Wireless System

CE RoHS

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
Minimised 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
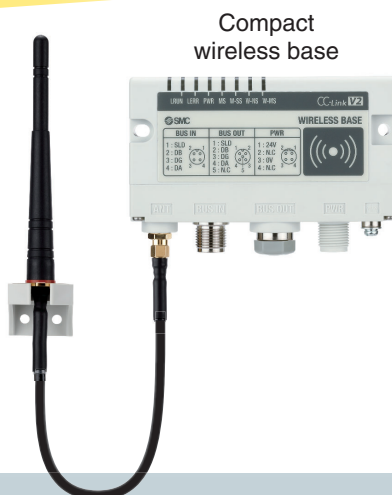
CC-Link

Compact and lightweight

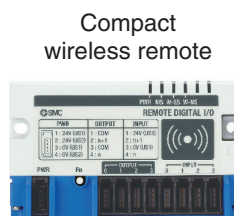| Volume	Approx. **86** % reduction[1]

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

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

Compact wireless base

Compact wireless remote

Communication distance: 100 m

Mixed input and output loading

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/ analogue unit.
- Connector type: M12/M8, D-sub, Spring type terminal block

Communication distance: 10 m

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

SMC

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.

Wireless base area ❶
Wireless base
Wireless remote

Wireless base area ❷
Wireless base

Wireless remote

Wireless remote

Noise in electronic circuits

Interference from other wireless equipment

AGVs (Automatic Guided Vehicles) are being used.

Wireless network (Existing)
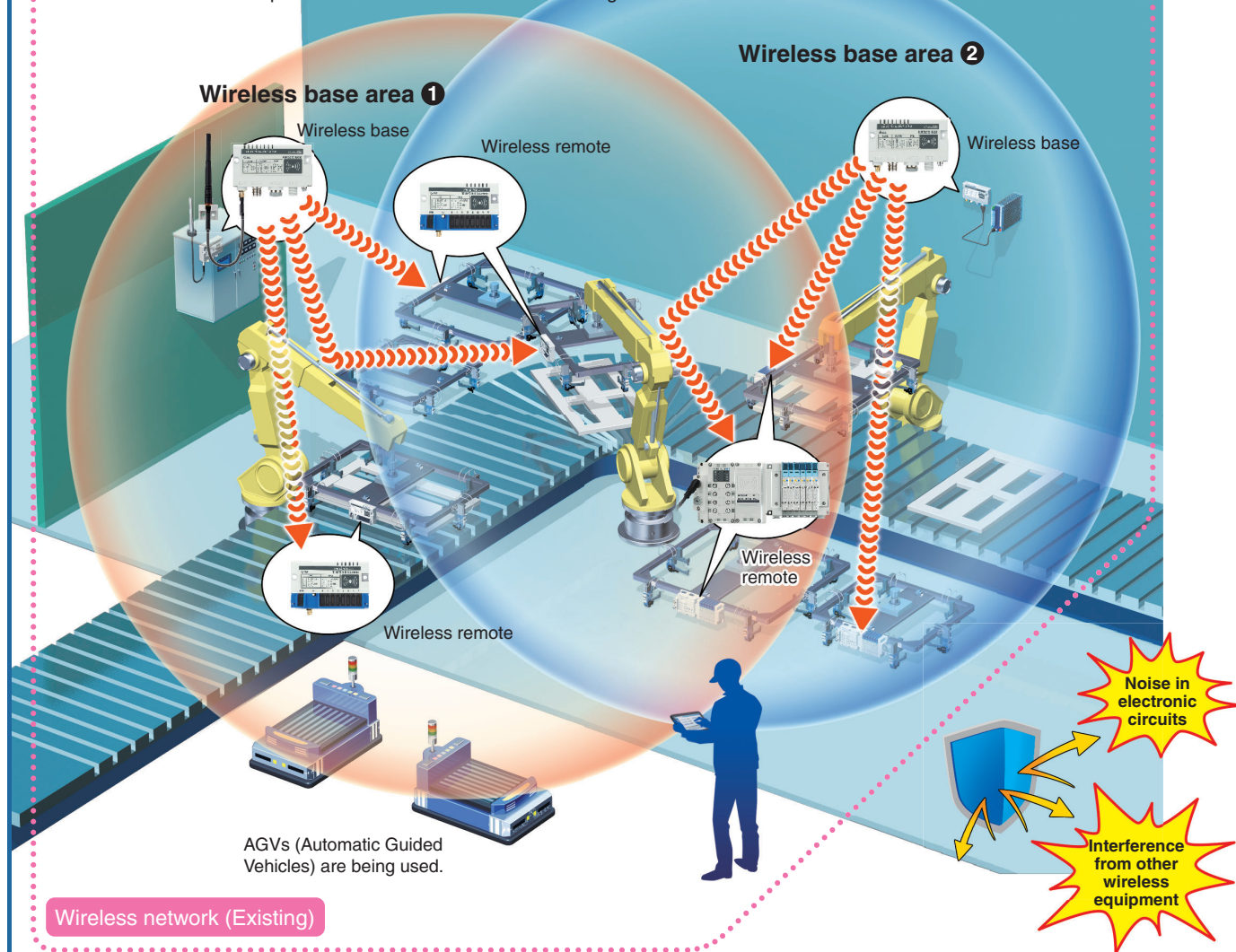
Supports external antennas
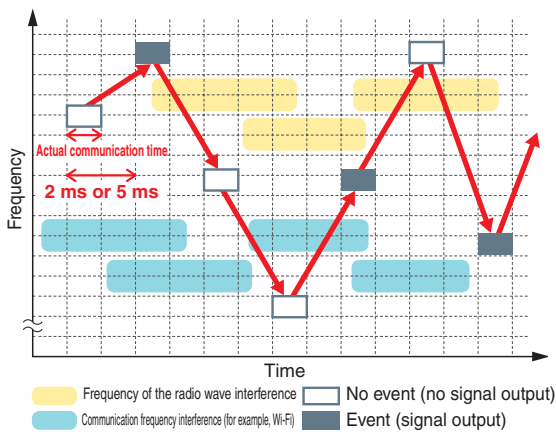
Compact **EXW1**

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.

External antenna type

External antenna

Compact wireless base

Compact remote

Control panel

Control box

SMC
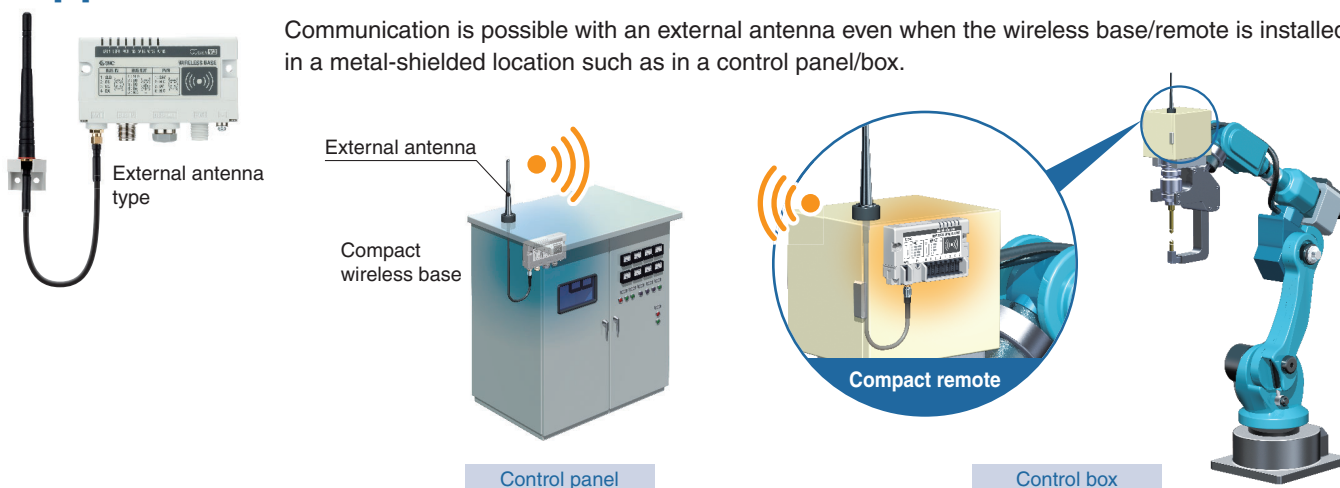
Frequency hopping/Event communication system

Compact **EXW1** Modular **EX600-W**

Legend:
- Frequency of the radio wave interference
- Communication frequency interference (for example, Wi-Fi)
- No event (no signal output)
- Event (signal output)

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 cycle
2 ms *1
or
5 ms

*1 For the EXW1 only

Event communication system

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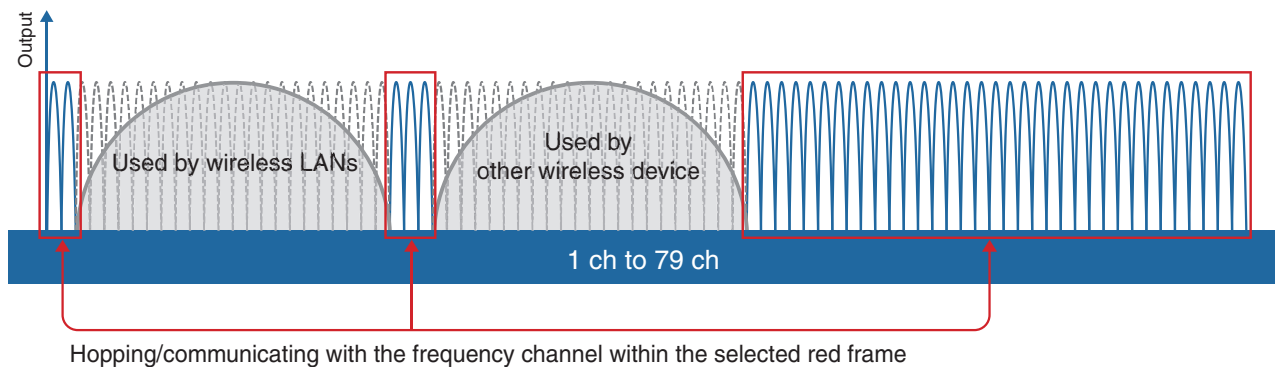
F.C.S. (Frequency channel select) function supported

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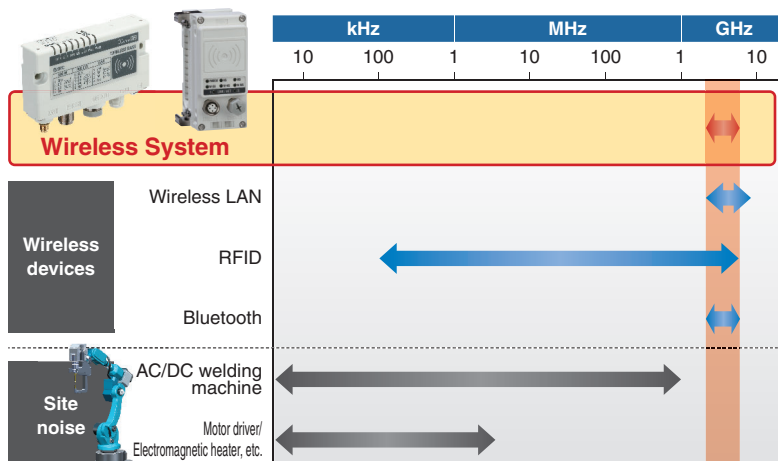∗ If no channel is selected, hopping/communication is established on 79 ch by default.

Used by wireless LANs

Used by other wireless device

1 ch to 79 ch

Hopping/communicating with the frequency channel within the selected red frame

Frequency band used

Compact **EXW1** Modular **EX600-W**

Uses the 2.4 GHz ISM frequency band

	kHz		MHz			GHz	
	10	100	1	10	100	1	10

Wireless System

Wireless devices:
- Wireless LAN
- RFID
- Bluetooth

Site noise:
- AC/DC welding machine
- Motor driver/ Electromagnetic heater, etc.

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

High security using encryption

Compact **EXW1** Modular **EX600-W**

Unauthorised access from outside is prevented by using data encryption.

Base
Remote
Unauthorised wiretapping
Removing device
Unauthorised access/ data falsification
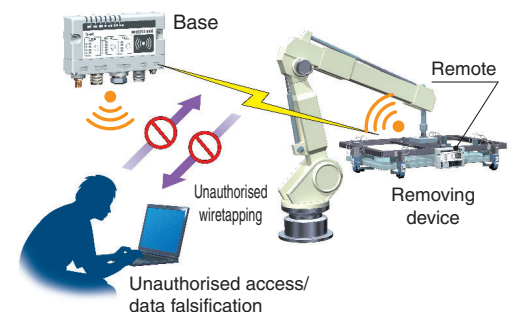
Remote high-speed connection

Compact **EXW1** Modular **EX600-W**

To start of communication: Min. **250 ms**
∗ Depends on the communication environment

Product diagnosis

Compact	Modular
EXW1	**EX600-W**

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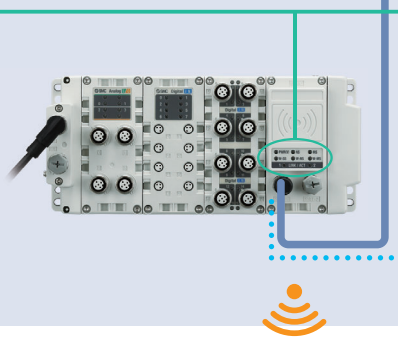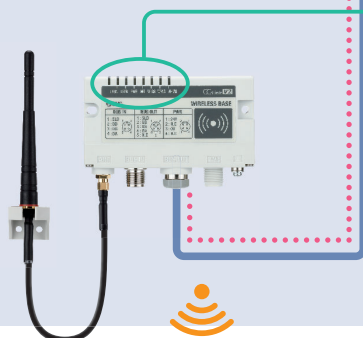
PLC

Web screen example

PC

Diagnostic signal

Web function ∗ **EtherNet/IP** and **PROFINET**® only

Fieldbus

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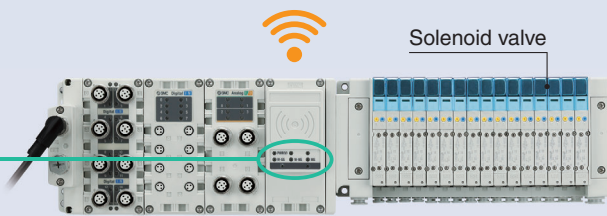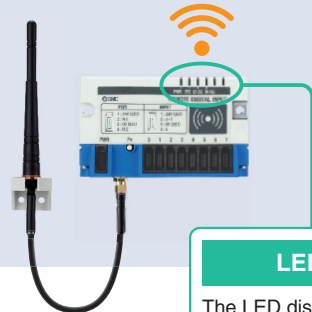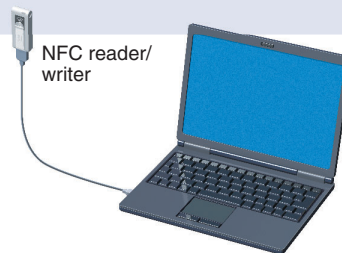
W-SS (Radio wave receiving intensity (For communication from base to remote))	
Green LED is ON.	The received power level is 3.
Green LED flashes. (1 Hz)	The received power level is 2.
Green LED flashes. (2 Hz)	The received power level is 1.
Red LED flashes.	Wireless communication is not connected.
OFF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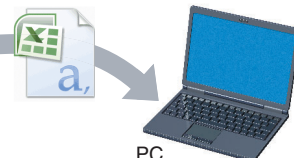
SMC

Product diagnosis

Compact	Modular
EXW1	**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.

NFC reader/writer

PC + Setting software

Setting software

Download the setting software from the "Configuration & certified software files" in www.smc.eu

---

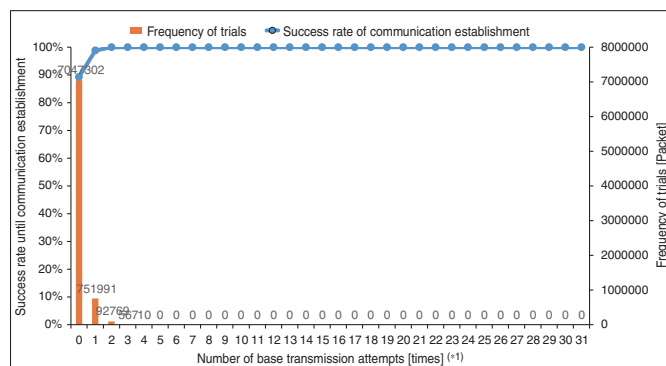# Logging function

Compact	Modular
EXW1	**EX600-W**

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

Number of retries

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

*1 Characteristics of base-to-remote transmission packets

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

*1 Characteristics of base-to-remote transmission packets
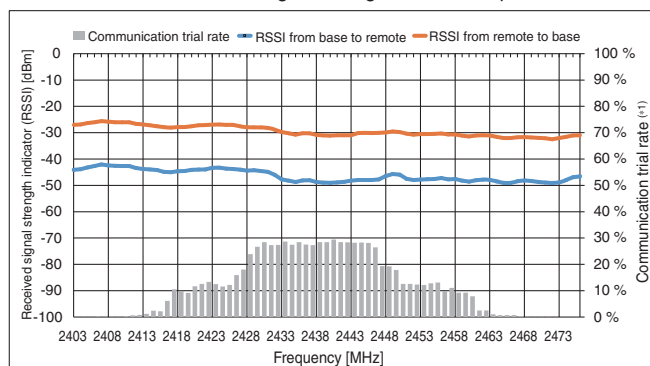
Graph 2. Received signal strength indicator and communication trial rate characteristics with respect to frequency

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

Scroll bar

SMC

4

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

PLC

Fieldbus

CC-Link   EtherNet/IP   PROFINET®

Wireless base

New Compact Type **EXW1**

Modular Type **EX600-W**

EX600 I/O unit
▶ Refer to the **catalogue on www.smc.eu**

Base module

Wireless remote

New Compact Type **EXW1**

Mixed input and output loading

Input

Output

Modular Type **EX600-W**

Remote module

EX600 I/O unit

Solenoid valve

Input/Output device

Vacuum unit

Output devices

Valve manifold (Plug lead)

Solenoid valve

Others
Indicator light
Relay
Buzzer

Input devices

Auto switch

Pressure switch

Flow switch

Others
Proximity sensor
Photoelectric switch
Limit switch

* 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 www.smc.eu, and contact your local sales representative.

SMC

System Configuration Examples

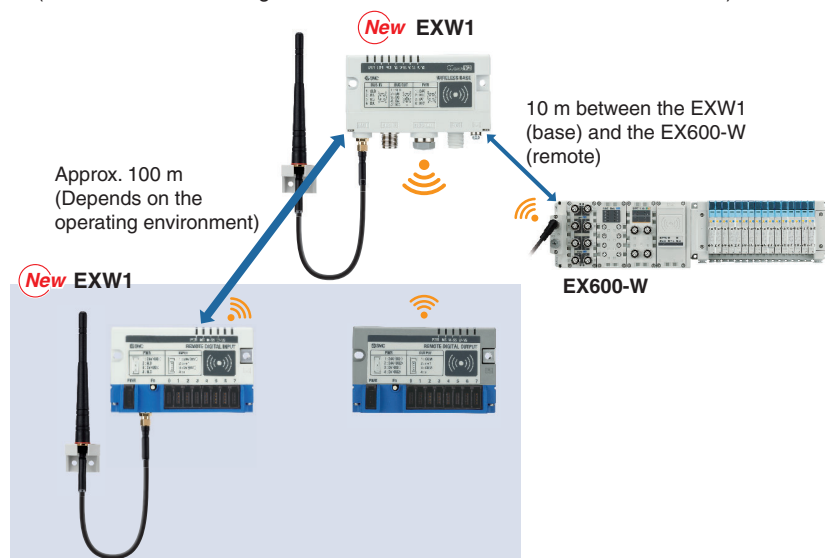■ Compact Type **Configuration example when using the EXW1 series base ①**
(When the remote configuration is for the EXW1 series only)

New **EXW1**

Approx. 100 m
(Depends on the
operating environment)

New **EXW1**
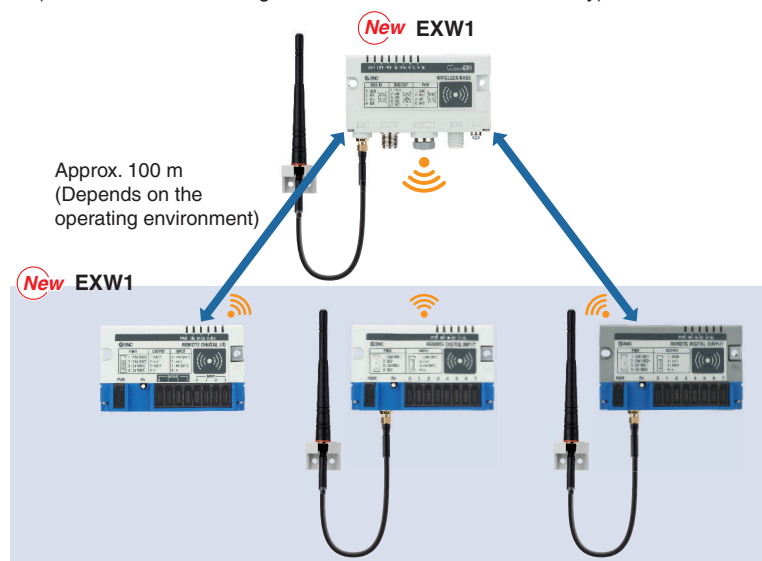
Applicable functions	
Frequency channel select (F.C.S.)	Applicable
Communication speed	Select from 1 Mbps or 250 kbps.
Response speed	Select from 2 ms or 5 ms.
Communication distance	Approx. 100 m (Depends on the operating environment)
External antenna	Applicable

■ Compact Type **Configuration example when using the EXW1 series base ②**
(When the remote configuration is for the EX600-W and the EXW1 series)

New **EXW1**

10 m between the EXW1
(base) and the EX600-W
(remote)

Approx. 100 m
(Depends on the
operating environment)

New **EXW1**

EX600-W

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**
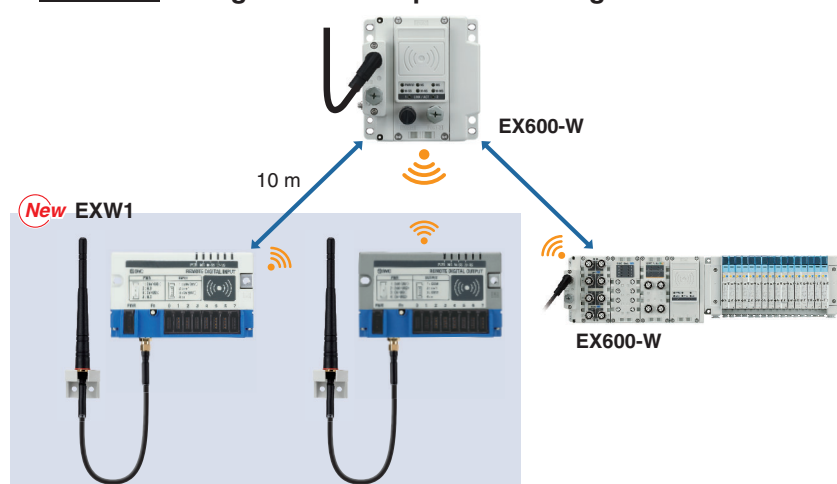
EX600-W

10 m

New **EXW1**

EX600-W

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

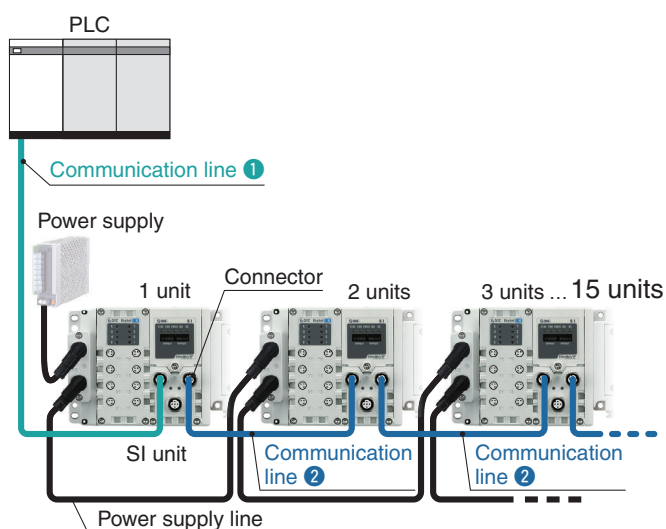The specifications are the same as those of the EX600-W series.

SMC

6

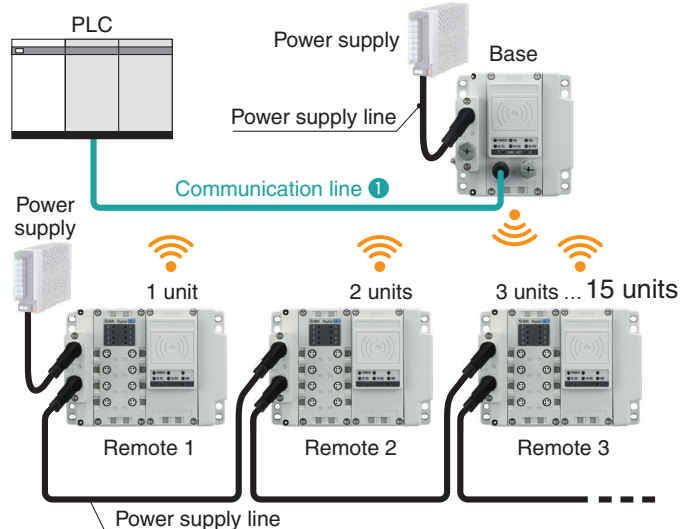# Wiring material cost and installation time can be reduced.*1

Compact **EXW1**	Modular **EX600-W**

∗1 For the EX600-W modular type

Existing (Wired) System	Wireless System

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

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

SMC
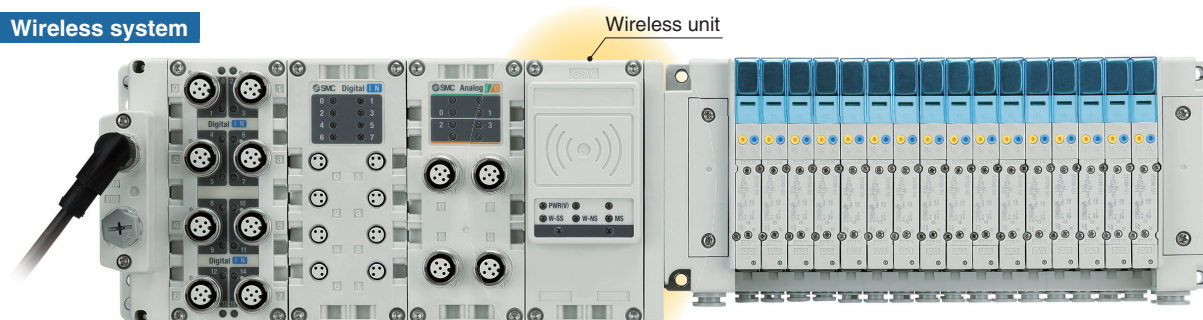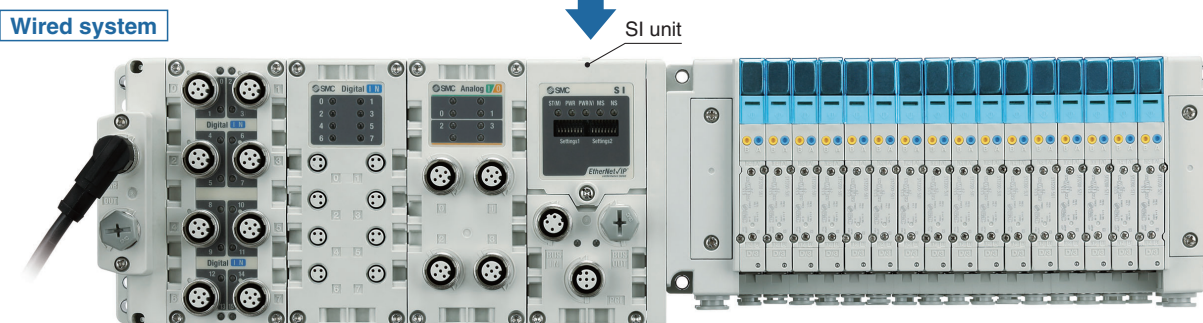
Application Examples

For tool changing

● A communication cable is not necessary for moving parts. ● Minimised disconnection risk
● Shorter time for establishing communication (startup time)
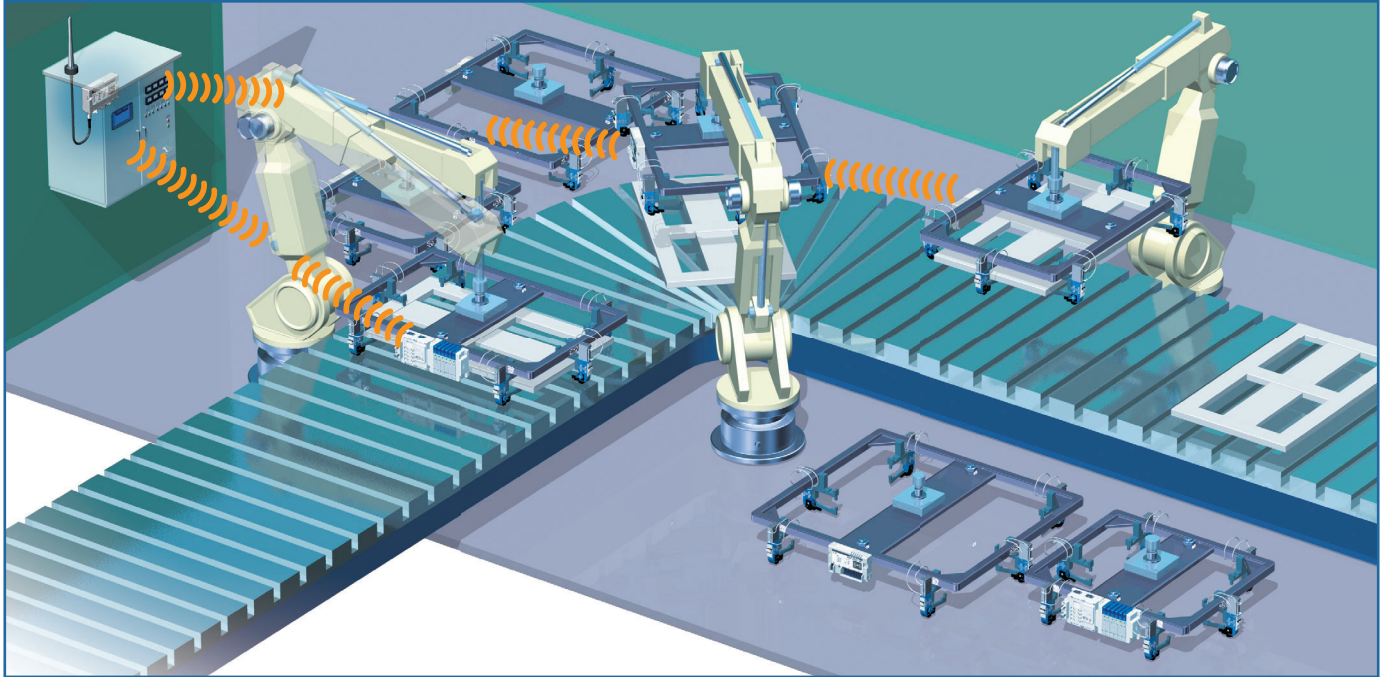
For rotary tables

● Minimised disconnection risk
● Smaller diameter communication cable/tubing

Wired system
Communication line
Power supply line

Power supply line only
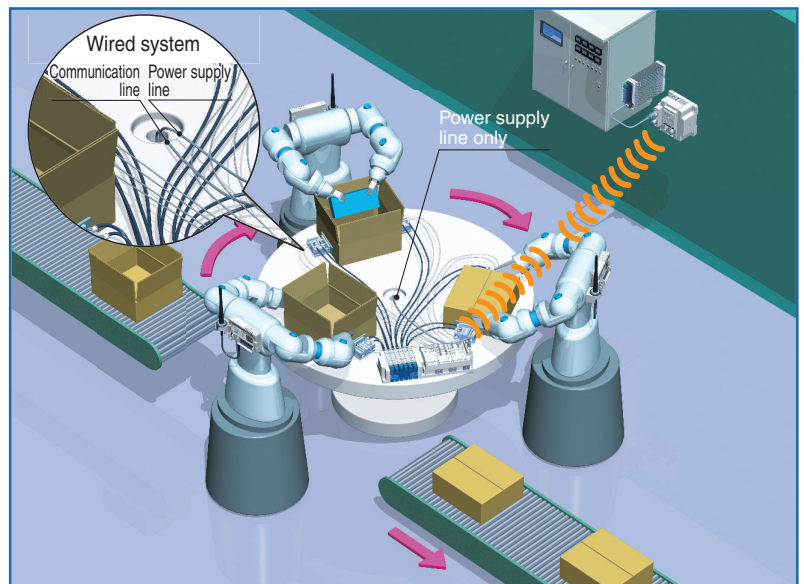
For the blocking of radio waves

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

CONTENTS

Wireless System

Compact Type *EXW1* *Series*

CC-Link

Compact wireless base

Compact wireless remote input/output

Compact wireless remote input

Compact wireless remote output

Modular Type *EX600-W* *Series*

EtherNet/IP™   PROFI NET®

Base module   Remote module

Accessories/Made to Order

External antenna set

Compact Type EXW1 *Series*

Modular Type EX600-W *Series*
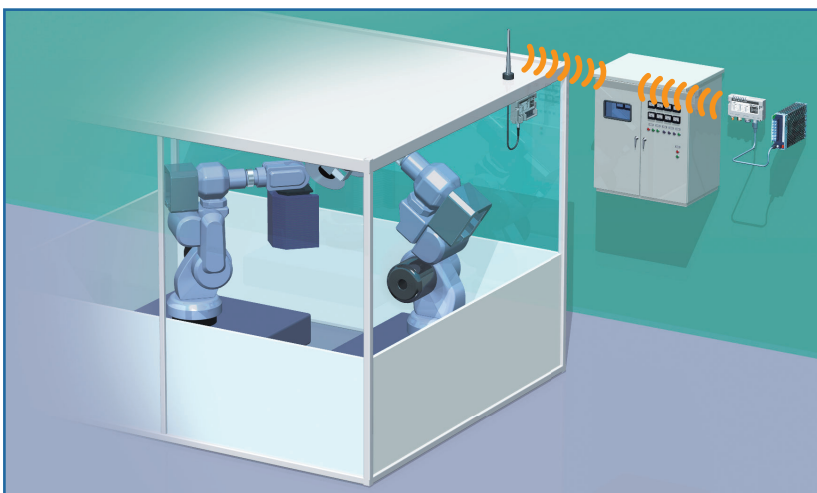
Wireless System
Compact Type
EXW1 Series

CE RoHS
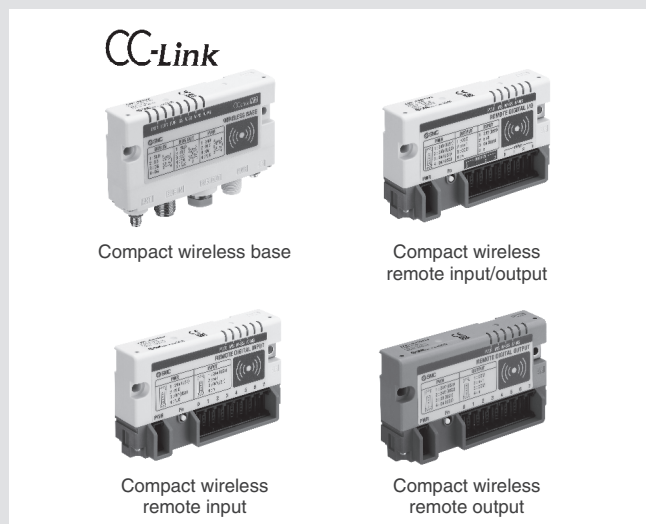
How to Order

Compact Wireless Base

CC-Link

External antenna set

EXW1 – B MJ A B E

Compact wireless •

Base •

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

Compact Wireless Remote

Input/Output

Input

Output

External antenna set

EXW1 – R D M P E3 B E

Compact wireless •

Remote •

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

● 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	Description	
	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"
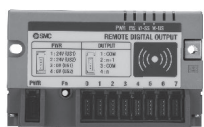
∗5 The antenna specification selected cannot be changed after purchase.
∗6 The external antenna set cannot be used for the internal antenna specification.
∗7 An external antenna set is included with the external antenna specification.
∗8 It is not possible to use the external antenna set without connecting it with the external antenna specification.

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		

SMC

10

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	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 www.smc.eu 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: www.smc.eu

Electrical Specifications

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

General Specifications

Item	Specifications
Enclosure	IP67
Vibration resistance	EN 61131-2 compliant $5 \le f < 8.4$ Hz 3.5 mm $8.4 \le f < 150$ 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)

SMC

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 www.smc.eu 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 ±10 %	
US2 (for output) power supply voltage range		24 VDC ±10 %	
Internal current consumption		100 mA or less	
Isolation		Yes (between US1 and US2)	
Input	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	
Output	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 ±10 %
Internal current consumption		100 mA or less
Input	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 ±10 %
US2 (for output) power supply voltage range		24 VDC ±10 %
Internal current consumption		100 mA or less
Isolation		Yes (between US1 and US2)
Output	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□

Internal antenna **External antenna** **External antenna set**

Model label

EXW1-BMJAB□

Radio Act-compliance label

20.3
15.3

116.7

13

∗ The seal cap is attached when shipped.

100
90.8 ±0.1
6.4
45
5

2 x M4 mounting hole

2 x (R)
54
4.5
20
Ø 4.5

WIRELESS BASE

25
8

2 x Ø 4.5
2 x Ø 4.5

15
20
30

FE terminal
Power supply connector
Communication connector BUS OUT
Communication connector BUS IN

RF (SMA coaxial connector)
[Mounting nut: Width across flats 8 mm (Ø 10)]

Whip antenna
∗ Accessory

RF cable (Ø 5, 1.5 m)
∗ Accessory

Bracket
∗ Accessory

External antenna set (Included only for antenna specification B)
∗ Part no.: EXW1-EA1

② ③ ①

Internal circuit

② BUS IN
SLD 1
DB 2
DG 3
DA 4

Internal
circuit

① Power supply connector
1 24 V (US1)
2 NC
3 0 V (US1)
4 NC

CC-Link
BUS connector
IN/OUT

SLD 1
DB 2
DG 3
DA 4
NC 5

RF

Filter

RF

FE

③ BUS OUT

∗ 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.	

② ③ **CC-Link BUS connector**

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

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

SMC

Dimensions/Parts Description

Compact Wireless Remote Input/Output

Internal antenna **External antenna** **External antenna set**

EXW1-RDM□□□□

Model label

EXW1-RDMPE3BE

Radio Act-compliance label

26.7
20.3
15.3

116.7

100
90.8 ±0.1
6.4
2 x M4 mounting hole

LED Indicator
Indicator lebel
FE terminal

20
Ø 4.5
59.8
4.5

PWR | OUTPUT | INPUT
1 : 24V (US1) | 1 : COM | 1 : 24V (US1)
2 : 24V (US2) | 2 : n+1 | 2 : n+1
3 : 0V (US1) | 3 : COM | 3 : 0V (US1)
4 : 0V (US2) | 4 : n | 4 : n

REMOTE DIGITAL I/O

PWR   Fn

INPUT (Connector for input device connection)
OUTPUT (Connector for output device connection)
Fn (Push button for pairing)
RF (SMA coaxial connector)
[Mounting nut: Width across flats 8 mm (Ø 10)]
PWR (Power supply connector)

2 x Ø 4.5
8
2 x Ø 4.5
25
15
20
30

Whip antenna
∗ Accessory

RF cable (Ø 5, 1.5 m)
∗ Accessory

Bracket
∗ Accessory

External antenna set (Included only for antenna specification B)
∗ Part no.: EXW1-EA1

Internal circuit

INPUT x 4
0 3

RF
PWR
1
US1
2
3
4
US2

RF

Internal circuit

Input I/F
Short-circuit protection

1 24 V (US1)
2 n + 1
3 0 V (US1)
4 n

Filter

OUTPUT x 4
0 3

Output I/F
Short-circuit protection

FE

1 COM (PNP: 0 V, NPN: 24 V)
2 n + 1
3 COM (PNP: 0 V, NPN: 24 V)
4 n

∗ 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	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

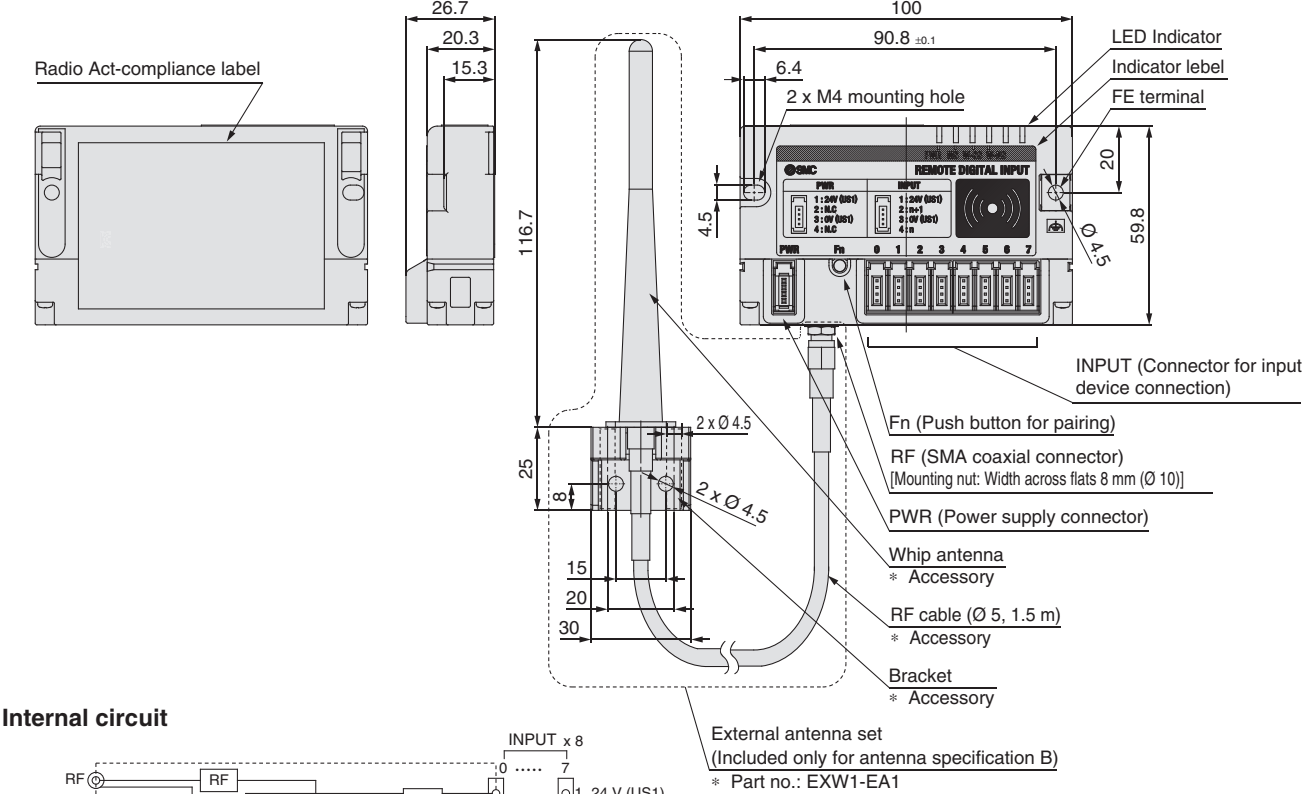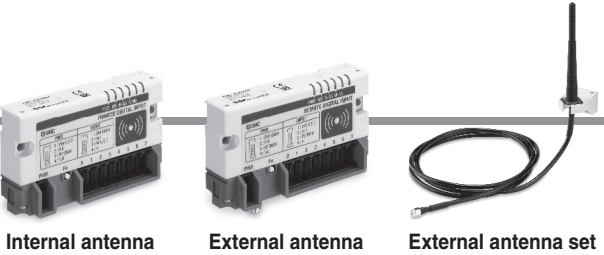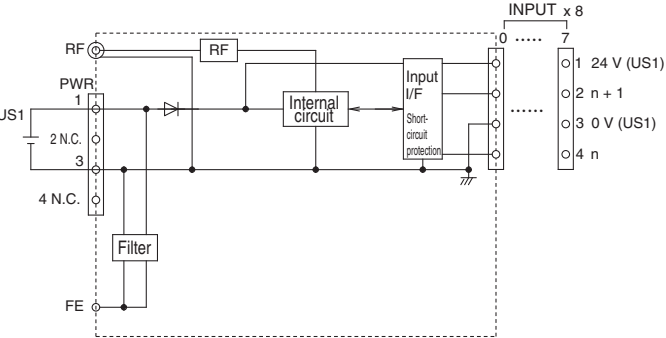∗1 The specifications of pin numbers ① and ③ differ depending on the part number system.

SMC

14

Dimensions/Parts Description

Compact Wireless Remote Input

EXW1-RDX□□□□

Internal antenna   External antenna   External antenna set

Radio Act-compliance label

26.7
20.3
15.3

116.7

25
8

15
20
30

2 x Ø 4.5
2 x Ø 4.5

100
90.8 ±0.1
6.4
2 x M4 mounting hole
4.5
20
Ø 4.5
59.8

LED Indicator
Indicator lebel
FE terminal

REMOTE DIGITAL INPUT

PWR   Fn   0 1 2 3 4 5 6 7

INPUT (Connector for input device connection)

Fn (Push button for pairing)

RF (SMA coaxial connector)
[Mounting nut: Width across flats 8 mm (Ø 10)]

PWR (Power supply connector)

Whip antenna
∗ Accessory

RF cable (Ø 5, 1.5 m)
∗ Accessory

Bracket
∗ Accessory

External antenna set
(Included only for antenna specification B)
∗ Part no.: EXW1-EA1

Internal circuit

INPUT x 8
0 7

RF
RF
PWR
1
US1
2 N.C.
3
4 N.C.
Internal circuit
Input I/F
Short-circuit protection

o 1 24 V (US1)
o 2 $n + 1$
o 3 0 V (US1)
o 4 n

Filter

FE

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

Model label

EXW1-RDXNE4BE

PWR
(Power supply connector)

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

INPUT
(Connector for input
device connection)

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

SMC

Dimensions/Parts Description

Compact Wireless Remote Output

Internal antenna **External antenna** **External antenna set**

EXW1-RDY□□□□

26.7
20.3
15.3

Radio Act-compliance label

116.7

25

8

2 x Ø 4.5

2 x Ø 4.5

15
20
30

100
90.8 ±0.1
6.4

2 x M4 mounting hole

4.5

20
Ø 4.5
59.8

LED Indicator
Indicator lebel
FE terminal

REMOTE DIGITAL OUTPUT

PWR
1 : 24V (US1)
2 : 24V (US2)
3 : 0V (US1)
4 : 0V (US2)

OUTPUT
1 : COM
2 : n+1
3 : COM
4 : n

PWR   Fn   0 1 2 3 4 5 6 7

OUTPUT (Connector for output device connection)

Fn (Push button for pairing)

RF (SMA coaxial connector)
[Mounting nut: Width across flats 8 mm (Ø 10)]

PWR (Power supply connector)

Whip antenna
∗ Accessory

RF cable (Ø 5, 1.5 m)
∗ Accessory

Bracket
∗ Accessory

External antenna set (Included only for antenna specification B)
∗ Part no.: EXW1-EA1

Internal circuit

RF

PWR

US1
1
2
3
US2
4

RF

Internal circuit

Filter

FE

Output I/F

Short-circuit protection

OUTPUT x 8
0 7

1 + COM (US2_24 V)
2 n + 1
3 + COM (US2_24 V)
4 n

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

Model label

EXW1-RDYNE4BE

**PWR
(Power supply connector)**

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

**OUTPUT
(Connector for output device connection)**

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

NFC Reader/Writer

EXW1-NT1

(72)
(24)
(12.3)

Cap

Fixing Bracket

EXW1-AB2 (Option, For EXW1)

(38)
(101.4)
(34.1)

EXW1 *Series*
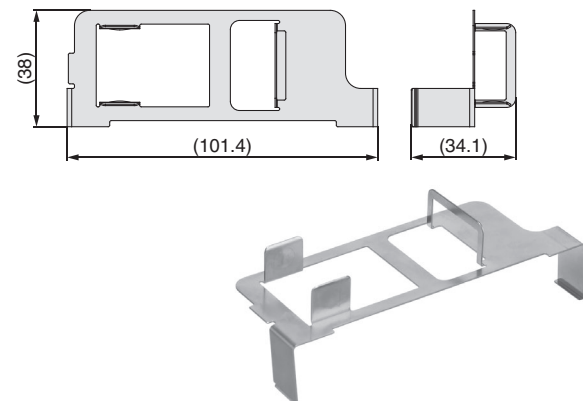
LED Display

Compact wireless base

No.	LED name	Function	LED status Color of LED	LED status ON/ Flashing	Description
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 | Green	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 · Analogue I/O upper set limit exceeded · Analogue 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

SMC

LED Display

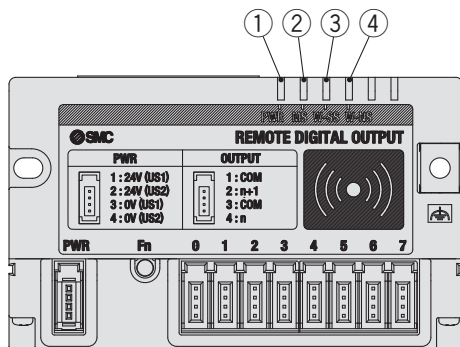### Compact wireless remote input/output
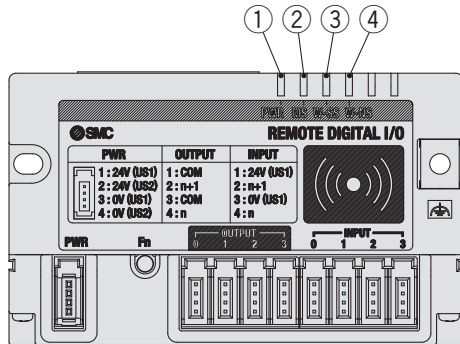
Compact wireless remote input
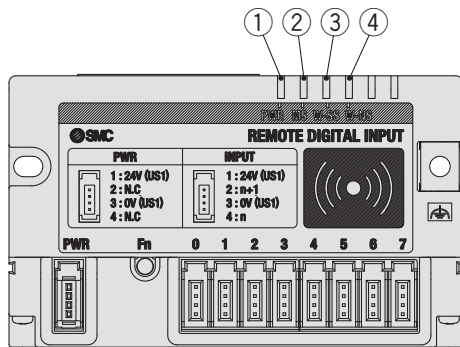
Compact wireless remote output

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.
4	W-NS	Wireless communication connection status indication	Green	ON	Base is connected correctly.
			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. The US1 (for control/input) power supply is OFF.

Accessories (Optional Parts)

Compact Wireless Base

❶ Power Supply Cable

❺ External Antenna Set

❹ Seal Cap (M12)

❷ Communication Cable

❸ Field-wireable Communication Connector

Compact Wireless Remote

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

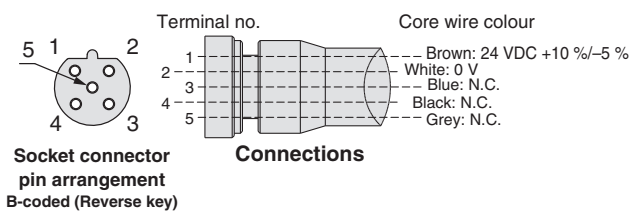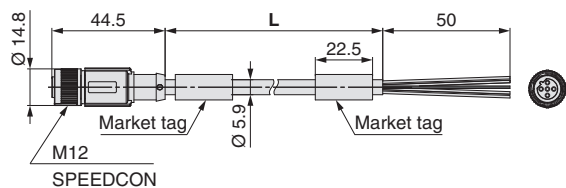**❺** External Antenna Set
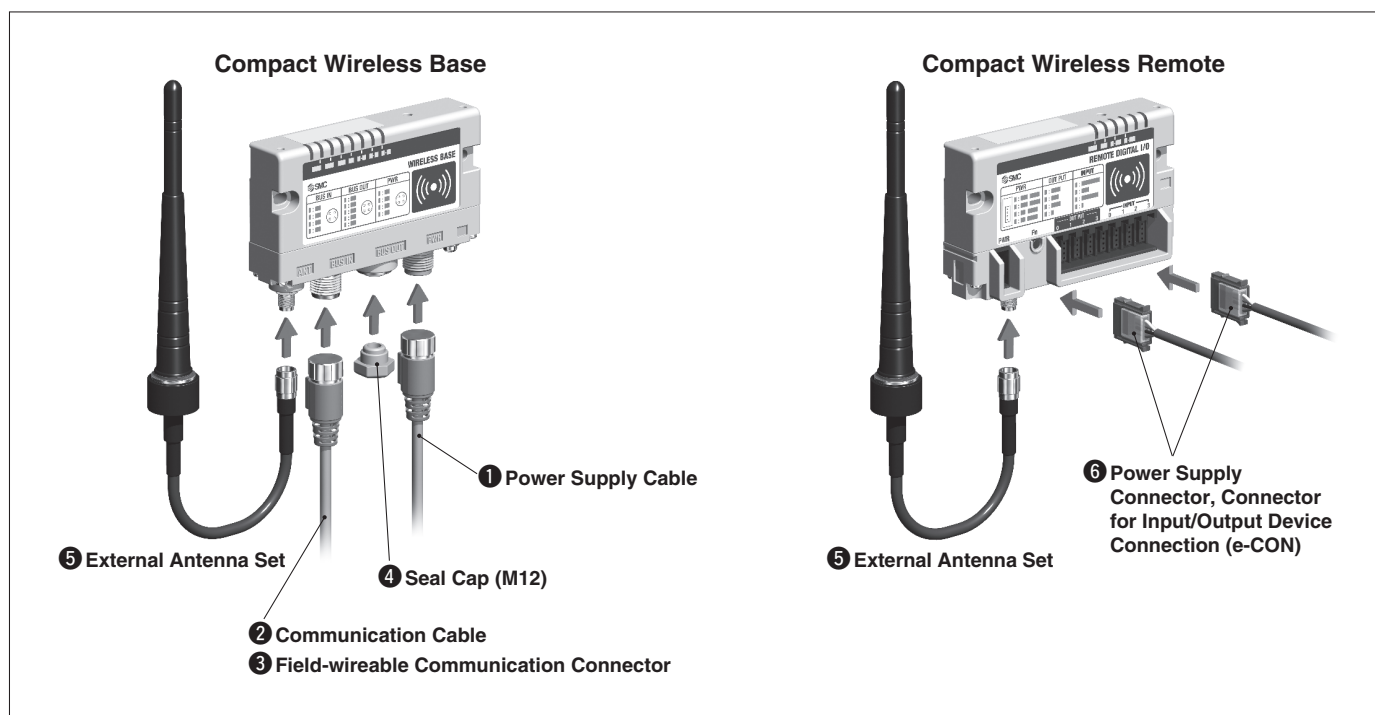
❶ Power Supply Cable (M12 connector)

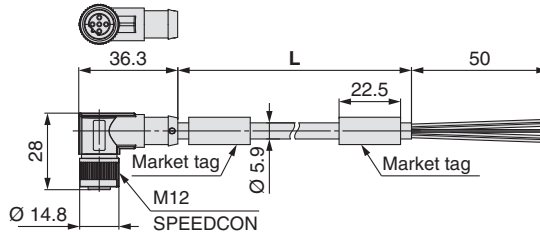∗ The shape of the M12 connector is B-coded (Reverse key).

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

Ø 14.8 44.5 **L** 50

22.5

Ø 5.9

Market tag   Market tag

M12
SPEEDCON

Terminal no.   Core wire colour

Socket connector
pin arrangement
B-coded (Reverse key)

Connections

1 — Brown: 24 VDC +10 %/–5 %
2 — White: 0 V
3 — Blue: N.C.
4 — Black: N.C.
5 — Grey: N.C.

Angled connector type

36.3 **L** 50

28   22.5

Ø 5.9

Ø 14.8

Market tag   Market tag

M12
SPEEDCON

Terminal no.   Core wire colour

Socket connector
pin arrangement
B-coded (Reverse key)

Connections

1 — Brown: 24 VDC +10 %/–5 %
2 — White: 0 V
3 — Blue: N.C.
4 — Black: N.C.
5 — Grey: N.C.

Item	Specifications
Cable O.D.	Ø 5.9 mm
Conductor nominal cross section	0.34 mm^2/AWG22
Wire O.D. (Including insulator)	1.27 mm
Min. bending radius (Fixed)	59 mm

⊘SMC
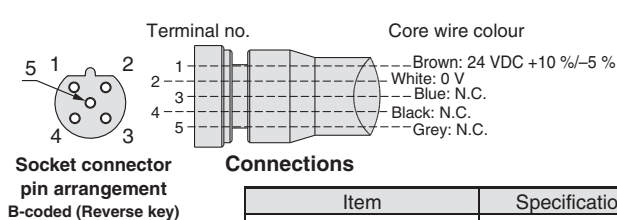
❷ Communication Cable

For CC-Link

PCA-1567720
(Socket)

PCA-1567717
(Plug)

Socket connector pin arrangement
A-coded (Normal key)
∗1 Number of holes: 5,
Total number of pins: 4

Plug connector
pin arrangement
A-coded (Normal key)
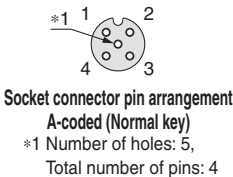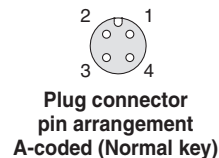
Made to Order

Cable length	10000 mm	Refer to page 23.
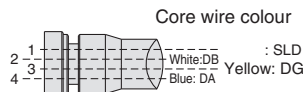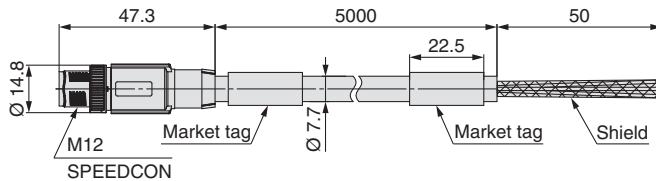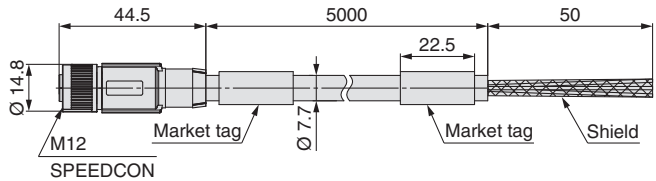
Core wire colour

Connections

Item	Specifications	
Cable O.D.		Ø 7.7 mm
Conductor nominal cross section	Data pair	0.5 mm²/AWG20
	Drain	0.34 mm²/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

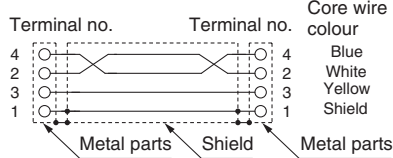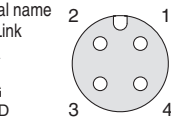| Item	Specifications	
Cable O.D.		Ø 7.7 mm
Conductor nominal cross section	Data pair	0.5 mm²/AWG20
	Drain	0.34 mm²/AWG22
Wire O.D. (Including insulator)		2.55 mm
Min. bending radius (Fixed)		77 mm
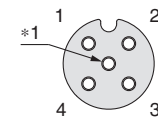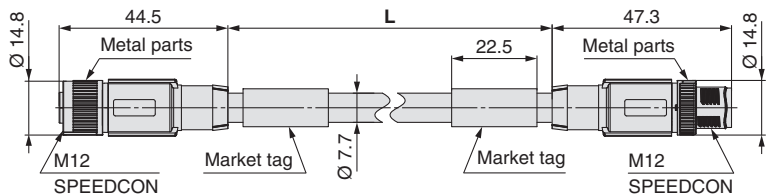
Socket connector
pin arrangement
A-coded (Normal key)
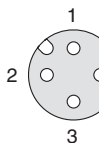∗1 Number of holes: 5,
Total number of pins: 4

Connections

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

Metal parts Shield

Plug connector
pin arrangement
A-coded (Normal key)

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.		Ø 7.7 mm
Conductor nominal cross section	Data pair	0.5 mm²/AWG20
	Drain	0.34 mm²/AWG22
Wire O.D. (Including insulator)		2.55 mm
Min. bending radius (Fixed)		77 mm

Plug connector
pin arrangement
A-coded (Normal key)

Connections

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

Metal parts Shield

Socket connector
pin arrangement
A-coded (Normal key)
∗1 Number of holes: 5,
Total number of pins: 4

EXW1 *Series*

❸ Field-wireable Communication Connector

Plug

For CC-Link

PCA-1075526
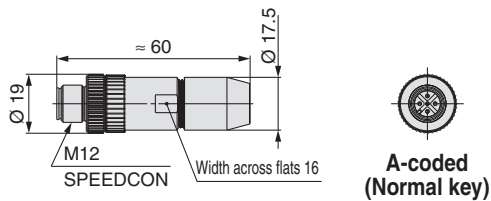
≈ 60
Ø 17.5
Ø 19
M12
SPEEDCON
Width across flats 16

**A-coded
(Normal key)**

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

≈ 58
Ø 17.5
Ø 19
M12
SPEEDCON
Width across flats 16

**A-coded
(Normal key)**

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)

❹ 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

❺ 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.

Ø 7
(115)
Ø 13

① **Whip antenna**

25
9.8
13

38
(9.09)
2 x Ø 4.5
5
30
20
2 x Ø 4.5
15
17

③ **Bracket**

(1.6)
(1500)
(6.2)
40
H8
30

② **Coaxial cable**

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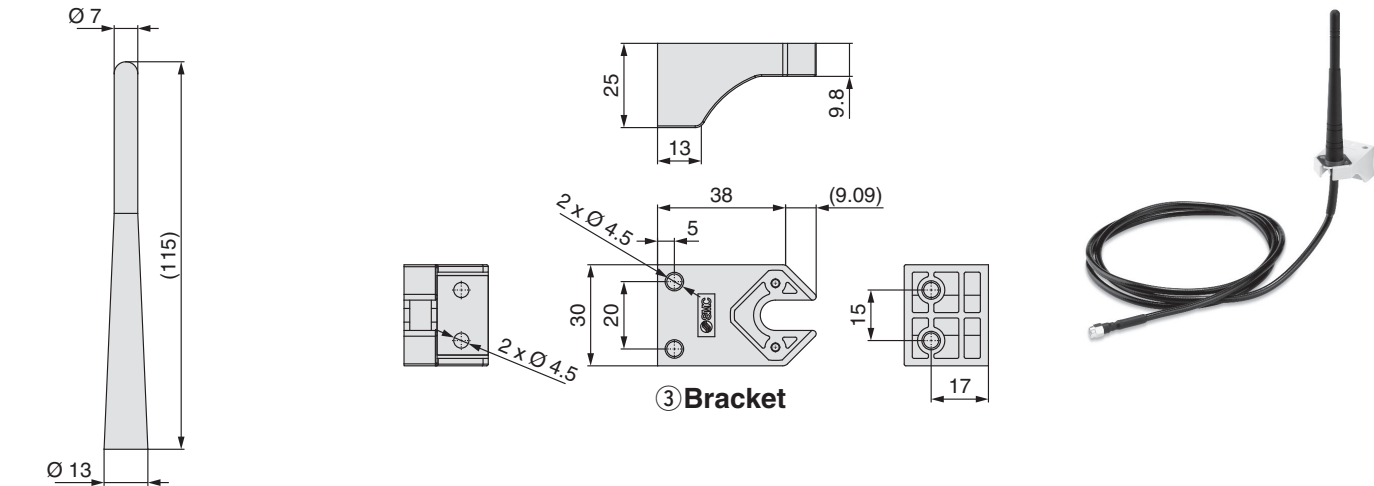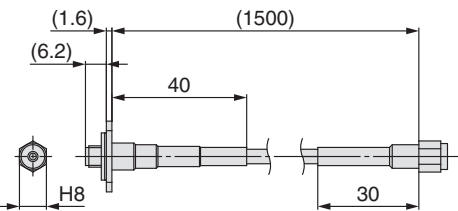
❻ Power Supply Connector, Connector for Input/Output Device Connection (e-CON)

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

Compact wireless remote
(e-CON type)

Input/Output devices

Auto switch

Power supply

Valve

e-CON Part Nos. List

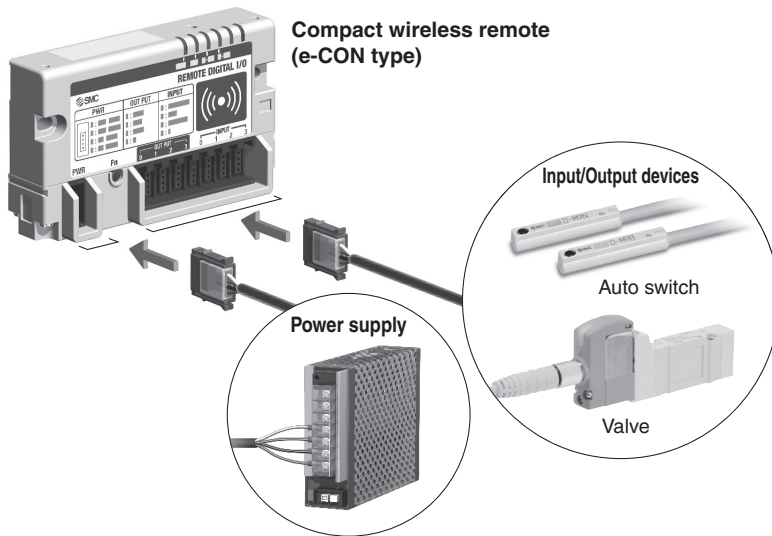| Part no.	AWG No.	Conductor cross section [mm SQ]	Finished outside diameter [mm]	Cover color
ZS-28-C-1	24 to 26	0.14 to 0.2	Ø 1.0 to Ø 1.2	Yellow
ZS-28-C-2			Ø 1.2 to Ø 1.6	Orange
ZS-28-C-3	22 to 20	0.3 to 0.5	Ø 1.0 to Ø 1.2	Green
ZS-28-C-4			Ø 1.2 to Ø 1.6	Blue
ZS-28-C-5			Ø 1.6 to Ø 2.0	Grey
ZS-28-CA-1	—	0.1 to 0.5	Ø 0.6 to Ø 0.9	Orange
ZS-28-CA-2			Ø 0.9 to Ø 1.0	Red
ZS-28-CA-3			Ø 1.0 to Ø 1.15	Yellow
ZS-28-CA-4			Ø 1.15 to Ø 1.35	Blue
ZS-28-CA-5			Ø 1.35 to Ø 1.6	Green

Input/ Output	Product	Series	Appearance	Conductor cross section [mm²]	Insulator O.D. [mm]	Applicable e-CON part no.
Output	Valve	**JSY1000 Plug lead (V050-30-4A-□)**		0.3	Ø 1.55	ZS-28-C-4 ZS-28-CA-5
		JSY3000, 5000/SYJ/SJ Plug lead (SY100-30-4A-□)		0.3	Ø 1.55	ZS-28-C-4 ZS-28-CA-5
		SY/SYJ M8 connector (V100-49-1-□)		0.16 (AWG25)	Ø 1.2	ZS-28-C-1 ZS-28-CA-4
	Ejector	**ZB (AXT661-13A/14A-□)**		AWG24	Ø 1.4	ZS-28-C-2 ZS-28-CA-5
		ZL/ZM (SY100-30-4A-□)		0.3	Ø 1.55	ZS-28-C-4 ZS-28-CA-5
		ZK2 (ZK2-LV□□-A)		0.2 (AWG24)	Ø 1.4	ZS-28-C-2 ZS-28-CA-5
Input	Pressure	**Z/ISE10, 20**		0.15 (AWG26)	Ø 1.0	ZS-28-C-1 ZS-28-CA-2
		PS1000		0.18	Ø 0.96	ZS-28-CA-2
	Auto switch	**D-M9**		0.15	Ø 0.88	ZS-28-CA-1
	Flow	**PF2M**		AWG26 (0.13)	Ø 1	ZS-28-CA-2

EXW1 *Series*
Made to Order

Please contact SMC for detailed specifications and lead times.

---

❶ **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** |
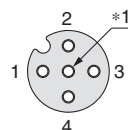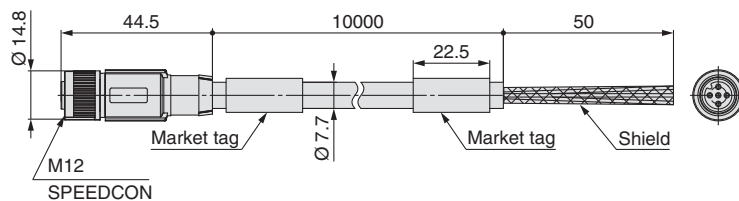
Ø 14.8 · 44.5 · 10000 · 50 · 22.5 · Ø 7.7

Market tag · Market tag · Shield

M12
SPEEDCON

Socket connector
pin arrangement
A-coded (Normal key)

2   *1
1   3
4

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.		Ø 7.7 mm
Conductor nominal cross section	Data pair	0.5 mm²/AWG20
	Drain	0.34 mm²/AWG22
Wire O.D. (Including insulator)		2.55 mm
Min. bending radius (Fixed)		77 mm

SMC

Wireless System

Modular Type
EX600-W Series

CE RoHS

Wireless Unit

EX600-WEN1

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**

Digital Input Unit*1
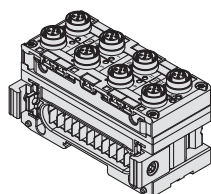
EX600-DXPD

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
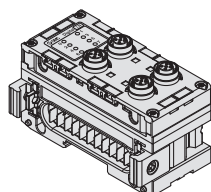
EX600-DYPB

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
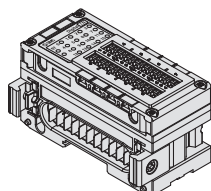
EX600-DMPF

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)

Analogue Input Unit*1
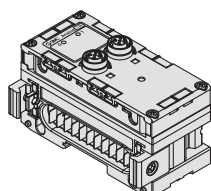
EX600-AXA

Analogue 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 **catalogue on www.smc.eu.**

How to Order

Analogue Output Unit *1

EX600 – AY A

Analogue output •

• **Number of output channels and connector**

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

Analogue Input/Output Unit *1
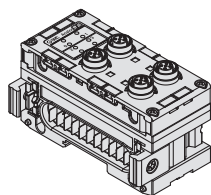
EX600 – AM B

Analogue input/output •

• **Number of input/output channels and connector**

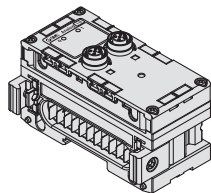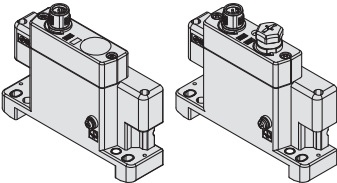| Symbol	Number of input channels	Number of output channels	Connector
B	2 channels	2 channels	M12 connector (5 pins) 4 pcs.

*1 For specifications, refer to the Fieldbus system EX600 series in the **catalogue on www.smc.eu**.

End Plate (D side)
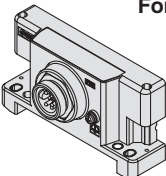
EX600 – E D 2 – 2

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.

For M12

For 7/8 inch

• **Mounting method**

Symbol	Description	Note
—	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)
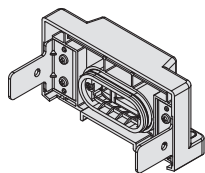
EX600 – E U 1 – 2

End plate •

End plate mounting position: U side •

Specifications

Symbol	Specifications
1	Waterproof cover

• **Mounting method**

Symbol	Description	Note
—	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		

SMC

Ordering Example of the Base Module

Base module: Without valve manifold and input/output unit

Wireless unit (Base module)
EX600-WEN1

End plate (D side)
EX600-ED4

End plate (U side)
EX600-EU1

D side

U side

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

Digital input unit
EX600-DXPD

Digital output unit
EX600-DYPB

End plate (D side)
EX600-ED4

Wireless unit
(Base module)
EX600-WEN1

2-position single
SY3100-5U1 (3 sets)

2-position double
SY3200-5U1 (2 sets)

D side

U side

1 2 3 4 5 ··· Valve stations

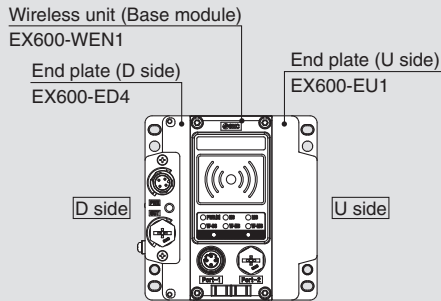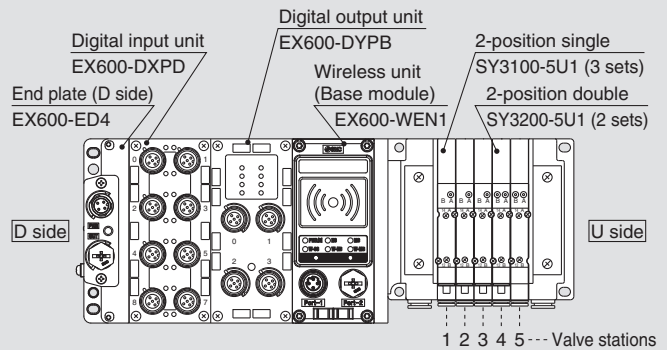**SS5Y3-10S6WE72-05B-C6**
(Type 10 5-station manifold base, Base EtherNet/IP™ compatible)
Negative common, M12 connector IN/OUT pin arrangement 1, I/O unit: 2 stations
∗ SY3100-5U1 ················· **3 sets (2-position single part no.)**
∗ SY3200-5U1 ················· **2 sets (2-position double part 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 catalogue of each valve series.

Ordering Example of the Remote Module

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

Digital output unit
EX600-DYPB

Digital input unit
EX600-DXPD

End plate (D side)
EX600-ED4

Wireless unit
(Remote module)
EX600-WSV1

End plate (U side)
EX600-EU1

D side

U side

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

Digital input unit
EX600-DXPD

Digital output unit
EX600-DYPB

End plate (D side)
EX600-ED4

Wireless unit
(Remote module)
EX600-WSV1

2-position single
SY3100-5U1 (3 sets)

2-position double
SY3200-5U1 (2 sets)

D side

U side

1 2 3 4 5 ··· Valve stations
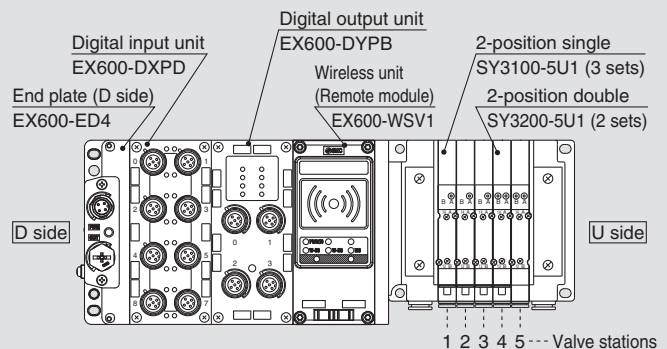
SS5Y3-10S6WS72-05B-C6
(Type 10 5-station manifold base, remote)
Negative common, M12 connector IN/OUT pin arrangement 1, I/O unit: 2 stations
∗ SY3100-5U1 ················· **3 sets (2-position single part no.)**
∗ SY3200-5U1 ················· **2 sets (2-position double part no.)**
∗ EX600-DXPD ··············· **1 set I/O unit part no. (Stations 1)**
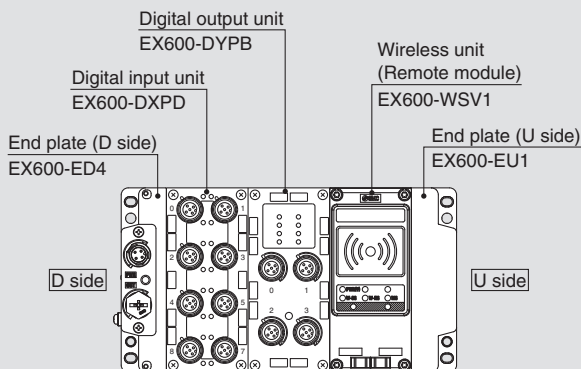∗ EX600-DYPB··············· **1 set I/O unit part no. (Stations 2)**

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

· For details, refer to the catalogue of each valve series.

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 www.smc.eu 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)
	Analogue 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.)
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 $5 \le f < 8.4$ Hz 3.5 mm $8.4 \le f < 150$ 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		ISO/IEC 14443B (Type-B)
	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: www.smc.eu
*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.

27

SMC

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 www.smc.eu for the latest information regarding in which countries the product is certified.
Electrical	For control/input (US1) — Power supply voltage	24 VDC ±10 %
	For control/input (US1) — Current consumption	150 mA or less
	For output (US2) — Power supply voltage	24 VDC ±10 %
	For output (US2) — Max. supply current	4 A
Input/Output	Number of inputs — System input size	Max. 1280 points together with the registered remote modules
	Number of inputs — 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
	Number of outputs — Output size	Max. 128 points (increase or decrease by 16 points)
	Analogue 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
	Analogue input/output — 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)
	Valve output — Number of outputs	Max. 32 points (0/8/16/24/32 points)
	Valve output — 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 $5 \leq f < 8.4$ Hz 3.5 mm $8.4 \leq f < 150$ Hz 9.8 m/s^2 (Excludes valve manifold)
	Impact resistance	Conforms to EN 61131-2 147 m/s^2, 11 ms (Excludes valve manifold)
	Standards	CE marking
	Weight	300 g
NFC communication*3	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 The configuration file can be downloaded from the SMC website: www.smc.eu
∗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

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)
	Radio Law certificate		Refer to the SMC website www.smc.eu for the latest information regarding in which countries the product is certified.
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 $5 \leq f < 8.4$ Hz 3.5 mm $8.4 \leq f < 150$ 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
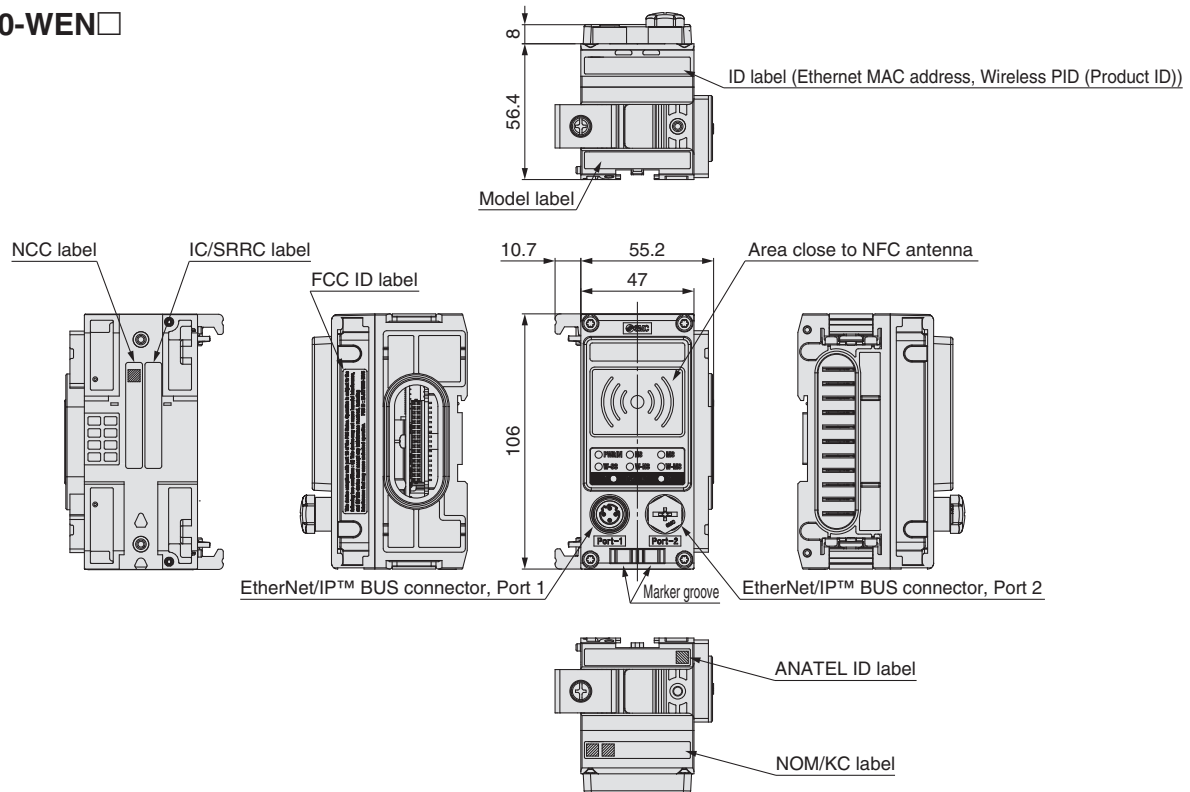
End Plate (D side)

	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.

SMC

Dimensions

Base Module

EX600-WEN☐

ID label (Ethernet MAC address, Wireless PID (Product ID))

Model label

8

56.4

NCC label

IC/SRRC label

FCC ID label

10.7

55.2

47

Area close to NFC antenna

106

EtherNet/IP™ BUS connector, Port 1

Marker groove

EtherNet/IP™ BUS connector, Port 2

Port-1

Port-2

ANATEL ID label

NOM/KC label

Connector for EtherNet/IP™ Port 1/Port 2

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

EX600-W Series

Dimensions

Base Module

EX600-WPN□

ID label (Ethernet MAC address, Wireless PID (Product ID))

Model label

8

56.4

NCC label   IC/SRRC label

FCC ID label

10.7   55.2   Area close to NFC antenna

47

106

PROFINET BUS connector, Port 1   Marker groove   PROFINET BUS connector, Port 2

ANATEL ID label

NOM/KC label
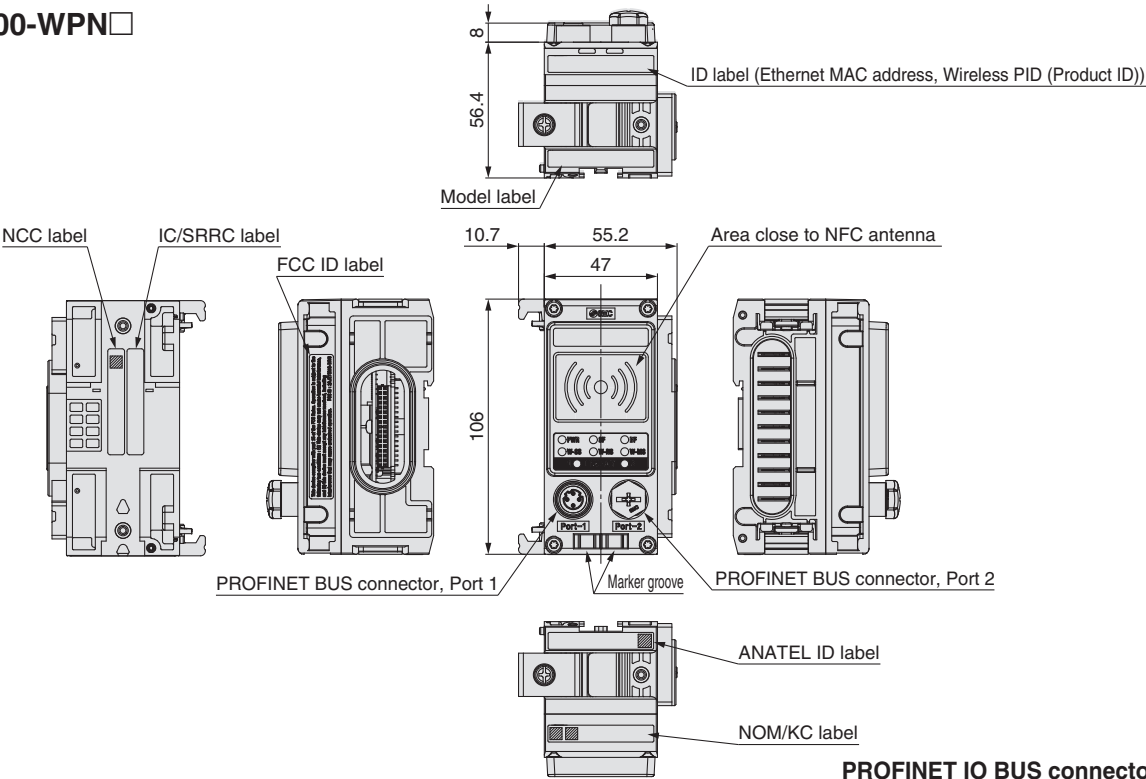
PROFINET IO BUS connector, Port 1/Port 2

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

Remote Module

EX600-WSV□

ID label (Wireless PID (Product ID))

Model label

8

56.4

NCC label   IC/SRRC label

FCC ID label

10.7   55.2   Area close to NFC antenna

47

106

Marker groove

ANATEL ID label

NOM/KC label

SMC

Dimensions

End Plate (D side)

EX600-ED2

2 x M4 direct mounting hole

Power supply connector PWR IN

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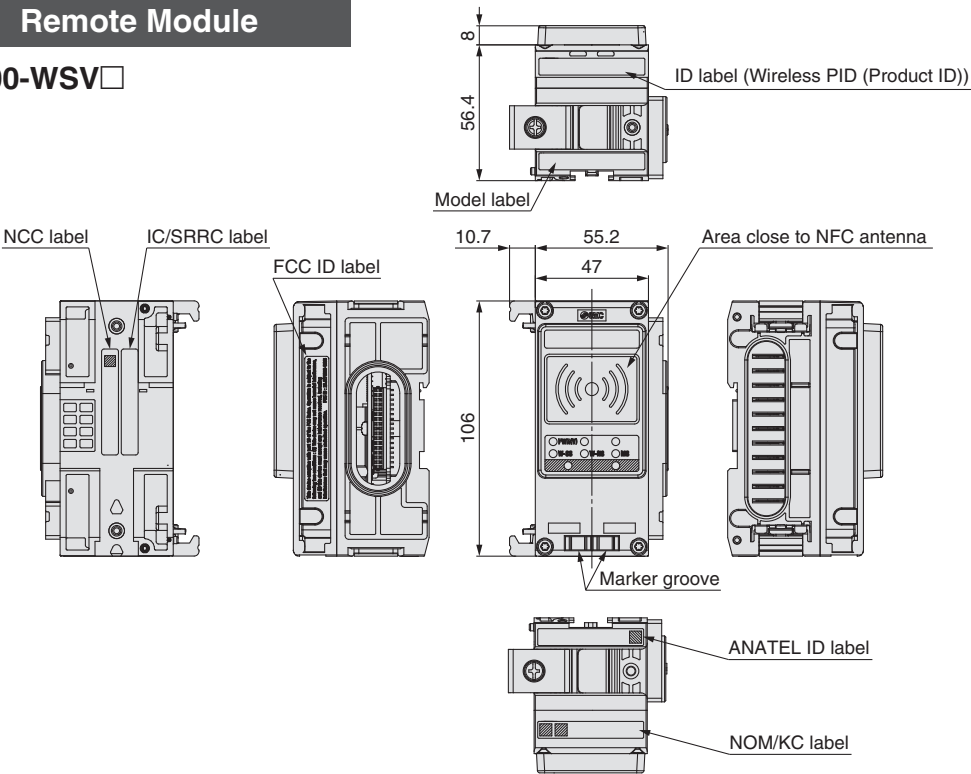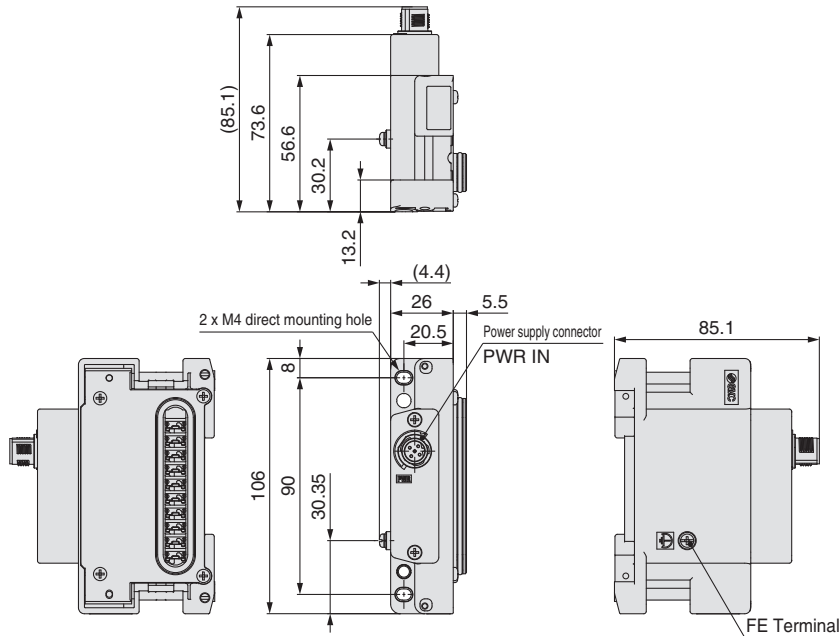
Power supply connector PWR IN: M12 5-pin plug, B-coded

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

2 x M4 direct mounting hole

Power supply connector PWR IN

Power supply connector PWR OUT

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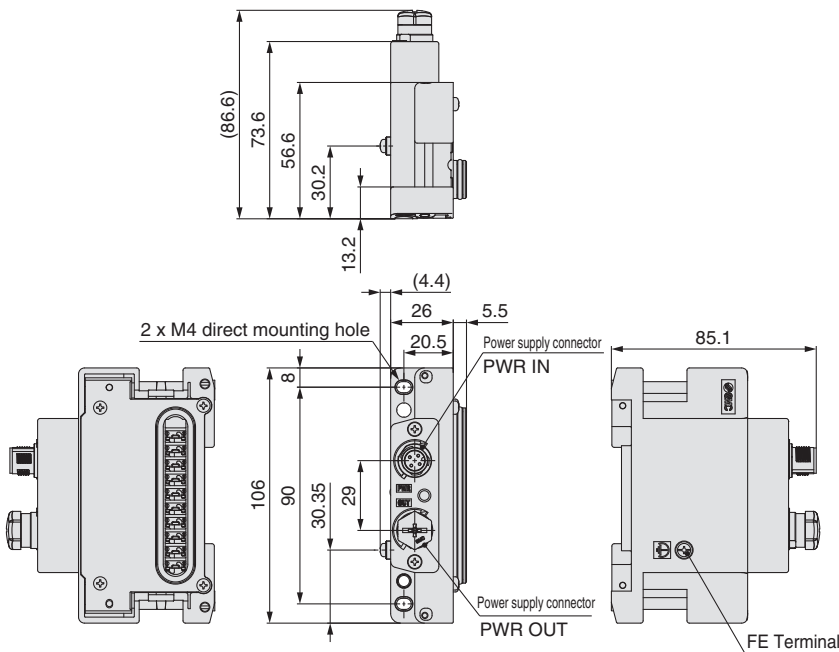
Power supply connector PWR IN: M12 4-pin plug, A-coded

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)

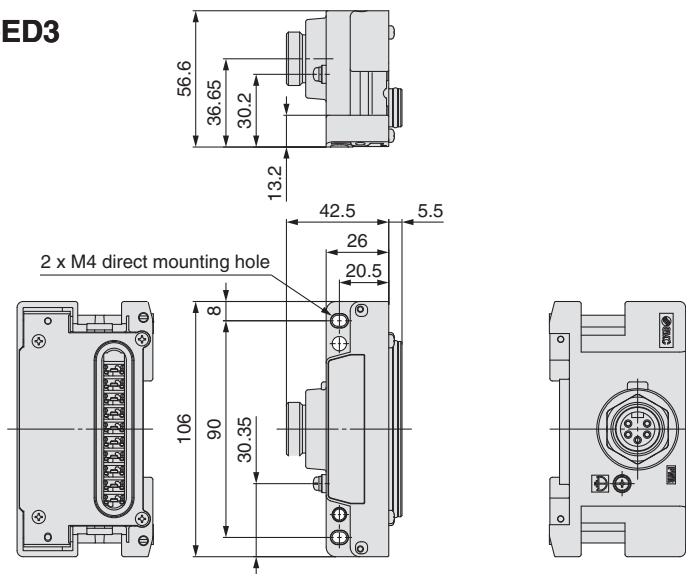**Power supply connector PWR OUT: M12 5-pin socket, A-coded**

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

SMC

32

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)

2 x M4 direct mounting hole

End Plate (U side)

EX600-EU1

SI unit mounting hole x 2

2 x M4 direct mounting hole

NFC Reader/Writer

EXW1-NT1

Cap
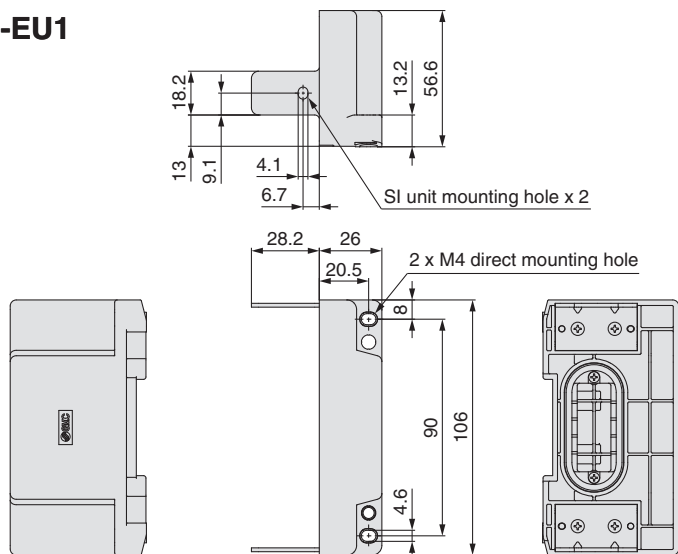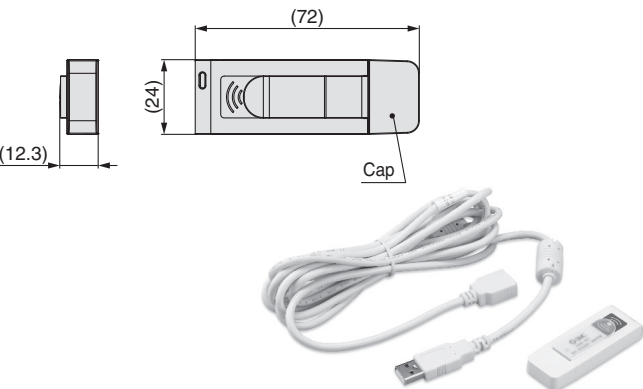
Fixing Bracket

EXW1-AB1 (Option, For EX600-W)

∗ Order a fixing bracket.

33

SMC
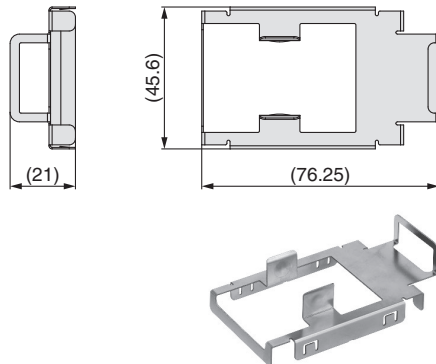
LED Display

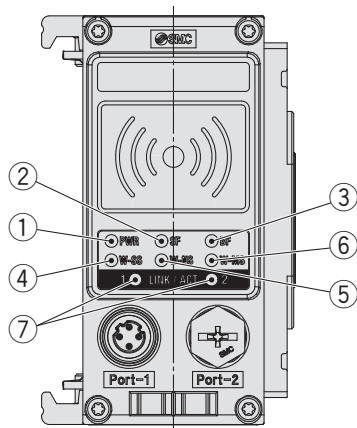**Base module**
EtherNet/IP™ communication specifications

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 · Analogue I/O upper set limit exceeded · Analogue 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
			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.) · Abnormal power supply voltage level for control and input (US1) · Abnormal power supply voltage level for output (US2) · Excessive I/O setting inputs/outputs · Analogue I/O upper set limit exceeded · Analogue 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.

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.) · 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 · Analogue I/O upper set limit exceeded · Analogue 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)
3	BF	PROFINET connection status	OFF	PROFINET communication is established.
			Red LED flashes.	The PROFINET controller setting and the EX600 configuration data are mismatched.
			Red LED is ON.	PROFINET communication is not established. · 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.
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
			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.) · Abnormal power supply voltage level for control and input (US1) · Abnormal power supply voltage level for output (US2) · Excessive I/O setting inputs/outputs · Analogue I/O upper set limit exceeded · Analogue 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

SMC

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
			OFF	The base module is not registered.
4	MS	Remote module 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.) · 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 · Analogue I/O upper set limit exceeded · Analogue 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.

❾ Power Supply Cable (M12 connector, For EX600-ED2)
❿ Power Supply Cable (M12 connector, For EX600-ED4/5)

❺ Seal Cap (M8)

⓭ I/O Cable with Connector

❻ Marker

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

⓫ Communication Cable
⓬ Field-wireable Communication Connector

❷ Valve Plate (When the valve manifold is in use)

❺ Seal Cap (M12)

❹ Reinforcing Brace (For direct mounting)

❸ End Plate (U side) (When the valve manifold is not in use)

❹ Reinforcing Brace (For DIN rail mounting)

❶ End Plate Bracket

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

❶ 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
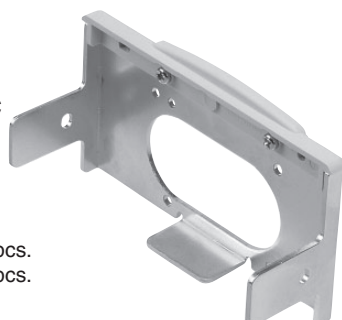**(For the SY and JSY series)**

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

❷ Valve Plate

EX600-ZMV1
(For the SV, S0700, and VQC series)
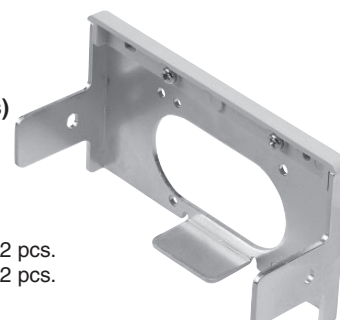
Enclosed parts
Round head screw (M4 x 6)   2 pcs.
Round head screw (M3 x 8)   4 pcs.

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.

SMC

❸ 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
—	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.
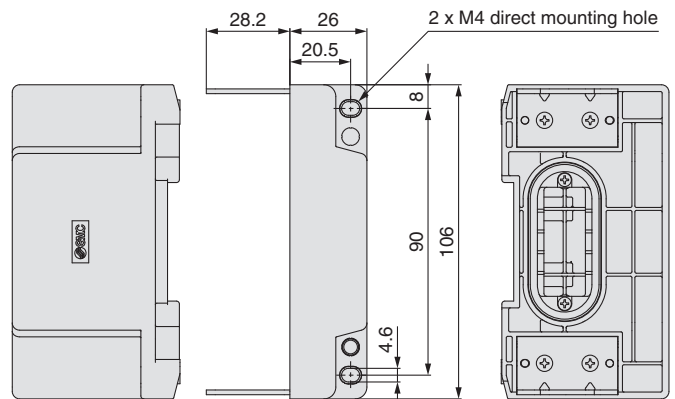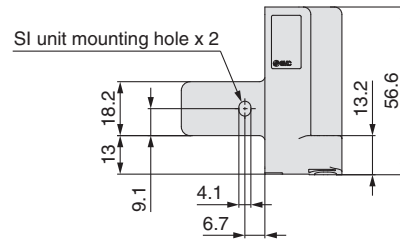
●**Specification**

Symbol	Specification
1	Waterproof cover

●**End plate mounting position: U side**

●**End plate**

EX600-EU1

SI unit mounting hole x 2

2 x M4 direct mounting hole
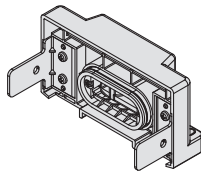
Enclosed parts
Round head screw (M4 x 6) 2 pcs.

❹ 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.
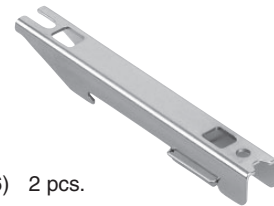
For direct mounting
EX600-ZMB1

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.

❺ Seal Cap (10 pcs.)

Be sure to mount a seal cap on any unused I/O connectors. Otherwise, the specified enclosure cannot be maintained.
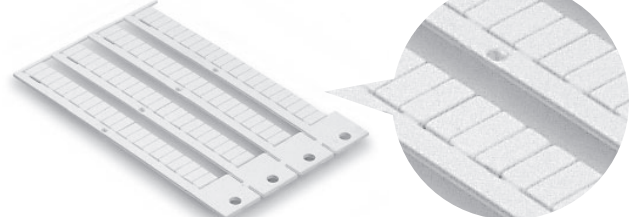
EX9-AWES
For M8

EX9-AWTS
For M12

❻ Marker (1 sheet, 88 pcs.)

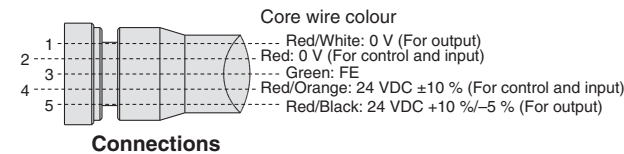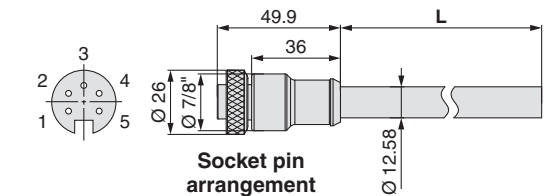The signal name of I/O device and each unit address can be entered and mounted on each unit.
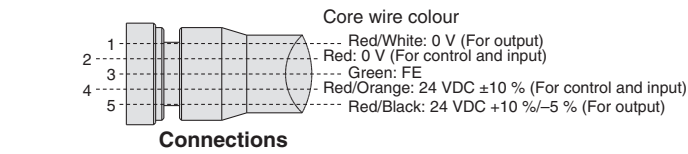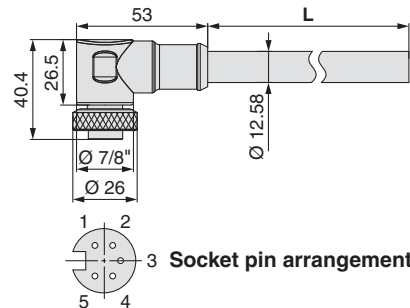
EX600-ZT1

EX600-W Series

❼ Power Supply Cable (7/8 inch connector)

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

49.9
36
L

Ø 26
Ø 7/8"
Ø 12.58

Socket pin arrangement

Angled connector type

53
L
40.4
26.5
Ø 12.58
Ø 7/8"
Ø 26

Socket pin arrangement

Core wire colour

1 — Red/White: 0 V (For output)
2 — Red: 0 V (For control and input)
3 — Green: FE
4 — Red/Orange: 24 VDC ±10 % (For control and input)
5 — Red/Black: 24 VDC +10 %/–5 % (For output)

Connections

Core wire colour

1 — Red/White: 0 V (For output)
2 — Red: 0 V (For control and input)
3 — Green: FE
4 — Red/Orange: 24 VDC ±10 % (For control and input)
5 — Red/Black: 24 VDC +10 %/–5 % (For output)

Connections

Item	Specifications
Cable O.D.	Ø 12.58 mm
Conductor nominal cross section	1.5 mm²/AWG16
Wire O.D. (Including insulator)	2.35 mm
Min. bending radius (Fixed)	110 mm

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

PCA-1578081	Socket [compatible with AWG22-16]

Applicable Cable

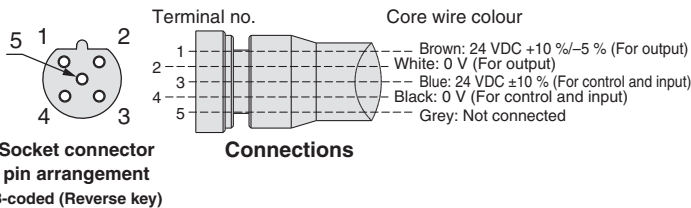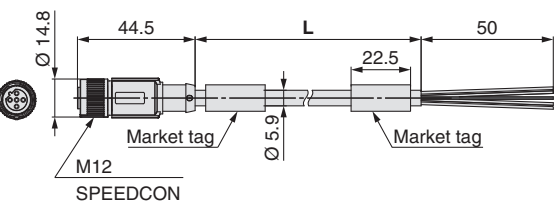| Item	Specifications
Cable O.D.	Ø 12.0 to 14.0 mm
Wire gauge (Stranded wire cross section)	0.34 to 1.5 mm² AWG22 to 16

❾ 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

Ø 14.8
44.5
L
50
22.5
Ø 5.9
Market tag
Market tag
M12
SPEEDCON

Angled connector type

36.3
L
50
22.5
28
Ø 5.9
Market tag
Market tag
Ø 14.8
M12
SPEEDCON

Terminal no. | Core wire colour

1 — Brown: 24 VDC +10 %/–5 % (For output)
2 — White: 0 V (For output)
3 — Blue: 24 VDC ±10 % (For control and input)
4 — Black: 0 V (For control and input)
5 — Grey: Not connected

Socket connector pin arrangement
B-coded (Reverse key)

Connections

Terminal no. | Core wire colour

1 — Brown: 24 VDC +10 %/–5 % (For output)
2 — White: 0 V (For output)
3 — Blue: 24 VDC ±10 % (For control and input)
4 — Black: 0 V (For control and input)
5 — Grey: Not connected

Socket connector pin arrangement
B-coded (Reverse key)

Connections

Item	Specifications
Cable O.D.	Ø 5.9 mm
Conductor nominal cross section	0.34 mm²/AWG22
Wire O.D. (Including insulator)	1.27 mm
Min. bending radius (Fixed)	59 mm

SMC

❿ 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)

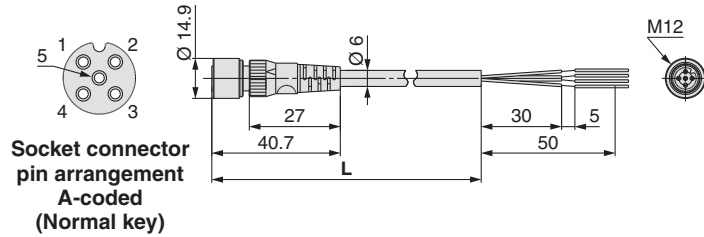| 010	1000 mm
050	5000 mm

Connector specification

S	Straight
A	Angled

Straight connector type

Socket connector
pin arrangement
A-coded
(Normal key)

Item	Specifications
Cable O.D.	Ø 6 mm
Nominal cross section	0.3 mm²/AWG22
Wire diameter (Including insulator)	1.5 mm
Min. bending radius	40 mm (Fixed)

Angled connector type
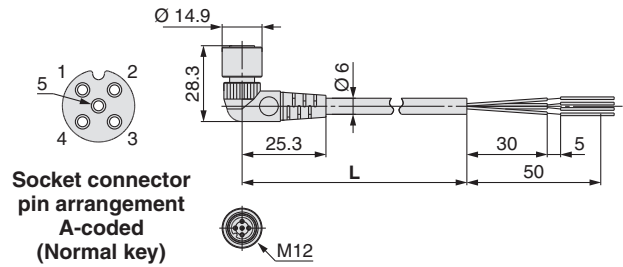
Socket connector
pin arrangement
A-coded
(Normal key)

Item	Specifications
Cable O.D.	Ø 6 mm
Nominal cross section	0.3 mm²/AWG22
Wire diameter (Including insulator)	1.5 mm
Min. bending radius	40 mm (Fixed)

Terminal no. — Cable core wire colours

1	Brown
2	White
3	Blue
4	Black
5	Grey

Connections
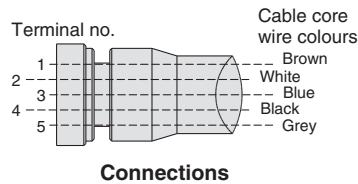
SPEEDCON

PCA- 1401804

Cable length (L)

1401804	1500 mm
1401805	3000 mm
1401806	5000 mm

Socket connector
pin arrangement
A-coded
(Normal key)

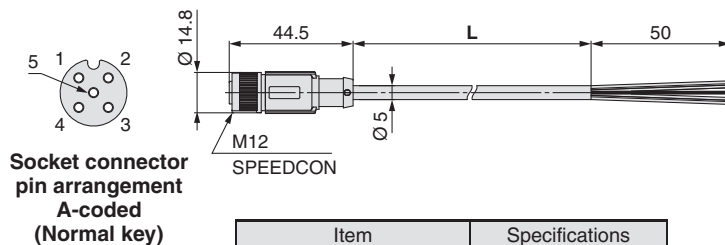| Item	Specifications
Cable O.D.	Ø 5 mm
Nominal cross section	0.3 mm²/AWG22
Wire diameter (Including insulator)	1.27 mm
Min. bending radius	21.7 mm (Fixed)

Terminal no. — Cable core wire colours

1	Brown
2	White
3	Blue
4	Black
5	Green/Yellow
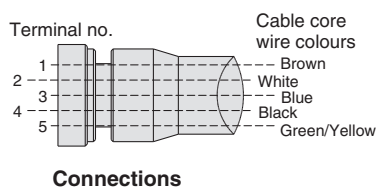
Connections

PCA- 1557769

Cable length (L)

1557769	3000 mm

Socket connector
pin arrangement
A-coded
(Normal key)

Connections

Plug connector
pin arrangement
A-coded
(Normal key)
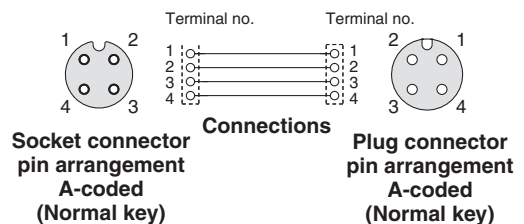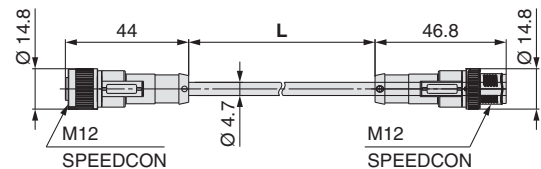
EX600-W Series

⓫ 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

RJ-45 Ø 14.8 Metal parts Ø 6.4 Metal parts M12

47.3 L 44

Plug connector pin arrangement D-coded

Signal name	Terminal no.		Terminal no.	Core wire colour
TD+	1		1	White/Orange
RD+	2		2	Orange
TD–	3		3	White/Green
RD–	4		4	
			5	
			6	Green
			7	
			8	

Metal parts

Shield   Metal parts

Plug connector pin arrangement

Connections (Straight cable)
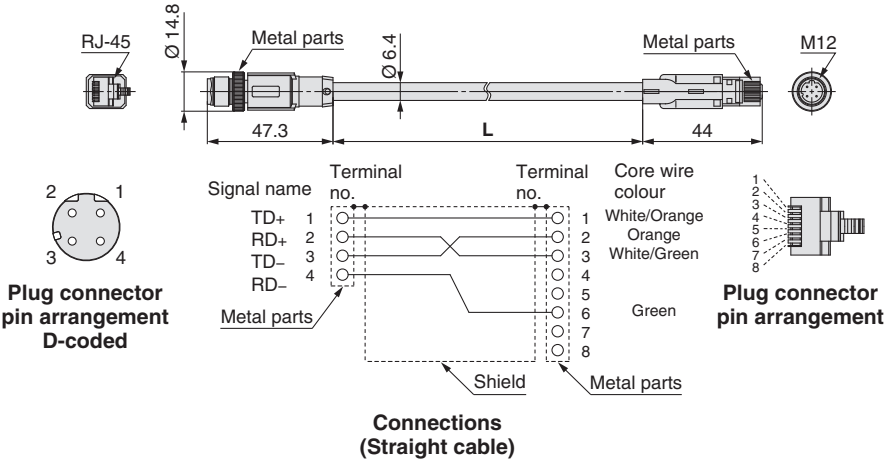
Item	Specifications
Cable O.D.	Ø 6.4 mm
Conductor nominal cross section	0.14 mm²/AWG26
Wire O.D. (Including insulator)	0.98 mm
Min. bending radius (Fixed)	26 mm

PCA-1446566 (Plug)

Plug connector pin arrangement D-coded

Ø 14.8   47.3   5000   50

Ø 6.5

M12 SPEEDCON

Terminal no.   Wire guide colour

1 — Yellow: TD+
2 — White: RD+
3 — Orange: TD-
4 — Blue: RD-
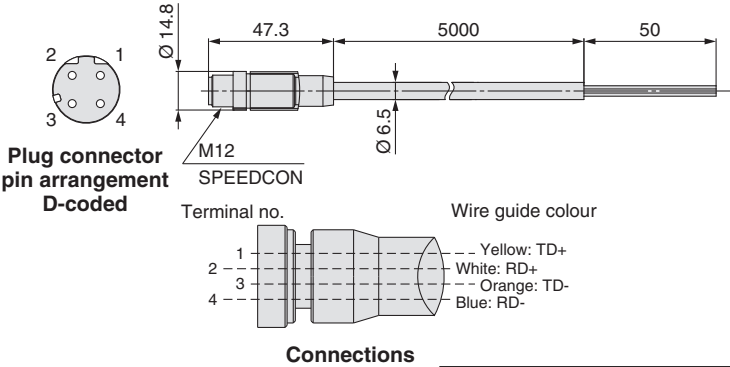
Connections

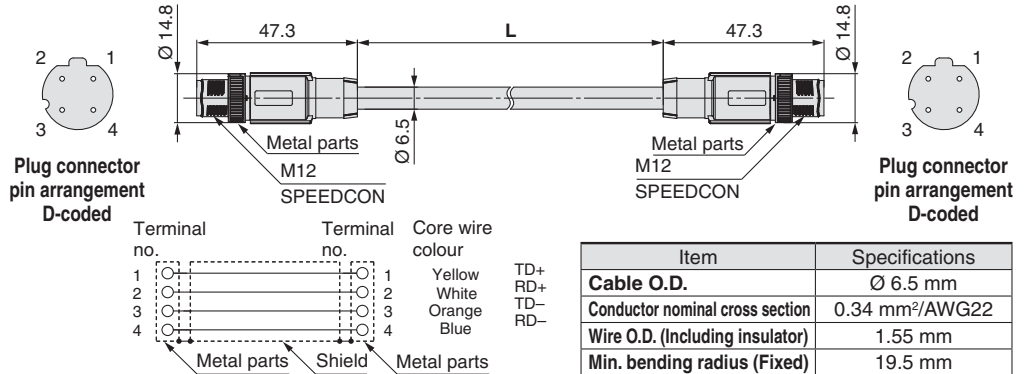| Item	Specifications
Cable O.D.	Ø 6.5 mm
Conductor nominal cross section	AWG22
Wire O.D. (Including insulator)	1.55 mm
Min. bending radius (Fixed)	45.5 mm

SMC

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

Plug connector pin arrangement D-coded

Ø 14.8   47.3   L   47.3   Ø 14.8   Ø 6.5

Metal parts   M12 SPEEDCON   Metal parts   M12 SPEEDCON

Plug connector pin arrangement D-coded

Terminal no.		Terminal no.	Core wire colour	
1		1	Yellow	TD+
2		2	White	RD+
3		3	Orange	TD–
4		4	Blue	RD–

Metal parts   Shield   Metal parts

Connections (Straight cable)

Item	Specifications
Cable O.D.	Ø 6.5 mm
Conductor nominal cross section	0.34 mm²/AWG22
Wire O.D. (Including insulator)	1.55 mm
Min. bending radius (Fixed)	19.5 mm

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

Plug connector pin arrangement D-coded

36.3   L   Ø 6.5   30.8   Ø 15

Metal parts   M12 SPEEDCON   Metal parts   M12 SPEEDCON

Plug connector pin arrangement D-coded

Terminal no.		Terminal no.	Core wire colour	Signal name
1		1	Yellow	TD+
2		2	White	RD+
3		3	Orange	TD–
4		4	Blue	RD–

Metal parts   Shield   Metal parts
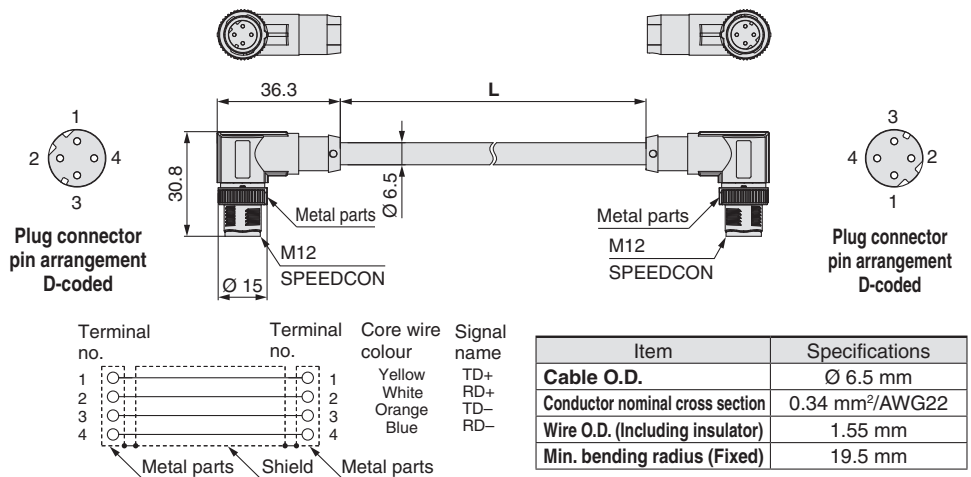
Connections (Straight cable)

Item	Specifications
Cable O.D.	Ø 6.5 mm
Conductor nominal cross section	0.34 mm²/AWG22
Wire O.D. (Including insulator)	1.55 mm
Min. bending radius (Fixed)	19.5 mm

⑫ Field-wireable Communication Connector

Plug

For PROFINET   For EtherNet/IP™

PCA-1446553
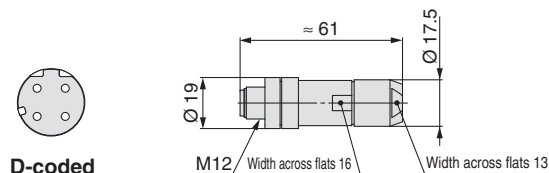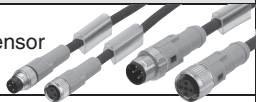
D-coded

≈ 61   Ø 17.5   Ø 19

M12   Width across flats 16   Width across flats 13

Applicable Cable

| Item	Specifications
Cable O.D.	4.0 to 8.0 mm
Wire gauge (Stranded wire cross section)	0.14 to 0.34 mm²/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*

⑬ I/O Cable with Connector, I/O Connector

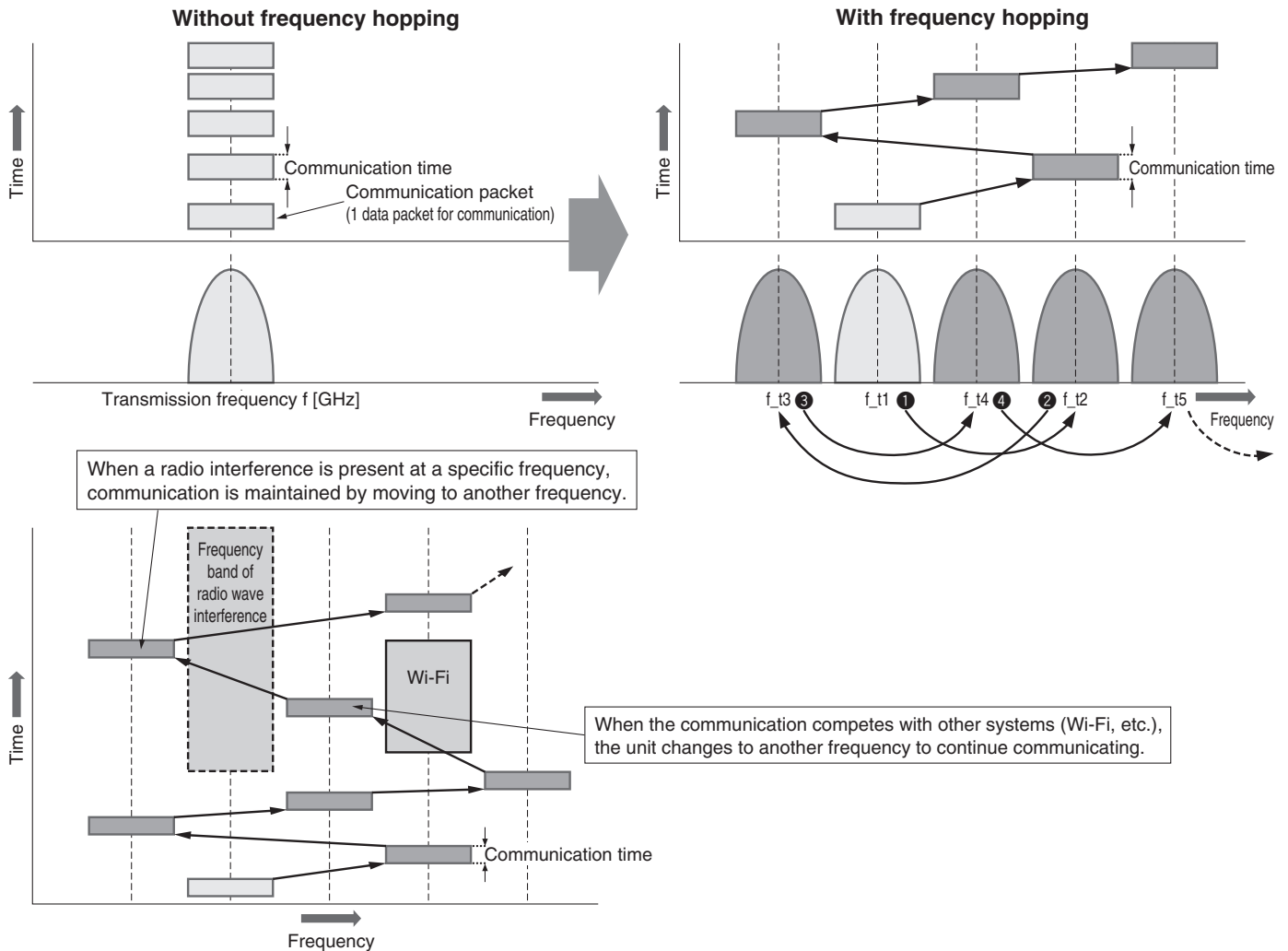| Name	Use	Part no.	Description
Cable with connector	For sensor	**PCA-1557769**	Cable with M12 connector (4 pins/3 m)
		PCA-1557772	Cable with M8 connector (3 pins/3 m)
Field-wireable connector	For sensor	**PCA-1557730**	Field-wireable connector (M8/3 pins/Plug/Piercecon® connection)
		PCA-1557743	Field-wireable connector (M12/4 pins/Plug/QUICKON-ONE connection/SPEEDCON)
		PCA-1557756	
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 catalogue on **www.smc.eu**.
∗ 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.

M8/M12 connector

M12 x 2 → M12

M8 x 2 → M12

Y connector

M12

Cable with connector

I/O unit

SMC
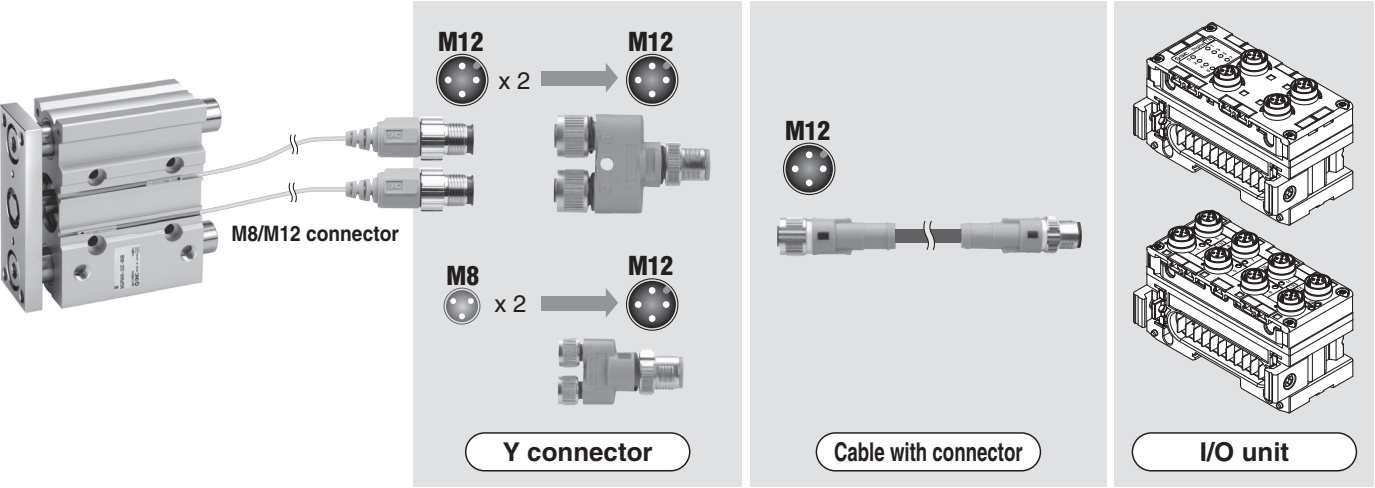
Technical Data

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.

Without frequency hopping

Time

Communication time
Communication packet
(1 data packet for communication)

Transmission frequency f [GHz]

Frequency

With frequency hopping

Time

Communication time

f_t3 ❸   f_t1 ❶   f_t4 ❹   ❷ f_t2   f_t5

Frequency

When a radio interference is present at a specific frequency, communication is maintained by moving to another frequency.

Frequency band of radio wave interference

Wi-Fi

Time

When the communication competes with other systems (Wi-Fi, etc.), the unit changes to another frequency to continue communicating.

Communication time

Frequency

⚠**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 catalogue, 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.smc.eu

---

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.

⚠ 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 catalogueue 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 catalogueue.
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 catalogueue 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.

⚠ Safety Instructions	Be sure to read "Handling Precautions for SMC Products" (M-E03-3) before using.

Revision History

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

SMC Corporation (Europe)

Austria	+43 (0)2262622800	www.smc.at	office@smc.at
Belgium	+32 (0)33551464	www.smc.be	info@smc.be
Bulgaria	+359 (0)2807670	www.smc.bg	office@smc.bg
Croatia	+385 (0)13707288	www.smc.hr	office@smc.hr
Czech Republic	+420 541424611	www.smc.cz	office@smc.cz
Denmark	+45 70252900	www.smcdk.com	smc@smcdk.com
Estonia	+372 651 0370	www.smcee.ee	info@smcee.ee
Finland	+358 207513513	www.smc.fi	smcfi@smc.fi
France	+33 (0)164761000	www.smc-france.fr	supportclient@smc-france.fr
Germany	+49 (0)61034020	www.smc.de	info@smc.de
Greece	+30 210 2717265	www.smchellas.gr	sales@smchellas.gr
Hungary	+36 23513000	www.smc.hu	office@smc.hu
Ireland	+353 (0)14039000	www.smcautomation.ie	sales@smcautomation.ie
Italy	+39 03990691	www.smcitalia.it	mailbox@smcitalia.it
Latvia	+371 67817700	www.smc.lv	info@smc.lv

Lithuania	+370 5 2308118	www.smclt.lt	info@smclt.lt
Netherlands	+31 (0)205318888	www.smc.nl	info@smc.nl
Norway	+47 67129020	www.smc-norge.no	post@smc-norge.no
Poland	+48 222119600	www.smc.pl	office@smc.pl
Portugal	+351 214724500	www.smc.eu	apoioclientept@smc.smces.es
Romania	+40 213205111	www.smcromania.ro	smcromania@smcromania.ro
Russia	+7 (812)3036600	www.smc.eu	sales@smcru.com
Slovakia	+421 (0)413213212	www.smc.sk	office@smc.sk
Slovenia	+386 (0)73885412	www.smc.si	office@smc.si
Spain	+34 945184100	www.smc.eu	post@smc.smces.es
Sweden	+46 (0)86031240	www.smc.nu	smc@smc.nu
Switzerland	+41 (0)523963131	www.smc.ch	info@smc.ch
Turkey	+90 212 489 0 440	www.smcturkey.com.tr	satis@smcturkey.com.tr
UK	+44 (0)845 121 5122	www.smc.uk	sales@smc.uk

South Africa	+27 10 900 1233	www.smcza.co.za	zasales@smcza.co.za