 2 A	Max. 8 A	Max. 4 A
		Power supply for output			
Enclosure			IP67 (with manifold assembled)		
Standards*1			CE marking (EMC directive/RoHS directive), UL (CSA)		
Weight			170 g	175 g	170 g

^{*1} The EX600-ED4/5-□ is not compliant with UL (CSA) standards.

Dimensions

Base Module

EX600-WEN□



Connector for EtherNet/IP™ Port 1/Port 2

M12, 4-pin, D-coded, socket	Pin no.	Description
	1	Tx+
	2	Rx+
	3	Tx-
	4	Rx-

EXW1 Series

Accessories

Made to Order

EX600-W Series

Accessories

Technical Data

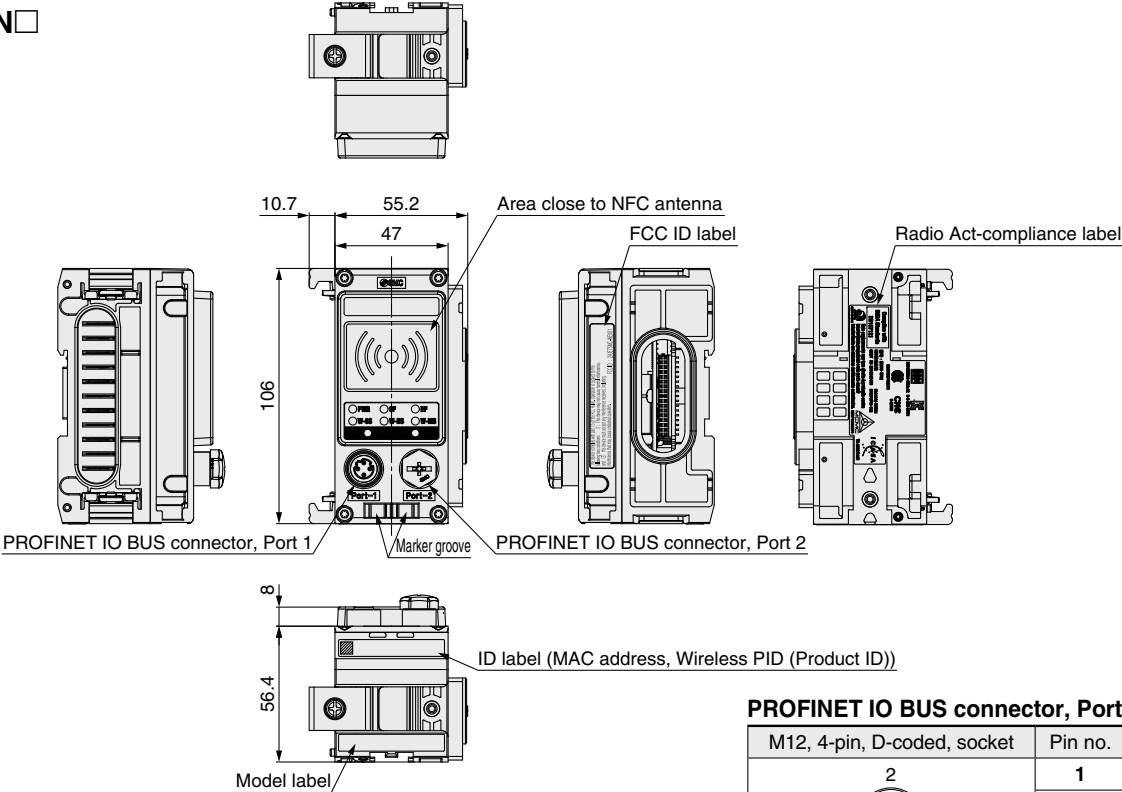
Specific Product Precautions

EX600-W Series

Dimensions

Base Module

EX600-WPN□

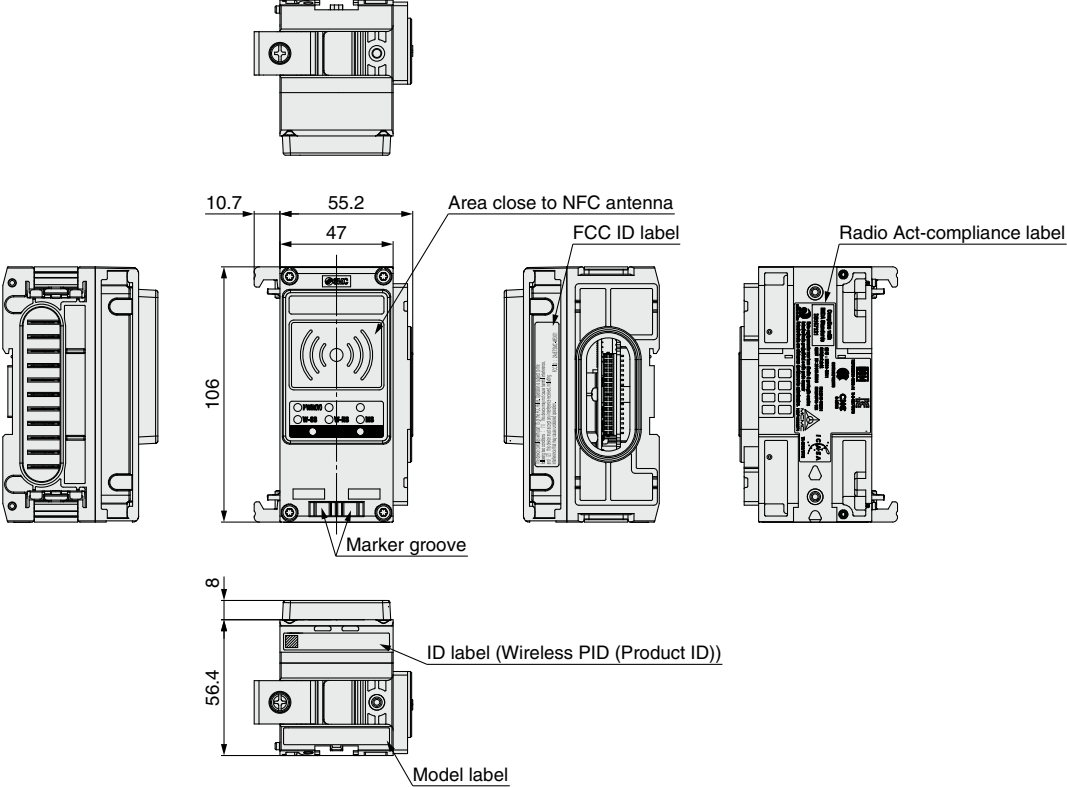


PROFINET IO BUS connector, Port 1/Port 2

M12, 4-pin, D-coded, socket	Pin no.	Description
	1	TD+
	2	RD+
	3	TD-
	4	RD-

Remote Module

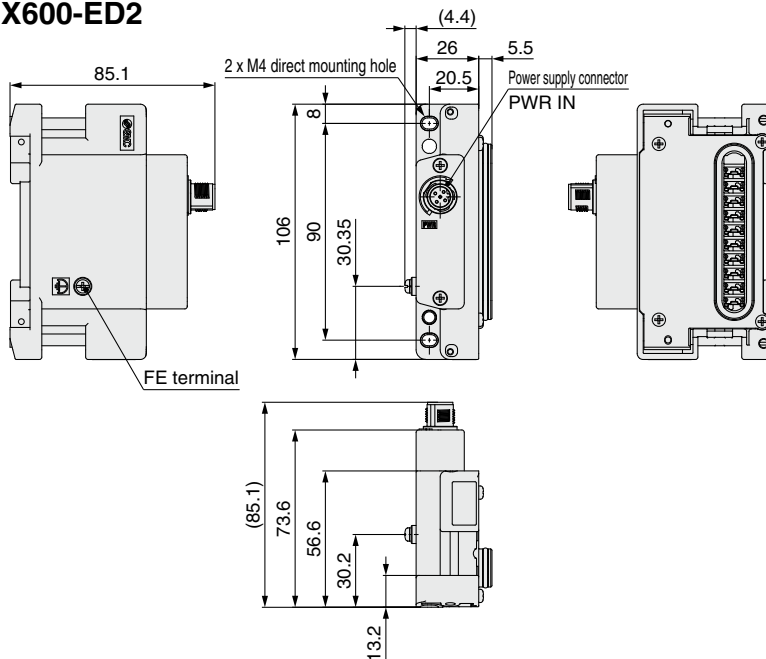
EX600-WSV□



Dimensions

End Plate (D side)

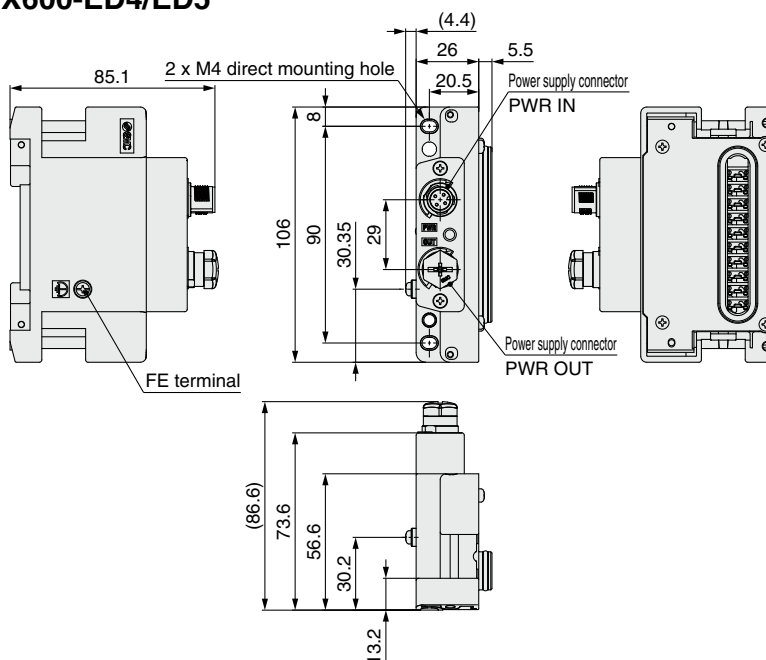
EX600-ED2




Power supply connector PWR IN: M12 5-pin plug, B-coded

Configuration	Pin no.	Description
	1	24 V (for output)
	2	0 V (for output)
	3	24 V (for control/input)
	4	0 V (for control/input)
	5	FE


EX600-ED4/ED5



Power supply connector PWR IN: M12 4-pin plug, A-coded

Configuration	EX600-ED4 (Pin arrangement 1)		EX600-ED5 (Pin arrangement 2)	
	Pin no.	Description	Pin no.	Description
	1	24 V (for control/input)	1	24 V (for output)
	2	24 V (for output)	2	0 V (for output)
	3	0 V (for control/input)	3	24 V (for control/input)
	4	0 V (for output)	4	0 V (for control/input)

Power supply connector PWR OUT: M12 5-pin socket, A-coded

Configuration	EX600-ED4 (Pin arrangement 1)		EX600-ED5 (Pin arrangement 2)	
	Pin no.	Description	Pin no.	Description
	1	24 V (for control/input)	1	24 V (for output)
	2	24 V (for output)	2	0 V (for output)
	3	0 V (for control/input)	3	24 V (for control/input)
	4	0 V (for output)	4	0 V (for control/input)
	5	Unused	5	Unused

EXW1 Series

Accessories

Made to Order

EX600-W Series

Accessories

Technical Data

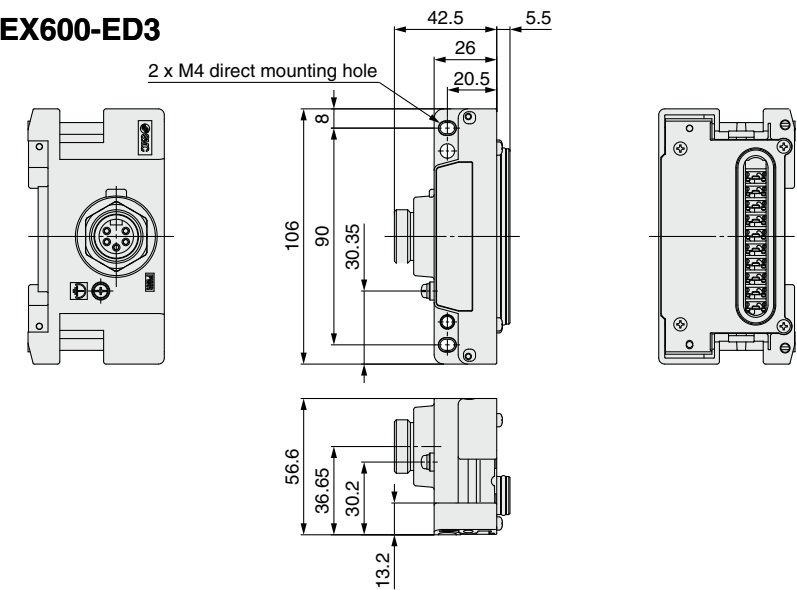
Specific Product Precautions

EX600-W Series

Dimensions

End Plate (D side)

EX600-ED3

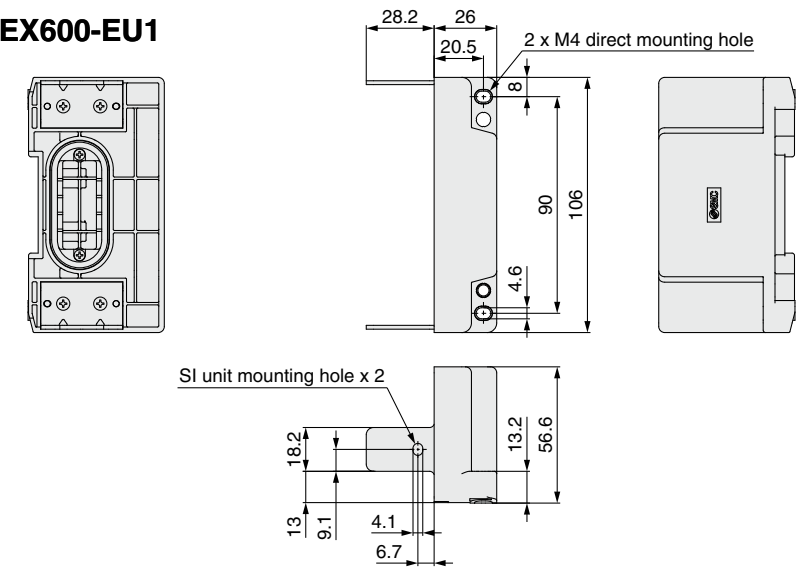


Power supply connector PWR: 7/8 inch 5-pin plug

Configuration	Pin no.	Description
	1	0 V (for output)
	2	0 V (for control/input)
	3	FE
	4	24 V (for control/input)
	5	24 V (for output)

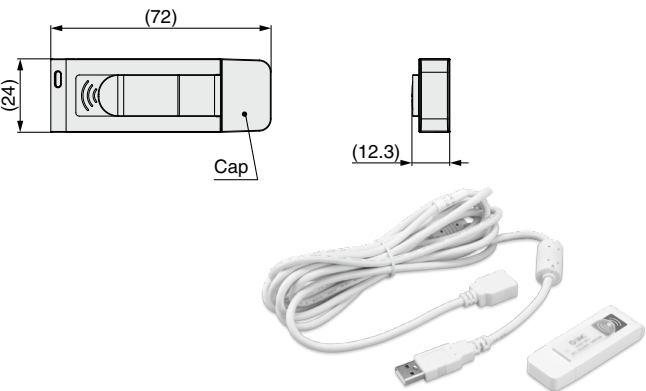
End Plate (U side)

EX600-EU1



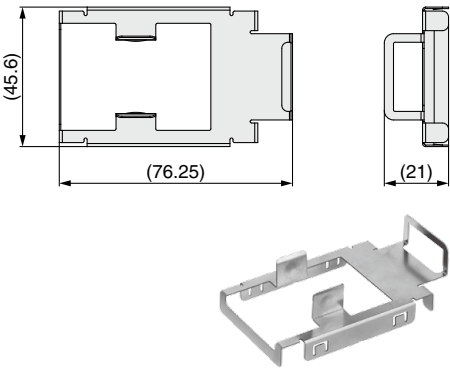
NFC Reader/Writer

EXW1-NT1



Fixing Bracket

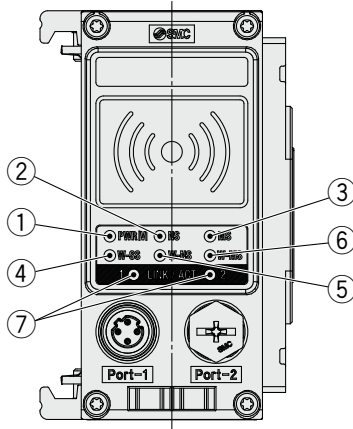
EXW1-AB1 (Option, For EX600-W)



* Order a fixing bracket.

LED Display

Base module EtherNet/IP™ communication specifications



No.	LED name	Function	Color of LED	Operation
1	PWR (V)	Power supply voltage for output (US2)	Green LED is ON.	Power supply voltage for output (US2) is normal.
			Red LED flashes.	Power supply voltage for output (US2) is abnormal. (Indication only. The product can be operated. Applicable when the output power supply voltage monitoring setting is enabled)
			OFF	Power supply for control and input (US1) is not supplied.
2	NS	EtherNet/IP™ connection status	Green LED is ON.	EtherNet/IP™ communication is established.
			Green LED flashes.	EtherNet/IP™ communication is not established.
			Red LED flashes.	EtherNet/IP™ communication time out
			Red LED is ON.	Duplicated IP addresses are detected.
			OFF	IP address not set
3	MS	Base module system status	Green LED is ON.	Base module is normal.
			Green LED flashes.	EtherNet/IP™ communication is not connected.
			Red LED flashes.	Restorable error is detected. (LED flashes when one diagnostic information item or more is detected.) · Abnormal power supply voltage level for control and input (US1) (Applicable when the control and input power supply voltage monitoring setting is enabled) · Excessive I/O setting inputs/outputs · Analog I/O upper set limit exceeded · Analog input range upper and lower limit exceeded · Abnormal number of remote connections · Error in communication between units · EX600 I/O unit detects diagnostic information · Valve diagnostic information detected
			Red LED is ON.	Non-restorable error is detected. (e.g. Hardware failure)
			OFF	Power supply for control and input (US1) is not supplied.
4	W-SS	Radio wave receiving intensity (For communication from remote to base)	Green LED is ON.	The received power level of all remotes is 3.
			Green LED flashes. (1 Hz)	There are connected remotes with a received power level of 2.
			Green LED flashes. (2 Hz)	There are connected remotes with a received power level of 1.
			Red LED flashes.	No remotes are connected.
			OFF	The remote module is not registered.
5	W-NS	Wireless communication connection status	Green LED is ON.	All remote modules are connected correctly.
			Green LED flashes.	There are unconnected remote modules.
			Red LED flashes.	All remote modules are unconnected.
			Red LED is ON.	All remote modules are unconnected. (Non-restorable error in wireless communication)
			Red/Green	Wireless communication connection is under construction. (Pairing)
			Orange LED is ON.	Forced output mode
6	W-MS	Remote module connection system status	OFF	The remote module is not registered.
			Green LED is ON.	Remote module is normal.
			Red LED flashes.	Restorable error is detected. (LED flashes when one diagnostic information item or more is detected.) · Abnormal power supply voltage level for control and input (US1) · Abnormal power supply voltage level for output (US2) · Excessive I/O setting inputs/outputs · Analog I/O upper set limit exceeded · Analog input range upper and lower limit exceeded · Error in communication between units · EX600 I/O unit detects diagnostic information · Valve diagnostic information detected
			Red LED is ON.	Non-restorable error is detected. (e.g. Hardware failure)
			OFF	No remote modules are connected.
7	LINK/ACT1 LINK/ACT2	Communication status of EtherNet/IP™ ports 1 and 2 100 Mbps: Green 10 Mbps: Orange	Green LED is ON.	Link, No Activity (100 Mbps)
			Green LED flashes.	Link, Activity (100 Mbps)
			Orange LED is ON.	Link, No Activity (10 Mbps)
			Orange LED flashes.	Link, Activity (10 Mbps)
			Red LED is ON.	IP address has been duplicated.
			OFF	EtherNet/IP™ is not connected.

EXW1 Series

Accessories

Made to Order

EX600-W Series

Accessories

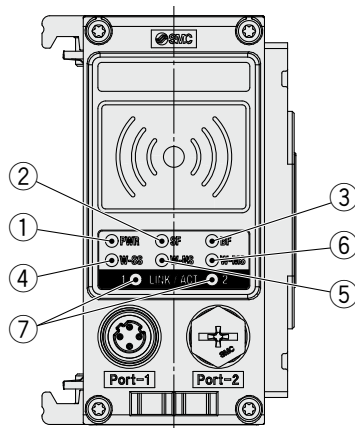
Technical Data

Specific Product Precautions

EX600-W Series

LED Display

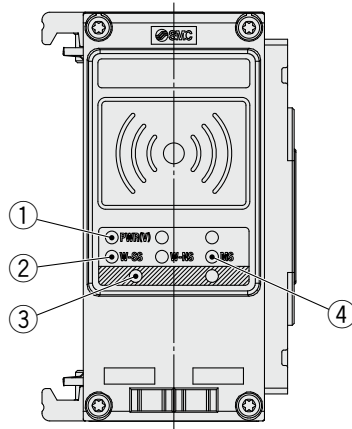
Base module PROFINET communication specifications



No.	LED name	Function	Color of LED	Operation
1	PWR	Power supply voltage (US1/US2)	Green LED is ON.	Power supply voltage for control and input (US1) is normal, and power supply voltage for output (US2) is normal.
			Green LED flashes.	Power supply voltage for control and input (US1) is normal, and power supply voltage for output (US2) is abnormal. (Applicable when the output power supply voltage monitoring setting is enabled)
			Red LED flashes.	Abnormal power supply voltage level for control and input (US1) (Applicable when the control and input power supply voltage monitoring setting is enabled)
			OFF	Power supply for control and input (US1) is not supplied.
2	SF	Base module system status	OFF	Normal operation
			Green LED flashes.	Node flashing test command has been received.
			Red LED flashes.	Restorable error is detected. (LED flashes when one diagnostic information item or more is detected.) <ul style="list-style-type: none"> Abnormal power supply voltage level for control and input (US1) (Applicable when the control and input power supply voltage monitoring setting is enabled) Abnormal power supply voltage level for output (US2) (Applicable when the output power supply voltage monitoring setting is enabled) Excessive I/O setting inputs/outputs Analog I/O upper set limit exceeded Analog input range upper and lower limit exceeded Abnormal number of remote connections Error in communication between units EX600 I/O unit detects diagnostic information Valve diagnostic information detected
			Red LED is ON.	Non-restorable error is detected. (e.g. Hardware failure)
			Red LED is ON.	PROFINET communication is established.
3	BF	PROFINET connection status	Red LED flashes.	The PROFINET controller setting and the EX600 configuration data are mismatched.
			Red LED is ON.	PROFINET communication is not established. <ul style="list-style-type: none"> The power supply of the PROFINET controller is OFF. There is a defective connection in the communication cable between the PROFINET controller and the base module. The PROFINET controller or the base module has broken down. The PROFINET controller setting and the device name of the base module are mismatched.
			Green LED is ON.	The received power level of all remotes is 3.
			Green LED flashes. (1 Hz)	There are connected remotes with a received power level of 2.
4	W-SS	Radio wave receiving intensity (For communication from remote to base)	Green LED flashes. (2 Hz)	There are connected remotes with a received power level of 1.
			Red LED flashes.	No remotes are connected.
			OFF	The remote module is not registered.
			Green LED is ON.	All remote modules are connected correctly.
5	W-NS	Wireless communication connection status	Green LED flashes.	There are unconnected remote modules.
			Red LED flashes.	All remote modules are unconnected.
			Red LED is ON.	All remote modules are unconnected. (Non-restorable error in wireless communication)
			Red/Green	Wireless communication connection is under construction. (Pairing)
			Orange LED is ON.	Forced output mode
			OFF	The remote module is not registered.
6	W-MS	Remote module connection system status	Green LED is ON.	Remote module is normal.
			Red LED flashes.	Restorable error is detected. (LED flashes when one diagnostic information item or more is detected.) <ul style="list-style-type: none"> Abnormal power supply voltage level for control and input (US1) Abnormal power supply voltage level for output (US2) Excessive I/O setting inputs/outputs Analog I/O upper set limit exceeded Analog input range upper and lower limit exceeded Error in communication between units EX600 I/O unit detects diagnostic information Valve diagnostic information detected
			Red LED is ON.	Non-restorable error is detected. (e.g. Hardware failure)
			OFF	No remote modules are connected.
7	LINK/ACT1 LINK/ACT2	Communication status of PROFINET ports 1 and 2	Green LED is ON.	Link, No Activity
			Green LED flashes.	Link, Activity
			OFF	No Link, No Activity

LED Display

Remote module



No.	LED name	Function	Color of LED	Operation
1	PWR (V)	Power supply voltage for output (US2)	Green LED is ON.	Power supply voltage for output (US2) is normal.
			Red LED flashes.	Power supply voltage for output (US2) is abnormal. (Indication only. The product can be operated. Applicable when the output power supply voltage monitoring setting is enabled)
			OFF	Power supply for control and input (US1) is not supplied.
2	W-SS	Radio wave receiving intensity (For communication from base to remote)	Green LED is ON.	The received power level is 3.
			Green LED flashes, (1 Hz)	The received power level is 2.
			Green LED flashes, (2 Hz)	The received power level is 1.
			Red LED flashes.	Wireless communication is not connected.
			OFF	The base module is not registered.
3	W-NS	Wireless communication connection status	Green LED is ON	Remote is connected correctly.
			Red LED flashes.	No remotes are connected.
			Red LED is ON.	No remotes are connected. (Non-restorable error in wireless communication)
			Red/Green	Wireless communication connection is under construction. (Pairing)
			Orange LED is ON.	Forced output mode
4	MS	Remote module system status	OFF	The base module is not registered.
			Green LED is ON.	Remote module is normal.
			Red LED flashes.	Restorable error is detected. (LED flashes when one diagnostic information item or more is detected.) · Abnormal power supply voltage level for control and input (Applicable when the control and input power supply voltage monitoring setting is enabled) · Excessive I/O setting inputs/outputs · Analog I/O upper set limit exceeded · Analog input range upper and lower limit exceeded · Error in communication between units · EX600 I/O unit detects diagnostic information · Valve diagnostic information detected
			Red LED is ON.	Non-restorable error is detected. (e.g. Hardware failure)
			OFF	Power supply for control and input (US1) is not supplied.

EXW1 Series

Accessories

Made to Order

EX600-W Series

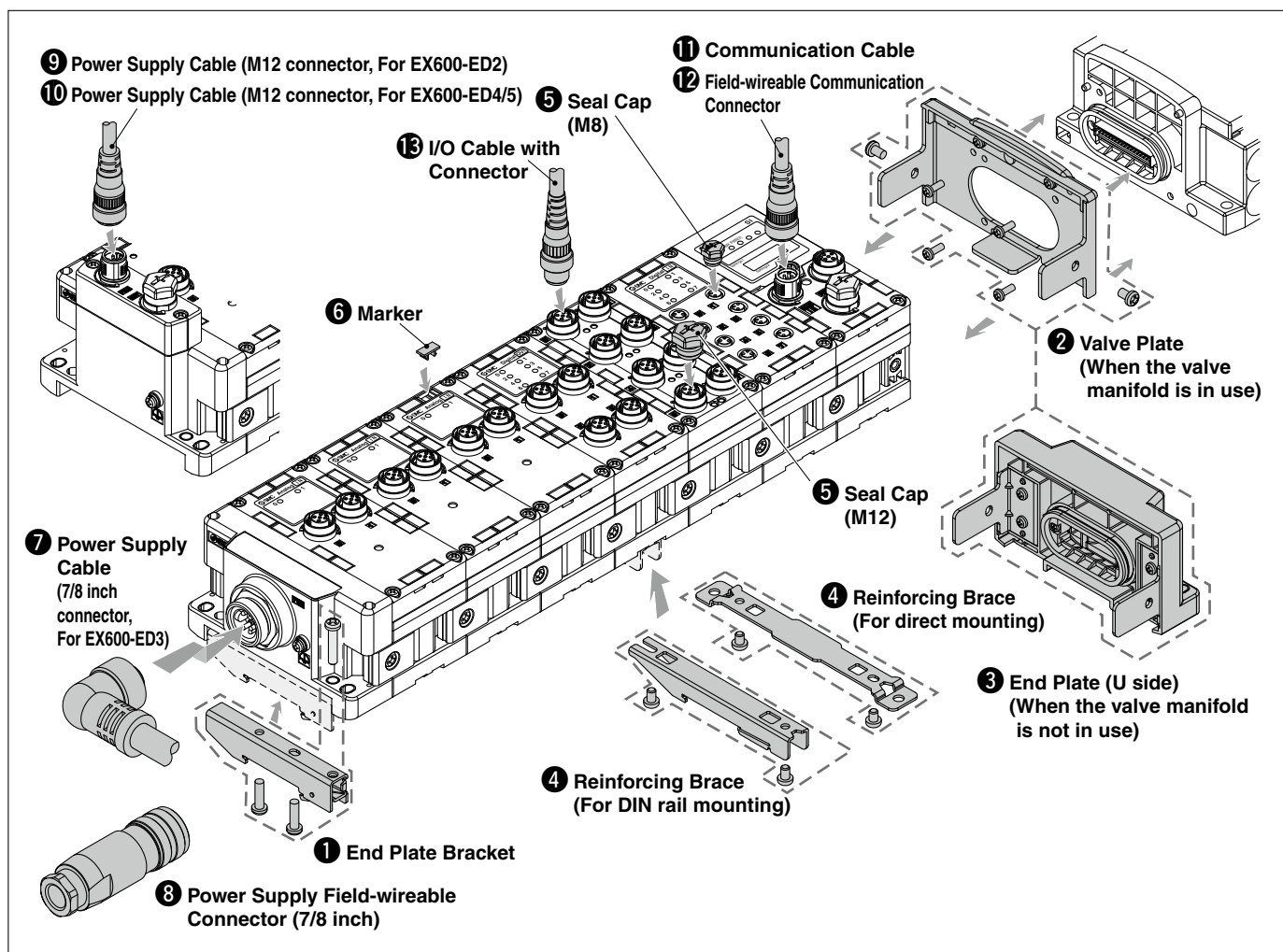
Accessories

Technical Data

Specific Product Precautions

EX600-W Series

Accessories (Optional Parts)



① End Plate Bracket

This bracket is used for the end plate of DIN rail mounting.



EX600-ZMA2
(For the SV, S0700, and VQC series)

Enclosed parts

Round head screw (M4 x 20) 1 pc.
P-tight screw (4 x 14) 2 pcs.

EX600-ZMA3
(For the SY and JSY series)

Enclosed parts

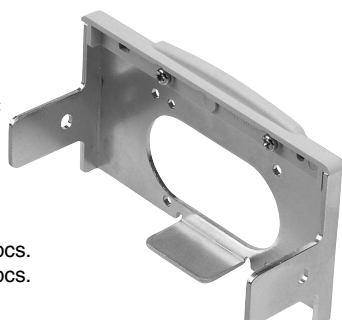
Round head screw with washer (M4 x 20) 1 pc.
P-tight screw (4 x 14) 2 pcs.

② Valve Plate

EX600-ZMV1
(For the SV, S0700, and VQC series)

Enclosed parts

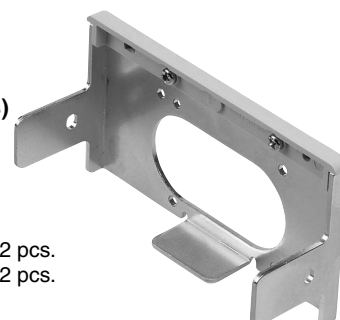
Round head screw (M4 x 6) 2 pcs.
Round head screw (M3 x 8) 4 pcs.



EX600-ZMV2
(For the SY and JSY series)

Enclosed parts

Round head screw (M4 x 6) 2 pcs.
Round head screw (M3 x 8) 2 pcs.



③ End Plate (U side)

The end plate is for use when the manifold valve is not connected.

EX600-E U 1 - **2**

● Mounting method

Symbol	Description	Note
Nil	Without DIN rail mounting bracket	—
2	With DIN rail mounting bracket	For EX600-ED□-2
3	With DIN rail mounting bracket	For EX600-ED□-3

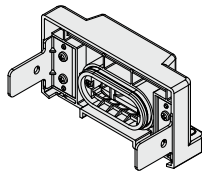
* Select in accordance with the symbol for the end plate (D side) mounting method.

● Specification

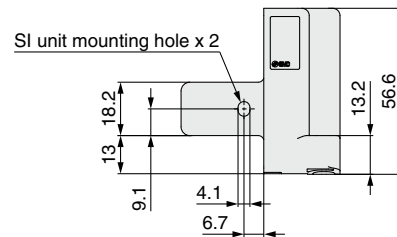
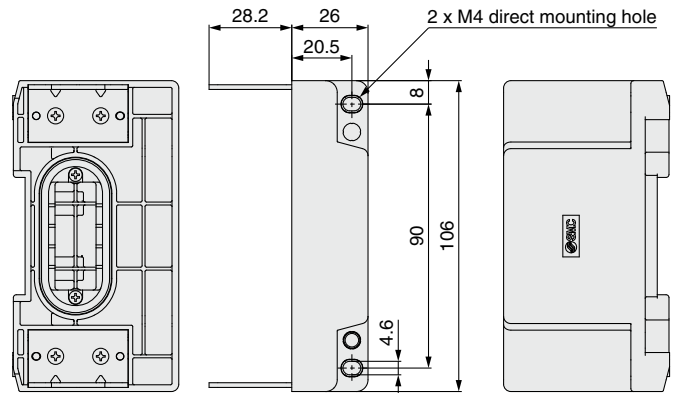
Symbol	Specification
1	Waterproof cover

● End plate mounting position: U side

● End plate



EX600-EU1



Enclosed parts

Round head screw (M4 x 6) 2 pcs.

④ Reinforcing Brace

This bracket is used on the bottom of the unit at the intermediate position for connecting 6 units or more.

* Be sure to attach this bracket to prevent connection failure between the units caused by deflection.

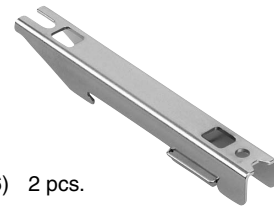
For direct mounting
EX600-ZMB1



Enclosed parts

Round head screw (M4 x 5) 2 pcs.

For DIN rail mounting
EX600-ZMB2



Enclosed parts

Round head screw (M4 x 6) 2 pcs.

⑤ Seal Cap (10 pcs.)

Be sure to mount a seal cap on any unused I/O connectors. Otherwise, the specified enclosure cannot be maintained.

EX9-AWES
For M8



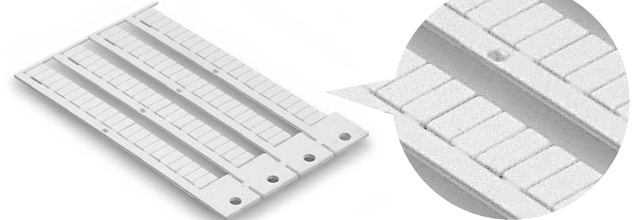
EX9-AWTS
For M12



⑥ Marker (1 sheet, 88 pcs.)

The signal name of I/O device and each unit address can be entered and mounted on each unit.

EX600-ZT1



EXW1 Series

Accessories

Made to Order

EX600-W Series

Accessories

Technical Data

Specific Product Precautions

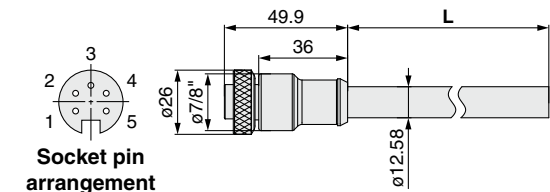
EX600-W Series

⑦ Power Supply Cable (7/8 inch connector, For EX600-ED3)

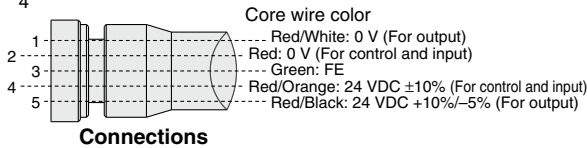
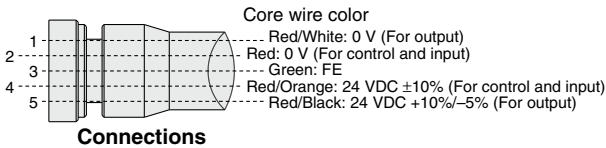
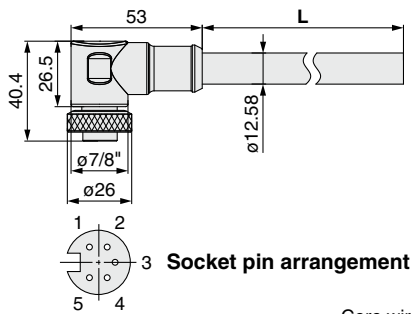
PCA-1558810	Straight 2 m
PCA-1558823	Straight 6 m
PCA-1558836	Right angled 2 m
PCA-1558849	Right angled 6 m



Straight connector type



Angled connector type



Item	Specifications
Cable O.D.	ø12.58 mm
Conductor nominal cross section	1.5 mm ² /AWG16
Wire O.D. (Including insulator)	2.35 mm
Min. bending radius (Fixed)	110 mm

⑧ Power Supply Field-wireable Connector (7/8 inch)

PCA-1578081	Socket [compatible with AWG22-16]
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Applicable Cable

Item	Specifications
Cable O.D.	ø12.0 to 14.0 mm
Wire gauge (Stranded wire cross section)	0.34 to 1.5 mm ² AWG22 to 16

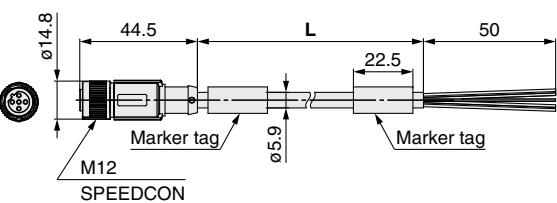
⑨ Power Supply Cable (M12 connector, For EX600-ED2) * The shape of the M12 connector is B-coded (Reverse key).

PCA-1564927	Straight 2 m
PCA-1564930	Straight 6 m
PCA-1564943	Right angled 2 m
PCA-1564969	Right angled 6 m

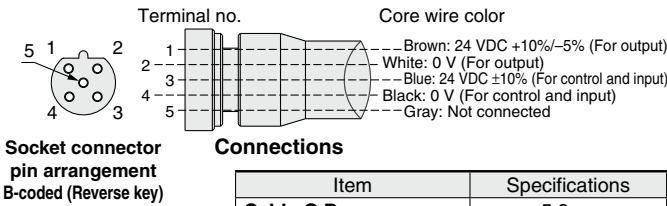
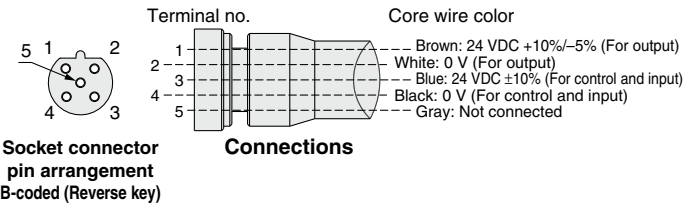
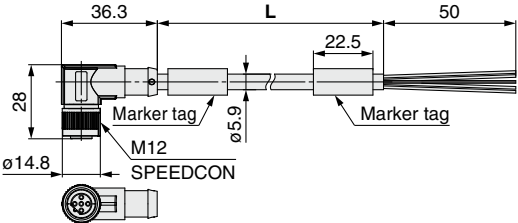


SPEEDCON

Straight connector type



Angled connector type



Item	Specifications
Cable O.D.	ø5.9 mm
Conductor nominal cross section	0.34 mm ² /AWG22
Wire O.D. (Including insulator)	1.27 mm
Min. bending radius (Fixed)	59 mm

⑩ Power Supply Cable (M12 connector, For EX600-ED4/5)

* The shape of the M12 connector is A-coded (Normal key).

EX500-AP 050 - S

● Cable length (L)

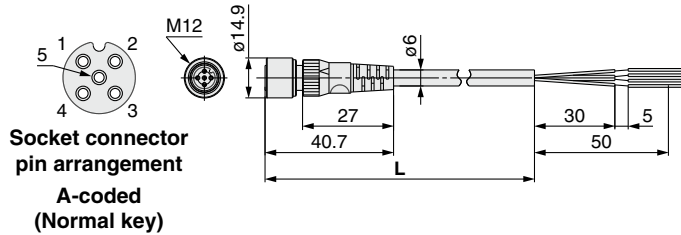
010	1000 mm
050	5000 mm

● Connector specification

S	Straight
A	Angled

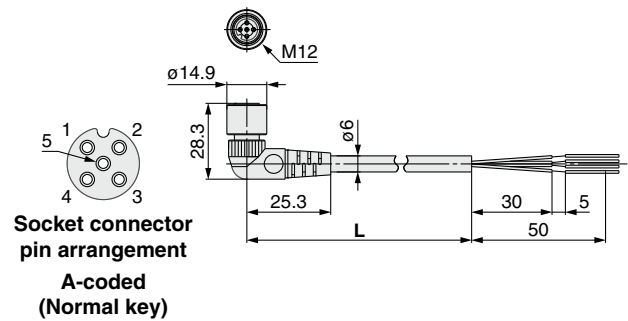


Straight connector type

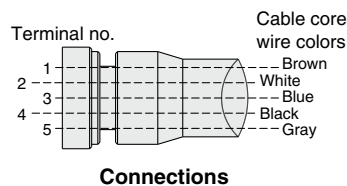


Item	Specifications
Cable O.D.	ø6 mm
Nominal cross section	0.3 mm ² /AWG22
Wire diameter (Including insulator)	1.5 mm
Min. bending radius	40 mm (Fixed)

Angled connector type



Item	Specifications
Cable O.D.	ø6 mm
Nominal cross section	0.3 mm ² /AWG22
Wire diameter (Including insulator)	1.5 mm
Min. bending radius	40 mm (Fixed)

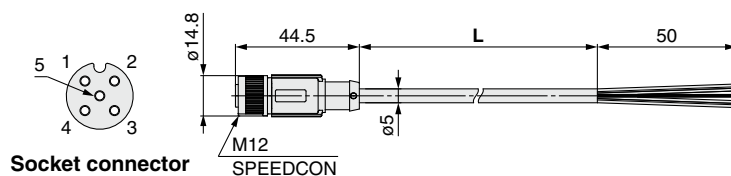


SPEEDCON

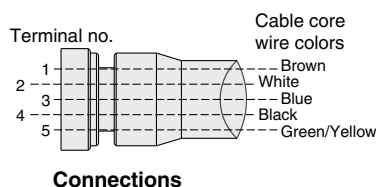
PCA-1401804

● Cable length (L)

1401804	1500 mm
1401805	3000 mm
1401806	5000 mm



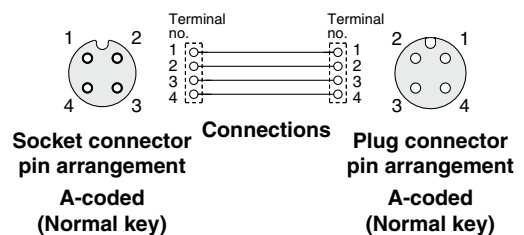
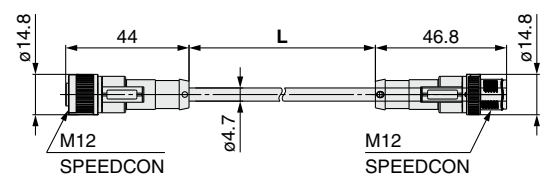
Item	Specifications
Cable O.D.	ø5 mm
Nominal cross section	0.3 mm ² /AWG22
Wire diameter (Including insulator)	1.27 mm
Min. bending radius	21.7 mm (Fixed)



PCA-1557769

● Cable length (L)

1557769	3000 mm
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EXW1 Series

Accessories

Made to Order

EX600-W Series

Accessories

Technical Data

Specific Product Precautions

EX600-W Series

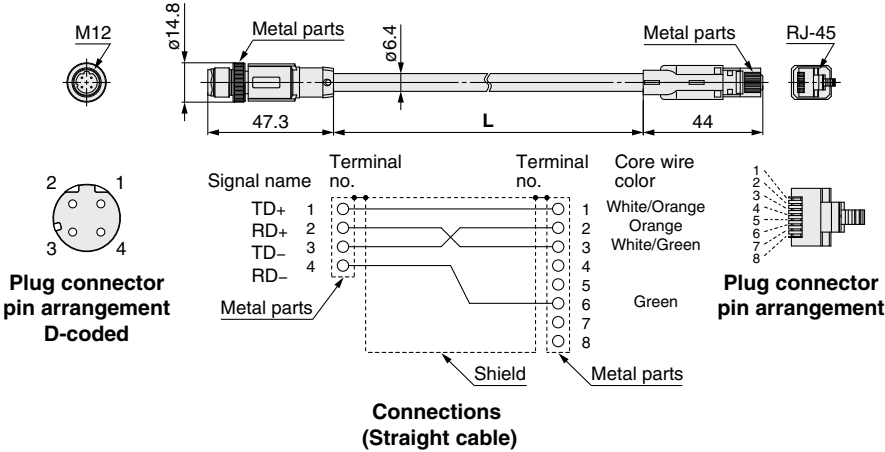
① Communication Cable

For PROFINET For EtherNet/IP™

EX9-AC 020 EN-PSRJ (Plug/RJ-45 connector)

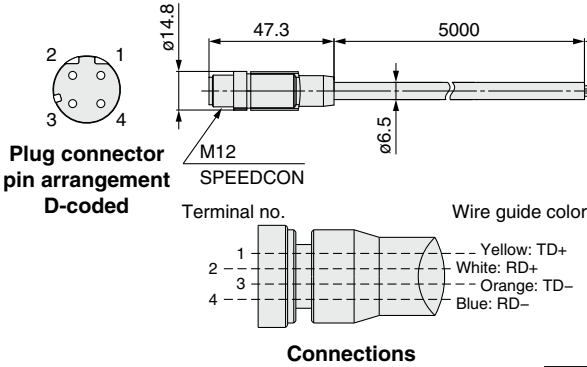
● Cable length (L)

010	1000 mm
020	2000 mm
030	3000 mm
050	5000 mm
100	10000 mm



Item	Specifications
Cable O.D.	$\phi 6.4$ mm
Conductor nominal cross section	0.14 mm ² /AWG26
Wire O.D. (Including insulator)	0.98 mm
Min. bending radius (Fixed)	26 mm

PCA-1446566 (Plug)



Item	Specifications
Cable O.D.	$\phi 6.5$ mm
Conductor nominal cross section	AWG22
Wire O.D. (Including insulator)	1.55 mm
Min. bending radius (Fixed)	45.5 mm

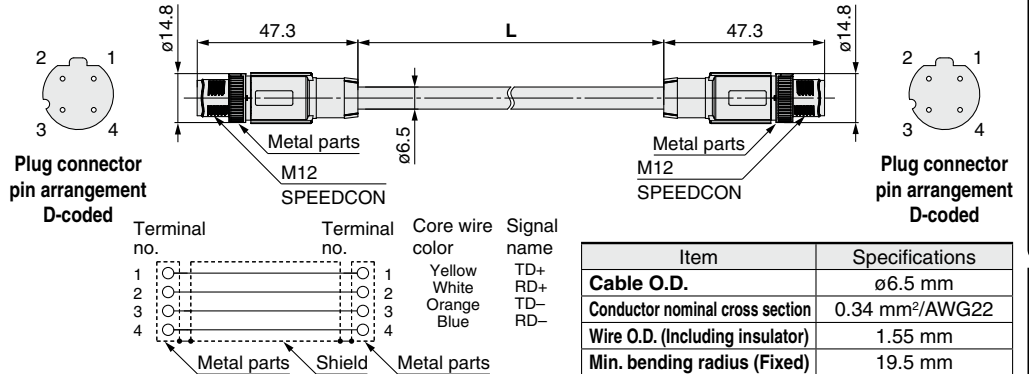
⑪ Communication Cable

For PROFINET For EtherNet/IP™

EX9-AC 005 EN-PSPS (With connector on both sides (Plug/Plug))

• Cable length (L)

005	500 mm
010	1000 mm
020	2000 mm
030	3000 mm
050	5000 mm
100	10000 mm

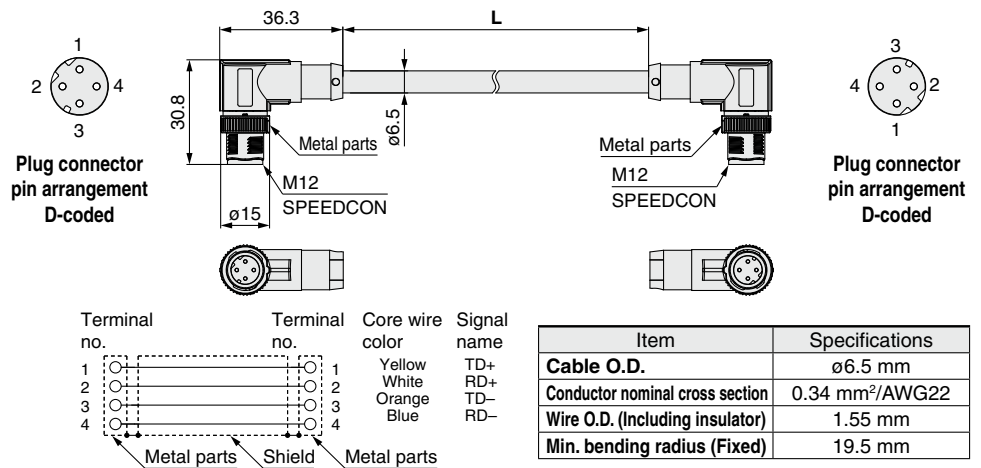


Connections (Straight cable)

EX9-AC 005 EN-PAPA (With angled connector on both sides (Plug/Plug))

• Cable length (L)

005	500 mm
010	1000 mm
020	2000 mm
030	3000 mm
050	5000 mm
100	10000 mm



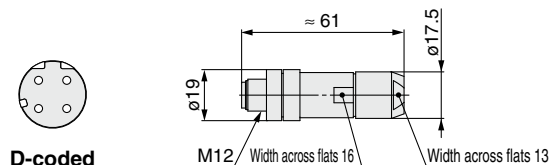
Connections (Straight cable)

⑫ Field-wireable Communication Connector

Plug

For PROFINET For EtherNet/IP™

PCA-1446553



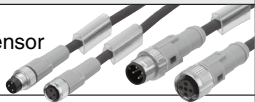


Applicable Cable

Item	Specifications
Cable O.D.	4.0 to 8.0 mm
Wire gauge (Stranded wire cross section)	0.14 to 0.34 mm ² /AWG26 to 22

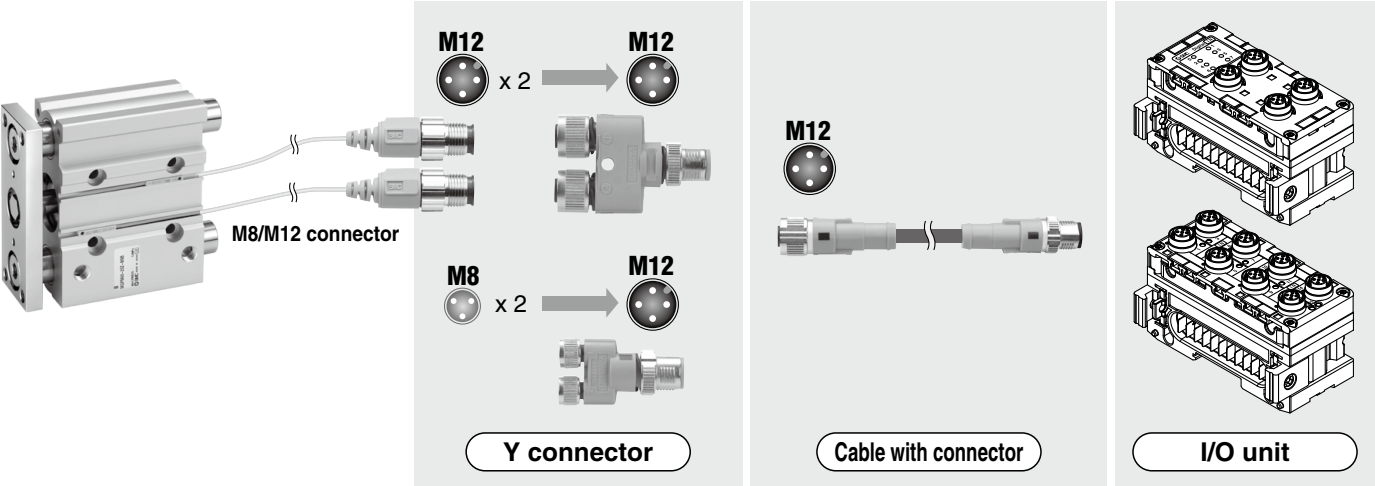
* The table above shows the specifications for the applicable cable. Adaptation for the connector may vary on account of the conductor construction of the electric wire.

EX600-W Series

I/O Cable with Connector, I/O Connector

Name	Use	Part no.	Description
Cable with connector	For sensor 	PCA-1557769	Cable with M12 connector (4 pins/3 m)
		PCA-1557772	Cable with M8 connector (3 pins/3 m)
Field-wireable connector	For sensor 	PCA-1557730	Field-wireable connector (M8/3 pins/Plug/Piercecon® connection)
		PCA-1557743	Field-wireable connector (M12/4 pins/Plug/QUICKON-ONE connection/SPEEDCON)
		PCA-1557756	Field-wireable connector (M12/4 pins/Plug/QUICKON-ONE connection/SPEEDCON)
Y connector	For sensor 	PCA-1557785	Y connector (2 x M12 (5 pins)-M12 (5 pins)/SPEEDCON)
		PCA-1557798	Y connector (2 x M8 (3 pins)-M12 (4 pins)/SPEEDCON)

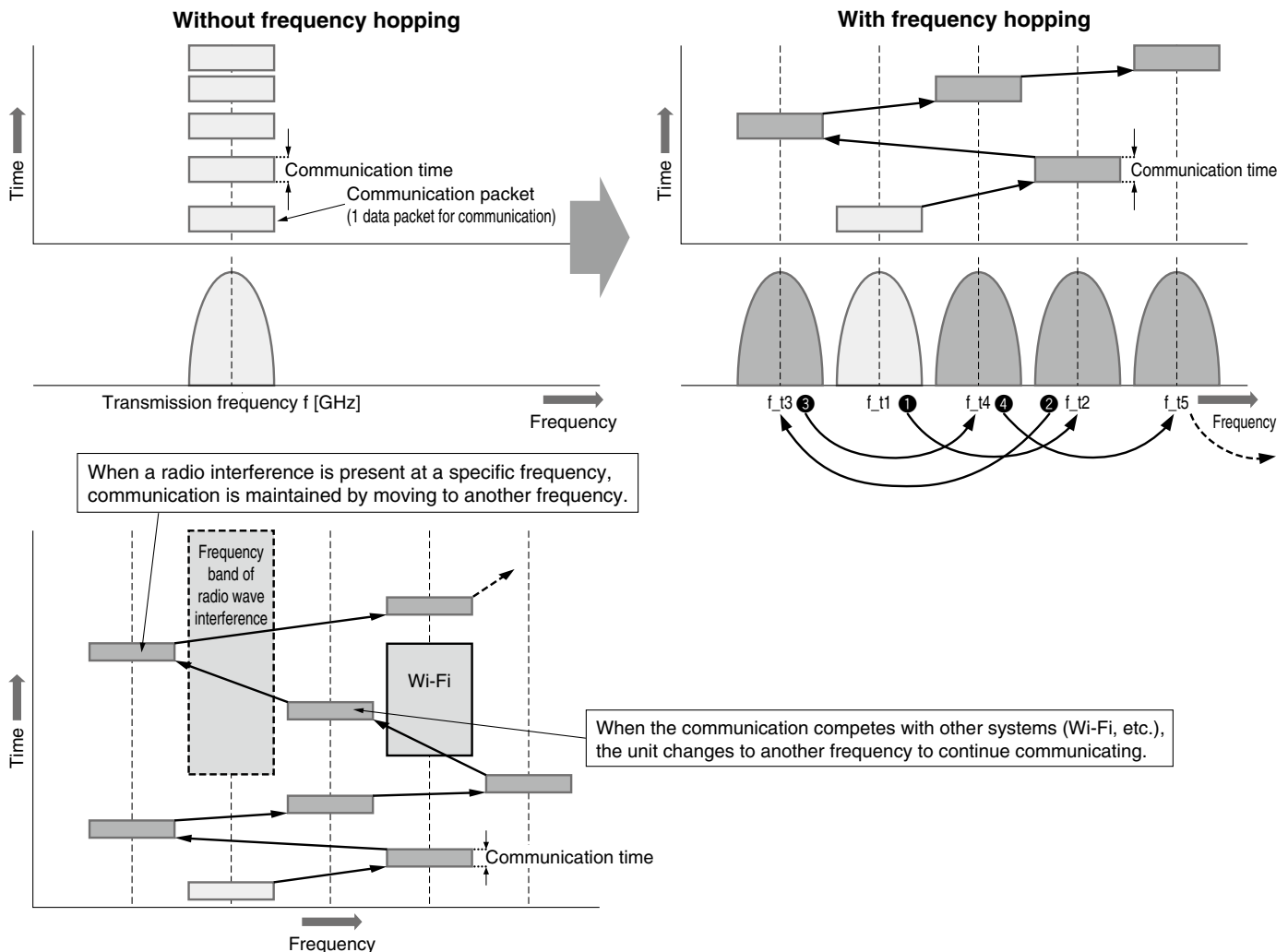
- * For further information, refer to the M8/M12 connector PCA series in the **Web Catalog**.
- * When using the Y connector, connect it to the connector on the I/O unit through the sensor cable (PCA-1557769) with the M12 connector.



Technical Data

Frequency Hopping (FHSS: Frequency Hopping Spread Spectrum)

A communication technology that uses spread spectrum transmission with frequency hopping to rapidly switch the frequency. Because the frequency rapidly changes all the time, this communication method is resistant to radio wave interference due to reflections or noise from other wireless equipment, while ensuring a high level of data security. Multiple systems can be installed in the same area, and it is a suitable technology for point-to-multipoint communication.



⚠ Warning <Important>

- The product is certified as a wireless equipment in accordance with the Radio Act and the Japanese radio law has been obtained. Customers do not need to apply for a license to use this equipment.
Be sure to comply with the following precautions.
- Do not disassemble or modify the product. Disassembly and modification are prohibited by law.
- This product is compliant with the Radio Act in the following countries/regions. For use in other countries/regions, please contact SMC.

[Modular Type EX600-W Series]

Iceland, Ireland, Italy, Ukraine, Estonia, Austria, Netherlands, Cyprus, Greece, Croatia, Sweden, Spain, Slovakia, Slovenia, Czech Republic, Denmark, Germany, Hungary, Finland, France, Bulgaria, Belgium, Poland, Portugal, Malta, Latvia, Lithuania, Liechtenstein, Romania, Luxembourg, Russia, U.K., Switzerland, Turkey, Norway, South Africa, Morocco, U.S., Argentina, Canada, Brazil, Mexico, India, Australia, South Korea, Singapore, Thailand, China, Japan, New Zealand, Philippines, Vietnam, Malaysia, Taiwan

[Compact Type EXW1 Series]

Iceland, Ireland, Italy, Estonia, Austria, Netherlands, Cyprus, Greece, Croatia, Sweden, Spain, Slovakia, Slovenia, Czech Republic, Denmark, Germany, Hungary, Finland, France, Bulgaria, Belgium, Poland, Portugal, Malta, Latvia, Lithuania, Liechtenstein, Romania, Luxembourg, U.K., Switzerland, Turkey, Norway, U.S., Canada, South Korea, Japan, Vietnam

[NFC Reader/Writer EXW1-NT1]

Iceland, Ireland, Italy, Estonia, Austria, Netherlands, Cyprus, Greece, Croatia, Sweden, Spain, Slovakia, Slovenia, Czech Republic, Denmark, Germany, Hungary, Finland, France, Bulgaria, Belgium, Poland, Portugal, Malta, Latvia, Lithuania, Liechtenstein, Romania, Luxembourg, U.K., Ukraine, Switzerland, Turkey, Norway, Morocco, South Africa, U.S., Argentina, Canada, Brazil, Mexico, India, Australia, South Korea, Singapore, Thailand, China, Japan, New Zealand, Vietnam, Taiwan

* If this product is to be imported into Malaysia (including if the product is integrated into other equipment), an SMC Wireless System Certificate of Compliance and a test report may be required in some cases. Please contact SMC for further details.

- This product communicates by radio waves, and the communication may stop instantaneously due to ambient environments and operating methods. SMC will not be responsible for any secondary failure which may cause personal injury, or damage to other devices or equipment.
- When several units are installed closely to each other, slight interference may occur due to the characteristics of the wireless product.
- The electromagnetic waves emitted from this product may interfere with implantable medical devices such as cardiac pacemakers and cardioverter defibrillators, resulting in the malfunction of the medical device or other adverse effects.
Please use extreme caution when operating equipment which may have an adverse effect on your implantable medical device. Be sure to thoroughly read the precautions stated in the catalog, operation manual, etc., of your implantable medical device, or contact the manufacturer directly for further details on what types of equipment need to be avoided.
- The communication performance is affected by the ambient environment, so please perform the communication testing before use. * As of the end of March 2022



EXW1/EX600-W Series

Specific Product Precautions

Be sure to read this before handling the products. Refer to the back cover for safety instructions. For fieldbus system precautions, refer to the "Operation Manual" on the SMC website: <https://www.smcworld.com>

Notice

Caution

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

Handling Precautions

Caution


1. This equipment complies with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules.
This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the operation manual, may cause harmful interference to radio communications.
Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
2. This device complies with Industry Canada's license-exempt RSSs.
Operation is subject to the following two conditions:
(1) This device may not cause interference; and
(2) This device must accept any interference, including interference that may cause undesired operation of the device.
3. When operating the product, please be sure to maintain a separation distance of at least 20 cm between your body (excluding fingers, hands, wrists, ankles, and feet) and the product to meet RF exposure safety requirements as determined by FCC and Innovation, Science and Economic Development Canada.
Installation of this device must ensure that at 20 cm separation distance is maintained between the device and end users.


■ Trademark


EtherNet/IP® is a registered trademark of ODVA, Inc.

Safety Instructions

These safety instructions are intended to prevent hazardous situations and/or equipment damage. These instructions indicate the level of potential hazard with the labels of “**Caution**,” “**Warning**” or “**Danger**.” They are all important notes for safety and must be followed in addition to International Standards (ISO/IEC)*1), and other safety regulations.

 **Caution:** **Caution** indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.

 **Warning:** **Warning** indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.

 **Danger :** **Danger** indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.

*1) ISO 4414: Pneumatic fluid power – General rules relating to systems.
ISO 4413: Hydraulic fluid power – General rules relating to systems.
IEC 60204-1: Safety of machinery – Electrical equipment of machines.
(Part 1: General requirements)
ISO 10218-1: Manipulating industrial robots – Safety.
etc.

Warning

1. The compatibility of the product is the responsibility of the person who designs the equipment or decides its specifications.

Since the product specified here is used under various operating conditions, its compatibility with specific equipment must be decided by the person who designs the equipment or decides its specifications based on necessary analysis and test results. The expected performance and safety assurance of the equipment will be the responsibility of the person who has determined its compatibility with the product. This person should also continuously review all specifications of the product referring to its latest catalog information, with a view to giving due consideration to any possibility of equipment failure when configuring the equipment.

2. Only personnel with appropriate training should operate machinery and equipment.

The product specified here may become unsafe if handled incorrectly. The assembly, operation and maintenance of machines or equipment including our products must be performed by an operator who is appropriately trained and experienced.

3. Do not service or attempt to remove product and machinery/equipment until safety is confirmed.

1. The inspection and maintenance of machinery/equipment should only be performed after measures to prevent falling or runaway of the driven objects have been confirmed.
2. When the product is to be removed, confirm that the safety measures as mentioned above are implemented and the power from any appropriate source is cut, and read and understand the specific product precautions of all relevant products carefully.
3. Before machinery/equipment is restarted, take measures to prevent unexpected operation and malfunction.

4. Contact SMC beforehand and take special consideration of safety measures if the product is to be used in any of the following conditions.

1. Conditions and environments outside of the given specifications, or use outdoors or in a place exposed to direct sunlight.
2. Installation on equipment in conjunction with atomic energy, railways, air navigation, space, shipping, vehicles, military, medical treatment, combustion and recreation, or equipment in contact with food and beverages, emergency stop circuits, clutch and brake circuits in press applications, safety equipment or other applications unsuitable for the standard specifications described in the product catalog.
3. An application which could have negative effects on people, property, or animals requiring special safety analysis.
4. Use in an interlock circuit, which requires the provision of double interlock for possible failure by using a mechanical protective function, and periodical checks to confirm proper operation.

Caution

1. The product is provided for use in manufacturing industries.

The product herein described is basically provided for peaceful use in manufacturing industries.
If considering using the product in other industries, consult SMC beforehand and exchange specifications or a contract if necessary.
If anything is unclear, contact your nearest sales branch.

Limited warranty and Disclaimer/ Compliance Requirements

The product used is subject to the following “Limited warranty and Disclaimer” and “Compliance Requirements”.

Read and accept them before using the product.

Limited warranty and Disclaimer

1. The warranty period of the product is 1 year in service or 1.5 years after the product is delivered, whichever is first.*2)
Also, the product may have specified durability, running distance or replacement parts. Please consult your nearest sales branch.
2. For any failure or damage reported within the warranty period which is clearly our responsibility, a replacement product or necessary parts will be provided.
This limited warranty applies only to our product independently, and not to any other damage incurred due to the failure of the product.
3. Prior to using SMC products, please read and understand the warranty terms and disclaimers noted in the specified catalog for the particular products.

*2) Vacuum pads are excluded from this 1 year warranty.

A vacuum pad is a consumable part, so it is warranted for a year after it is delivered.
Also, even within the warranty period, the wear of a product due to the use of the vacuum pad or failure due to the deterioration of rubber material are not covered by the limited warranty.

Compliance Requirements

1. The use of SMC products with production equipment for the manufacture of weapons of mass destruction (WMD) or any other weapon is strictly prohibited.
2. The exports of SMC products or technology from one country to another are governed by the relevant security laws and regulations of the countries involved in the transaction. Prior to the shipment of a SMC product to another country, assure that all local rules governing that export are known and followed.

Caution

SMC products are not intended for use as instruments for legal metrology.

Measurement instruments that SMC manufactures or sells have not been qualified by type approval tests relevant to the metrology (measurement) laws of each country. Therefore, SMC products cannot be used for business or certification ordained by the metrology (measurement) laws of each country.

Revision History

Edition B	* A U-side end plate (for the SY) has been added.	WT
Edition C	* The EXW1 series compact wireless system has been added.	AT

Safety Instructions

Be sure to read the “Handling Precautions for SMC Products” (M-E03-3) and “Operation Manual” before use.

SMC Corporation

Akihabara UDX 15F,
4-14-1, Sotokanda, Chiyoda-ku, Tokyo 101-0021, JAPAN
Phone: 03-5207-8249 Fax: 03-5298-5362
<https://www.smcworld.com>
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Specifications are subject to change without prior notice
and any obligation on the part of the manufacturer.