Wireless System

$C \in$ RoHS

Usable even in welding environments

Noise resistance	High-speed connection	Communication response
Uses the 2.4 GHz ISM frequency band Frequency hopping: Every 5 ms	From power supply ON to start of communication: **Min. 250 ms**[1] ∗1 For remote	Wireless communication signal Response time: **5 ms**

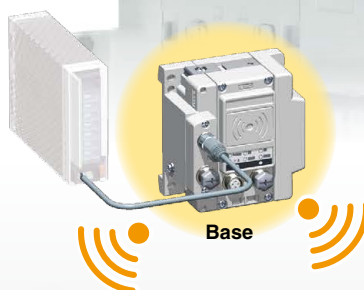| Communication cables not required	Number of I/O points	Compatible protocol
Reduced wiring work, space, and cost Minimized disconnection risk	Max. 1280 inputs/1280 outputs (Max. 128 inputs/128 outputs per module)	EtherNet/IP™ New PROFINET®
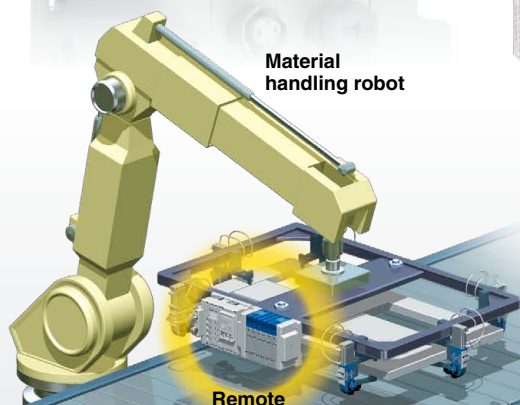
Material handling robot

Remote

Base

Spot welding

Remote

Base module

Remote module

EtherNet/IP™   PROFINET®

Countries/Regions in which wireless is supported
This product cannot be used in countries where wireless is not supported. Refer to page 23 for details on countries in which the product can be used.

Country/Region	Standards
Japan	(Japanese radio law)
EU	$C \in$ (CE marking/RE Directive)
USA	FC (FCC)

EX600-W *Series*

SMC

CAT.E02-28B ®

Provide safe and reliable communication

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.
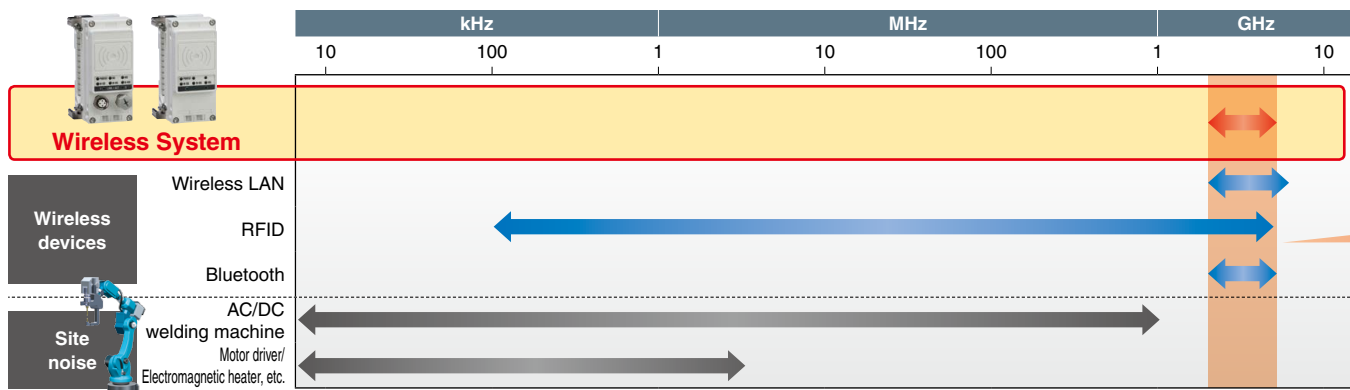
∗ ISM (Industrial, Scientific and Medical) radio bands: Radio bands reserved for the use of radio frequency energy for industrial, scientific and medical purposes.
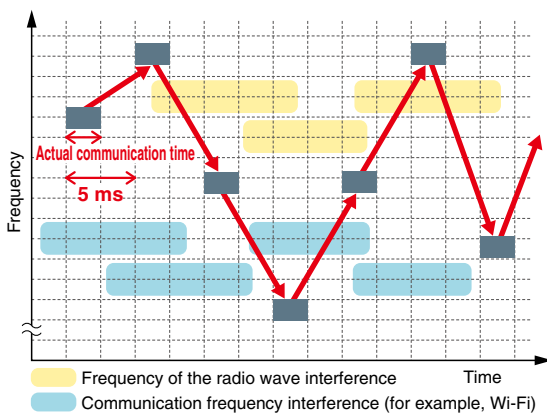
Provide stable communication

Communications using various forms of radio wave propagation

PLC

Power supply

Base

Communication possible in a 10 m radius
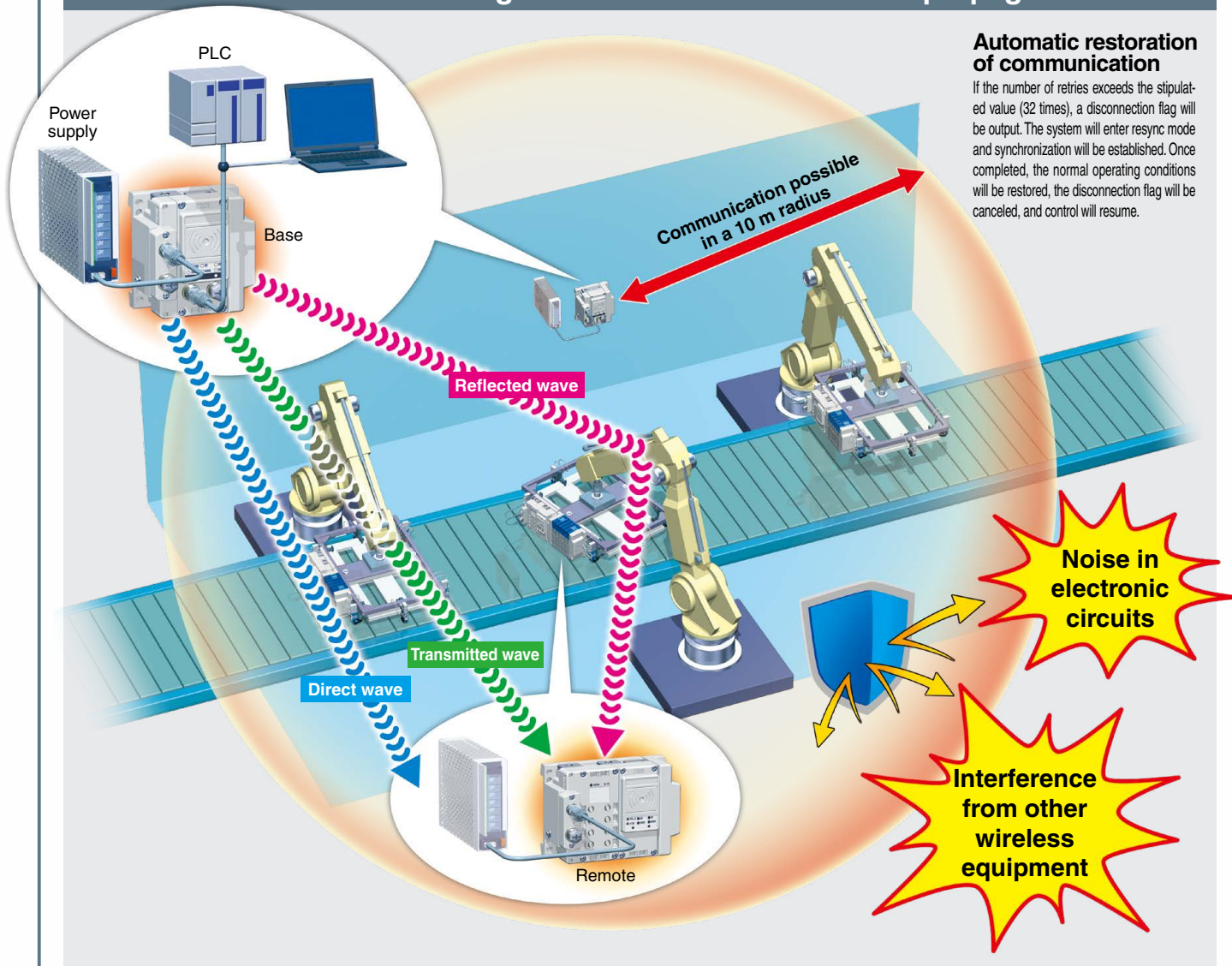
Automatic restoration of communication
If the number of retries exceeds the stipulated value (32 times), a disconnection flag will be output. The system will enter resync mode and synchronization will be established. Once completed, the normal operating conditions will be restored, the disconnection flag will be canceled, and control will resume.

Reflected wave

Transmitted wave

Direct wave

Remote

Noise in electronic circuits

Interference from other wireless equipment

SMC

Frequency hopping: Every 5 ms

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

Frequency Hopping

The communication technology rapidly changes frequency (hopping), to prevent interference from other wireless equipment. When the frequency of Wi-Fi and other wireless communications compete, or radio wave interference is present, then other frequencies are used for communication. For details, refer to technical data on page 23.

Actual communication time
5 ms
Frequency
Time

Frequency of the radio wave interference
Communication frequency interference (for example, Wi-Fi)

High security using encryption

Unauthorized access from outside is prevented by using data encryption.

Base
Remote
Unauthorized access/ data falsification
Unauthorized wiretapping
Removing device
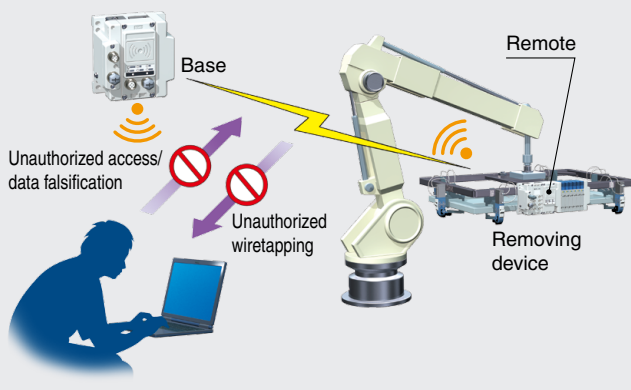
Point-to-Multipoint communication

Registration and communication of up to 127 remote modules is possible.

Base

EtherNet/IP™	Max. 127 units
PROFINET	Max. 31 units

Remote 1
Remote 2
Remote 3
Remote 4
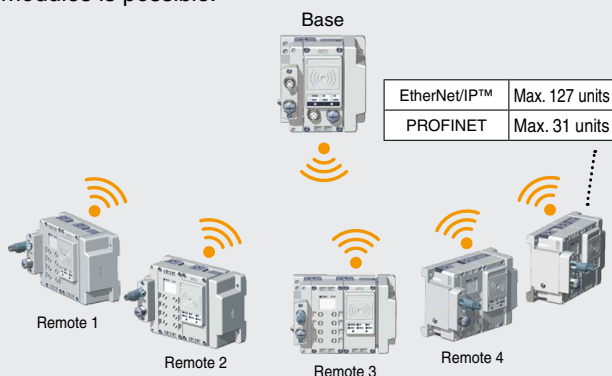
∗ 1 to 15 units are recommended for simultaneous operation.
∗ It is possible to install multiple bases in the same area.

Wireless communication status can be monitored.
<Monitoring the remote communication status>

The wireless system connection can be monitored during operation according to the diagnostic data.
The installation location can be ascertained according to the intensity level of the radio wave received by the unit display.

[Diagnostic data]
∗ When communication from the remote cannot be received
∗ When communication retry has exceeded the upper limit (32 times)

[Unit display]

For Base	W-SS (Radio wave receiving intensity (For communication from remote to base))	
EtherNet/IP™ PWR(V) NS MS W-SS W-NS W-MS 1 LINK / ACT 2	Green LED is ON.	Received power level of all remotes is 3.
	Green LED flashes. (1 Hz)	There are connected remotes with received power level 2.
	Green LED flashes. (2 Hz)	There are connected remotes with received power level 1.
PROFINET PWR SF BF W-SS W-NS W-MS 1 LINK / ACT 2	Red LED flashes.	No remotes connected.
	OFF	Remote module is not registered.

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

∗ A received radio wave intensity level of 1 means the intensity is weak. Add a base so that the wave intensity becomes level 3 or 2. Alternatively remove the obstacle between the base and remote, or reduce the distance between the base and remote.

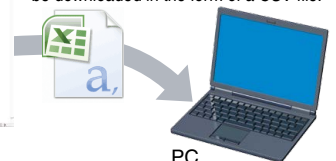### <Communication status can be downloaded by a PC>

By connecting the base to a PC, it is possible to view log files which show the number of retries or the received radio wave intensity. Log files are accessed by using a web browser to connect to the built-in web server. The wireless environment and installation location can be optimized by checking the number of retries and received radio wave intensity.

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

2 Ⓐ

Wiring material cost and installation work-hours can be reduced.

Wireless System	Current (Wired) System

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

Interchangeability maintained

∗ Maximum I/O of base/remote module is limited to 128 points.

Connection interchangeability between EX600 series SI units is maintained.
Replacement of wireless and wired systems is possible.

Wireless system — Wireless unit
Wired system — SI unit
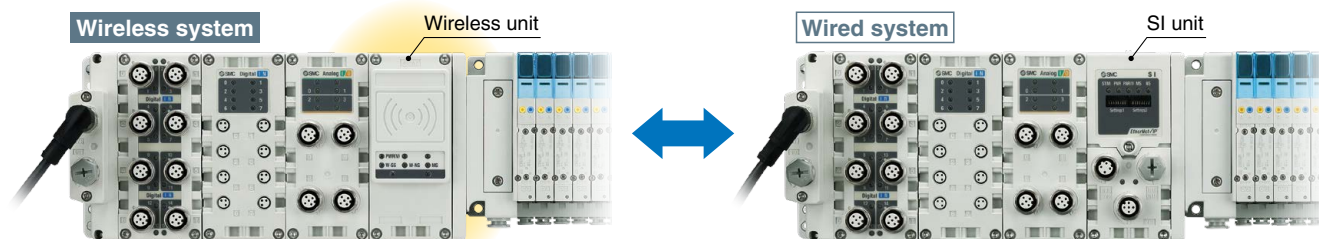
NFC contactless communication

(NFC: Near Field Communication)

Settings are possible using an NFC reader/writer and setting software.
(Some items can be set even when there is no power supplied.)
● Write IP address to the base
● Set the I/O points for the system and unit
● Pairing of the base and remote
● I/O monitoring

NFC reader/ writer
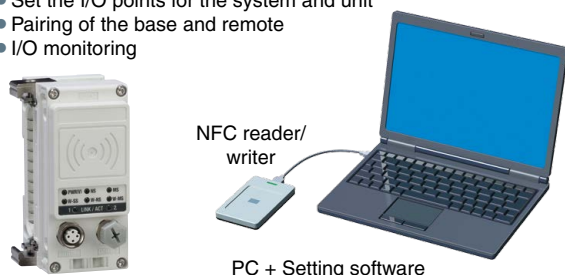
PC + Setting software

Configuration File

From SMC website

Documents/Download
⬇
Instruction Manuals
⬇
Fieldbus System
Serial Transmission System
⬇
EtherNet/IP™ Compatible
or
PROFINET Compatible
⬇
I/O Configurator for NFC
⬇
Configuration File

SMC

Application Examples

Tool change

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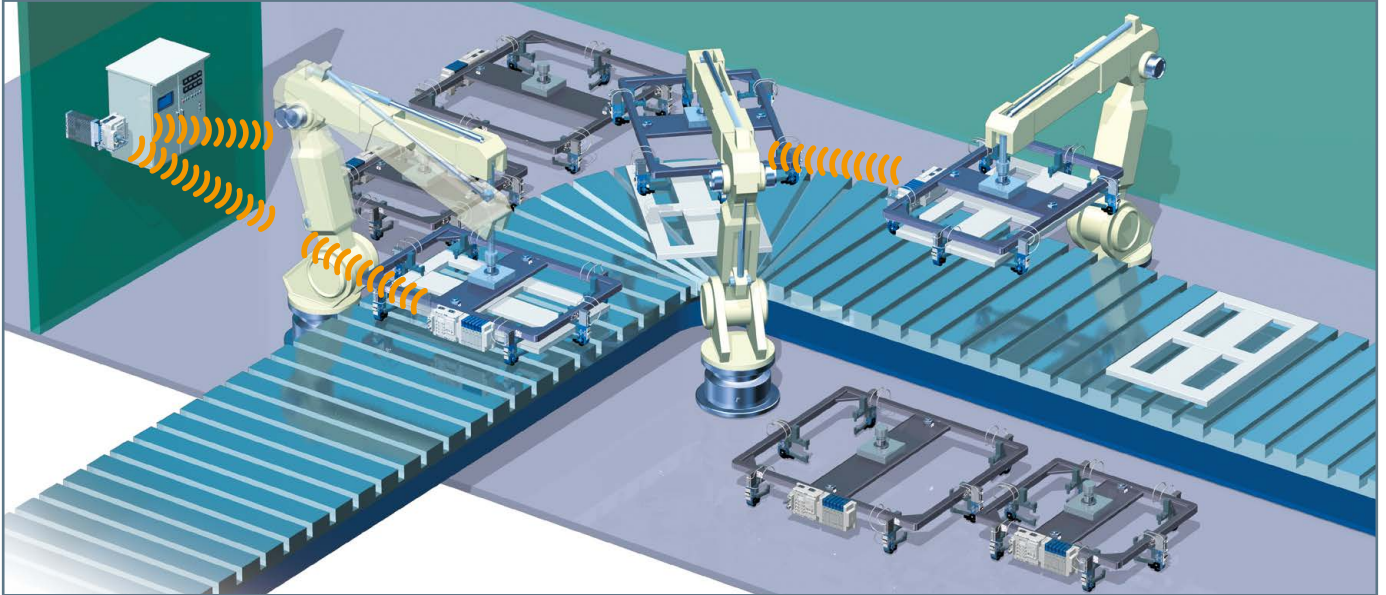
Rotary table

- Minimized disconnection risk
- Smaller diameter communication cable/tubing

Wired system
Communication line Power supply line

Power supply line only
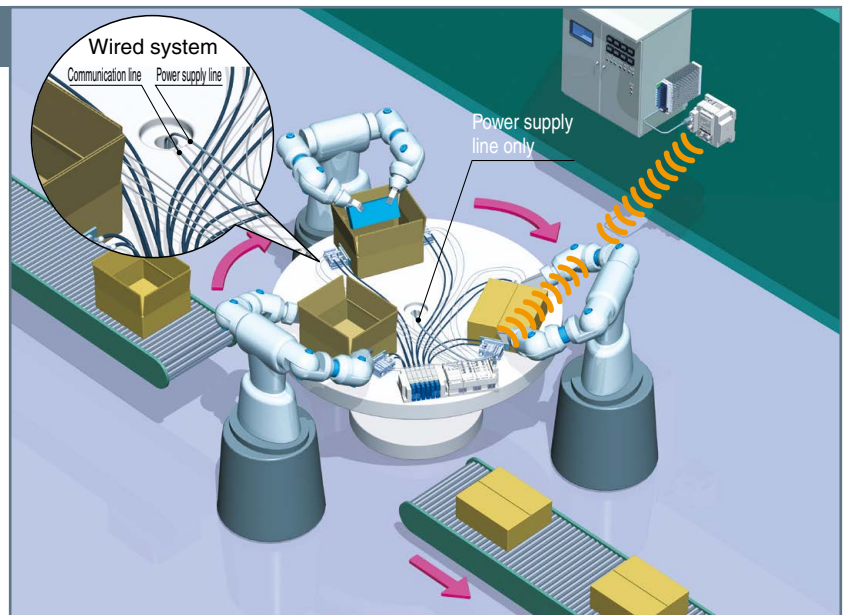
Blocking of radio waves
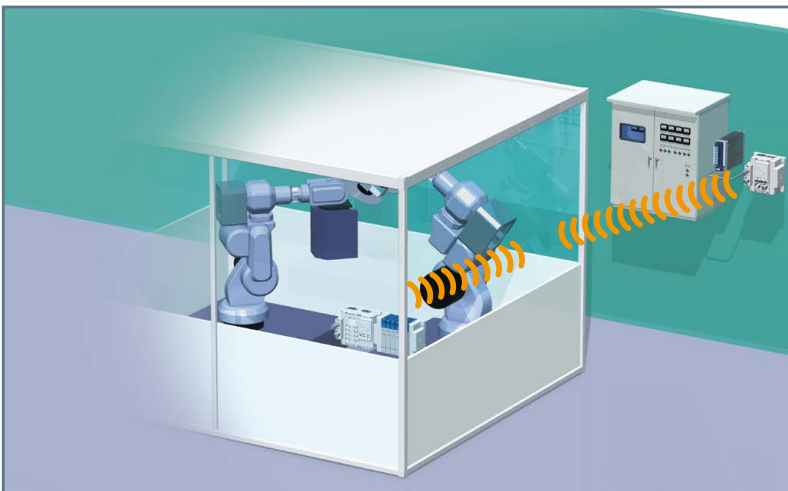
∗ The radio waves must not be blocked by nearby conductive objects such as metal enclosures or covers.

SMC

System Examples

PLC

Fieldbus

EtherNet/IP™

PROFI NET®

Setting/Monitor tool
Initial setting/monitoring/
pairing are possible.

PC

Wireless Network

EX600 I/O unit
▶Refer to the **Web Catalog**.

Base module
▶p. 7

Number of I/O points:
Max. 1280 inputs
1280 outputs

Combination Example ❶

EX600
I/O unit

Remote module No. 1
▶p. 7

Solenoid valve

Combination Example ❷

Remote module No. 2
▶p. 7

EX600 I/O unit

Combination Example ❸

Remote module No. 3
▶p. 7

Solenoid valve

Other products
Pressure switch, flow switch, auto switch, and other switches
(proximate sensor, photoelectric switch, limit switch, etc.)

Various actuators

Applicable Manifold Solenoid Valves

SY Series	IP67	**SV** Series	IP67	**S0700** Series	IP40	**VQC** Series	IP67
C E		C E c␣U␣L us		C E		C E	

⊘SMC

CONTENTS

Wireless System
EX600-W Series

EtherNet/IP

PROFINET ®

Base module   Remote module

How to Order

Ordering Example of the Base Module

Ordering Example of the Remote Module

Specifications

Dimensions

LED Display

Accessories

SMC

Wireless System
EX600-W *Series*

CE

RoHS
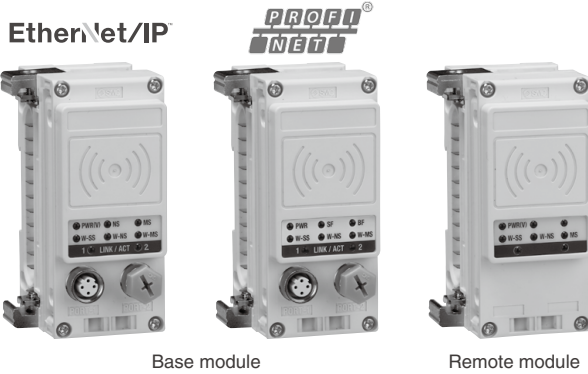
How to Order

Wireless Unit

EX600-WEN1

EtherNet/IP™   PROFINET

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

Base module   **Remote module**

Digital Input Unit

EX600-DXPD

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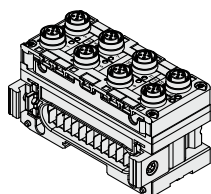
∗ For specifications, refer to the Fieldbus system EX600 series in the **Web Catalog**.

Digital Output Unit

EX600-DYPB

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)

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

Digital Input/Output Unit

EX600-DMPF

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)

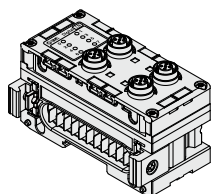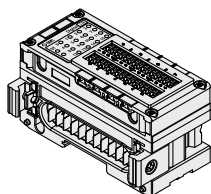∗ For specifications, refer to the Fieldbus system EX600 series in the **Web Catalog**.
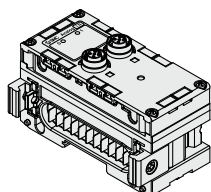
SMC

How to Order

Analog Input Unit
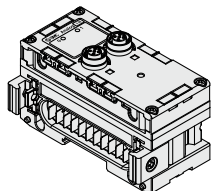
EX600 – AX A

Analog input

Number of input channels and Connector

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

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

Analog Output Unit

EX600 – AY A

Analog output

Number of output channels and Connector

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

∗ For specifications, refer to the Fieldbus system EX600 series in the **Web Catalog**.
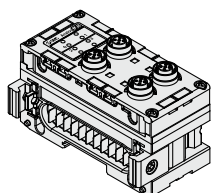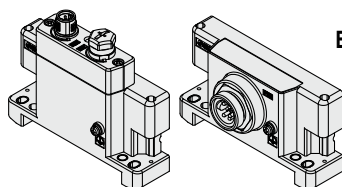
Analog Input/Output Unit

EX600 – AM B

Analog input/output

Number of input/output channels and Connector

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

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

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

For M12　**For 7/8 inch**

∗1 The pin layout for "4" and "5" pin connector is different.
Refer to the dimensions on page 14.

Mounting method

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

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

End Plate (U side)
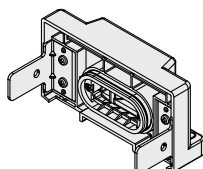
EX600 – E U 1 – 2

End plate

End plate mounting position: U side

Specifications

Symbol	Specifications
1	Waterproof cover

Mounting method

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

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

EX600-W Series

Ordering Example of the Base Module

Base module: Without valve manifold and input/output unit	Manifold with base module: With input/output unit

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
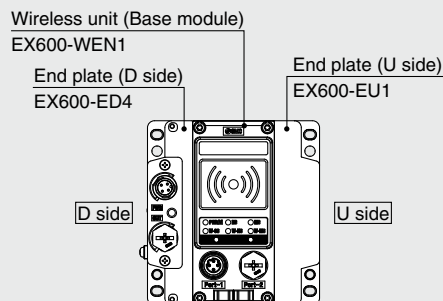
EX600-ED4 ····························· **1 set**
EX600-WEN1 ··························· **1 set**
EX600-EU1 ····························· **1 set**

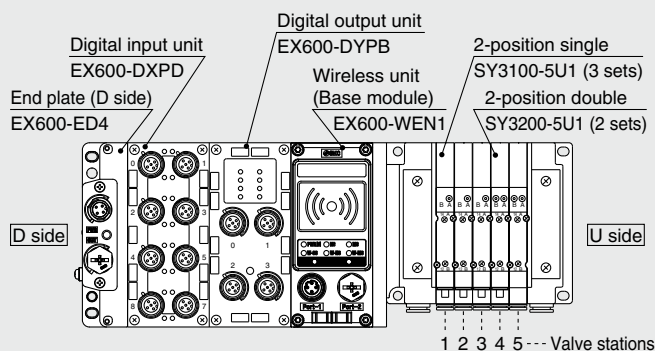· Products should be ordered separately and assembled by the customer.

Manifold with base module: With input/output unit

Digital input unit
EX600-DXPD

Digital output unit
EX600-DYPB

Wireless unit
(Base module)
EX600-WEN1

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

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

End plate (D side)
EX600-ED4

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 catalog of each valve series.

Ordering Example of the Remote Module

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

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

Digital output unit
EX600-DYPB

Digital input unit
EX600-DXPD

Wireless unit
(Remote module)
EX600-WSV1

End plate (D side)
EX600-ED4

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

Wireless unit
(Remote module)
EX600-WSV1

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

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

End plate (D side)
EX600-ED4

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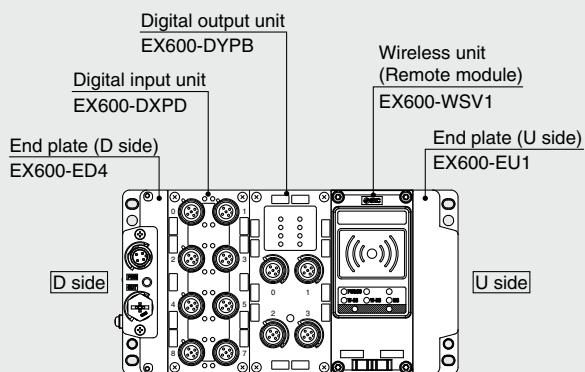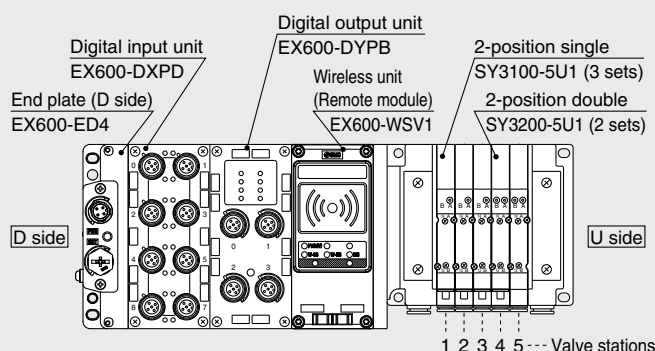∗ EX600-DYPB··············· **1 set   I/O unit part no. (Stations 2)**

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

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

SMC

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)
	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	Japanese radio law (Japan), RE (EU*2), FCC (USA), ANATEL (Brazil), ETA (India), NOM (Mexico), IC (Canada), SRRC (China), NBTC (Thailand), ACMA (Australia), ACMA (New Zealand), IMDA (Singapore), NCC (Taiwan), KC (South Korea)
Electrical	**For control/input (US1)** — Power supply voltage	24 VDC ±10%
	Current consumption	150 mA or less
	For output (US2) — Power supply voltage	24 VDC ±10%
	Max. supply current	4 A
Input/Output	**Number of inputs** — System input size	Max. 1280 points together with the registered remote modules
	Input size	Max. 128 points (increase or decrease by 16 points)
	Number of outputs — System output size	Max. 1280 points together with the registered remote modules
	Output size	Max. 128 points (increase or decrease by 16 points)
	Analog input/output — AD refresh time	10 ms or less (the input connected to the base module) 0.1/0.2/0.5/1/2/5/10/30/60 s (the input connected to the remote module)*3
	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)*3
	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 EN61131-2 5 ≤ f < 8.4 Hz 3.5 mm 8.4 ≤ f < 150 Hz 9.8 m/s² (Excludes valve manifold)
	Impact resistance	Conforms to EN61131-2 147 m/s², 11 ms (Excludes valve manifold)
	Standards	CE marking (EMC directive/RoHS directive)
	Weight	300 g
NFC communication*4	**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: https://www.smcworld.com
*2 Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, U.K., Turkey
*3 Varies depending on the wireless communication status and the surrounding environment
*4 The NFC communication RFID tag of the 13.56 MHz passive type

■Trademark
EtherNet/IP™ is a trademark of ODVA.

EX600-W Series

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)
	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		Japanese radio law (Japan), RE (EU[*2]), FCC (USA), ANATEL (Brazil), ETA (India), NOM (Mexico), IC (Canada), SRRC (China), NBTC (Thailand), ACMA (Australia), ACMA (New Zealand), IMDA (Singapore), NCC (Taiwan), KC (South Korea)
Electrical	**For control/input (US1)**	**Power supply voltage**	24 VDC ±10%
		Current consumption	150 mA or less
	For output (US2)	**Power supply voltage**	24 VDC ±10%
		Max. supply current	4 A
Input/Output	**Number of inputs**	**System input size**	Max. 1280 points together with the registered remote modules
		Input size	Max. 128 points (increase or decrease by 16 points)
	Number of outputs	**System output size**	Max. 1280 points together with the registered remote modules
		Output size	Max. 128 points (increase or decrease by 16 points)
	Analog input/output	**AD refresh time**	10 ms or less (the input connected to the base module) 0.1/0.2/0.5/1/2/5/10/30/60 s (the input connected to the remote module)[*3]
		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)[*3]
	Valve output	**Output type**	EX600-WPN1: Source/PNP (−COM) EX600-WPN2: Sink/NPN (+COM)
		Number of outputs	Max. 32 points (0/8/16/24/32 points)
		Connected load	Solenoid valve with surge voltage suppressor of 24 VDC and 1.5 W or less (manufactured by SMC)
	Number of remote modules connected		Max. 31 units (0/15/31 units)
	Number of connected EX600 I/O units		Max. 9 EX600 series I/O units (I/O = 128. I/O above 128 cannot be recognized.)
General	**Enclosure**		Conforms to IP67 (with manifold assembled)
	Ambient temperature (Operating temperature)		−10 to +50°C
	Ambient temperature (Storage temperature)		−20 to +60°C
	Ambient humidity		35 to 85% RH (No condensation)
	Withstand voltage		500 VAC for 1 minute between external terminals and metallic parts
	Insulation resistance		10 MΩ or more (500 VDC between external terminals and metallic parts)
	Vibration resistance		Conforms to EN61131-2 $5 \leq f < 8.4$ Hz 3.5 mm $8.4 \leq f < 150$ Hz 9.8 m/s^2 (Excludes valve manifold)
	Impact resistance		Conforms to EN61131-2 147 m/s^2, 11 ms (Excludes valve manifold)
	Standards		CE marking (EMC directive/RoHS directive)
	Weight		300 g
NFC communication[*4]	**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: http://www.smcworld.com
*2 Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, U.K., Turkey
*3 Varies depending on the wireless communication status and the surrounding environment
*4 The NFC communication RFID tag of the 13.56 MHz passive type

SMC

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)
	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		Japanese radio law (Japan), RE (EU*2), FCC (USA), ANATEL (Brazil), ETA (India), NOM (Mexico), IC (Canada), SRRC (China), NBTC (Thailand), ACMA (Australia), ACMA (New Zealand), IMDA (Singapore), NCC (Taiwan), KC (South Korea)
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 EN61131-2 $5 \leq f < 8.4$ Hz 3.5 mm $8.4 \leq f < 150$ Hz 9.8 m/s² (Excludes valve manifold)
	Impact resistance		Conforms to EN61131-2 147 m/s², 11 ms (Excludes valve manifold)
	Standards		CE marking (EMC directive/RoHS directive)
	Weight		280 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 Varies depending on the wireless communication status and the surrounding environment
*2 Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, U.K., Turkey
*3 The NFC communication RFID tag of the 13.56 MHz passive type

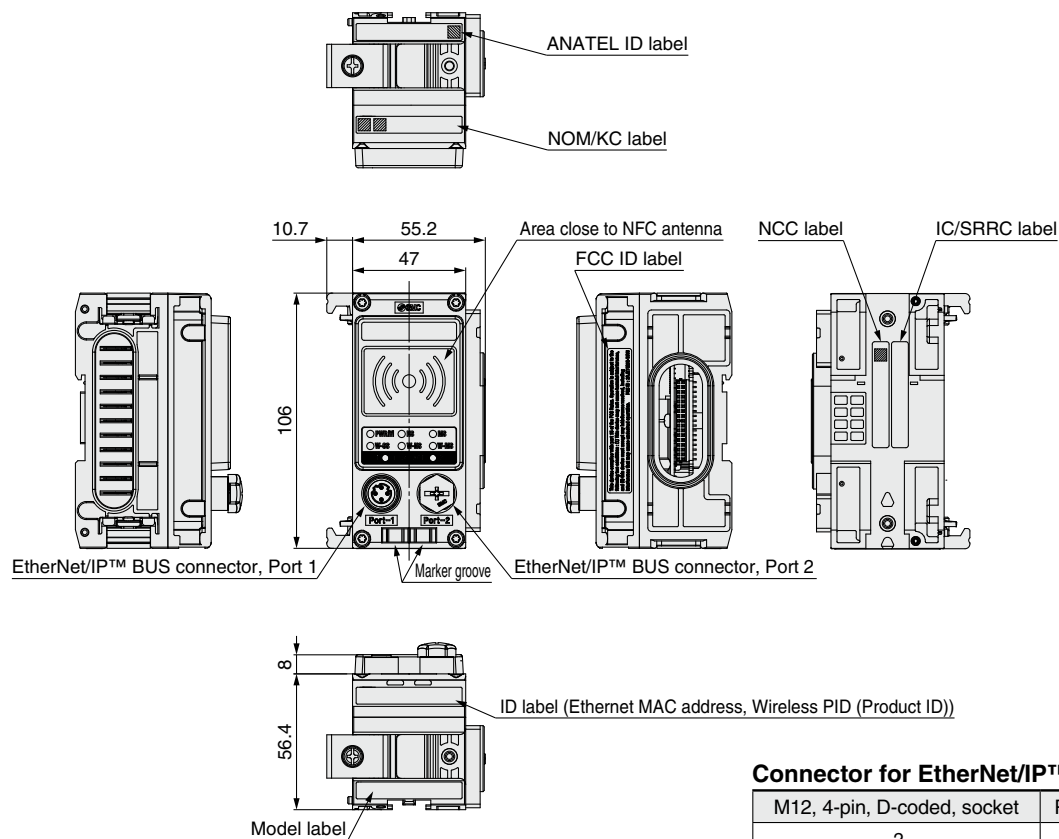### End Plate (D side): EX600-ED4/5-□

	Item		Specifications
Electrical	Connector type	PWR IN	M12 plug, 4-pin
		PWR OUT	M12 socket, 5-pin
	Rated voltage	Power supply for output	24 VDC +10%/−5%
		Power supply for control/input	24 VDC ±10%
	Rated current	Power supply for output	Max. 4 A
		Power supply for control/input	Max. 4 A
General	Enclosure		Conforms to IP67 (with manifold assembled)
	Withstand voltage		500 VAC for 1 minute (between FE and external terminals)
	Insulation resistance		10 MΩ or more (500 VDC between FE and external terminals)
	Ambient temperature	Operating	−10 to +50°C
		Stored/Transported	−20 to +60°C
	Ambient humidity		35% to 85% RH (No condensation)
	Standards		CE marking (EMC directive/RoHS directive)

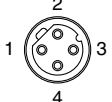* For the EX600-ED2/3-□, refer to the Fieldbus system EX600 series in the **Web Catalog**.

EX600-W *Series*

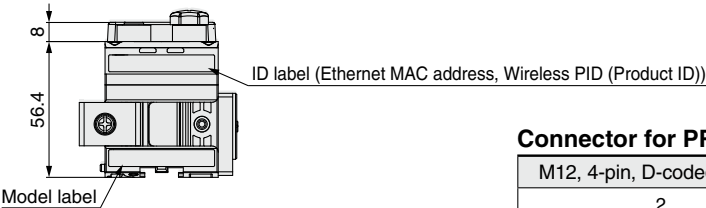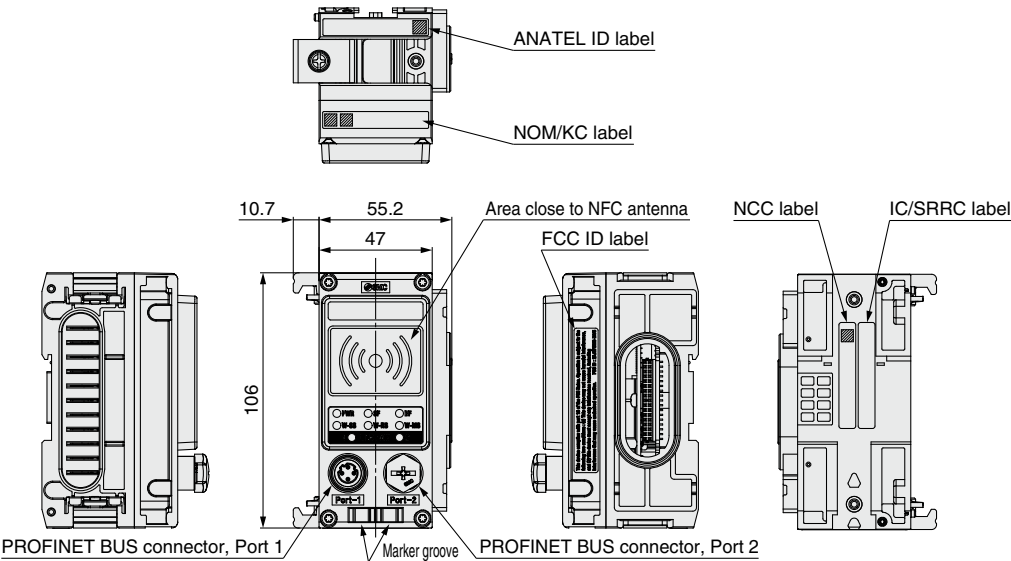## Dimensions

Base module: EX600-WEN□

ANATEL ID label

NOM/KC label

10.7   55.2

47

106

Area close to NFC antenna

FCC ID label

NCC label   IC/SRRC label

Port-1   Port-2

EtherNet/IP™ BUS connector, Port 1

Marker groove

EtherNet/IP™ BUS connector, Port 2

8

56.4

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

Model 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−

SMC

Dimensions

Base module: EX600-WPN□

ANATEL ID label

NOM/KC label

10.7   55.2   Area close to NFC antenna

47

FCC ID label

NCC label   IC/SRRC label

106

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

8

56.4

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

Model label

Connector for PROFINET 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□

ANATEL ID label

NOM/KC label

10.7   55.2   Area close to NFC antenna

47

FCC ID label

NCC label   IC/SRRC label

106

Marker groove

8

56.4

ID label (Wireless PID (Product ID))

Model label
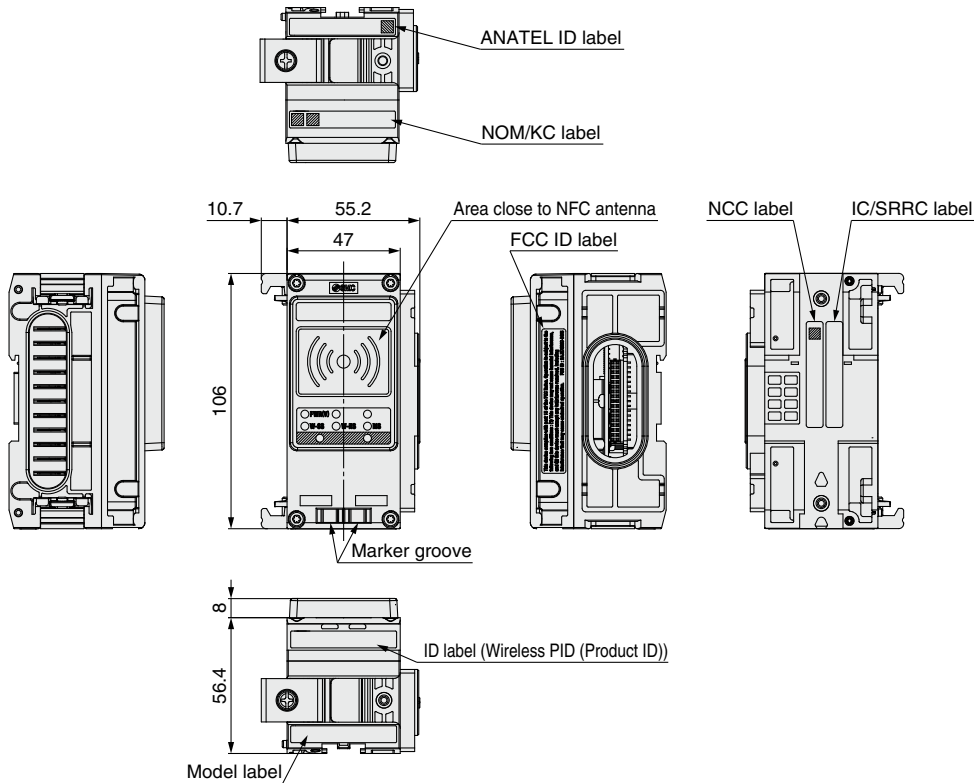
Dimensions

End plate (D side)
EX600-ED2/ED4/ED5

85.1

2 x M4 direct mounting hole

(4.4)
26
5.5
20.5

Power supply connector PWR IN

8
106
90
30.35
29

Power supply connector PWR OUT

FE terminal

(86.6)
73.6
56.6
30.2
13.2

EX600-ED3

42.5
5.5
26
20.5

2 x M4 direct mounting hole

8
106
90
30.35

56.6
36.65
30.2
13.2

End plate (U side)
EX600-EU1

28.2
26
20.5

2 x M4 direct mounting hole

8
90
106
4.6

SI unit mounting hole x 2

18.2
13
9.1
4.1
6.7
13.2
56.6
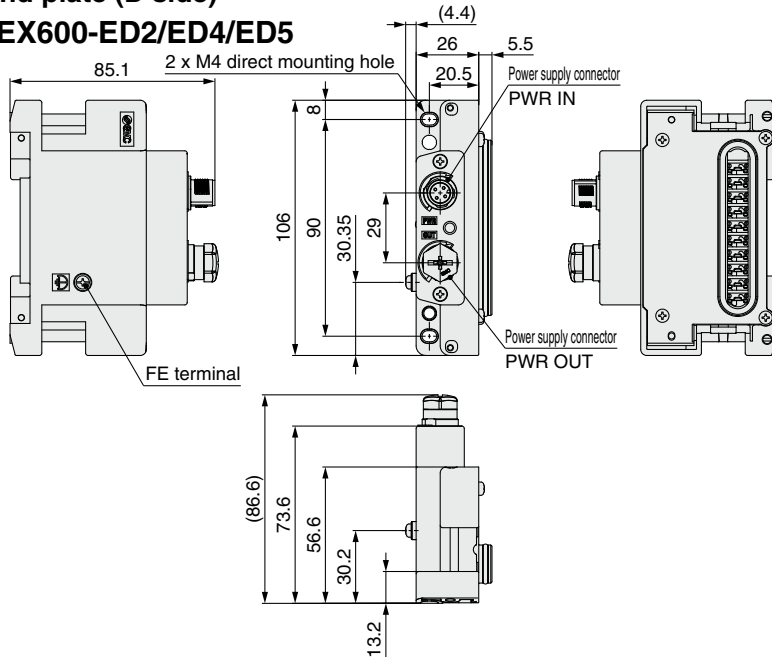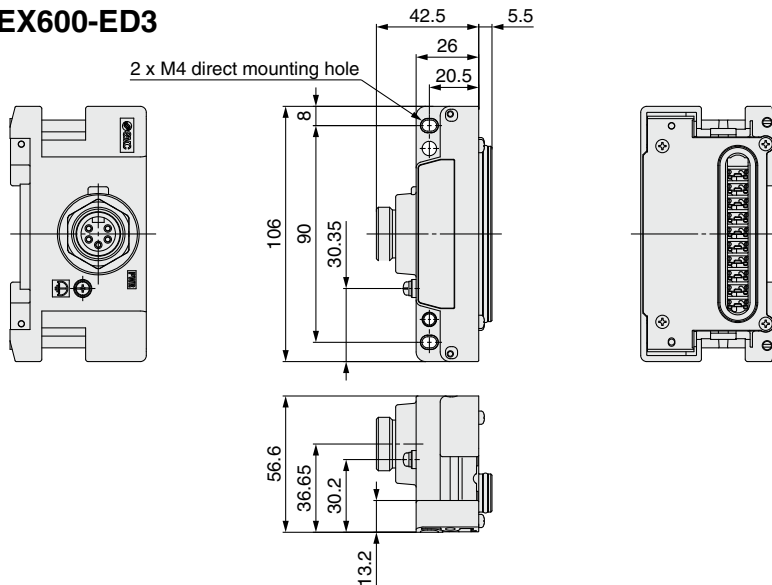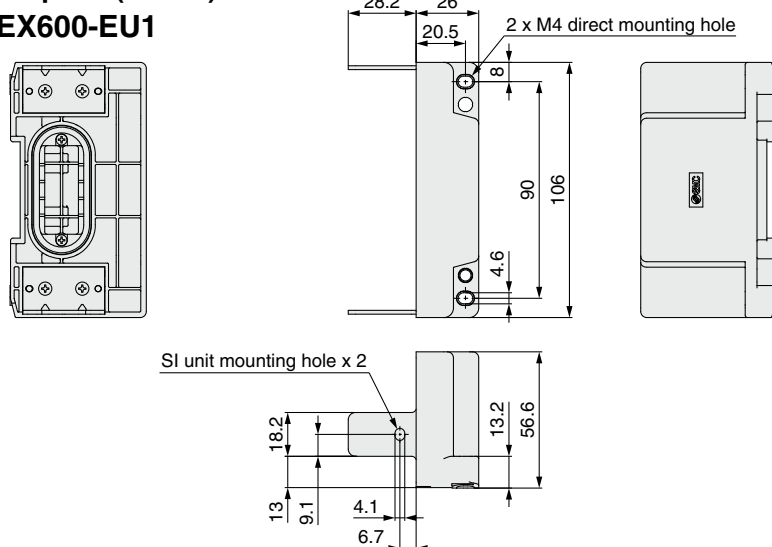
EX600-ED2

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

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

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

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)

SMC

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EX600-W Series

LED Display

Base module
EtherNet/IP™ communication specifications

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

⊘SMC

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 · Analog I/O upper set limit exceeded · Analog input range upper and lower limit exceeded · Abnormal number of remote connections · Error in communication between units · EX600 I/O unit detects diagnostic information · Valve diagnostic information detected
			Red LED is ON.	Non-restorable error is detected. (e.g. Hardware failure)
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.	Received power level of all remotes is 3.
			Green LED flashes. (1 Hz)	There are connected remotes with received power level 2.
			Green LED flashes. (2 Hz)	There are connected remotes with received power level 1.
			Red LED flashes.	No remotes connected.
			OFF	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	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 · Analog I/O upper set limit exceeded · Analog input range upper and lower limit exceeded · Error in communication between units · EX600 I/O unit detects diagnostic information · Valve diagnostic information detected
			Red LED is ON.	Non-restorable error is detected. (e.g. Hardware failure)
			OFF	No remote module 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

EX600-W Series

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.	Received power level is 3.
			Green LED flashes. (1 Hz)	Received power level is 2.
			Green LED flashes. (2 Hz)	Received power level is 1.
			Red LED flashes.	Wireless communication is not connected.
			OFF	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 connected.
			Red LED is ON.	No remotes connected (Non-restorable error in wireless communication)
			Red/Green	Wireless communication connection is under construction. (Pairing)
			Orange LED is ON.	Forced output mode
			OFF	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 · Analog I/O upper set limit exceeded · Analog input range upper and lower limit exceeded · Error in communication between units · EX600 I/O unit detects diagnostic information · Valve diagnostic information detected
			Red LED is ON.	Non-restorable error is detected. (e.g. Hardware failure)
			OFF	Power supply for control and input (US1) is not supplied.

SMC

⓵ **Power supply cable with connector**

⓹ **Marker**

⓸ **Seal cap (M8)**

⓺ **Communication cable with connector**

⓶ **Valve plate**

⓸ **Seal cap (M12)**

⓷ **Reinforcing brace (for direct mounting)**

⓼ **Power supply cable (7/8 inch connector)**

⓷ **Reinforcing brace (for DIN rail mounting)**

⓵ **End plate bracket**

⓼ **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

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

EX600-ZMA3
(Specialized for the SY 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

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

EX600-ZMV2
(Specialized for the SY series)

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

❸ 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.

❹ Seal Cap (10 pcs.)

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

For M8
EX9-AWES

For M12
EX9-AWTS

EX600-W Series

❺ 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
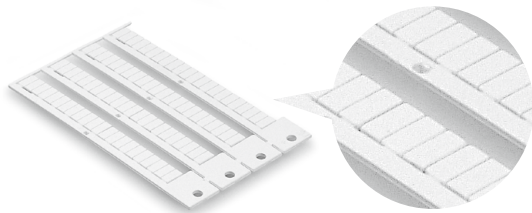
❻ Communication Cable with Connector/Communication Connector

Cable with M12 ↔ RJ-45 connector

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

Plug connector pin arrangement
D-coded

Terminal no.　　　Terminal no.　Cable core wire colors

1	1 White/Orange ⎫ Pair
2	2 Orange ⎭
3	3 White/Green ⎫
4	4
	5
	6 Green ⎭ Pair
	7
	8
	Shield
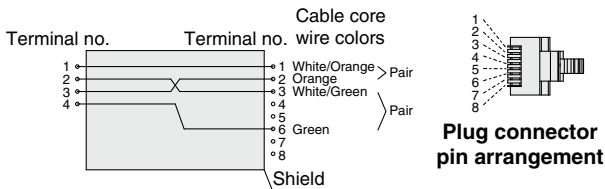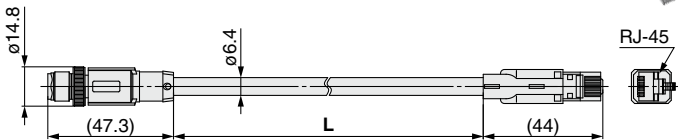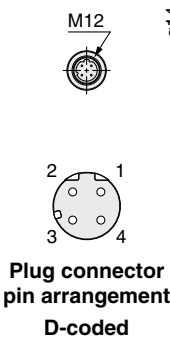
Connections (Straight cable)

Plug connector pin arrangement

Item	Specifications
Cable O.D.	ø6.4 mm
Nominal cross section	0.14 mm²/AWG26
Wire diameter	0.98 mm
Min. bending radius	26 mm (Fixed)

Cable with connector

PCA-1446566 (Plug)

Plug connector pin arrangement
D-coded

Terminal no.　　Wire guide colors

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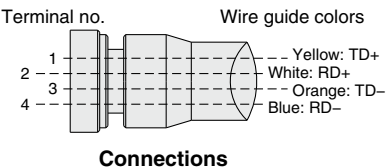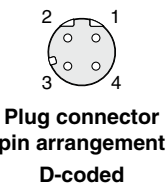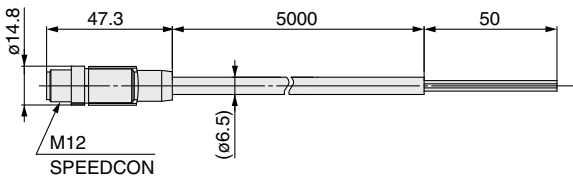
Connections

Item	Specifications
Cable O.D.	ø6.5 mm
Nominal cross section	AWG22
Wire diameter (Including insulator)	1.5 mm
Min. bending radius	45.5 mm

Field wireable connector

PCA-1446553

Plug pin arrangement
D-coded
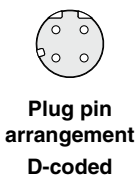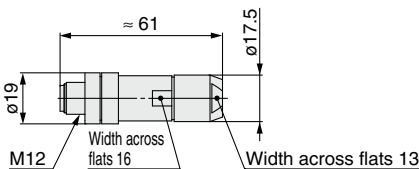
Terminal no.	Wire guide colors
1	Orange/White
2	Green/White
3	Orange
4	Green

Applicable Cable

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.
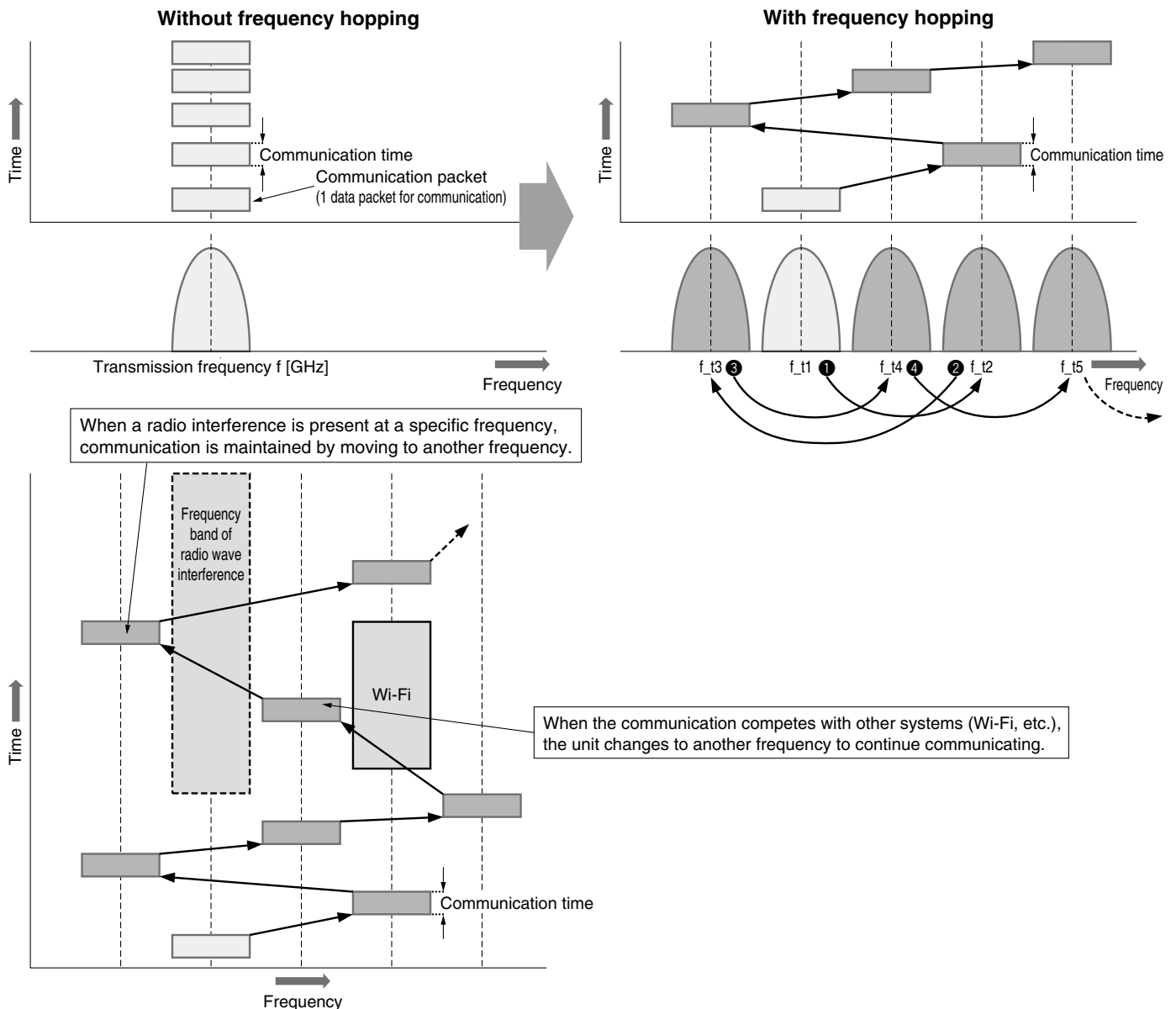
SMC

❼ Power Supply Cable with M12 Connector (A-coded)

EX500-AP `050` **-** `S`

● Cable length (L)

010	1000 mm
050	5000 mm

● Connector specification

S	Straight
A	Angle

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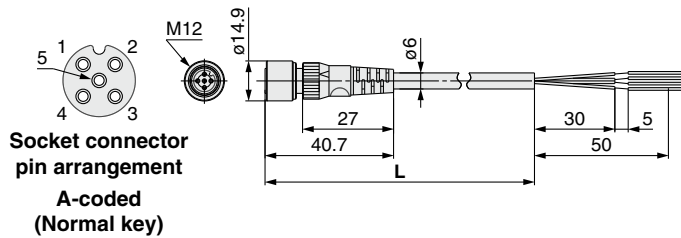
Socket connector
pin arrangement
**A-coded
(Normal key)**

M12

ø14.9

ø6

27
40.7
L
30
5
50

Item	Specifications
Cable O.D.	ø6 mm
Nominal cross section	0.3 mm²/AWG22
Wire diameter (Including insulator)	1.5 mm
Min. bending radius	40 mm (Fixed)

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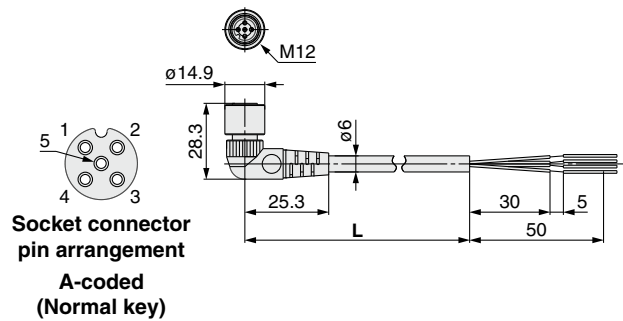
Socket connector
pin arrangement
**A-coded
(Normal key)**

M12

ø14.9

28.3

ø6

25.3
L
30
5
50

Item	Specifications
Cable O.D.	ø6 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 colors

1	Brown
2	White
3	Blue
4	Black
5	Gray

Connections
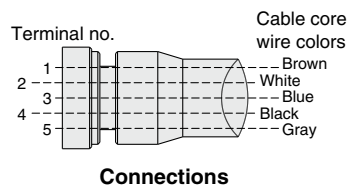
SPEEDCON

PCA- `1401804`

● Cable length (L)

1401804	1500 mm
1401805	3000 mm
1401806	5000 mm

Socket connector
pin arrangement
**A-coded
(Normal key)**

ø14.8

44.5
L
50

ø5

M12
SPEEDCON
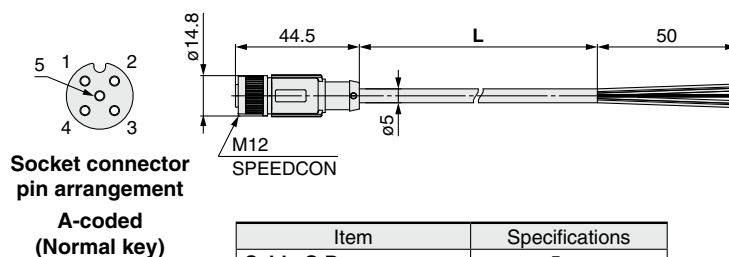
Item	Specifications
Cable O.D.	ø5 mm
Nominal cross section	0.3 mm²/AWG22
Wire diameter (Including insulator)	1.27 mm
Min. bending radius	21.7 mm (Fixed)

Terminal no.

Cable core
wire colors

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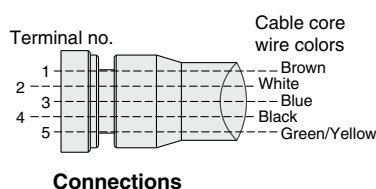
Connections

PCA- `1557769`

● Cable length (L)

1557769	3000 mm

ø14.8

44
L
46.8

ø4.7

M12
SPEEDCON

M12
SPEEDCON

Socket connector
pin arrangement
**A-coded
(Normal key)**

Connections

1	1
2	2
3	3
4	4

Plug connector
pin arrangement
**A-coded
(Normal key)**

SMC
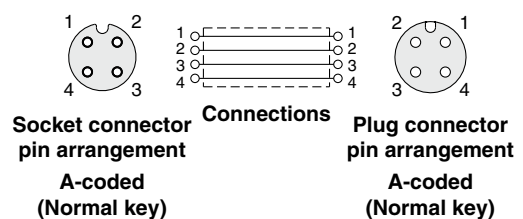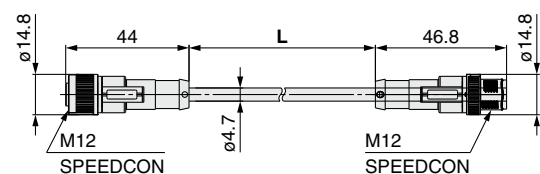
EX600-W Series

❼ **Power Supply Cable with M12 Connector (B-coded)**

SPEEDCON

PCA- 1564927

● **Socket specification, Cable length (L)**

1564927	Straight 2 m
1564930	Straight 6 m
1564943	Angle 2 m
1564969	Angle 6 m

Straight connector type
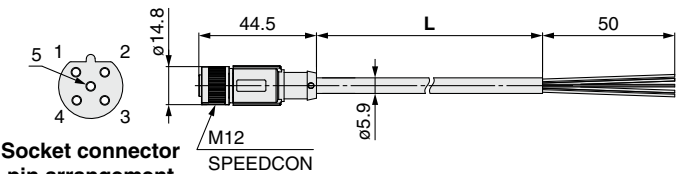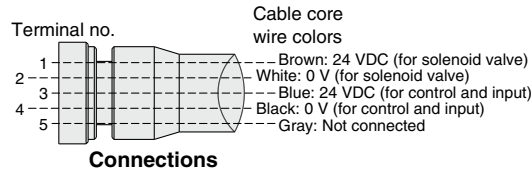
5 1 2
4 3

**Socket connector
pin arrangement
B-coded
(Reverse key)**

ø14.8   44.5   L   50

M12
SPEEDCON

ø5.9

Terminal no.

Cable core
wire colors

1 ———— Brown: 24 VDC (for solenoid valve)
2 ———— White: 0 V (for solenoid valve)
3 ———— Blue: 24 VDC (for control and input)
4 ———— Black: 0 V (for control and input)
5 ———— Gray: Not connected

Connections

Angle connector type

5 1 2
4 3

**Socket connector
pin arrangement
B-coded
(Reverse key)**

36.3   L   50

28

M12
SPEEDCON

ø5.9

ø14.8

Terminal no.

Cable core
wire colors

1 ———— Brown: 24 VDC (for solenoid valve)
2 ———— White: 0 V (for solenoid valve)
3 ———— Blue: 24 VDC (for control and input)
4 ———— Black: 0 V (for control and input)
5 ———— Gray: Not connected

Connections

SMC
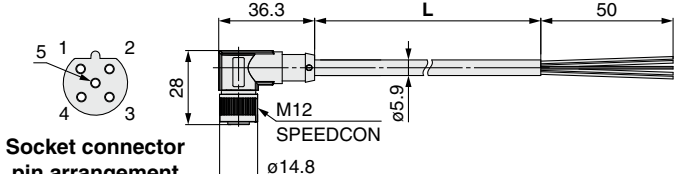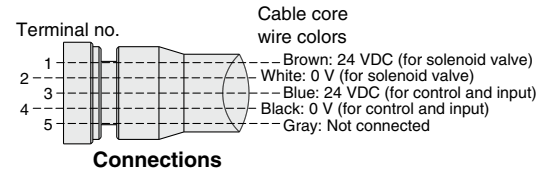
❽ **Power Supply Cable with 7/8 Inch Connector/Power Supply Connector**

PCA- 1558810

● **Specifications**

Symbol	Cable length (L)	Connector specification
1558810	2000	Straight
1558823	6000	Straight
1558836	2000	Right angle
1558849	6000	Right angle

Straight connector type
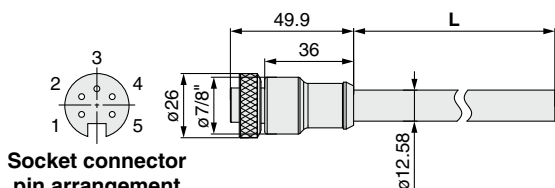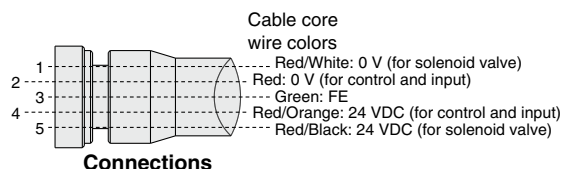
49.9 | 36 | L | ø26 | ø7/8" | ø12.58

Socket connector pin arrangement 7/8 inch (Mini style)

Cable core wire colors
1 — Red/White: 0 V (for solenoid valve)
2 — Red: 0 V (for control and input)
3 — Green: FE
4 — Red/Orange: 24 VDC (for control and input)
5 — Red/Black: 24 VDC (for solenoid valve)

Connections

Angle connector type

53 | L | 40.4 | 26.5 | ø12.58 | ø7/8" | ø26

Socket connector pin arrangement 7/8 inch (Mini style)
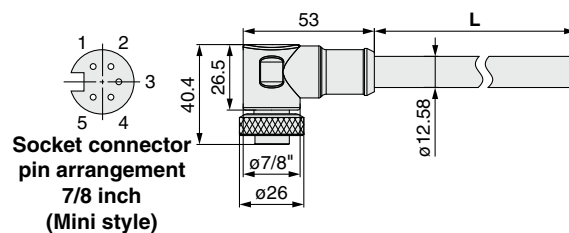
Cable core wire colors
1 — Red/White: 0 V (for solenoid valve)
2 — Red: 0 V (for control and input)
3 — Green: FE
4 — Red/Orange: 24 VDC (for control and input)
5 — Red/Black: 24 VDC (for solenoid valve)
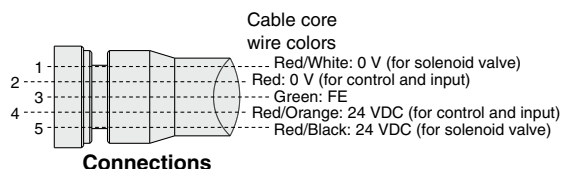
Connections

Field wireable connector

PCA- 1578078

● **Specifications**

Symbol	Connector specification
1578078	Plug
1578081	Socket

≈ 86 | ø27 | ø27

≈ 86 | ø27 | ø27 | Width across flats 24
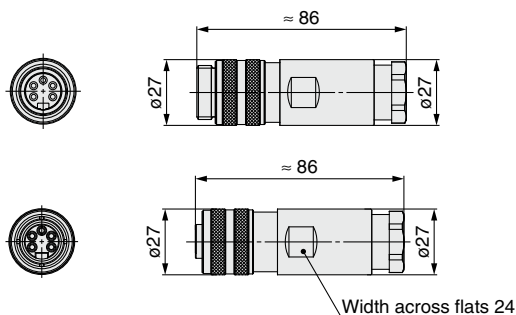
Plug connector pin arrangement 7/8 inch (Mini style)

Socket connector pin arrangement 7/8 inch (Mini style)

Terminal no.	Wire guide colors
1	Red/White
2	Red
3	Green
4	Red/Orange
5	Red/Black

Applicable Cable

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

∗ 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.

∗ For further information on cables and connectors, refer to the M8/M12 connector PCA series in the **Web Catalog**.

EX600-W Series
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

With frequency hopping

Time

Communication time

Communication packet
(1 data packet for communication)

Transmission frequency f [GHz]

Frequency

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

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

Time

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 for use in Japan, European countries (Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, U.K., Turkey), the U.S., Mexico, Brazil, India, Canada, China, Thailand, Australia, New Zealand, Singapore, Taiwan and South Korea. For use in other countries, please contact SMC.
● This product communicates by radio waves, and the communication may stop instantaneously due to ambient environments and operating methods. SMC will not be responsible for any secondary failure which may cause personal injury, or damage to other devices or equipment.
● When several units are installed closely to each other, slight interference may occur due to the characteristics of the wireless product.
● The electromagnetic waves emitted from this product may interfere with implantable medical devices such as cardiac pacemakers and cardioverter defibrillators, resulting in the malfunction of the medical device or other adverse effects.
Please use extreme caution when operating equipment which may have an adverse effect on your implantable medical device. Be sure to thoroughly read the precautions stated in the catalog, operation manual, etc., of your implantable medical device, or contact the manufacturer directly for further details on what types of equipment need to be avoided.
● The communication performance is affected by the ambient environment, so please perform the communication testing before use. ∗ As of end of December, 2018

Ⓢ SMC