# Wireless System

* For more information on supported models, refer to the "Specifications" page for each series.

## Noise resistance

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

## Communication cables not required

Reduced wiring work, space, and cost
Minimized disconnection risk

## Communication distance/speed, Response time*1

| | 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 |

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

**New** **Analog input, digital input/output, and valve manifold have been added to the compact type EXW1 series.**

## Compact Type EXW1 Series p. 14

Compatible protocols: EtherNet/IP, EtherCAT, DeviceNet, PROFINET, CC-Link, OPC UA, IO-Link

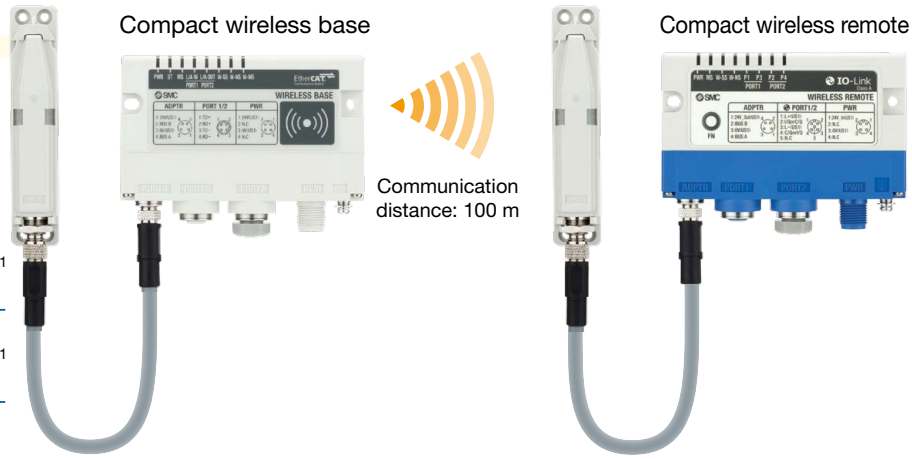
### Compact and lightweight

Compared with the EX600-W series (remote)

**Volume** Approx. 81% reduction*1

**Weight** Approx. 79% reduction*1

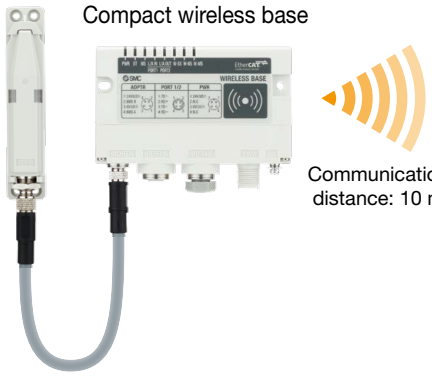
*1 For the existing remote, M12 connector/8 digital outputs specification




## Modular Type EX600-W Series p. 55

### Modular connection is possible.

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




**For countries/regions in which wireless is supported**

This product cannot be used in countries/regions where wireless is not supported. Refer to page 68 for details on countries/regions in which the product can be used.

# EXW1/EX600-W Series

## Provides communication stability in FA environments

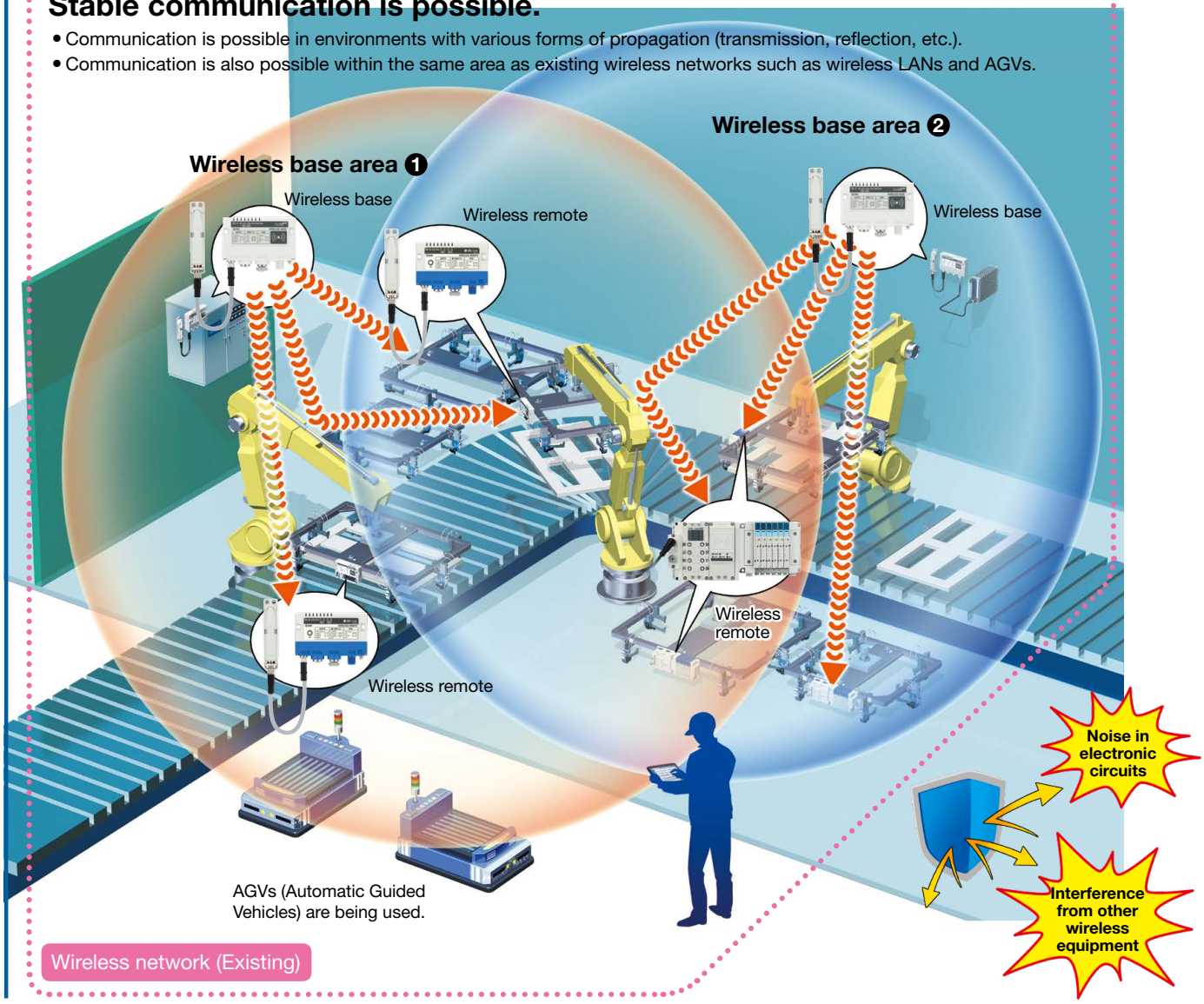
Compact EXW1 | Modular EX600-W

- 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.

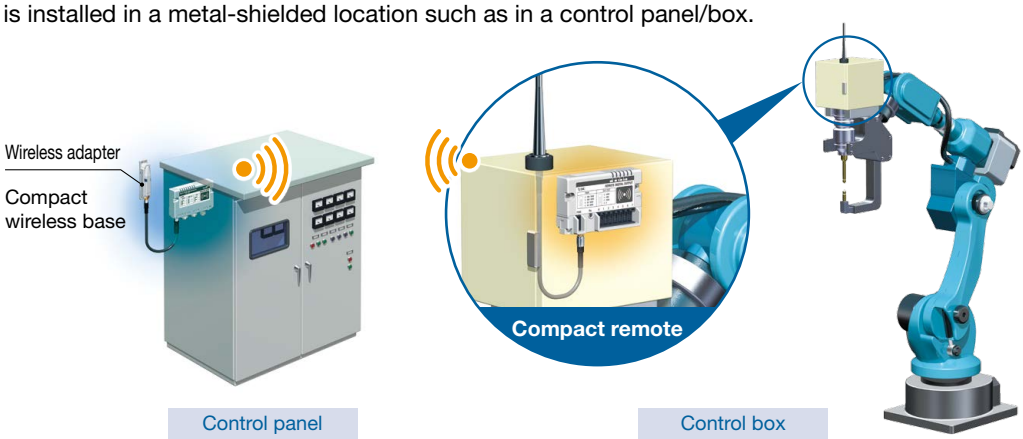
- Communication is possible in environments with various forms of propagation (transmission, reflection, etc.).
- Communication is also possible within the same area as existing wireless networks such as wireless LANs and AGVs.




## Antenna support

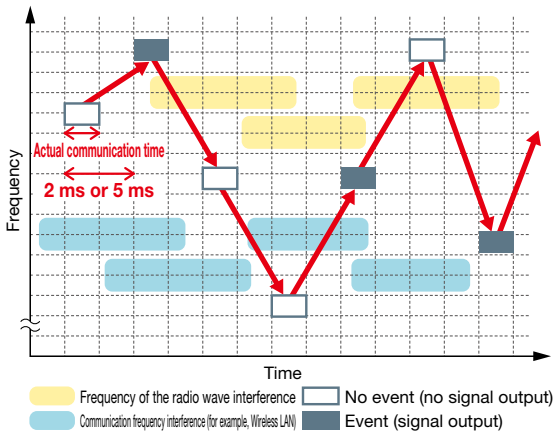
Compact EXW1

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



# Frequency hopping/Event communication system

Compact EXW1 | Modular EX600-W




## Frequency hopping

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

Frequency hopping cycle
**2 ms**∗1 **or 5 ms**

## 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.

∗1 For the EXW1 only

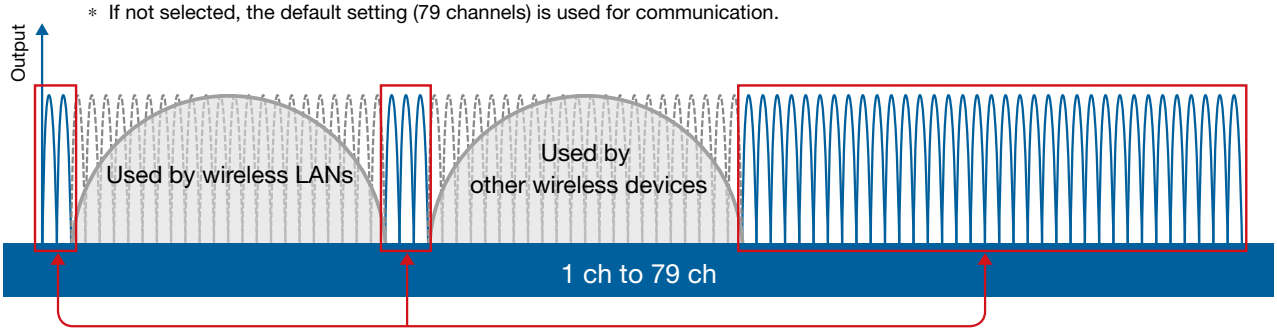
# F.C.S. (Frequency channel select) function supported

Compact EXW1

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

| Symbol | Number of selectable frequency channels | Applicable countries |
|---|---|---|
| **E** | Min. 5/Max. 79 channels | Radio Law certified countries other than the U.S., Canada, South Korea, Brazil, Taiwan, Argentina, and Mexico |
| **N** | Min. 15/Max. 79 channels | Radio Law certified countries including the U.S., Canada, South Korea, Brazil, Taiwan, Argentina, and Mexico |

∗ If not selected, the default setting (79 channels) is used for communication.

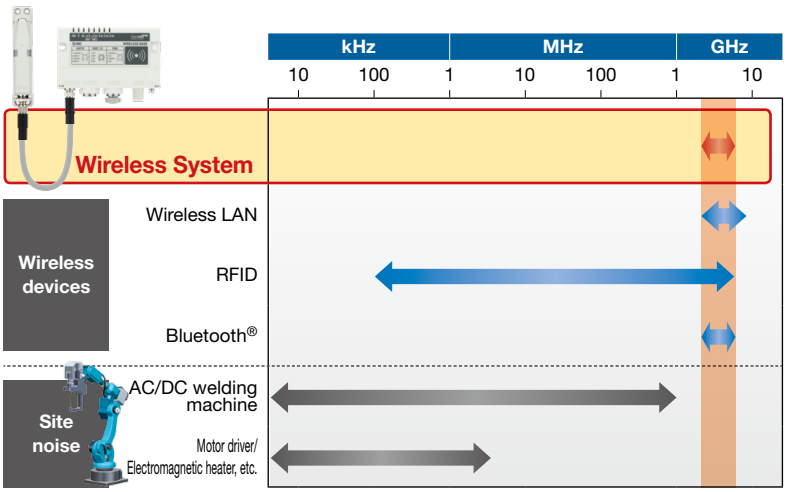



Hopping/communicating with the frequency channel within the selected red frame

# Frequency band used

Compact EXW1 | Modular EX600-W

Uses the 2.4 GHz ISM frequency band

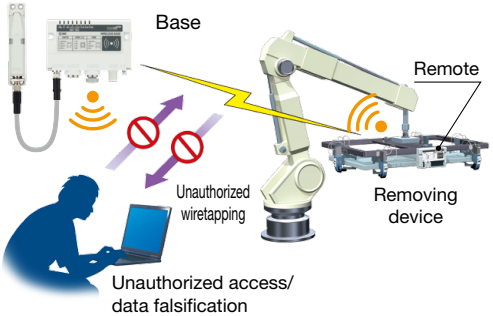



∗ ISM (Industrial, Scientific, and Medical) radio bands: Frequency bands allocated for industrial, scientific, and medical applications

# High security using encryption

Compact EXW1 | Modular EX600-W

Unauthorized access from outside is prevented by using data encryption.




# Remote high-speed connection

Compact EXW1 | Modular EX600-W

To start of communication: Min. **250 ms**

∗ Depends on the communication environment

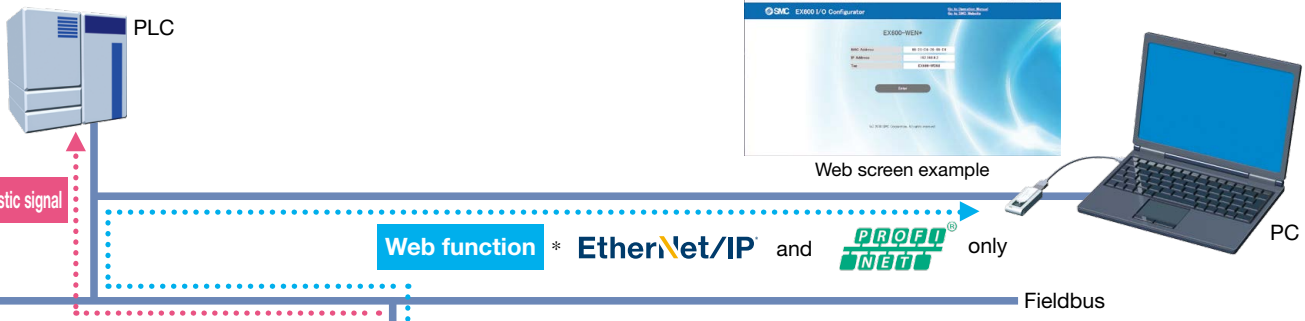
**■Trademark**

The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc.

# Product diagnosis

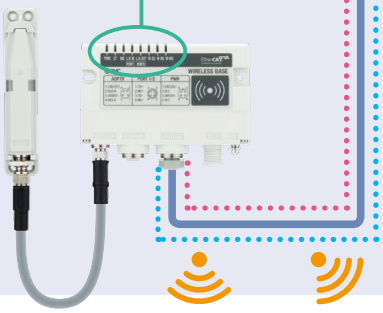
Compact EXW1 | Modular EX600-W

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




## Wireless base

Compact Type **EXW1**



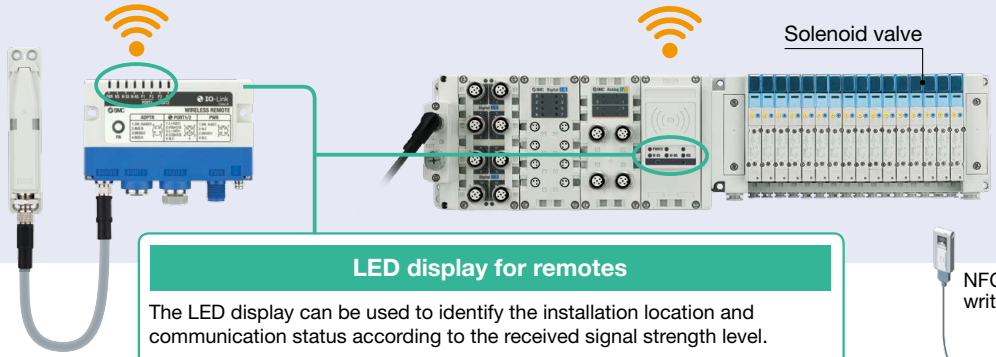
### LED display for bases

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. | All the remotes that support protocol V.1.0 are not connected. |
| Orange LED flashes. | All the remotes that support protocol V.2.0 are not connected. |
| OFF | The remote module is not registered. |

## Wireless remote

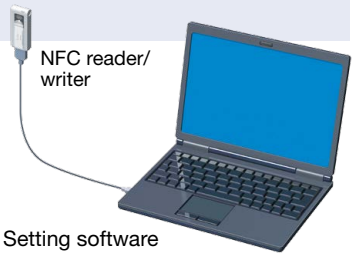
Compact Type **EXW1** Modular Type **EX600-W**




### 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. | Red LED flashes. | The base that supports protocol V.1.0 is not connected. |
| Green LED flashes. (1 Hz) | The received power level is 2. | Orange LED flashes. | The base that supports protocol V.2.0 is not connected. |
| Green LED flashes. (2 Hz) | The received power level is 1. | OFF | The base module is not registered. |




**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 an error occurs in the wireless system (base or remote)
- When communication from the remote cannot be received

## Web function (When the base and PC are connected)

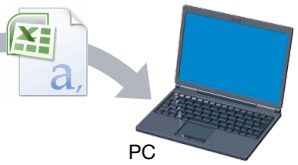
Via the EXW1-BEN/BPN web screen, you can change the wireless communication protocol, OPC UA, and pairing settings. Wireless/diagnostic logs and wireless system configuration information can be checked, and the log data can be generated and then downloaded as a CSV file.

* Refer to the logging function on page 4.

EtherNet/IP PROFINET

Web screen example

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



PC

# Product diagnosis

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

## Setting software (IO Configurator)

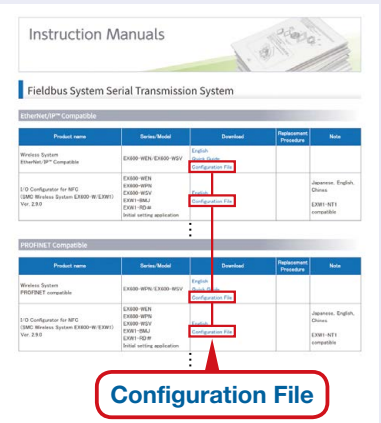
The NFC reader/writer can be used with the setting software to perform various checks and setting without contact.
(NFC: Near Field Communication)

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

＊ Refer to the logging function.


## Setting software

Download the setting software from the “configuration file.”




**From the SMC website**

**Product Information**
↓
**Documents/Download**
↓
**Operation Manuals**
↓
**Fieldbus System Serial Transmission System**
↓
**DeviceNet® Compatible**
**or**
**CC-Link Compatible**
**or**
**EtherNet/IP™ Compatible**
**or**
**EtherCAT Compatible**
**or**
**PROFINET Compatible**
↓
**I/O Configurator for NFC**
↓
**Configuration File**

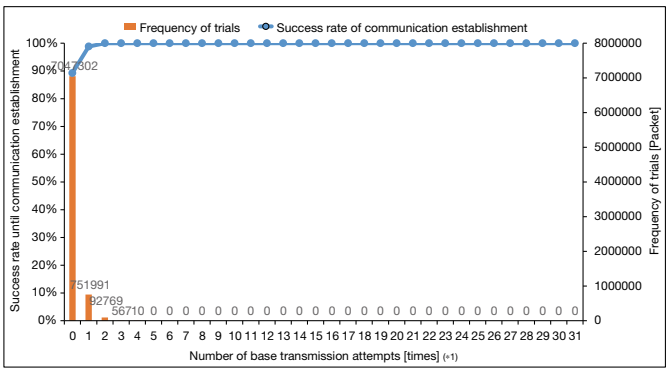
# Logging function

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

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

## Number of retries

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

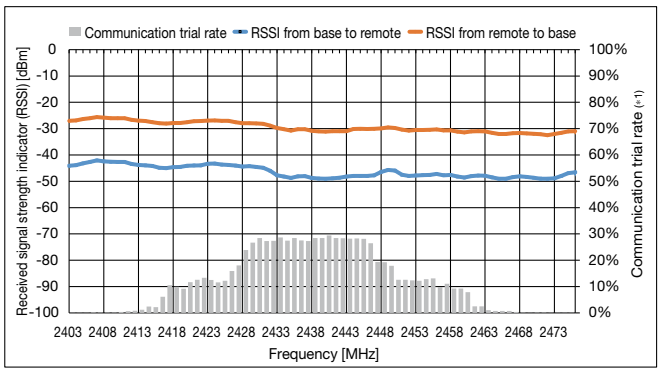



*1 Characteristics of base-to-remote transmission packets

**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 |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

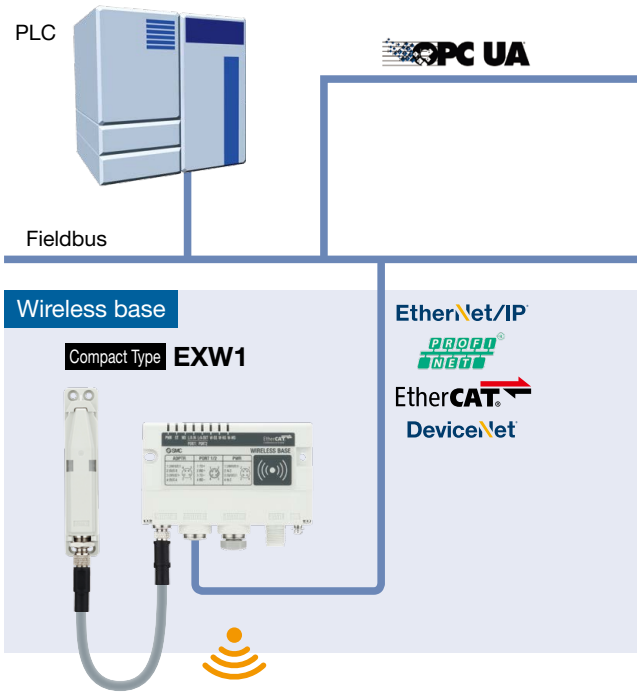
Scroll bar

System Examples

# Reduced wiring of Digital-, analog-, and IO-Link components

## Air management system connection by wireless*1

*1 By the compact type EXW1 base only




Wireless remote

Compact Type **EXW1**
Digital input/output
IP20

New
IP67

New
Compact Type **EXW1**
Analog input

New
Compact Type **EXW1**
Valve manifold

Modular Type **EX600-W**
Digital/Analog input/output
EX600 I/O unit
Remote module
Solenoid valve

**Digital input devices**

Auto switch

Pressure switch

Flow switch

Others
Proximity sensor
Photoelectric switch
Limit switch

**Digital output devices**

Valve manifold (Plug lead)

Solenoid valve

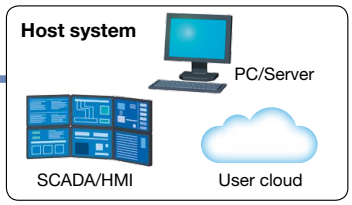
Electric actuator

Ionizer

Others
Indicator light
Relay
Buzzer

**Digital input/output devices**

Vacuum unit




# The compact type EXW1 and modular type EX600-W can be used in combination.*1

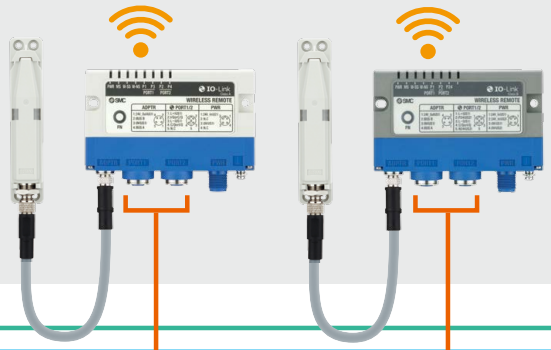
*1 When used in combination, the communication speed and response time are limited to the specifications of the EX600-W. (See the sample system configuration.)

CC-Link

EtherNet/IP
PROFINET
EtherCAT
CC-Link IE Field

Air Management System
**AMS□-SA**

Compact Type **EXW1**
Port class A/B
IO-Link



Fieldbus system (Wired)
Integrated Input-Output Type **EX600**
IO-Link

EX600 I/O unit
Solenoid valve

## Analog input devices

Actuator position sensor

Pressure switch
Flow switch

Analog input sensor

## IO-Link devices

Actuator position sensor

Pressure switch

Gap checker

SI unit for valve

Flow switch

Terminal unit

Electro-pneumatic regulator
Electronic vacuum regulator

Vacuum manifold

Ionizer

Vacuum unit

Step motor controller (Electric actuator)

## New Compact Wireless Remote Digital Input/Output p. 18 Compact EXW1


### For preventive maintenance and increase productivity

#### ■ ON/OFF time & number of operations measurement function

Measure ON/OFF times (latest value, average, maximum, and minimum) between input and I/O signal.
In addition, the number of ON/OFF operations of I/O can be turned measurement.
Measurement function can be determined when and where to perform maintenance.
Supports preventive maintenance and increase of productivity to utilize data for solenoid valve operation frequency and cylinder operating time by auto switch.


#### ■ Log function

A threshold is turned set-up setting, and data that is out of the range can be saved as a log in ON/OFF time measurement function. Data supports preventive maintenance and increase of productivity.
It can be saved up to 40 logs in Timer 0 to Timer 15, and the logs include the following data:

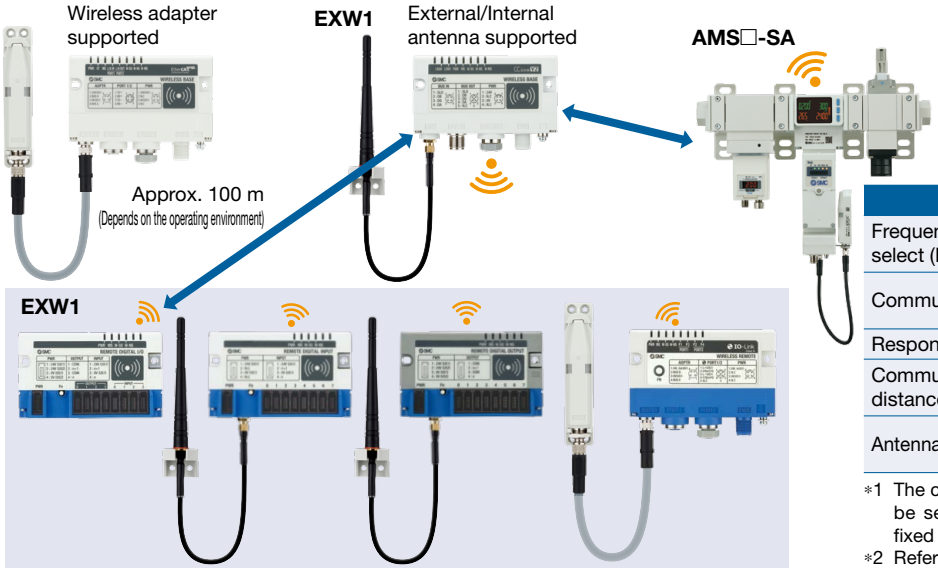
- Timer no.
- Measured value
- Measurement count (the total number of times that the thresholds are in and out of range)
- Measurement count that the thresholds are out of range
- Time stamp

* Log is saved to the memory element at 60 minutes interval from the moment when power supply is turned on. No storage from the last save to power supply OFF, so caution it.

# System Configuration Examples

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

(When the remote configuration is for the EXW1 series or air management hub only)

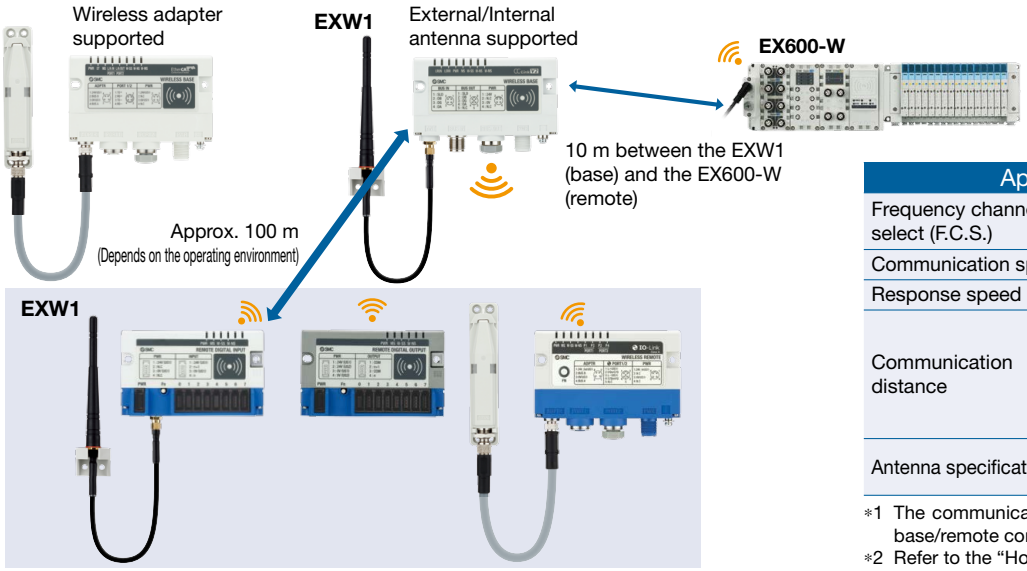



| Applicable functions | |
|---|---|
| Frequency channel select (F.C.S.) | Applicable |
| Communication speed | Select from 1 Mbps or 250 kbps.*1 |
| Response speed | Select from 2 ms or 5 ms.*1 |
| Communication distance | Approx. 100 m (Depends on the operating environment) |
| Antenna specification*2 | Wireless adapter and External/ Internal antenna supported |

*1 The communication speed and response speed cannot be selected for the Air Management Hub. They are fixed at 1 Mbps and 2 ms, respectively.
*2 Refer to the "How to Order" section.

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

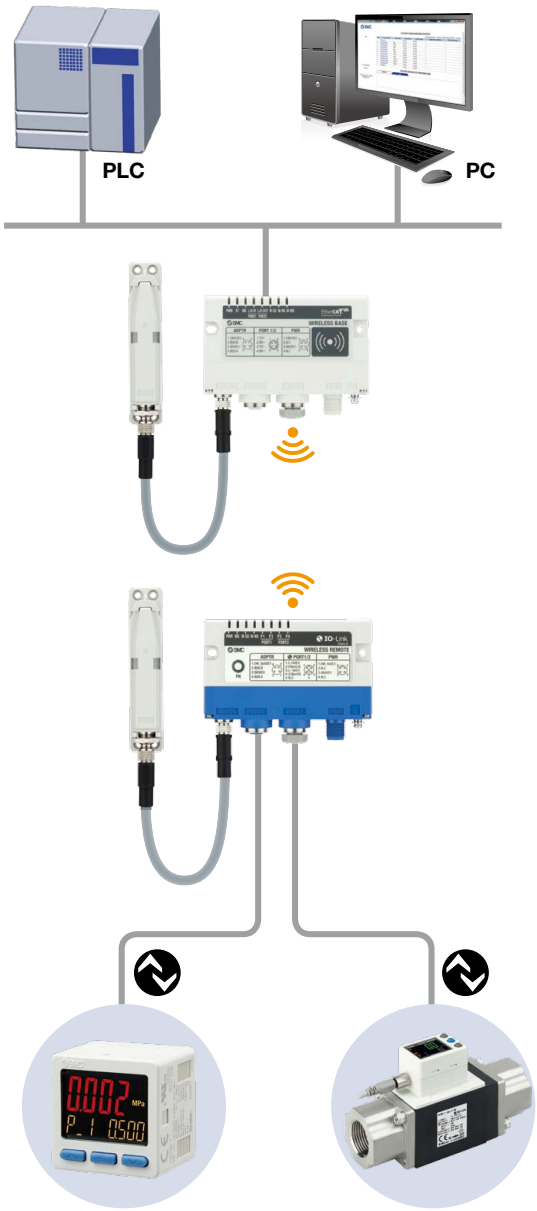
(When the remote configuration is for the EX600-W and the EXW1 series)



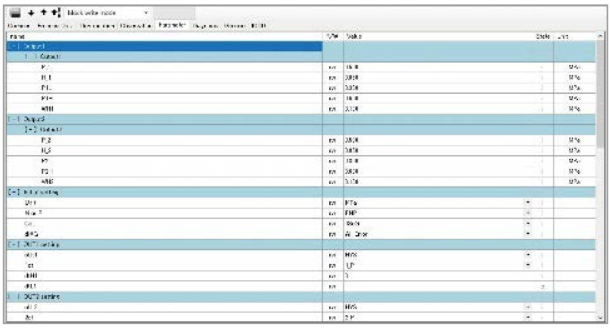

| Applicable functions | |
|---|---|
| Frequency channel select (F.C.S.) | Not applicable |
| Communication speed | 250 kbps |
| Response speed | 5 ms |
| Communication distance | Approx. 100 m between the EXW1 base and remote (Depends on the operating environment) 10 m*1 between the EXW1 (base) and the EX600-W (remote) |
| Antenna specification*2 | Wireless adapter and External/ Internal antenna supported |

*1 The communication distance varies depending on the base/remote combination.
*2 Refer to the "How to Order" section.

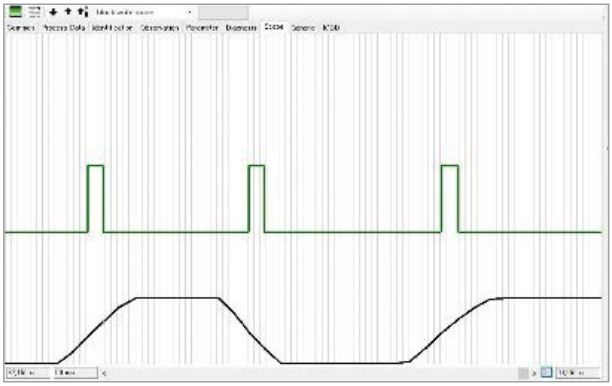
# The data can be accessed from via PC (IO-Link setting tool). Compact EXW1




Setting screen



Monitoring screen



IO-Link devices can be set and monitored from a PC without going through a PLC.

- Process data
- Device parameters
- Device information
- Device diagnosis

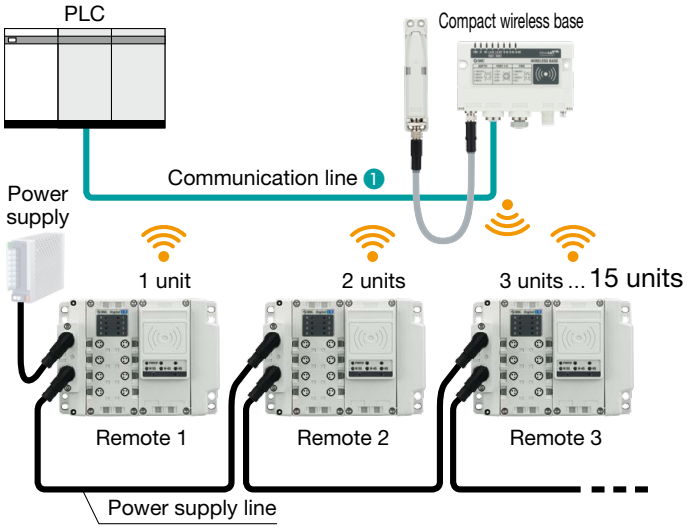
* The IO-Link setting tool (IO-Link Device Tool) is a software used for the setting and monitoring of IO-Link unit/device.
  · A setting tool compatible with the IO-Link units of every manufacturer is used for the SMC EXW1 series and EX600 series IO-Link unit. (IO-Link Device Tool V5-PE (V5 or later only) manufactured by TMG Technologie und Engineering GmbH (hereinafter referred to as TMG))
  · It can be downloaded for free from TMG's website. However, to use it for more than 30 days, a license key for the IO-Link Device Tool is required. (Refer to page 53 for details.)

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

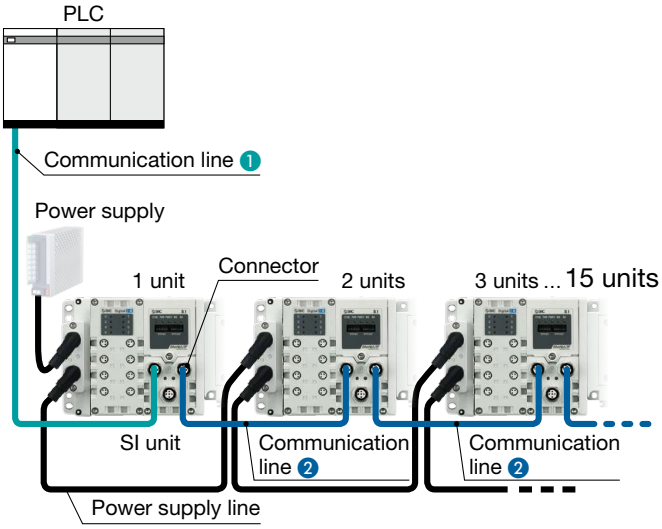
Compact EXW1 | Modular EX600-W

*1 For the EX600-W modular type

## Wireless System




## Existing (Wired) System




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

# Interchangeability maintained

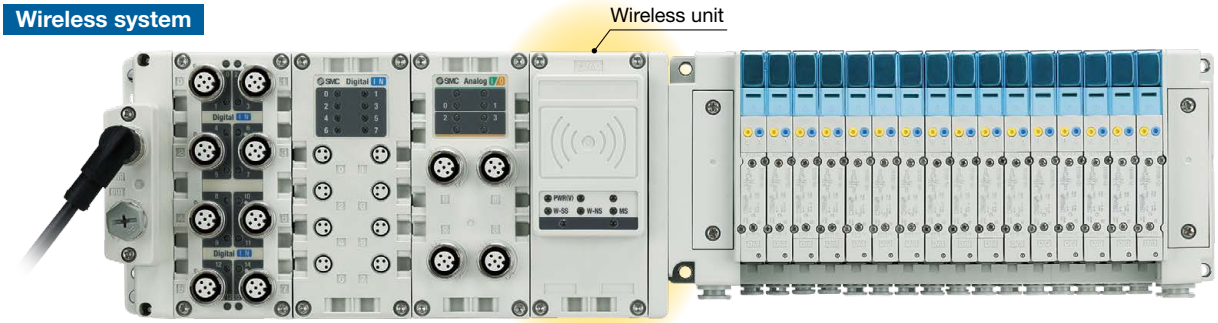
Modular EX600-W

Connection interchangeability between EX600 series SI units is maintained.

**The replacement of wireless and wired systems is possible.**

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

**Wireless system**

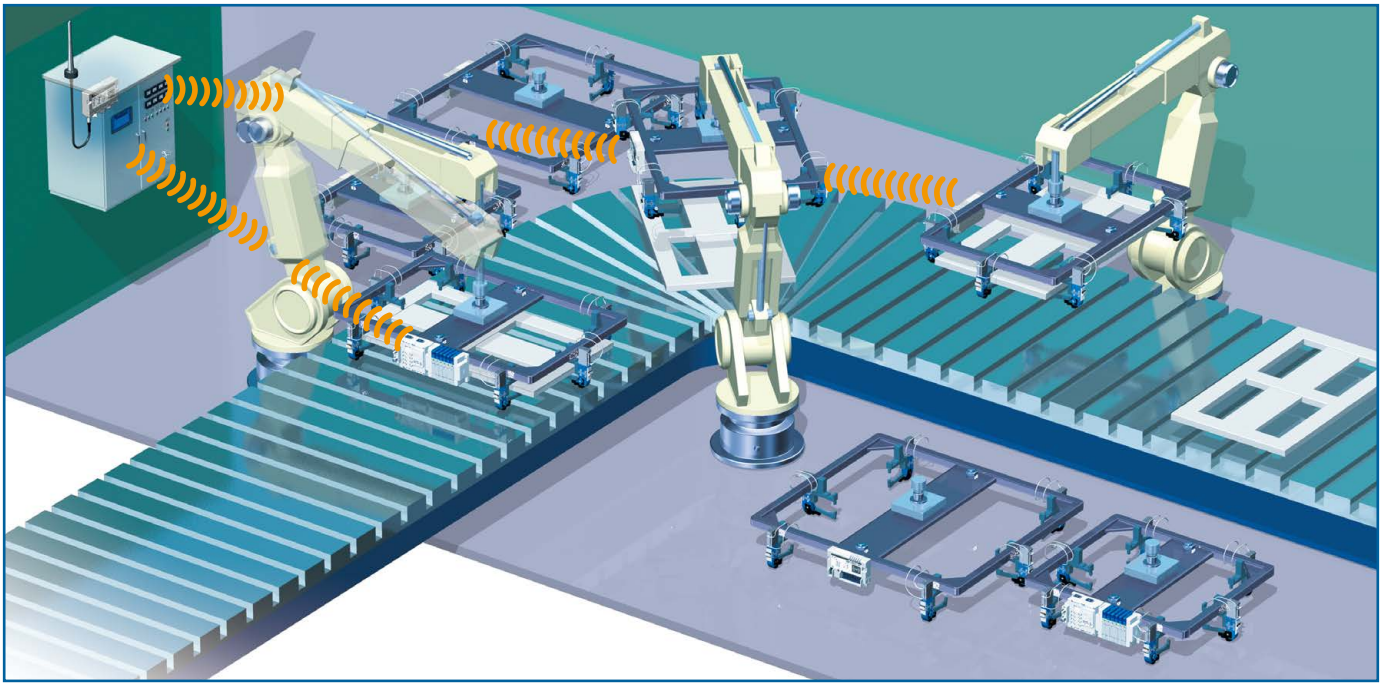



**Wired system**

## Application Examples

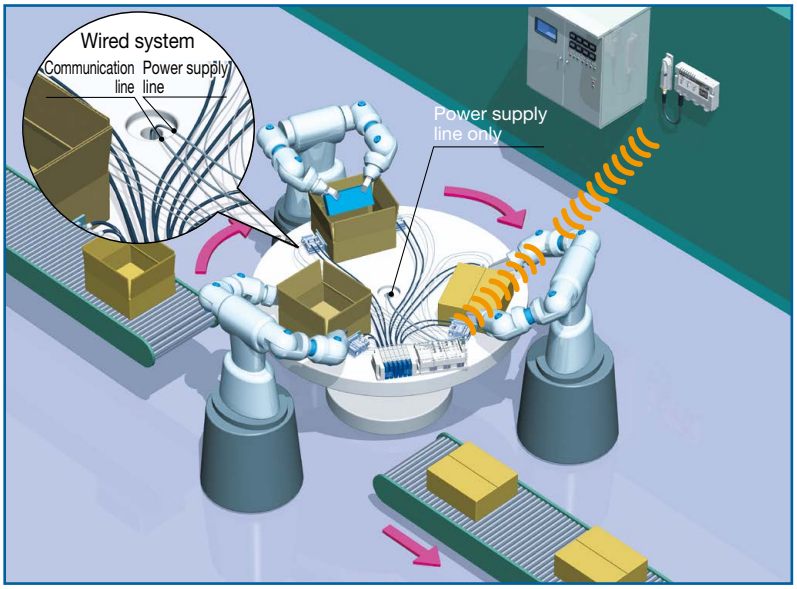
### For tool changing

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



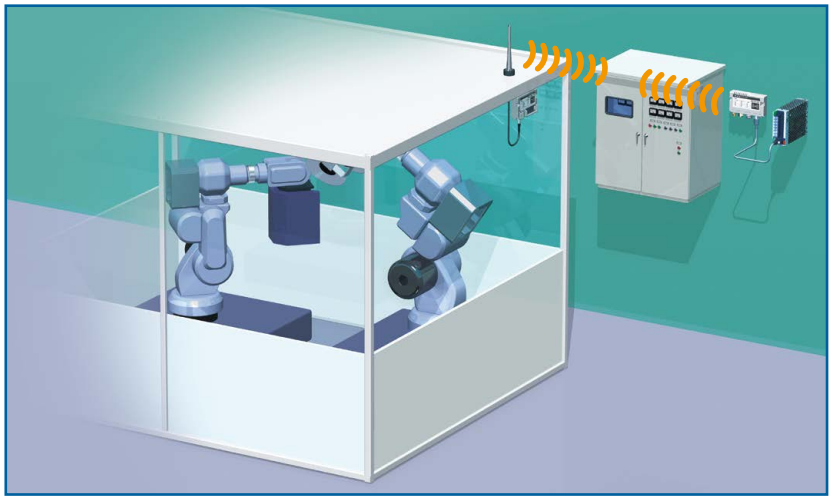
### For rotary tables

- Minimized disconnection risk
- Smaller diameter communication cable/tubing




### For the blocking of radio waves

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



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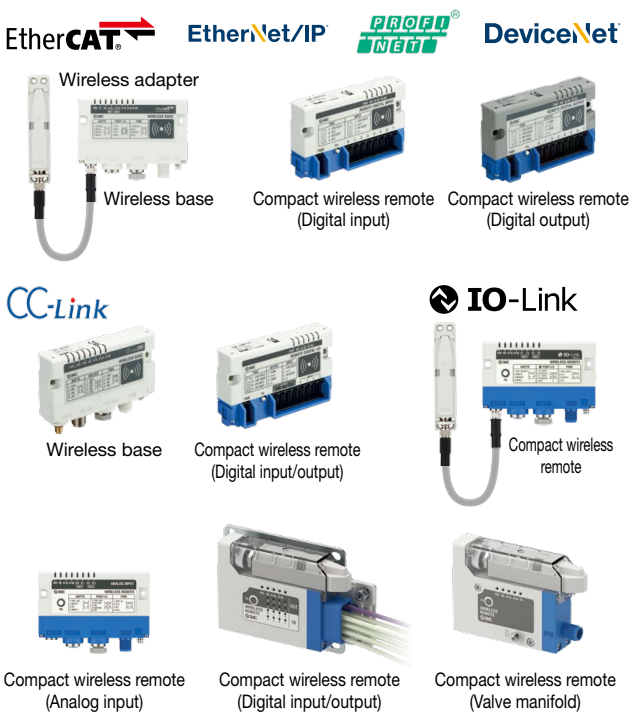
## Wireless System Compact Type *EXW1* Series

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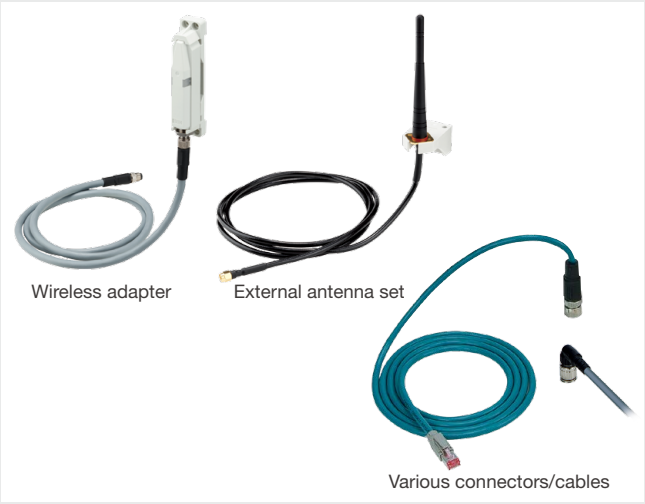



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**Made to Order**


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Remote module


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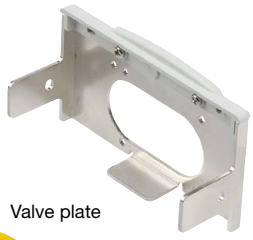
## Accessories

End plate bracket



Valve plate

Power supply cable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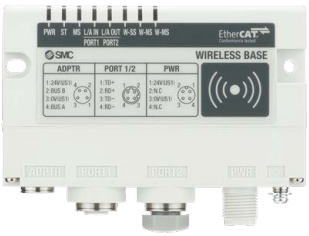
# Wireless System
# Compact Type
# EXW1 Series

## How to Order

### Compact Wireless Base

EtherCAT
EtherNet/IP
PROFINET
DeviceNet



**EXW1 – B EC A C □**

**Base**

**Communication protocol**

| Symbol | Protocol |
|---|---|
| **EC** | EtherCAT |
| **EN** | EtherNet/IP™ |
| **PN** | PROFINET |
| **DN** | DeviceNet® |

**Connector**

| Symbol | Connector interface |
|---|---|
| **A** | M12 |

**Antenna specification for wireless communication**∗1

| Symbol | Antenna specification |
|---|---|
| **C** | Wireless adapter |

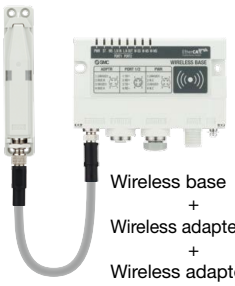
**OPC UA Compliant**

| Symbol | OPC UA Compliant |
|---|---|
| **Nil** | × |
| **1**∗2 | ○ |

∗2 Select "1" for communication protocol types "EN" and "PN."

∗1 A wireless system base used in combination with a wireless adapter
When using this product, order the wireless adapter and wireless adapter cable separately.

**Components**



Wireless base
+
Wireless adapter cable
+
Wireless adapter

### Wireless Adapter

**EXW1 – A1 1 N**

**Wireless adapter**

**Applicable model**

| Symbol | Applicable model |
|---|---|
| **1** | • Base (EtherCAT: EXW1-BECAC / EtherNet/IP™: EXW1-BENAC1 / PROFINET: EXW1-BPNAC1 / DeviceNet®: EXW1-BDNAC)<br>• Air Management Hub (EXA1-□)<br>• Remote (IO-Link) (EXW1-RL□)<br>• Remote (Analog input) (EXW1-RAX□) |

**Frequency channel selection**

| Symbol | Number of selectable frequency channels | Applicable countries |
|---|---|---|
| **E** | Min. 5/Max. 79 channels | Radio Law certified countries other than the U.S., Canada, South Korea, Brazil, Taiwan, Argentina, and Mexico |
| **N** | Min. 15/Max. 79 channels | Radio Law certified countries including the U.S., Canada, South Korea, Brazil, Taiwan, Argentina, and Mexico |

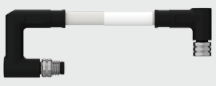
∗ Select this according to the country of use.
∗ Applicable countries differ depending on the part number. Before purchasing, refer to the "Country-specific Radio Law Compliance Table" on page 68.

∗ A dedicated cable is required to connect the wireless base/remote and wireless adapter. When using this product, order the wireless adapter cable separately.
An installation plate (EXW1-AB4) is included as an accessory.

### Wireless Adapter Cable

**EXW1 – AC001-SAPU**

**Shape & cable length**

| Symbol | Mounting image | Cable length | Secondary battery compatible |
|---|---|---|---|
| **AC001-SAPU**  |  | 100 mm | Yes |
| **AC1-X1**  |  | 300 mm | – |
| **AC030-SSPS**  | | 2950 mm | Yes |

∗ This cable is required to connect the wireless base/remote and wireless adapter.

## How to Order

### Compact Wireless Base (CC-Link)

**EXW1 – B MJ A B E**

External antenna set

**Compact wireless**

**Base**

**Communication protocol**

| Symbol | Protocol |
|---|---|
| **MJ** | CC-Link |

**Connector**

| Symbol | Connector interface |
|---|---|
| **A** | M12 |

**Frequency channel selection**

| Symbol | Number of selectable frequency channels | Applicable countries |
|---|---|---|
| **E** | Min. 5/Max. 79 channels | Radio Law certified countries other than the U.S., Canada, South Korea, Brazil, Taiwan, Argentina, and Mexico |
| **N** | Min. 15/Max. 79 channels | Radio Law certified countries including the U.S., Canada, South Korea, Brazil, Taiwan, Argentina, and Mexico |

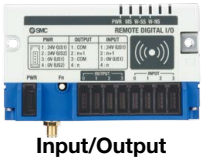
* Select this according to the country of use.
* Applicable countries differ depending on the part number. Before purchasing, refer to the "Country-specific Radio Law Compliance Table" on page 68.

**Antenna specification for wireless communication**

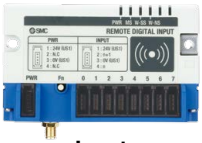
| Symbol | Antenna specification*3 |
|---|---|
| **A***4 | Internal antenna |
| **B***5, *6 | External antenna |

### Compact Wireless Remote (Digital Input/Output)

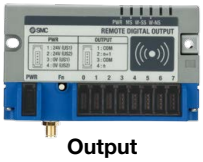
**EXW1 – R D M P E3 B E**



Input/Output



Input



Output

External antenna set

**Compact wireless**

**Remote**

**Type**

| Symbol | Description |
|---|---|
| **D** | Digital |

**Type**

| Symbol | Description |
|---|---|
| **X** | Input |
| **Y** | Output |
| **M** | Input/Output |

**Polarity**

| Symbol | Description |
|---|---|
| **P** | PNP |
| **N** | NPN |

**Frequency channel selection**

| Symbol | Number of selectable frequency channels | Applicable countries |
|---|---|---|
| **E** | Min. 5/Max. 79 channels | Radio Law certified countries other than the U.S., Canada, South Korea, Brazil, Taiwan, Argentina, and Mexico |
| **N** | Min. 15/Max. 79 channels | Radio Law certified countries including the U.S., Canada, South Korea, Brazil, Taiwan, Argentina, and Mexico |

* Select this according to the country of use.
* Applicable countries differ depending on the part number. Before purchasing, refer to the "Country-specific Radio Law Compliance Table" on page 68.

**Antenna specification for wireless communication**

| Symbol | Antenna specification*3 |
|---|---|
| **A***4 | Internal antenna |
| **B***5, *6 | External antenna |

**Connector and number of points/ports**

| Symbol | Description | |
|---|---|---|
| | Connector | Number of points/ports |
| **E3***1 | e-CON | Input: 8 inputs/ Output: 8 outputs |
| **E4***2 | e-CON | 16 points |

*1 Can be selected with type "M"
*2 Can be selected with types "X" and "Y"

*3 The antenna specification selected cannot be changed after purchase.
*4 The external antenna set cannot be used for the internal antenna specification.
*5 An external antenna set is included with the external antenna specification.
*6 It is not possible to use the external antenna set without connecting it with the external antenna specification.

## How to Order

**Compact Wireless Remote (IO-Link)**

# EXW1 – R L A P A8 C

IO-Link

**Remote**

**Type**

| Symbol | Description |
|---|---|
| L | IO-Link |

**Type**

| Symbol | Description |
|---|---|
| A | Port class A |
| B | Port class B |

**Antenna specification for wireless communication**

| Symbol | Connector interface |
|---|---|
| C | Wireless adapter |

**Connector and Number of IO-Link ports**

| Symbol | Connector/Number of IO-Link ports |
|---|---|
| A8*1 | M12/4-port*2 |
| A7*3 | M12/2-port*4 |

*1 Can be selected with type “A”
*2 When using the IO-Link 4-port type, 2 Y branch connectors (EXW1-ACY1) are required.
*3 Can be selected with type “B”
*4 The Y branch connector (EXW1-ACY1) cannot be used with this option.

**Polarity**

| Symbol | Description |
|---|---|
| P | PNP |

* This wireless remote is to be used in combination with a wireless adapter. Order the wireless adapter and the cable for the wireless adapter separately. (For details ⇒ p. 14)

### ● Y branch connector (Option)

When selecting the IO-Link 4-port type for type "A," order the connectors using the part number shown below.
* When using the 4-port type, 2 Y branch connectors (EXW1-ACY1) are required.
* This cannot be used with type "B."

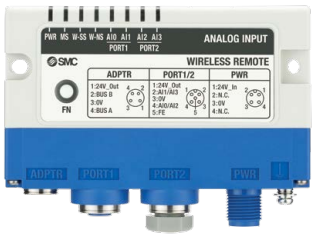
**EXW1-ACY1**

### Components

**Wireless remote**
**+**
**Wireless adapter cable**
**+**
**Wireless adapter**
**+ (When the port class A, 4-port type is used)**
**Y branch connector (2 pcs.)**

## How to Order

### Compact Wireless Remote (Analog input)




**EXW1 – R A X Z A2 C**

**Wireless remote**

**Type**

| Symbol | Description |
|---|---|
| A | Analog |

**Type**

| Symbol | Description |
|---|---|
| X | Input |

**Polarity**

| Symbol | Description |
|---|---|
| Z | None |

**Connector and Number of points**

| Symbol | Connector | Number of points |
|---|---|---|
| A2 | M12 | 4 points*1 |

*1 When using 4 points, use 2 Y-branch connectors (EXW1-ACY2). Or, use a terminal block, etc., to wire 2 devices to 1 analog device connector.

**Antenna specification for wireless communication**

| Symbol | Connector interface |
|---|---|
| C | Wireless adapter |

* This wireless remote is to be used in combination with a wireless adapter. Order the wireless adapter and the cable for the wireless adapter separately. (For details ⇒ p. 14)

**● Y branch connector (Option)**

When branching 1 connector to use as 2 input points, order separately using the part number below.
Note that when using the Y branch connector (EXW1-ACY2), the FE terminal of the input device connected to the remote cannot be used.

**EXW1-ACY2**

**Components**

**Wireless remote**
**+**
**Wireless adapter cable**
**+**
**Wireless adapter**
**+ (4 points type is used)**
**Y branch connector (2 pcs.)**

### NFC Reader/Writer

**EXW1 – NT1**

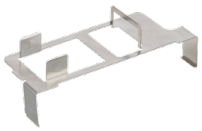
* Order a fixing bracket.
* A USB cable (3 m) is also included.

**● Fixing bracket (Option)**

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

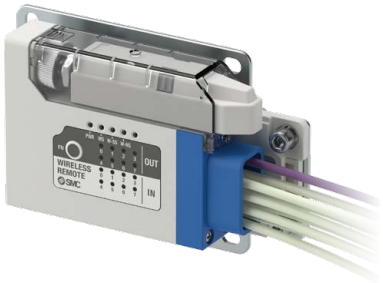
**EXW1-AB 2**

**Variations**

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

## How to Order

### Compact Wireless Remote (Digital input/output)



**EXW1 – R D X P G4 C 1 – E**

**Wireless remote**

**Type**

| Symbol | Type |
|---|---|
| D | Digital |

**Type**

| Symbol | Type |
|---|---|
| X | Input |
| Y | Output |
| M | Input/Output |

**Polarity**

| Symbol | Polarity |
|---|---|
| P | PNP |
| N | NPN |

**Connector/Number of ports**

| Symbol | Connector/Number of points |
|---|---|
| G3 | Grommet/8 points (For type M) |
| G4 | Grommet/16 points (For types X and Y) |

**Antenna specification for communication**

| Symbol | Connector interface |
|---|---|
| C | Wireless adapter |

**Bracket type**

| Symbol | Bracket type |
|---|---|
| 1 | Bracket ① |
| 2 | Bracket ②<br>* EX600-WD□A1 interchangeable bracket |

**Option**

| Symbol | Option |
|---|---|
| Nil | Without wireless adapter |
| E | With wireless adapter ① (EXW1-A11E) |
| N | With wireless adapter ② (EXW1-A11N) |

* If without wireless adapter is selected, a dedicated cable for wireless adapter and wireless adapter or wireless adapter and wireless adapter cover must be ordered separately.
* E, N is shipped with wireless adapter assembled.

### Compact Wireless Remote (Valve manifold)

**EXW1 – R D Y P M5 C – E**

**Wireless remote**

**Type**

| Symbol | Type |
|---|---|
| D | Digital |

**Type**

| Symbol | Type |
|---|---|
| Y | Output |

**Polarity**

| Symbol | Polarity |
|---|---|
| P | PNP |
| N | NPN |

**Connector/Number of ports**

| Symbol | Connector | Number of points |
|---|---|---|
| M5 | Valve manifold | 32 points |

**Antenna specification for wireless communication**

| Symbol | Connector interface |
|---|---|
| C | Wireless adapter |

**Option**

| Symbol | Option |
|---|---|
| Nil | Without wireless adapter |
| E | With wireless adapter ① (EXW1-A11E) |
| N | With wireless adapter ② (EXW1-A11N) |

* If without wireless adapter is selected, a dedicated cable for wireless adapter and wireless adapter or wireless adapter and wireless adapter cover must be ordered separately.
* E, N is shipped with wireless adapter assembled.

### Wireless Adapter Cover

## EXW1 – AB6

For direct mounting of wireless adapter, a wireless adapter cover is required.

## Specifications: Wireless Communication, Wireless Adapter

### 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 or 15 to 79 ch (Refer to page 2.) |
| **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 page 68 for the latest information regarding in which countries the product is certified. |
| **Number of registered wireless remotes**∗1 | | Max. 127 units (15/31/63/127 units) |

∗1 The number of registered units varies depending on the product.
The recommended number of simultaneously operating units is 1 to 15 units.

### Wireless Adapter Specifications (EXW1-A11□)
### Electrical Specifications

| Item | Specifications |
|---|---|
| **US1 (for control) power supply voltage range** | 12 VDC –10% to 24 VDC +10% |
| **Internal current consumption** | 50 mA or less |

### General Specifications

| Item | Specifications |
|---|---|
| **Enclosure** | IP67 |
| **Vibration resistance** | EN 61131-2 compliant<br>5 ≤ f < 8.4 Hz 3.5 mm<br>8.4 ≤ f < 150 Hz 9.8 m/s$^2$ |
| **Impact resistance** | EN 61131-2 compliant, 147 m/s$^2$, 11 ms |
| **Standards** | CE/UKCA marking, UL (CSA)∗1 |
| **Weight** | 40 g (Body), 20 g (Installation plate) |

∗1 UL (CSA) is applicable only when the product is connected to an air management hub system or an EXW1 series wireless base.
Be sure to confirm the specifications of the device to be connected in advance to see if it is UL (CSA) compliant.
∗ Air bubbles may be visible on the exterior of the product, but this does not affect the product's performance.

## Specifications: Compact Wireless Base

### Compact Wireless Base Specifications

### Electrical Specifications

| Item | Specifications |
|---|---|
| **US1 (for control) power supply voltage range** | 24 VDC ±10% |
| **Internal current consumption** | 150 mA or less |

### EtherCAT Communication Specifications (EXW1-BECAC)

| Item | Specifications |
|---|---|
| **Protocol** | EtherCAT(Conformance Test Record V.2.3.0) |
| **Communication speed** | 100 Mbps |
| **Occupation area (Number of inputs/outputs)** | Max. 11784 inputs/11784 outputs (1473 bytes/1473 bytes) |
| **Configuration file** | ESI (XML file)*1 |

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

### General Specifications

| Item | Specifications |
|---|---|
| **Enclosure** | IP67 |
| **Vibration resistance** | EN 61131-2 compliant<br>5 ≤ f < 8.4 Hz 3.5 mm<br>8.4 ≤ f < 150 Hz 9.8 m/s$^2$ |
| **Impact resistance** | EN 61131-2 compliant, 147 m/s$^2$, 11 ms |
| **Standards** | CE/UKCA marking, UL (CSA) |
| **Weight** | 150 g |

### EtherNet/IP Communication Specifications (EXW1-BENAC1)

| Item | Specifications |
|---|---|
| **Protocol** | EtherNet/IP™ (Conformance version: Composite 19.1) |
| **Communication cable** | Standard Ethernet cable (CAT5 or higher, 100BASE-TX) |
| **Communication speed** | 10/100 Mbps |
| **Communication method** | Full duplex/Half duplex |
| **Configuration file** | EDS file |
| **Occupation area (Number of inputs/outputs)** | Max. 11552 inputs/11552 outputs (1444 bytes) |
| **IP address setting range** | Manual, Through DHCP server: Optional address |
| **Device information** | Vendor ID: 7 (SMC Corporation)<br>Device type: 12 (Communication Adapter)<br>Product code: 266 |
| **QuickConnect™ function** | Supported |
| **Web server** | Supported |
| **OPC UA** | Supported |

### General Specifications

| Item | Specifications |
|---|---|
| **Enclosure** | IP67 |
| **Ambient temperature** | Operating: –10 to 50°C<br>Storage/Shipping: –20 to 60°C |
| **Ambient humidity** | 35 to 85%RH (No condensation) |
| **Vibration resistance** | EN61131-2 compliant<br>5 ≤ f < 8.4 Hz 3.5 mm<br>8.4 ≤ f < 150 Hz 9.8 m/s$^2$ |
| **Impact resistance** | EN61131-2 compliant, 147 m/s$^2$, 11 ms |
| **Standards** | CE/UKCA marking, UL (CSA) |
| **Weight** | 160 g |

## Specifications: Compact Wireless Base

### Compact Wireless Base Specifications
### PROFINET Communication Specifications (EXW1-BPNAC1)

| Item | Specifications |
|---|---|
| **Protocol** | PROFINET IO (Conformance Class B) |
| **Communication speed** | 100 Mbps |
| **Configuration file** | GSDML file |
| **Occupation area (Number of inputs/outputs)** | Max. 10464 inputs/10464 outputs (1308 bytes) |
| **FSU (Fast start up)** | Supported |
| **MRP (Media Redundancy Protocol)** | Supported |
| **System redundancy S.2** | Supported |
| **Web server** | Supported |
| **OPC UA** | Supported |

### General Specifications

| Item | Specifications |
|---|---|
| **Enclosure** | IP67 |
| **Ambient temperature** | Operating: –10 to 50 °C<br>Storage/Shipping: –20 to 60 °C |
| **Ambient humidity** | 35 to 85%RH (No condensation) |
| **Vibration resistance** | EN 61131-2 compliant<br>5 ≤ f < 8.4 Hz 3.5 mm<br>8.4 ≤ f < 150 Hz 9.8 m/s$^2$ |
| **Impact resistance** | EN 61131-2 compliant, 147 m/s$^2$,11 ms |
| **Standards** | CE/UKCA marking, UL (CSA) |
| **Weight** | 160 g |

### DeviceNet Communication Specifications (EXW1-BDNAC)

| Item | Specifications |
|---|---|
| **Protocol** | DeviceNet®<br>Volume 1 (Edition 2.1)<br>Volume 3 (Edition 1.1) |
| **Device type** | Communication adapter |
| **Communication speed** | 125/250/500 kbps |
| **Configuration file** | EDS file |
| **Occupation area (Number of inputs/outputs)** | Max. 4096 inputs/4096 outputs (512 bytes) |
| **Applicable messages** | Duplicate MAC ID Check Message<br>Group 2 Only Unconnected Explicit Message<br>Explicit Message (Group 2)<br>Poll I/O Message (Predefined M/S Connection set) |

### Electrical Specifications

| Item | Specifications |
|---|---|
| **V+ (US1) power supply voltage range** | DeviceNet® specification compliant (11 to 25 VDC) |
| **Internal current consumption** | 100 mA or less |

### General Specifications

| Item | Specifications |
|---|---|
| **Enclosure** | IP67 |
| **Ambient temperature** | Operating: –10 to 50°C<br>Storage/Shipping: –20 to 60°C |
| **Ambient humidity** | 35 to 85%RH (No condensation) |
| **Vibration resistance** | EN 61131-2 compliant<br>5 ≤ f < 8.4 Hz 3.5 mm<br>8.4 ≤ f < 150 Hz 9.8 m/s$^2$ |
| **Impact resistance** | EN 61131-2 compliant, 147 m/s$^2$, 11 ms |
| **Standards** | CE/UKCA marking, UL (CSA) |
| **Weight** | 150 g |

## Specifications: Compact Wireless Base

### Compact Wireless Base Specifications
### 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<br>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<br>Extended cyclic transmission (Only when Ver. 2.00 is specified)<br>Longer cable between stations |

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

### Electrical Specifications

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

### General Specifications

| Item | Specifications |
|---|---|
| **Enclosure** | IP67 |
| **Ambient temperature** | Operating: –10 to 50°C<br>Storage/Shipping: –20 to 60°C |
| **Ambient humidity** | 35 to 85%RH (No condensation) |
| **Vibration resistance** | EN 61131-2 compliant<br>5 ≤ f < 8.4 Hz 3.5 mm<br>8.4 ≤ f < 150 Hz 9.8 m/s$^2$ |
| **Impact resistance** | EN 61131-2 compliant, 147 m/s$^2$, 11 ms |
| **Standards** | CE/UKCA marking |
| **Weight** | 150 g (Body), 100 g (External antenna set) |

## Specifications: Compact Wireless Remote (EXW1-RD□□E□)

### 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 or 15 to 79 ch (Refer to page 2.) |
| **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 page 68 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 | |
|---|---|---|---|
| | | **EXW1-RDXPE4□□** | **EXW1-RDXNE4□□** |
| 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** | PNP (-COM) | 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 | |
|---|---|---|---|
| | | **EXW1-RDYPE4□□** | **EXW1-RDYNE4□□** |
| 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** | PNP (-COM) | 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 |
| **Ambient temperature** | Operating: –10 to 50°C<br>Storage/Shipping: –20 to 60°C |
| **Ambient humidity** | 35 to 85%RH (No condensation) |
| **Standards** | CE/UKCA marking |
| **Vibration resistance** | EN 61131-2 compliant<br>5 ≤ f < 8.4 Hz 3.5 mm<br>8.4 ≤ 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) |

## Specifications: Compact Wireless Remote (EXW1-RL□) IO-Link

### 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 or 15 to 79 ch (Refer to page 2.) |
| **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 page 68 for the latest information regarding in which countries the product is certified. |

### IO-Link Specifications

| Item | Specifications | |
|---|---|---|
| **Model** | **EXW1-RLAPA8C** | **EXW1-RLBPA7C** |
| **IO-Link port class** | Class A | Class B |
| **Communication speed** | COM1 (4.8 kbps)<br>COM2 (38.4 kbps)<br>COM3 (230.4 kbps)<br>Changes automatically according to the connected device | |
| **IO-Link version** | Ver.1.1 | |
| **Number of IO-Link ports** | Max. 4 (32 bytes/IO-Link port) | Max. 2 (32 bytes/IO-Link port) |

### Electrical Specifications

| Item | Specifications | | |
|---|---|---|---|
| **Model** | **EXW1-RLAPA8C** | | **EXW1-RLBPA7C** |
| **US1 power supply voltage range (for control)** | 24 VDC ±10% | | |
| **US2 power supply voltage range (for driving)** | — | | 24 VDC ±10% |
| **Current consumption** | 100 mA or less | | |
| **Device power supply (L+)** | 0.5 A/Connector (1 A/Unit) | | 0.3 A/Connector (0.6 A/Unit) |
| **External power supply (P24)** | — | | 1.6 A/Connector (2 A/Unit)<br>(Supplied from the power supply for US2) |
| **Input** | | | |
| **Pin no.** | 2 | 4 | 4 |
| **Input type** | PNP | | |
| **Protection** | Short-circuit protection | | |
| **Rated input current** | Typ. 2.5 mA | Typ. 5.8 mA | Typ. 5.8 mA |
| **ON voltage** | 13 V or more | | |
| **OFF voltage** | 8 V or less | | |
| **Output** | | | |
| **Pin no.** | 2, 4 | | 4 |
| **Output type** | PNP | | |
| **Max. load current (C/Q line)** | 0.25 A/1 output (Supplied from the power supply for US1) | | |
| **Protection** | Short-circuit protection | | |

### General

| Item | Specifications |
|---|---|
| **Enclosure** | IP67 |
| **Ambient temperature** | Operating: –10°C to +50°C<br>Storage/Shipping: –20°C to +60°C |
| **Vibration resistance (Conforming to EN61131-2)** | 5 ≤ f < 8.4 Hz 3.5 mm<br>8.4 ≤ f ≤ 150 Hz 9.8 m/s$^2$ |
| **Impact (Conforming to EN61131-2)** | 147 m/s$^2$, 11 ms |
| **Mounting** | M4, 2 locations |
| **Ambient humidity** | 35% to 85% RH (No condensation) |
| **Standards** | CE/UKCA marking, UL (CSA) |
| **Weight** | 150 g |

## Specifications: Compact Wireless Remote (EXW1-RAX) Analog Input

### Electrical Specifications

| Item | Specifications | |
|---|---|---|
| **Input type** | Voltage input | Current input |
| **Power supply voltage range** | 24 VDC±10% | |
| **Current consumption** | 50 mA or less | |
| **Input connector** | M12 connector (5-pin) socket*1 | |
| **Number of inputs** | 4 inputs (2 inputs/Connector) | |
| **Max. sensor supply current** | 0.5 A/Connector (1 A/Unit) | |
| **Protection** | Short-circuit protection | |
| **Input signal range** | 0 to 10 V, 1 to 5 V, 0 to 5 V | 0 to 20 mA, 4 to 20 mA |
| **Resolution** | 16 bits | |
| **Max. rated input signal** | +15 V | +40 mA |
| **Input impedance** | 220 kΩ | 240 Ω |
| **Linearity (25°C)** | ±0.05% F.S. or less | |
| **Repeatability (25°C)** | ±0.15% F.S. or less | |
| **Accuracy (25°C)** | ±0.5% F.S. or less | ±0.6% F.S. or less |

*1 An M12 connector (4-pin) can be used as well.

### General Specifications

| Item | Specifications |
|---|---|
| **Enclosure** | IP67*2 |
| **Ambient temperature (Operating temperature)** | –10 to +55°C |
| **Ambient temperature (Storage temperature)** | –20 to +60°C |
| **Ambient humidity** | 35 to 85%RH (No condensation) |
| **Withstand voltage** | 1000 VAC 1.0 min. External terminals (including the FE terminal) and enclosure screws |
| **Insulation resistance** | 10 MΩ or more 500 VDC External terminals (including the FE terminal) and enclosure screws |
| **Vibration resistance** | Conforms to EN 61131-2<br>5 ≤ f < 8.4 Hz 3.5 mm<br>8.4 ≤ f < 150 Hz 9.8 m/s$^2$ |
| **Impact resistance** | Conforms to EN 61131-2, 147 m/s$^2$, 11 ms |
| **Mounting** | Through hole for M4 screw (2 pcs.) |
| **Standards** | CE/UKCA marking, UL/(CSA) |
| **Weight** | 150 g (Body) |

*2 Be sure to fit a seal cap on any unused connectors. (For details ⇒ p. 53)

## Specifications: Compact Wireless Remote (EXW1-RD□□G□) Digital Input/Output

### 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 or 15 to 79 ch (Refer to page 2.) |
| **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 page 68 for the latest information regarding in which countries the product is certified. |

### Electrical Specifications (Input/Output Type)

| Item | | Specifications | |
|---|---|---|---|
| Model | | **EXW1-RDMPG3C□** | **EXW1-RDMNG3C□** |
| **US1 power supply voltage range (for control/input)** | | 24 VDC ±10% | |
| **US2 power supply voltage range (for driving)** | | 24 VDC ±10% | |
| **Internal current consumption** | | 100 mA or less | |
| **Isolation** | | Yes (between US1 and US2) | |
| **Input** | **Number of points** | 2 points/connector, 8 points/unit | |
| | **Type** | PNP | NPN |
| | **Max. sensor supply current** | 0.5 A/connector, 2 A/unit | |
| | **ON current** | Typ.3 mA | |
| | **ON voltage** | 11 V or more | |
| | **OFF voltage** | 5 V or less | |
| | **Protection** | Short-circuit protection | |
| **Output** | **Number of points** | 2 points/connector, 8 points/unit | |
| | **Type** | PNP | NPN |
| | **Max. output current** | 0.5 A/point, 2 A/unit | |
| | **Protection** | Short-circuit protection | |

### Electrical Specifications (Input Type)

| Item | | Specifications | |
|---|---|---|---|
| Model | | **EXW1-RDXPG4C□** | **EXW1-RDXNG4C□** |
| **US1 power supply voltage range (for control/input)** | | 24 VDC ±10% | |
| **Internal current consumption** | | 100 mA or less | |
| **Input** | **Number of points** | 2 points/connector, 16 points/unit | |
| | **Type** | PNP | NPN |
| | **Max. sensor supply current** | 0.5 A/connector, 2 A/unit | |
| | **ON current** | Typ.3 mA | |
| | **ON voltage** | 11 V or more | |
| | **OFF voltage** | 5 V or less | |
| | **Protection** | Short-circuit protection | |

### Electrical Specifications (Output Type)

| Item | | Specifications | |
|---|---|---|---|
| Model | | **EXW1-RDYPG4C□** | **EXW1-RDMNG4C□** |
| **US1 power supply voltage range (for control/input)** | | 24 VDC ±10% | |
| **US2 power supply voltage range (for driving)** | | 24 VDC ±10% | |
| **Internal current consumption** | | 100 mA or less | |
| **Isolation** | | Yes (between US1 and US2) | |
| **Output** | **Number of points** | 2 points/connector, 16 points/unit | |
| | **Type** | PNP | NPN |
| | **Max. output current** | 0.5 A/point, 2 A/unit | |
| | **Protection** | Short-circuit protection | |

### General Specifications (Common)

| Item | Specifications |
|---|---|
| **Enclosure** | IP67*1 |
| **Ambient temperature** | Operating: –10 to 55°C<br>Storage/Shipping: –20 to 60°C |
| **Ambient humidity** | 35 to 85%RH (No condensation) |
| **Standards** | CE/UKCA marking |
| **Vibration resistance** | EN 61131-2 compliant<br>5 ≤ f < 8.4 Hz 3.5 mm<br>8.4 ≤ f < 150 Hz 9.8 m/s$^2$ |
| **Impact resistance** | EN 61131-2 compliant, 147 m/s$^2$, 11 ms |
| **Weight** | Min. 350 g (Bracket 1, Without wireless adapter)<br>Max. 500 g (Bracket 2, With wireless adapter) |

*1 Be sure to fit a seal cap on any unused connectors. (For details ⇒ p. 53)

## Specifications: Compact Wireless Remote (EXW1-RD□□M□) Valve Manifold

### Electrical Specifications

| Item | Specifications |
|---|---|
| **US1 (for control) power supply voltage range** | 24 VDC ±10% |
| **US2 (for output) power supply voltage range** | 24 VDC ±10% |
| **US1 (for control) current consumption** | 70 mA or less |
| **US2 (for output) max. supply current** | 2 A |
| **Valve output connected load** | Solenoid valve with surge voltage suppressor of 24 VDC and 1.5 W or less (manufactured by SMC) |

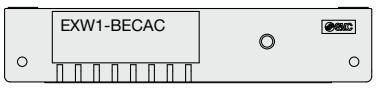
### General Specifications

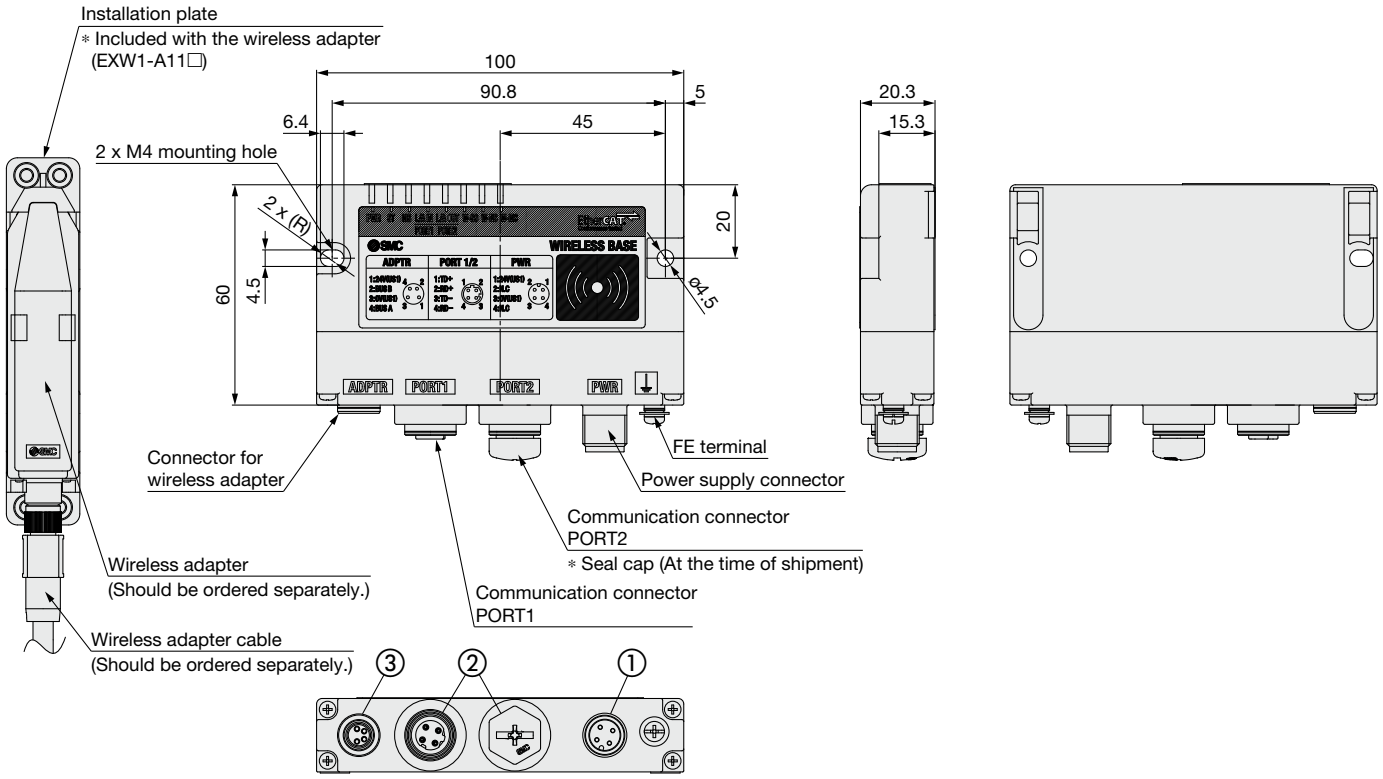
| Item | Specifications |
|---|---|
| **Enclosure** | IP67 |
| **Ambient temperature** | Operating: –10 to 55°C |
| | Storage/Shipping: –20 to 60°C |
| **Ambient humidity** | 35 to 85%RH (No condensation) |
| **Standards** | CE/UKCA marking |
| **Vibration resistance** | EN 61131-2 compliant<br>$5 \leq f < 8.4$ Hz 3.5 mm<br>$8.4 \leq f < 150$ Hz 9.8m/s$^2$<br>(Excludes the valve) |
| **Impact resistance** | EN 61131-2 compliant, 147 m/s$^2$, 11 ms<br>(Excludes the valve) |
| **Weight** | 180 g (With wireless adapter), 140 g (Without wireless adapter) |
| **Accessory (Mounting screw)** | 2 pcs. |

## Dimensions/Parts Description

### Compact Wireless Base (EtherCAT, EtherNet/IP™, PROFINET)

**EXW1-BECAC**
**EXW1-BENAC1**
**EXW1-BPNAC1**




#### ① Power supply connector

| No. | Signal | M12, 4-pin, plug A-coded |
|---|---|---|
| **1** | 24 V |  |
| **2** | N.C. | |
| **3** | 0 V | |
| **4** | N.C. | |



#### ② EtherCAT, PROFINET communication connector

| No. | Signal | M12, 4-pin, D-coded, socket |
|---|---|---|
| **1** | TD+ |  |
| **2** | RD– | |
| **3** | TD+ | |
| **4** | RD– | |



#### ② EtherNet/IP communication connector

| No. | Signal | M12, 4-pin, D-coded, socket |
|---|---|---|
| **1** | TX+ |  |
| **2** | RX– | |
| **3** | TX+ | |
| **4** | RX– | |



#### ③ Connector for wireless adapter

| No. | Signal | M8, 4-pin, socket |
|---|---|---|
| **1** | 24 V (US1) |  |
| **2** | Internal BUS B | |
| **3** | 0 V (US1) | |
| **4** | Internal BUS A | |

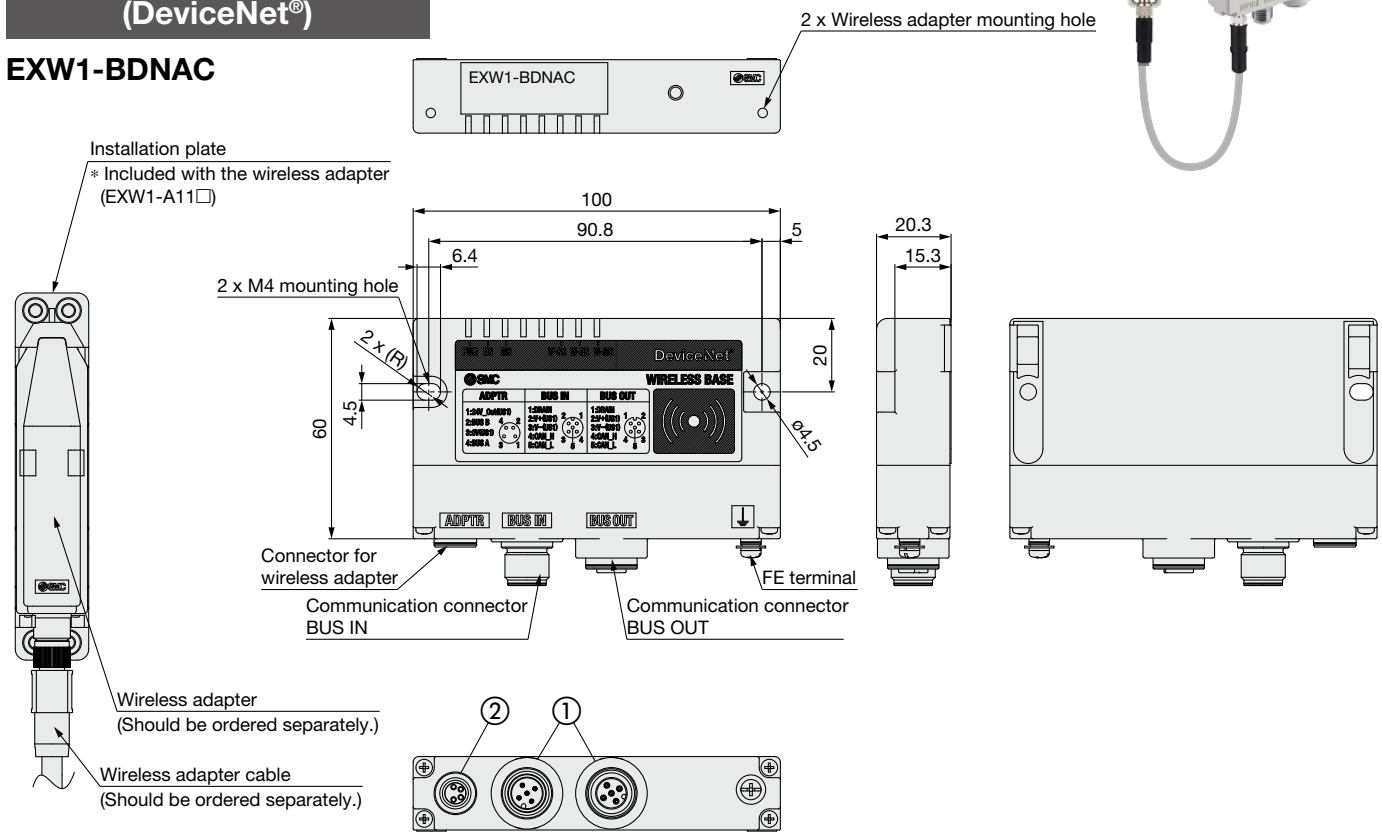


∗ The compact wireless base (EtherCAT®, EtherNet/IP™, PROFINET, DeviceNet®) is a wireless system base used in combination with a wireless adapter that has wireless communication capabilities.
When using this product, it is necessary to order the wireless adapter and wireless adapter cable separately. (For details ⇒ p. 14)
∗ Use the EXW1-NT1 for pairing with the wireless remote.

## Dimensions/Parts Description

### Compact Wireless Base (DeviceNet®)

### EXW1-BDNAC




#### ① DeviceNet communication connector

| No. | BUS IN | | | BUS OUT | | |
|---|---|---|---|---|---|---|
| | Signal | Description | M12, 5-pin, plug A-coded | Signal | Description | M12, 5-pin, socket A-coded |
| 1 | DRAIN | Drain | 2 1 5 3 4 | DRAIN | Drain | 1 2 5 4 3 |
| 2 | V+ (US1) | DeviceNet power supply + | | V+ (US1) | DeviceNet power supply + | |
| 3 | V– (US1) | DeviceNet power supply – | | V– (US1) | DeviceNet power supply – | |
| 4 | CAN_H | Signal wire H | | CAN_H | Signal wire H | |
| 5 | CAN_L | Signal wire L | | CAN_L | Signal wire L | |

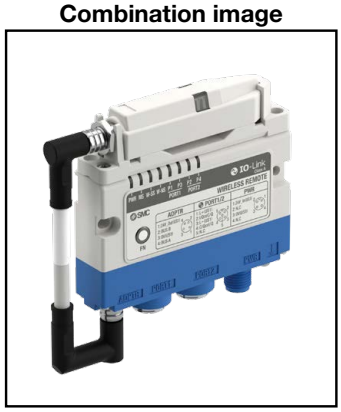
#### ② Connector for wireless adapter

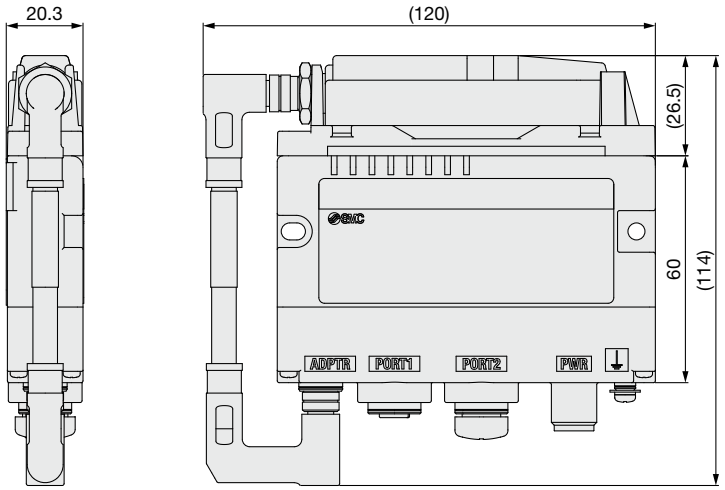
| No. | Signal | M8, 4-pin, socket |
|---|---|---|
| 1 | V+_Out (US1) | 4 2 3 1 |
| 2 | Internal BUS B | |
| 3 | V– (US1) | |
| 4 | Internal BUS A | |

* The compact wireless base (EtherCAT, EtherNet/IP™, PROFINET, DeviceNet®) is a wireless system base used in combination with a wireless adapter that has wireless communication capabilities.
  When using this product, it is necessary to order the wireless adapter and wireless adapter cable separately. (For details ⇒ p. 14)
* Use the EXW1-NT1 for pairing with the wireless remote.

### ■ Dimensions when the wireless adapter, cable for the wireless adapter (EXW1-AC001-SAPU), and installation plate are combined

**Combination image**

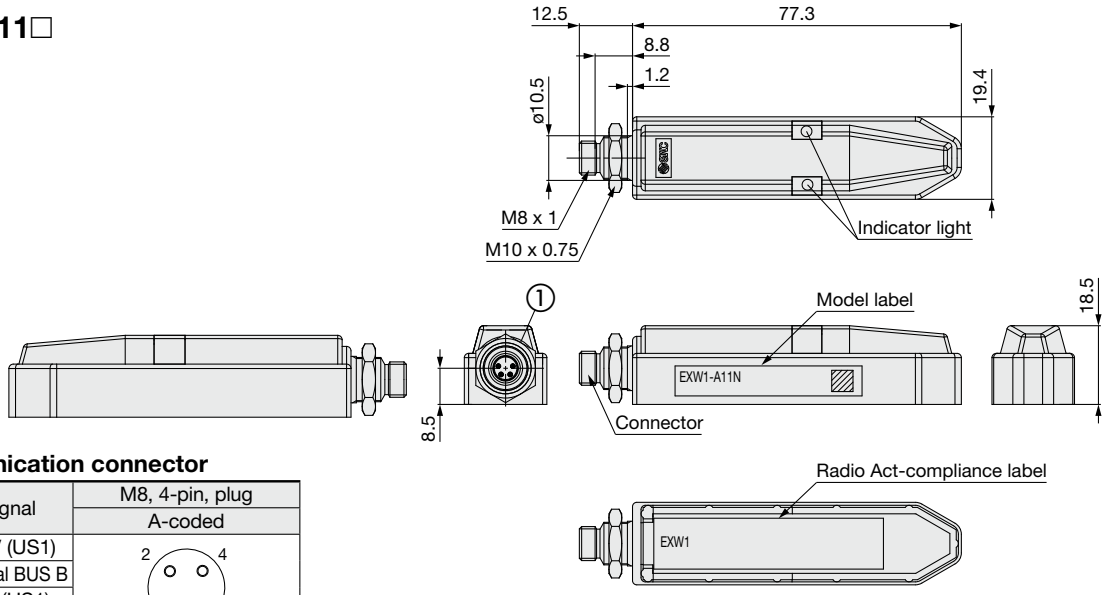




## Dimensions/Parts Description

### Wireless Adapter

**EXW1-A11□**




**①Communication connector**

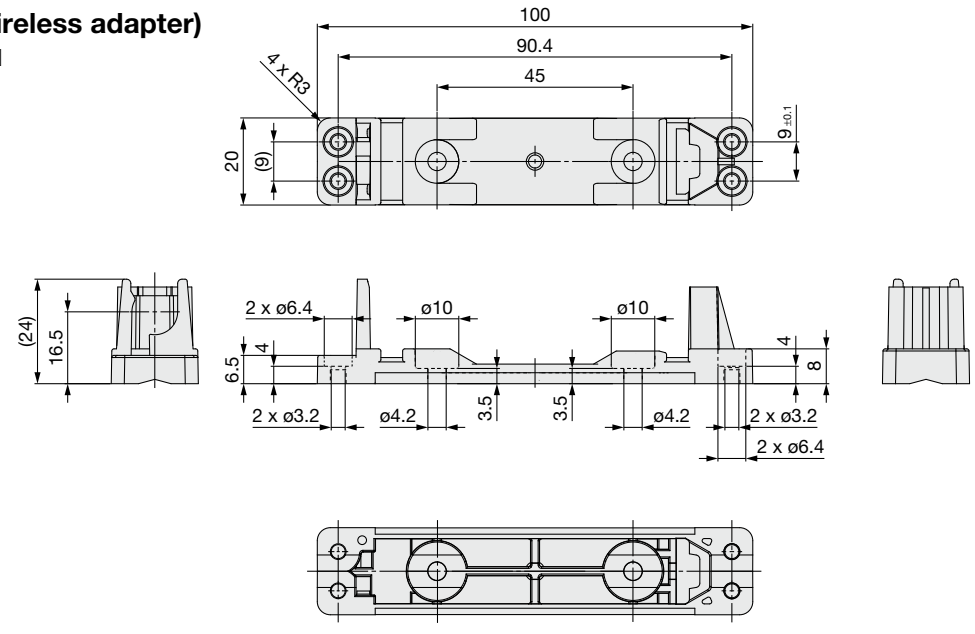
| No. | Signal | M8, 4-pin, plug A-coded |
|---|---|---|
| **1** | 24 V (US1) |  |
| **2** | Internal BUS B | |
| **3** | 0 V (US1) | |
| **4** | Internal BUS A | |



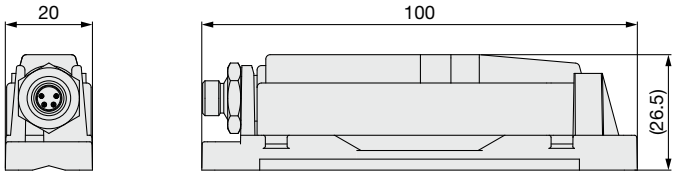
### Installation Plate

**EXW1-AB4 (Option for wireless adapter)**

∗ Included with the EXW1-A11□



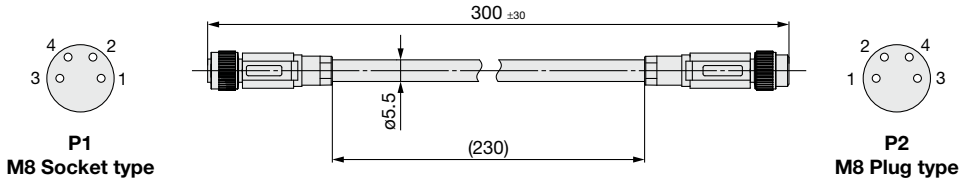

### ■ Dimensions when the wireless adapter and installation plate are combined



## Dimensions/Parts Description

### Wireless Adapter Cable

#### EXW1-AC1-X1

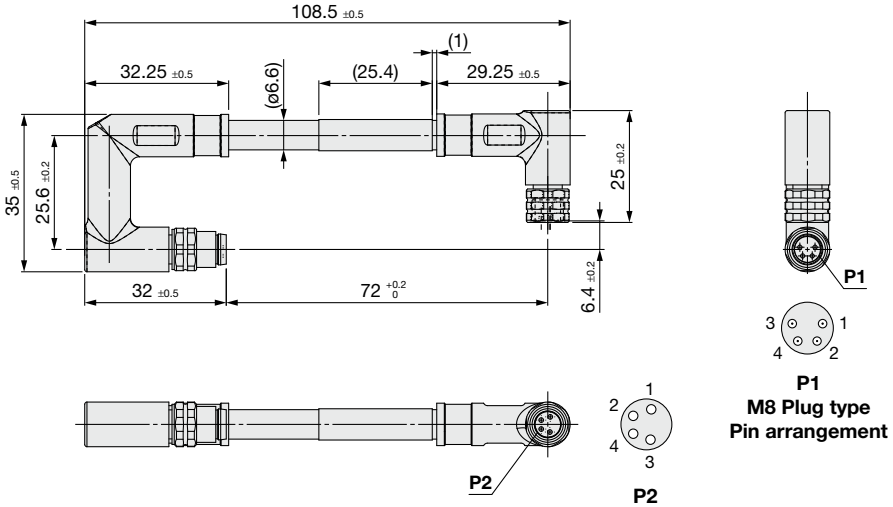



**P1**
**M8 Socket type**
**Pin arrangement**

**P2**
**M8 Plug type**
**Pin arrangement**

#### EXW1-AC001-SAPU

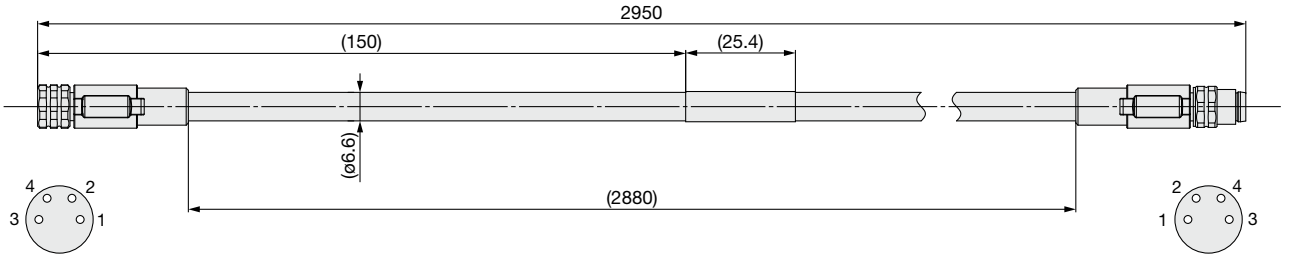
**Mounting diagram**




**P1**
**M8 Plug type**
**Pin arrangement**

**P2**
**M8 Socket type**
**Pin arrangement**

#### EXW1-AC030-SSPS




**P1**
**M8 Socket type**
**Pin arrangement**

**P2**
**M8 Plug type**
**Pin arrangement**

## Dimensions/Parts Description

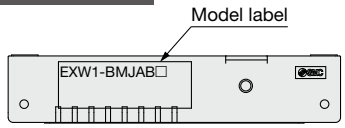

Internal antenna

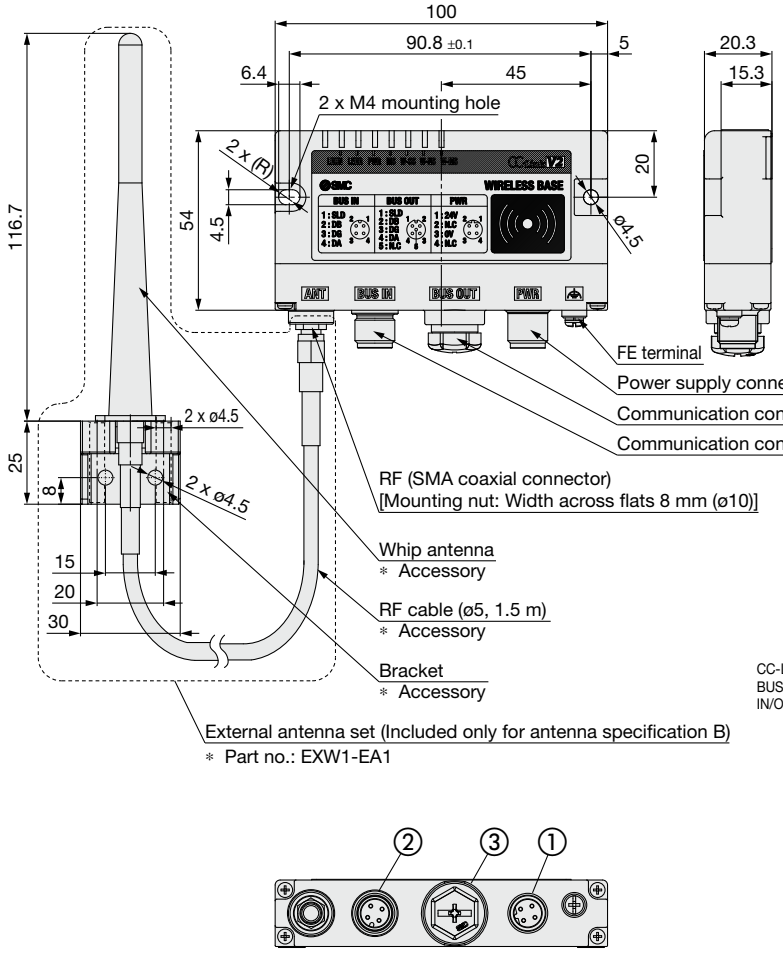

External antenna

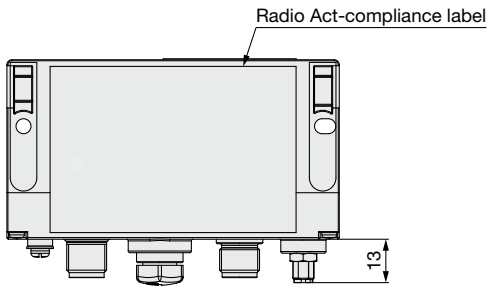

External antenna set

### Compact Wireless Base (CC-Link)

**EXW1-BMJA□**



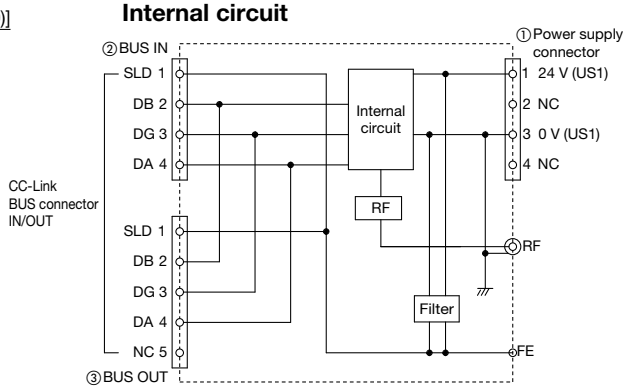




＊ The seal cap is attached when shipped.




**Internal circuit**




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

**①Power supply connector**

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



**②③CC-Link BUS connector**

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



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

## Dimensions/Parts Description

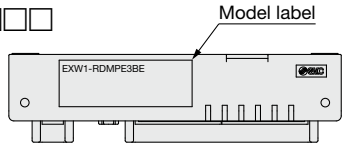

Internal antenna

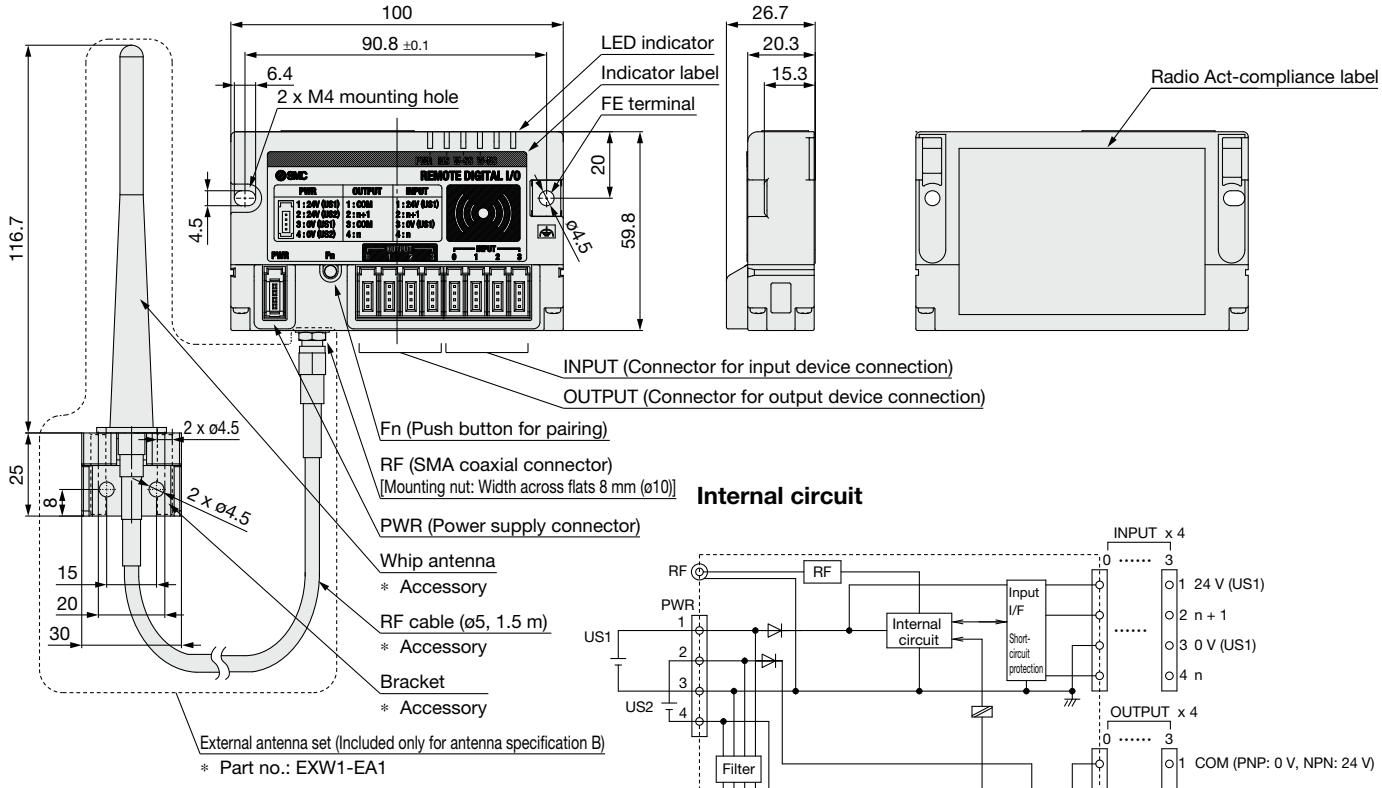

External antenna


External antenna set

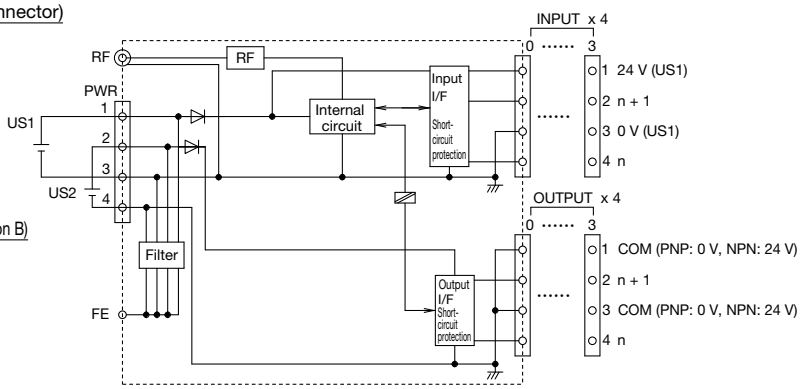
### Compact Wireless Remote (Digital Input/Output)

**EXW1-RDM□□□□**



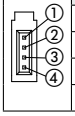




### Internal circuit



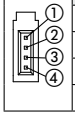

∗ The metal housing part of the RF (SMA coaxial connector) is connected to 0 V (US1).

**PWR (Power supply connector)**



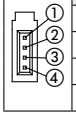
| Pin no. | Description |
|---|---|
| 1 | 24 V (US1) |
| 2 | 24 V (US2) |
| 3 | 0 V (US1) |
| 4 | 0 V (US2) |

**INPUT (Connector for input device connection)**



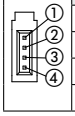
| Pin no. | Description |
|---|---|
| 1 | 24 V (US1) |
| 2 | n + 1 |
| 3 | 0 V (US1) |
| 4 | n |

**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.

## Dimensions/Parts Description

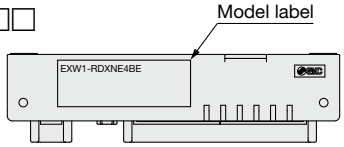

Internal antenna

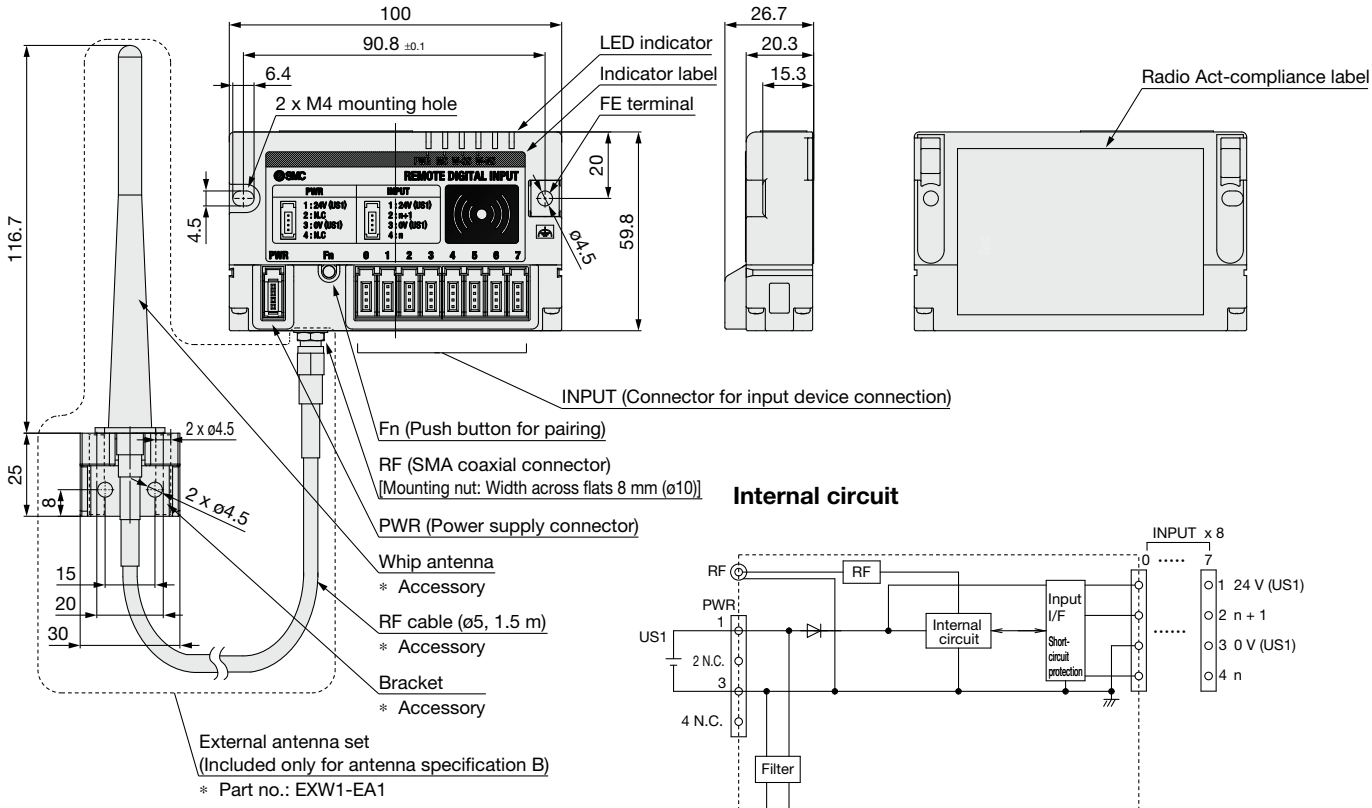

External antenna


External antenna set

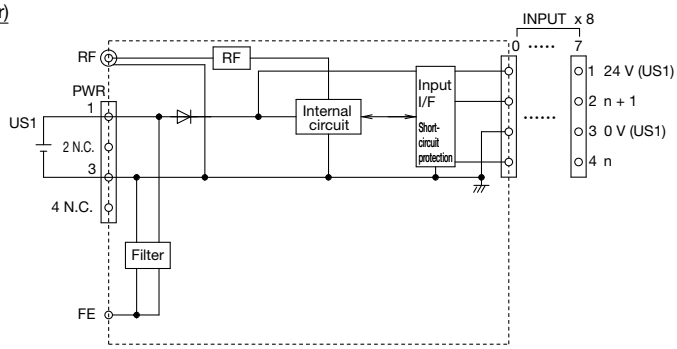
### Compact Wireless Remote (Digital Input)

**EXW1-RDX□□□□**




**Internal circuit**




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

**PWR (Power supply connector)**

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

**INPUT (Connector for input device connection)**

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

## Dimensions/Parts Description

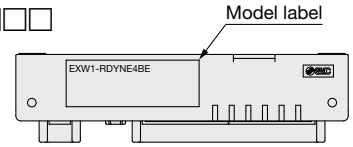

Internal antenna

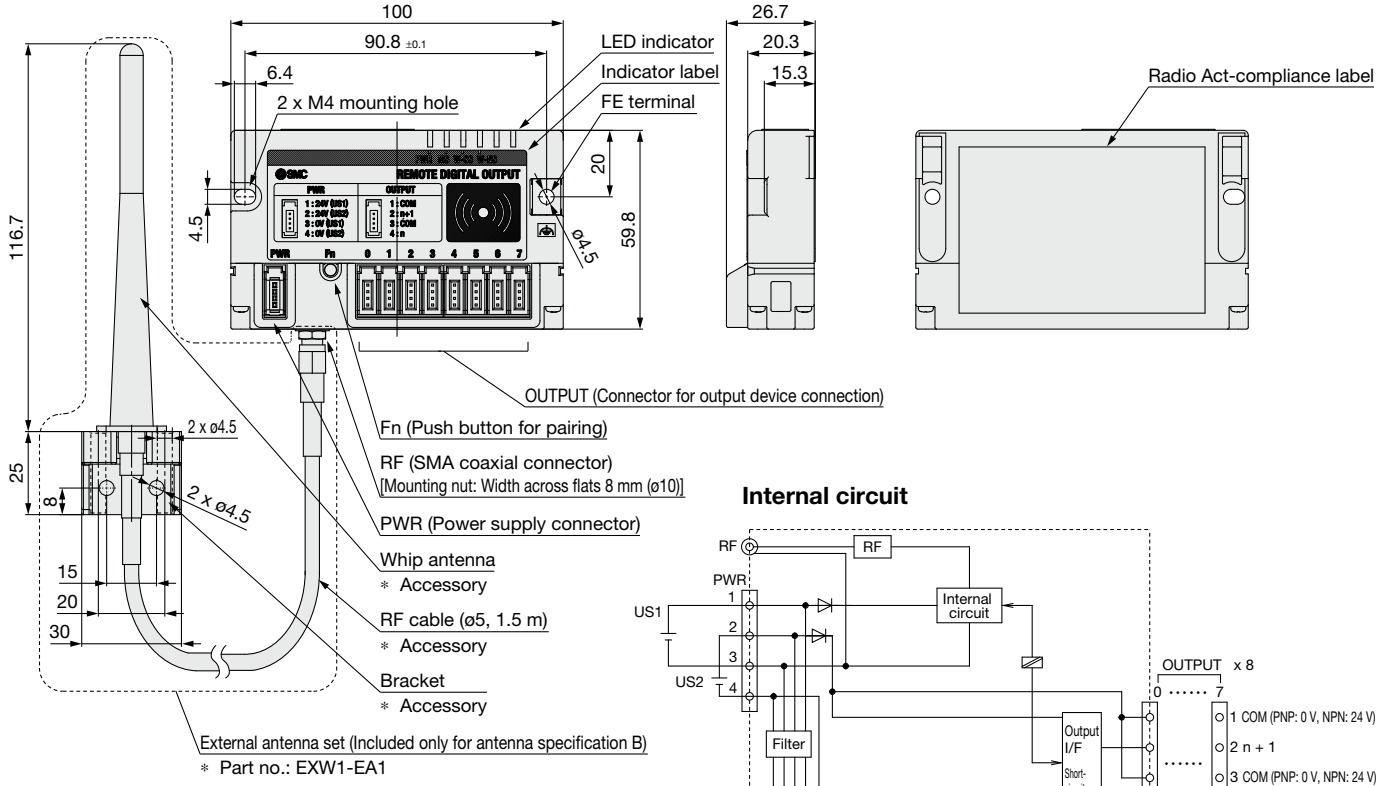

External antenna


External antenna set

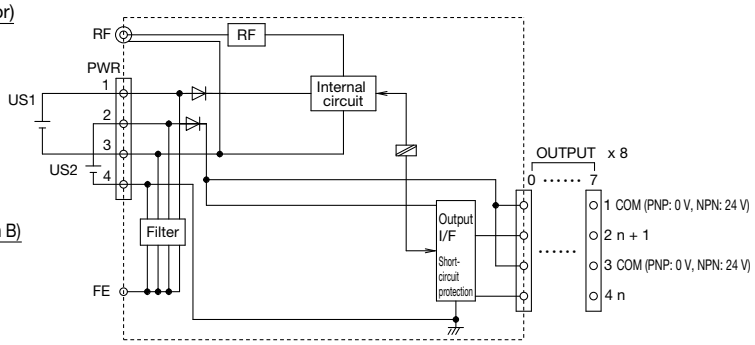
### Compact Wireless Remote (Digital Output)

**EXW1-RDY□□□□**



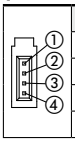




**Internal circuit**



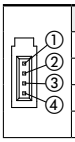

∗ The metal housing part of the RF (SMA coaxial connector) is connected to 0 V (US1).

**PWR**
**(Power supply connector)**



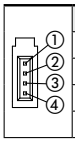
| Pin no. | Description |
|---|---|
| 1 | 24 V (US1) |
| 2 | 24 V (US2) |
| 3 | 0 V (US1) |
| 4 | 0 V (US2) |

**OUTPUT**
**(Connector for output device connection, EXW1-RDYPE4□□)**



| 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-RDYNE4□□)**

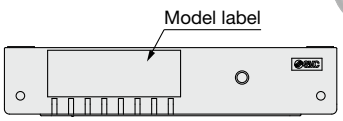


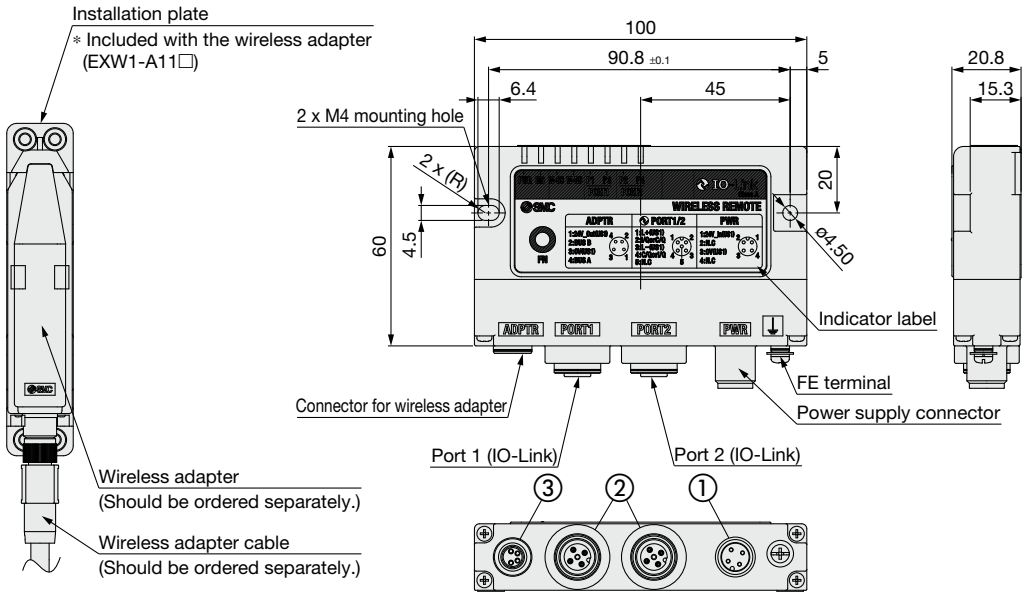
| Pin no. | Description |
|---|---|
| 1 | +COM (US2_24 V) |
| 2 | n + 1 |
| 3 | +COM (US2_24 V) |
| 4 | n |

## Dimensions/Parts Description

### Compact Wireless Remote (IO-Link)

**EXW1-RL□P□C**




### ①Connector for Wireless Adapter

| Pin no. | Description | M8, 4-pin, socket |
|---|---|---|
| 1 | 24 V (US1) |  |
| 2 | Internal BUS B | |
| 3 | 0 V (US1) | |
| 4 | Internal BUS A | |



### ②Port 1/2: EXW1-RLAPA8C (ClassA)

| Pin no. | Description | M12, 5-pin, A coding, socket |
|---|---|---|
| 1 | L+ (US1)∗1 |  |
| 2 | I/Q or C/Q∗2 | |
| 3 | L– (US1) | |
| 4 | C/Q or I/Q∗2 | |
| 5 | Unused | |



∗1 Do not input power.
∗2 The functions of pins can be changed in the settings.

### ②Port 1/2: EXW1-RLBPA7C (ClassB)

| Pin no. | Description | M12, 5-pin, A coding, socket |
|---|---|---|
| 1 | L+ (US1)∗1 |  |
| 2 | P24 (US2)∗1 | |
| 3 | L– (US1) | |
| 4 | C/Q or I/Q∗2 | |
| 5 | N24 (US2) | |



∗1 Do not input power.
∗2 The functions of pins can be changed in the settings.

### ③Power supply connector

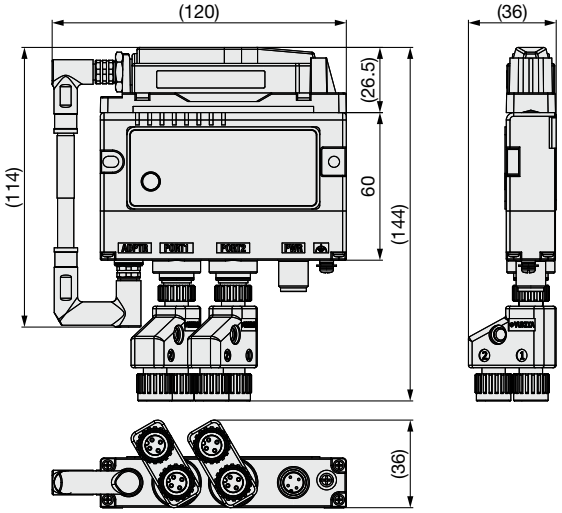
| Pin no. | Description | M12, 4-pin, A coding, plug |
|---|---|---|
| 1 | 24 V_In (US1) |  |
| 2 | 24 V_In (US2)∗1 | |
| 3 | 0 V (US1) | |
| 4 | 0 V (US2)∗1 | |



∗1 EXW1-RLBPA7C (ClassB) only

### ■ Dimensions when the wireless adapter, cable for the wireless adapter (EXW1-AC001-SAPU), installation plate, and Y-branch connector (EXW1-ACY1) are combined

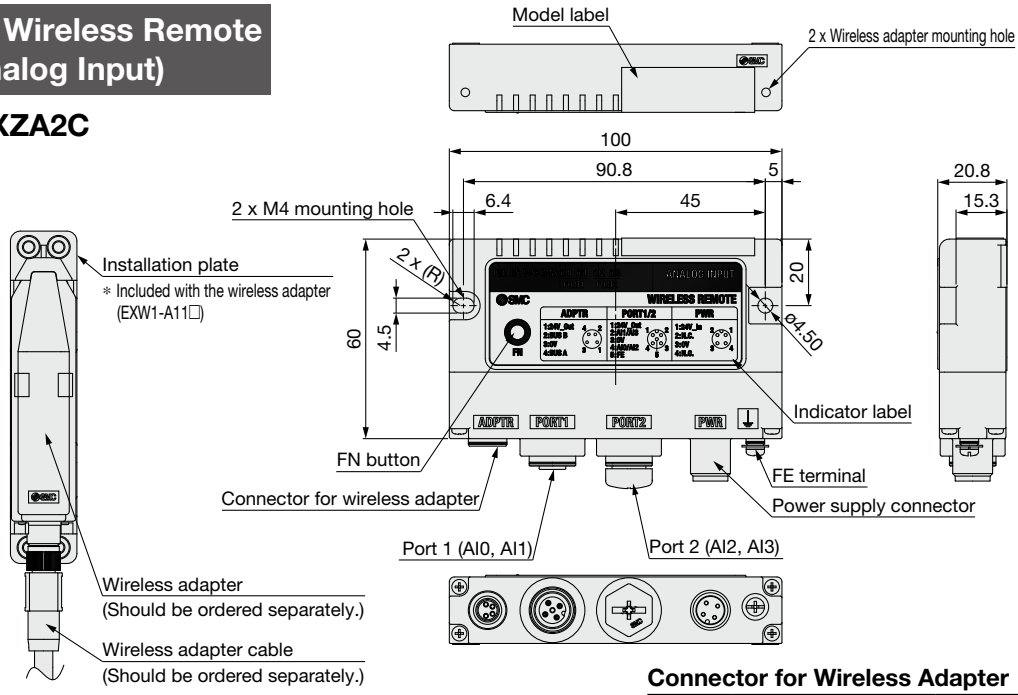
**Combination image**



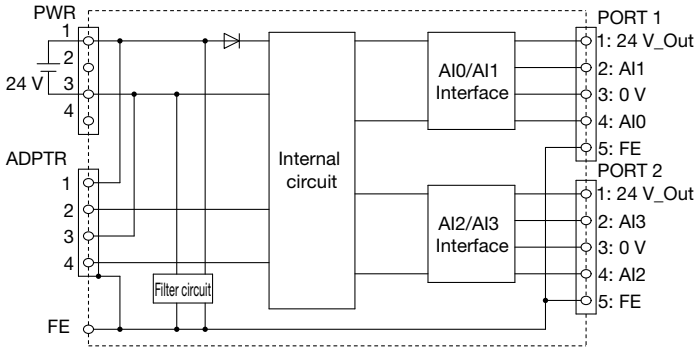
## Dimensions/Parts Description

### Compact Wireless Remote (Analog Input)

**EXW1-RAXZA2C**




### Internal circuit




### Connector for Wireless Adapter

| Pin no. | Description | M8, 4-pin, socket |
|---|---|---|
| **1** | 24 V |  |
| **2** | Internal BUS B | |
| **3** | 0 V | |
| **4** | Internal BUS A | |



### Power supply connector

| No. | Signal | Description | M12, 4-pin, plug A-coded |
|---|---|---|---|
| **1** | 24 V | 24 VDC: Input*1 |  |
| **2** | N.C. | N.C. | |
| **3** | 0 V | 0 VDC | |
| **4** | N.C. | N.C. | |



*1 Input 24 V ±10%.

### Analog device connector PORT 1/PORT 2

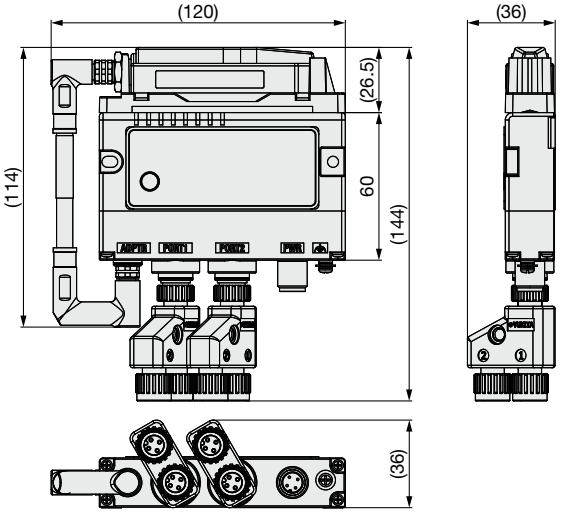
| No. | Signal | Description | M12, 5-pin, socket A-coded |
|---|---|---|---|
| **1** | 24 V | 24 V: Output*2 |  |
| **2** | AI1/AI3 | Analog input | |
| **3** | 0 V | 0 V | |
| **4** | AI0/AI2 | Analog input | |
| **5** | FE | FE | |



*2 Do not input power.

■ **Dimensions when the wireless adapter, cable for the wireless adapter (EXW1-AC001-SAPU), installation plate, and Y-branch connector (EXW1-ACY2) are combined**

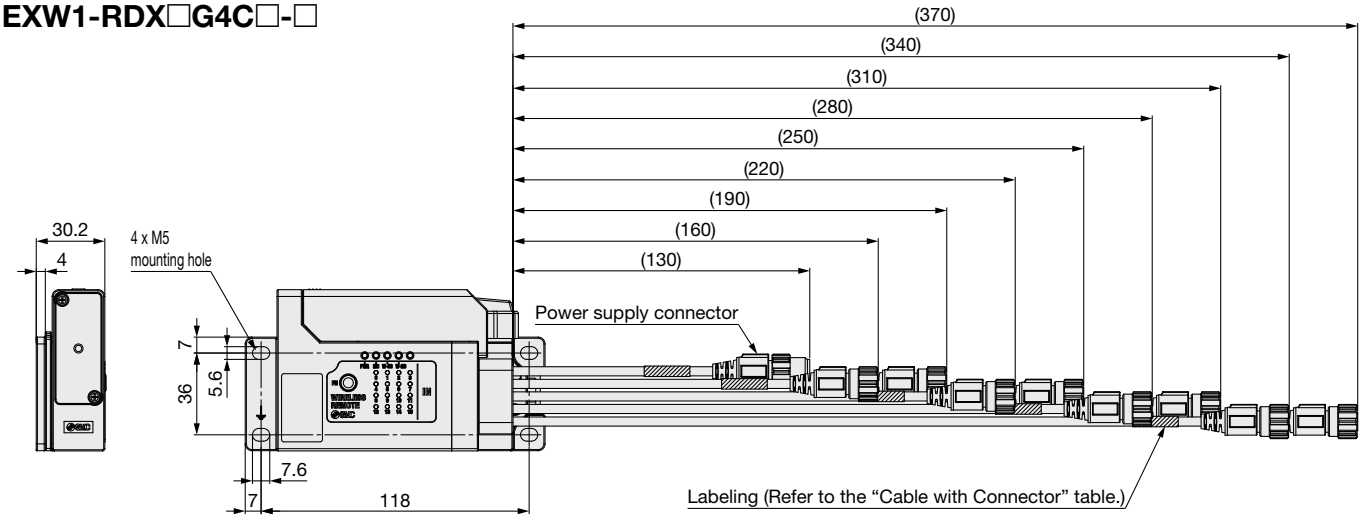
**Combination image**

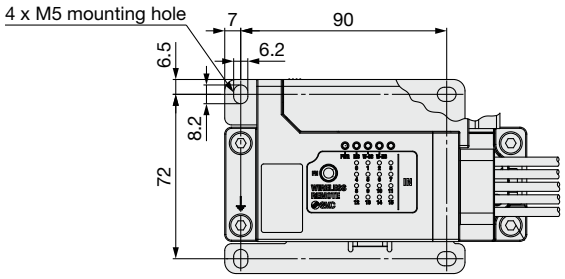


## Dimensions/Parts Description

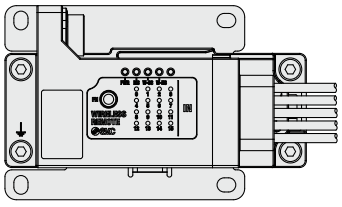
### Compact Wireless Remote (Digital Input)

**EXW1-RDX□G4C□-□**



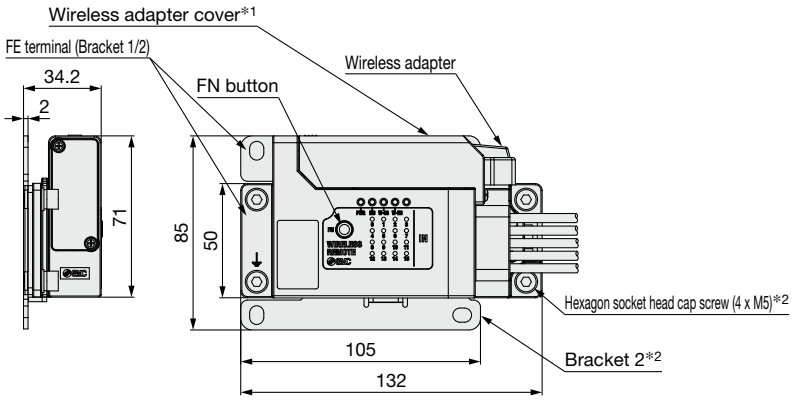

**EXW1-RDX□G4C1-E/N**
**(When bracket 1 and with wireless adapter are selected)**



**EXW1-RDX□G4C2**
**(When bracket 2 and without wireless adapter are selected)**

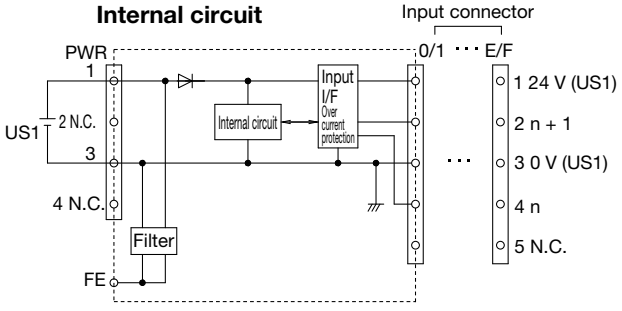
**Cable with Connector**

| Label | Cable length [mm] | Connector specifications | Description |
|---|---|---|---|
| POWER | 130 | M12, 4-pin, plug | Power supply |
| 0/1 | 160 | M12, 5-pin, socket | Input |
| 2/3 | 190 | | |
| 4/5 | 220 | | |
| 6/7 | 250 | | |
| 8/9 | 280 | | |
| A/B | 310 | | |
| C/D | 340 | | |
| E/F | 370 | | |




*1 For direct mounting of wireless adapter, a wireless adapter cover is required. (For details ⇒ p. 18)
*2 When bracket 2 is selected, bracket 2 and four hexagon socket head cap screw (M5 x 10) with spring washer and flat washer are included without assembly.
* If without wireless adapter is selected, a dedicated cable for wireless adapter and wireless adapter or wireless adapter and wireless adapter cover must be ordered separately. (For details ⇒ p. 14, 18)

**Internal circuit**




* Bracket 1 and 2 are FE.

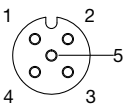
**Power Supply Connector (POWER)**

| No. | Signal | Description | M12, 4-pin, plug A-coded |
|---|---|---|---|
| 1 | 24 V (US1) | 24V DC (US1): Input*1 |  |
| 2 | N.C. | N.C. | |
| 3 | 0 V (US1) | 0 VDC (US1) | |
| 4 | N.C. | N.C. | |



*1 Input 24 VDC ±10%.

**Input Connector (0/1 to E/F)**

| No. | Signal | Description | M12, 5-pin, socket A-coded |
|---|---|---|---|
| 1 | 24V (US1) | 24 VDC (US1): Output*2 |  |
| 2 | n + 1 | Digital input: n + 1 | |
| 3 | 0 V (US1) | 0 VDC (US1) | |
| 4 | n | Digital input: n | |
| 5 | N.C. | N.C. | |

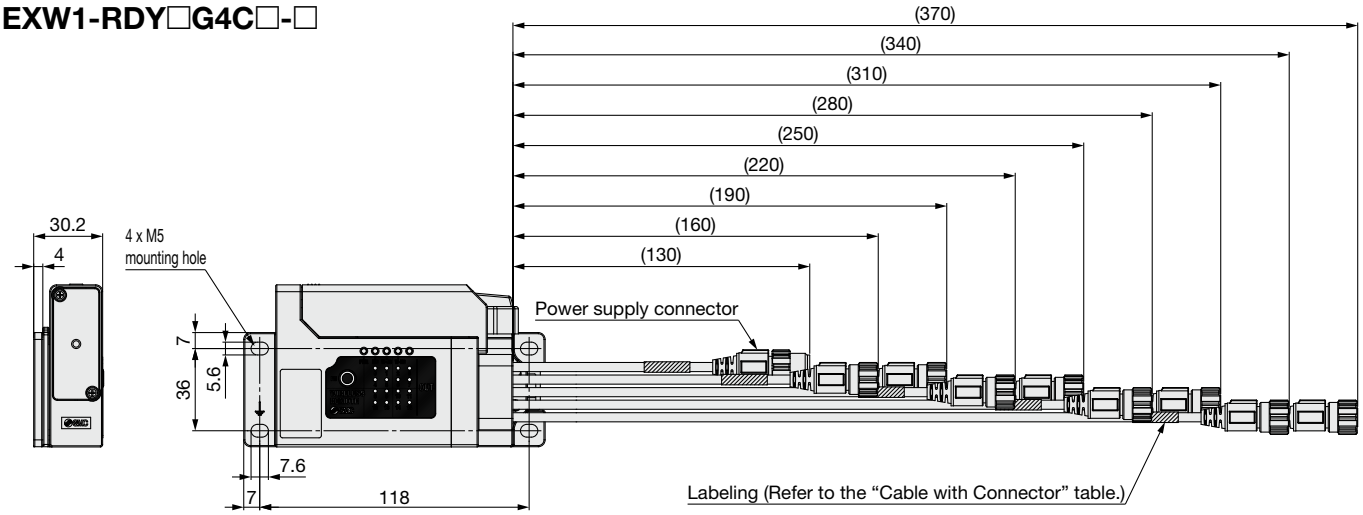


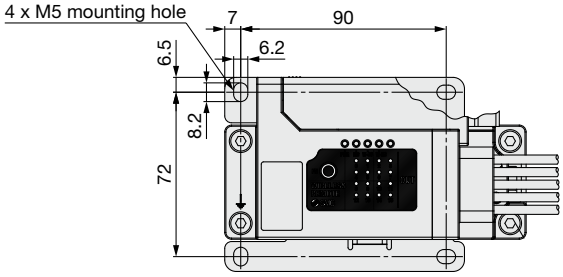
*2 Do not input power.

## Dimensions/Parts Description

### Compact Wireless Remote (Digital Output)

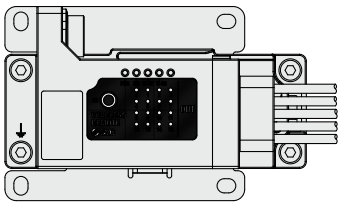
**EXW1-RDY□G4C□-□**



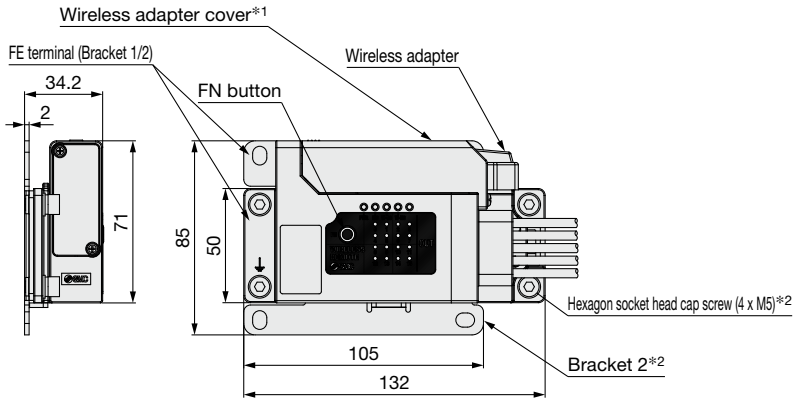

**EXW1-RDX□G4C2**

**(When bracket 2 and without wireless adapter are selected)**



**EXW1-RDY□G4C1-E/N**

**(When bracket 1 and with wireless adapter are selected)**




**Cable with Connector**

| Label | Cable length [mm] | Connector specifications | Description |
|---|---|---|---|
| POWER | 130 | M12, 4-pin, plug | Power supply |
| 0/1 | 160 | M12, 5-pin, socket | Output |
| 2/3 | 190 | | |
| 4/5 | 220 | | |
| 6/7 | 250 | | |
| 8/9 | 280 | | |
| A/B | 310 | | |
| C/D | 340 | | |
| E/F | 370 | | |

∗1 For direct mounting of wireless adapter, a wireless adapter cover is required. (For details ⇒ p. 18)

∗2 When bracket 2 is selected, bracket 2 and four hexagon socket head cap screw (M5 x 10) with spring washer and flat washer are included without assembly.

∗ If without wireless adapter is selected, a dedicated cable for wireless adapter and wireless adapter or wireless adapter and wireless adapter cover must be ordered separately. (For details ⇒ p. 14, 18)

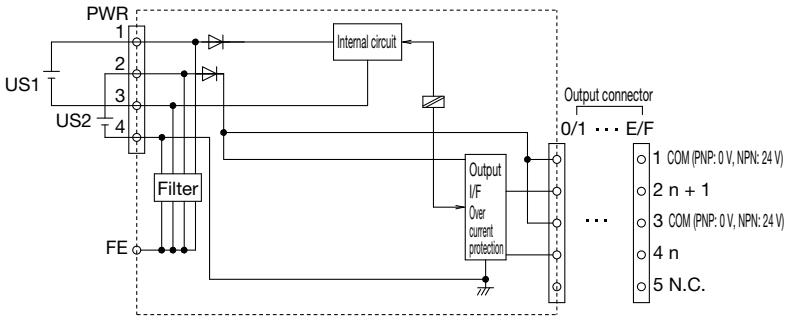
**Power Supply Connector (POWER)**

| No. | Signal | Description | M12, 4-pin, plug A-coded |
|---|---|---|---|
| **1** | 24 V (US1) | 24 VDC (US1): Input*1 |  |
| **2** | 24 V (US2) | 24 VDC (US2): Input*1 | |
| **3** | 0 V (US1) | 0 VDC (US1) | |
| **4** | 0 V (US2) | 0 VDC (US2) | |



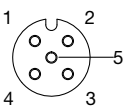
∗1 Input 24 VDC ±10%.

**Internal circuit**




∗ Bracket 1 and 2 are FE.

**Output Connector (0/1 to E/F)**

| No. | Signal | Description | M12, 5-pin, socket A-coded |
|---|---|---|---|
| **1** | COM | Common*2 |  |
| **2** | n + 1 | Digital output: n + 1*3 | |
| **3** | COM | Common*2 | |
| **4** | n | Digital output: n*3 | |
| **5** | N.C. | N.C. | |



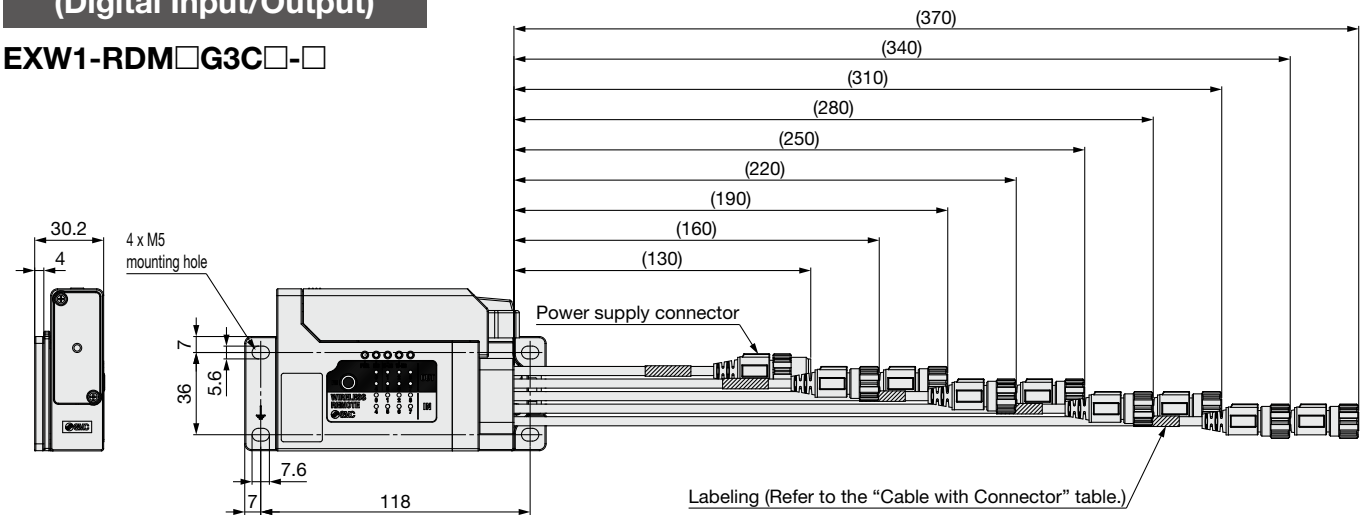
∗2 0 VDC (US2) for PNP type and 24 VDC (US2) for NPN type.

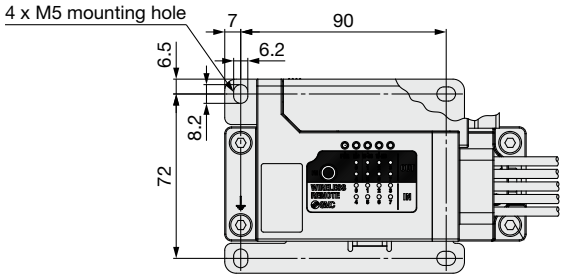
∗3 24 VDC (US2) for PNP type and 0 VDC (US2) for NPN type are output.

## Dimensions/Parts Description

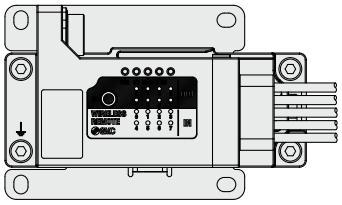
### Compact Wireless Remote (Digital Input/Output)

**EXW1-RDM□G3C□-□**

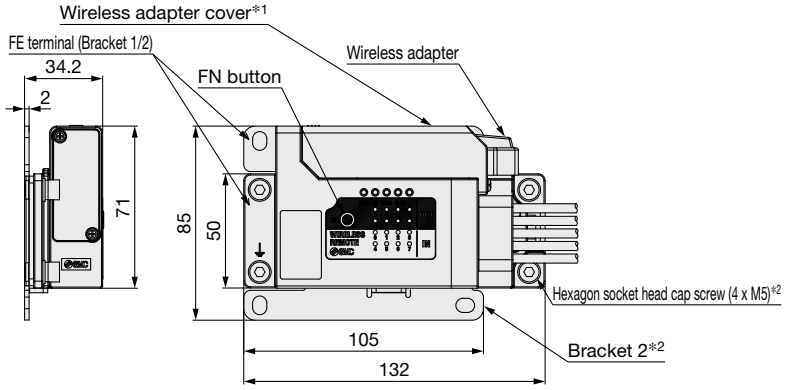



**EXW1-RDX□G4C2**
**(When bracket 2 and without wireless adapter are selected)**



**EXW1-RDM□G3C1-E/N**
**(When bracket 1 and with wireless adapter are selected)**




### Cable with Connector

| Label | Label color | Cable length [mm] | Connector specifications | Description |
|---|---|---|---|---|
| POWER | White | 130 | M12, 4-pin, plug | Power supply |
| 0/1 | White | 160 | M12, 5-pin, socket | Input |
| 2/3 | | 190 | | |
| 4/5 | | 220 | | |
| 6/7 | | 250 | | |
| 0/1 | Black | 280 | | Output |
| 2/3 | | 310 | | |
| 4/5 | | 340 | | |
| 6/7 | | 370 | | |

∗1 For direct mounting of wireless adapter, a wireless adapter cover is required. (For details ⇒ p. 18)
∗2 When bracket 2 is selected, bracket 2 and four hexagon socket head cap screw (M5 x 10) with spring washer and flat washer are included without assembly.
∗ If without wireless adapter is selected, a dedicated cable for wireless adapter and wireless adapter cover must be ordered separately. (For details ⇒ p. 14, 18)

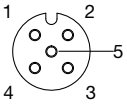
### Power Supply Connector (POWER)

| No. | Signal | Description | M12, 4-pin, plug A-coded |
|---|---|---|---|
| 1 | 24 V (US1) | 24 VDC (US1): Input*1 |  |
| 2 | 24 V (US2) | 24 VDC (US2): Input*1 | |
| 3 | 0 V (US1) | 0 VDC (US1) | |
| 4 | 0 V (US2) | 0 VDC (US2) | |



∗1 Input 24 VDC ±20%.

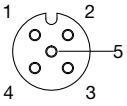
### Input Connector (0/1 to 6/7)

| No. | Signal | Description | M12, 5-pin, socket A-coded |
|---|---|---|---|
| 1 | 24 V | 24 VDC (US1): Output*1 |  |
| 2 | N.C. | Digital input: n + 1 | |
| 3 | 0 V | 0 VDC (US1) | |
| 4 | N.C. | Digital input: n | |
| 5 | N.C. | N.C. | |



∗1 Do not input power.

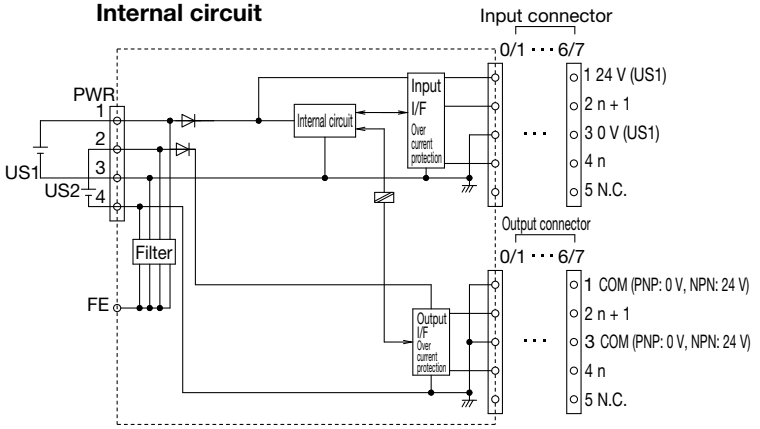
### Output Connector (0/1 to 6/7)

| No. | Signal | Description | M12, 5-pin, socket A-coded |
|---|---|---|---|
| 1 | COM | Common*2 |  |
| 2 | n + 1 | Digital output: n + 1*3 | |
| 3 | COM | Common*2 | |
| 4 | n | Digital output: n*3 | |
| 5 | N.C. | N.C. | |



∗2 0 VDC (US2) for PNP type and 24 VDC (US2) for NPN type.
∗3 24 VDC (US2) for PNP type and 0 VDC (US2) for NPN type are output.

### Internal circuit



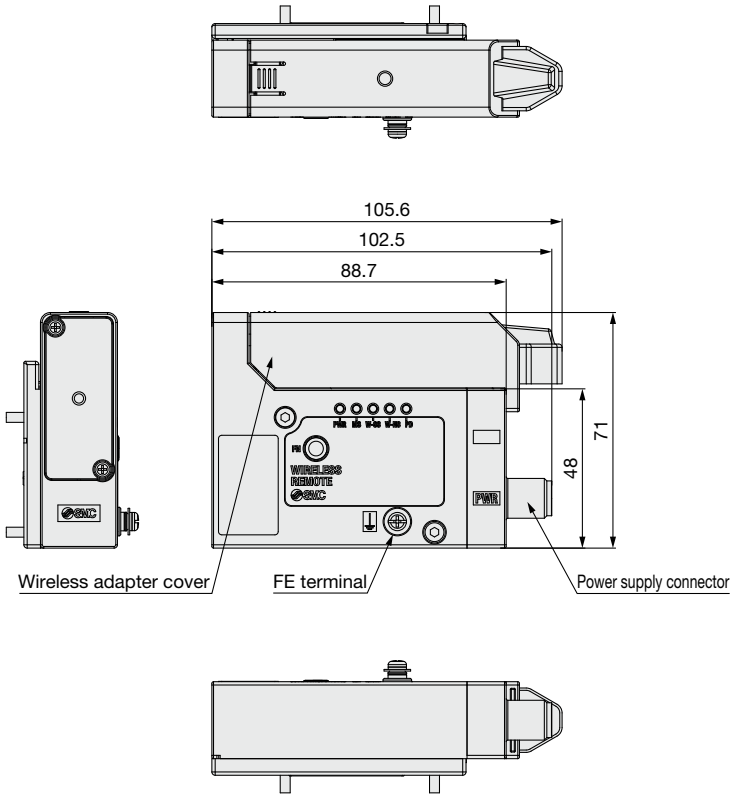

∗ Bracket 1 and 2 are FE.

## Dimensions/Parts Description

### Compact Wireless Remote (Valve Manifold)

**EXW1-RDY□M5C-□**

**With wireless adapter cover**




**Power Supply Connector**

| Pin no. | Description | M12, 4-pin, A coding, plug |
|---|---|---|
| **1** | 24 V_In (US1) |  |
| **2** | 24 V_In (US2) | |
| **3** | 0 V (US1) | |
| **4** | 0 V (US2) | |

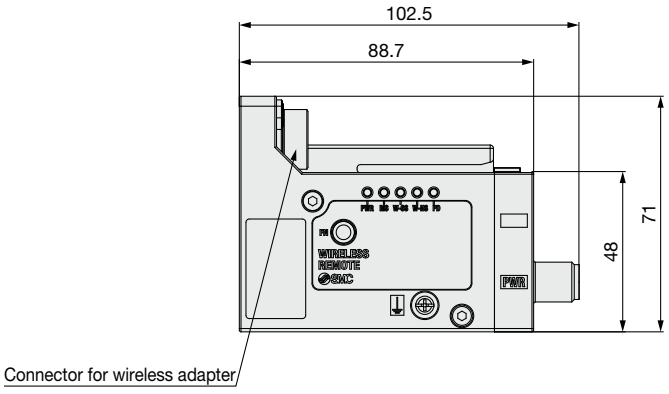


**Connector for Wireless Adapter**

| Pin no. | Description | M8, 4-pin, socket |
|---|---|---|
| **1** | 24 V (US1) |  |
| **2** | Internal BUS B | |
| **3** | 0 V (US1) | |
| **4** | Internal BUS A | |



**Without wireless adapter**

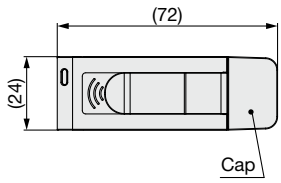


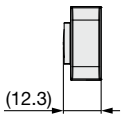

* If without wireless adapter is selected, a dedicated cable for wireless adapter and wireless adapter or wireless adapter and wireless adapter cover must be ordered separately. (For details ⇒ p. 14, 18)
* For direct mounting of wireless adapter, a wireless adapter cover is required. (For details ⇒ p. 18)

## Dimensions/Parts Description

### NFC Reader/Writer

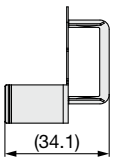
**EXW1-NT1**

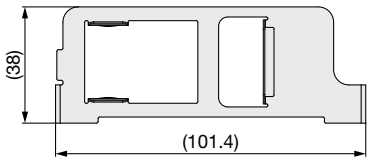


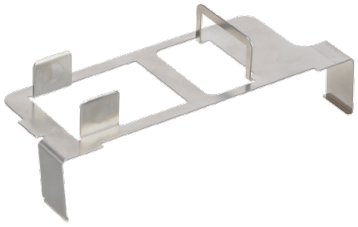




### Fixing Bracket

**EXW1-AB2 (Option, For EXW1)**

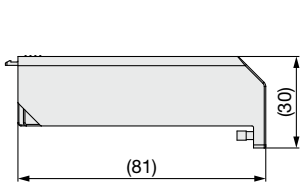


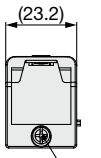



### Wireless Adapter Cover

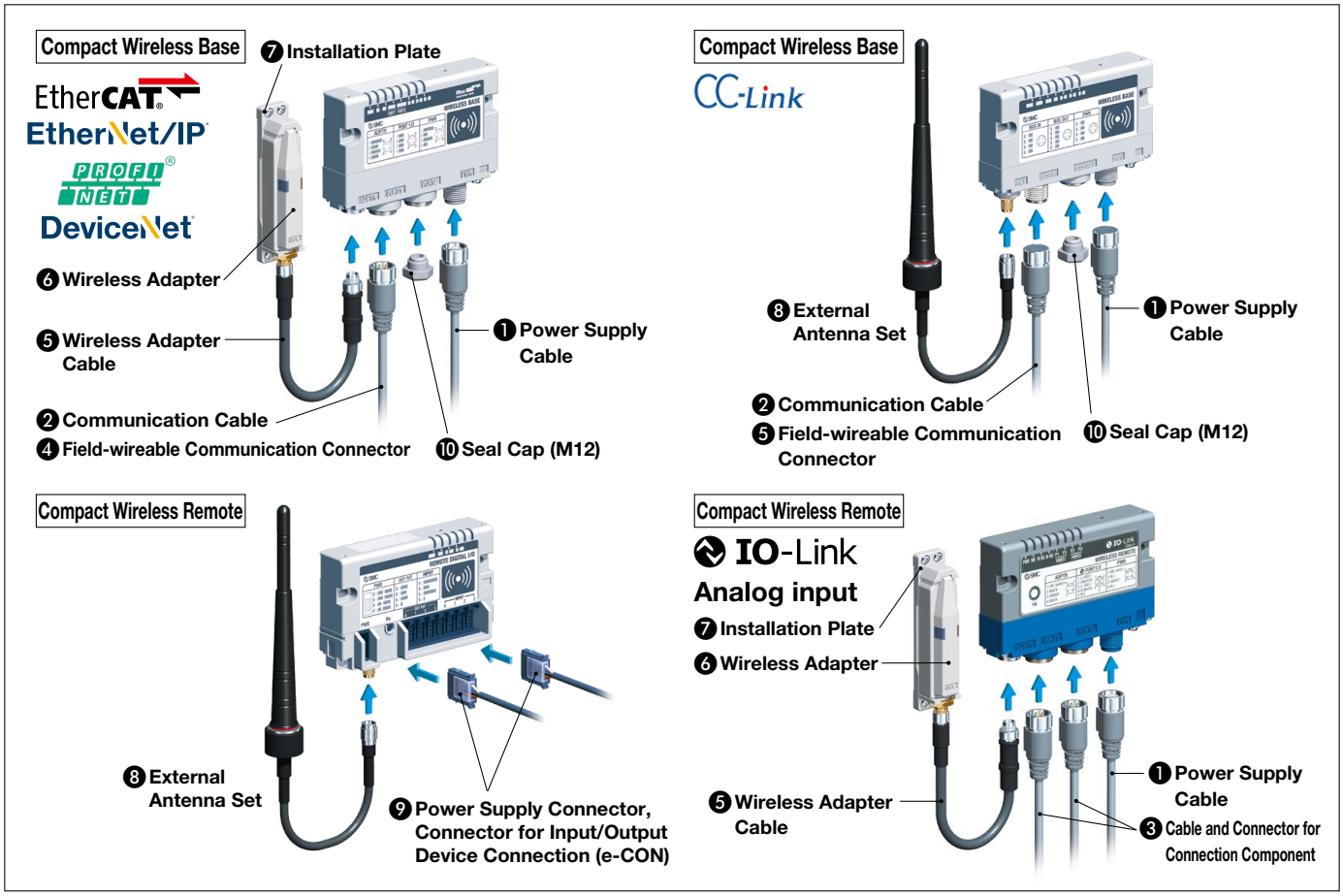
**EXW1-AB6**




M3 slotted cross recessed round head screw

# *EXW1 Series*
# Accessories (Optional Parts)




## 1 Power Supply Cable (For DeviceNet, power is supplied via the communication cable.)

**For EtherCAT** | **For PROFINET** | **For EtherNet/IP™** | **For IO-Link** | **For Analog Input**

**EX500-AP 050 - S**

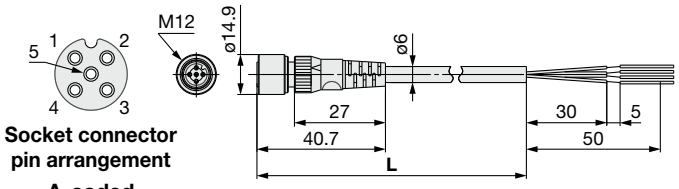
**Cable length (L)**

| | |
|---|---|
| **010** | 1000 mm |
| **050** | 5000 mm |

**Connector specification**

| | |
|---|---|
| **S** | Straight |
| **A** | Angled |

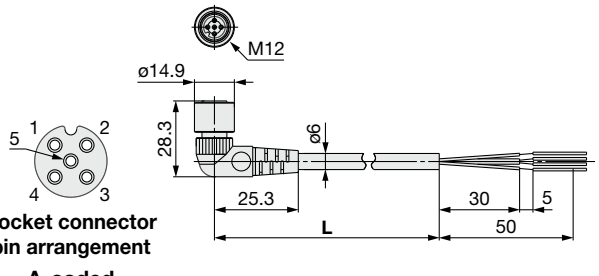
### Straight connector type




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

| Item | Specifications |
|---|---|
| **Cable O.D.** | ø6 mm |
| **Conductor nominal cross section** | 0.3 mm²/AWG22 |
| **Wire O.D. (Including insulator)** | 1.5 mm |
| **Min. bending radius (Fixed)** | 40 mm |

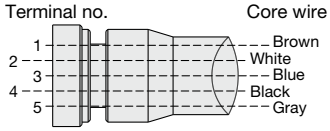
### Angled connector type




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

| Item | Specifications |
|---|---|
| **Cable O.D.** | ø6 mm |
| **Conductor nominal cross section** | 0.3 mm²/AWG22 |
| **Wire O.D. (Including insulator)** | 1.5 mm |
| **Min. bending radius (Fixed)** | 40 mm |

**Connections**



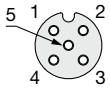
## ❶ Power Supply Cable

**For EtherCAT** | **For PROFINET** | **For EtherNet/IP™** | **For IO-Link** | **For Analog Input**

### PCA-1401804

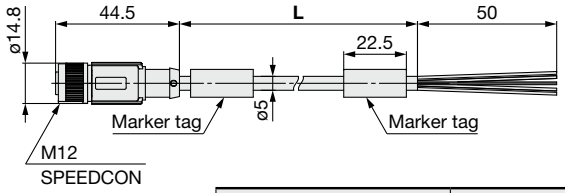
**Cable length (L)**

| | |
|---|---|
| **1401804** | 1500 mm |
| **1401805** | 3000 mm |
| **1401806** | 5000 mm |



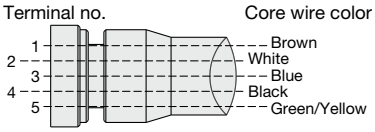

**Socket connector pin arrangement**

**A-coded (Normal key)**




| Item | Specifications |
|---|---|
| **Cable O.D.** | ø5 mm |
| **Conductor nominal cross section** | 0.34 mm²/AWG22 |
| **Wire O.D. (Including insulator)** | 1.27 mm |
| **Min. bending radius (Fixed)** | 21.7 mm |

**Connections**



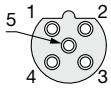

**For CC-Link**

**Straight connector type**

### EX9-AC050-1

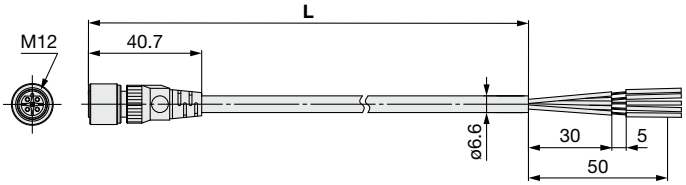
**Cable length (L)**

| | |
|---|---|
| **010** | 1000 mm |
| **030** | 3000 mm |
| **050** | 5000 mm |



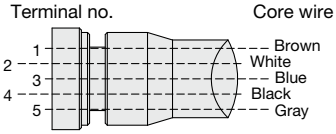

**Socket connector pin arrangement**

**B-coded (Reverse key)**




| Item | Specifications |
|---|---|
| **Cable O.D.** | ø6.6 mm |
| **Conductor nominal cross section** | 0.3 mm²/AWG22 |
| **Wire O.D. (Including insulator)** | 1.65 mm |
| **Min. bending radius (Fixed)** | 40 mm |

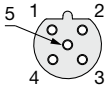
**Connections**




### PCA-1401807

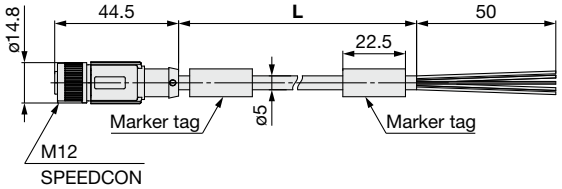
**Cable length (L)**

| | |
|---|---|
| **1401807** | 1500 mm |
| **1401808** | 3000 mm |
| **1401809** | 5000 mm |



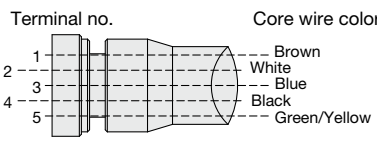

**Socket connector pin arrangement**

**B-coded (Reverse key)**




| Item | Specifications |
|---|---|
| **Cable O.D.** | ø5 mm |
| **Conductor nominal cross section** | 0.34 mm²/AWG22 |
| **Wire O.D. (Including insulator)** | 1.27 mm |
| **Min. bending radius (Fixed)** | 21.7 mm |

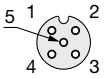
**Connections**



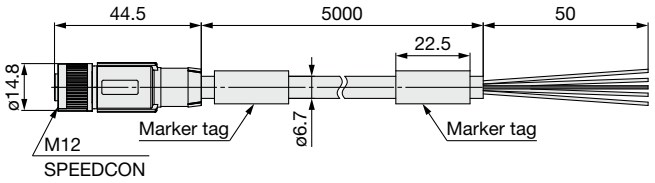
## ❷ Communication Cable

**For DeviceNet®**

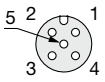
### PCA-1557633
**(Socket)**



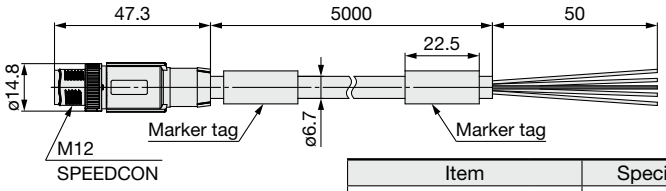

**Socket connector pin arrangement A-coded (Normal key)**

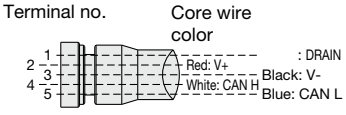



### PCA-1557646
**(Plug)**




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




**Connections**

| Item | | Specifications |
|---|---|---|
| **Cable O.D.** | | ø6.7 mm |
| **Conductor nominal cross section** | Power pair | 0.34 mm²/AWG22 |
| | Data pair | 0.25 mm²/AWG24 |
| **Wire O.D. (Including insulator)** | Power pair | 1.4 mm |
| | Data pair | 2.05 mm |
| **Min. bending radius (Fixed)** | | 67 mm |

Made to Order

**Made to Order**

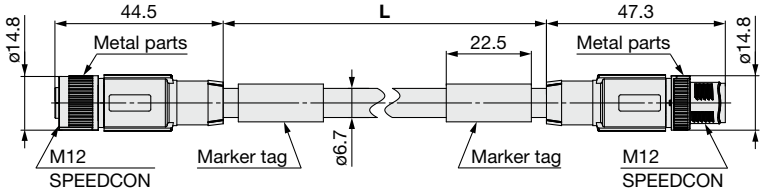
| | | |
|---|---|---|
| Cable length | 10000 mm | Refer to page 54. |

**Straight connector type**

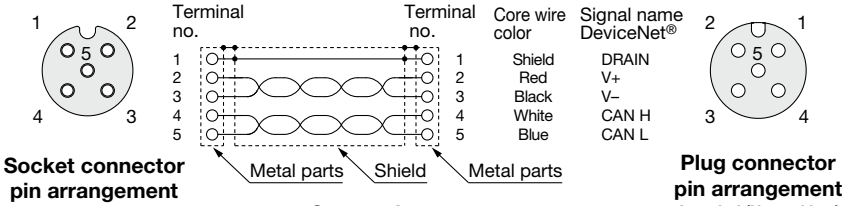
### EX9-AC 005 DN-SSPS (With connector on both sides (Socket/Plug))

**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.** | | ø6.7 mm |
| **Conductor nominal cross section** | Power pair | 0.34 mm²/AWG22 |
| | Data pair | 0.25 mm²/AWG24 |
| **Wire O.D. (Including insulator)** | Power pair | 1.4 mm |
| | Data pair | 2.05 mm |
| **Min. bending radius (Fixed)** | | 67 mm |




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

**Connections**

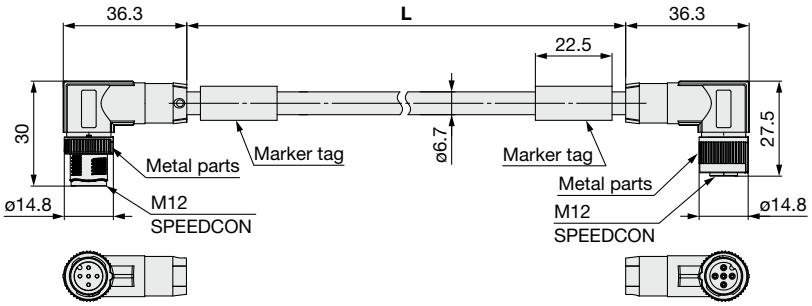
**Plug connector pin arrangement A-coded (Normal key)**

**Angled connector type**

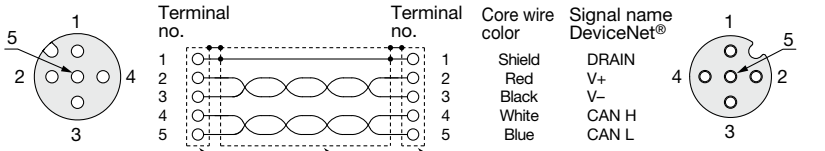
### EX9-AC 005 DN-SAPA (With angled connector on both sides (Socket/Plug))

**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.** | | ø6.7 mm |
| **Conductor nominal cross section** | Power pair | 0.34 mm²/AWG22 |
| | Data pair | 0.25 mm²/AWG24 |
| **Wire O.D. (Including insulator)** | Power pair | 1.4 mm |
| | Data pair | 2.05 mm |
| **Min. bending radius (Fixed)** | | 67 mm |




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

**Connections**

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

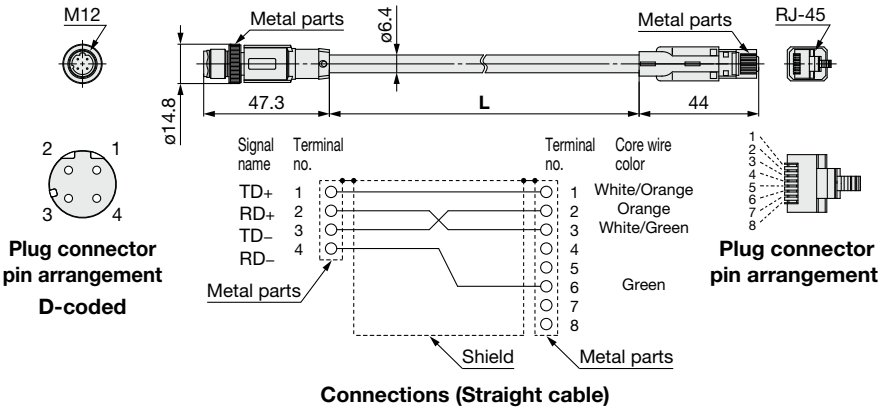
## ❷ Communication Cable

**For EtherCAT** | **For PROFINET** | **For EtherNet/IP™**

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

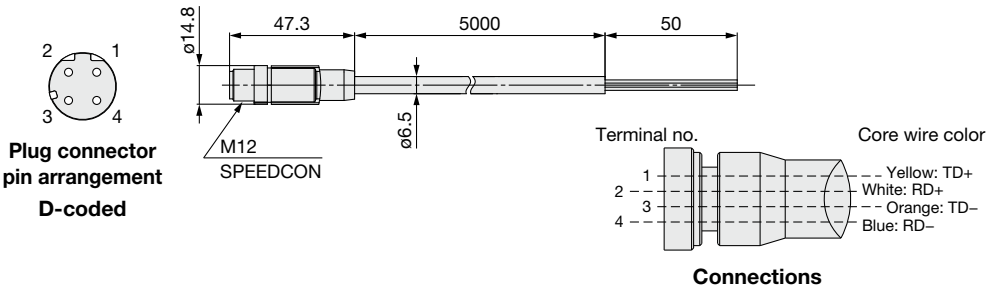
**Cable length (L)**

| | |
|---|---|
| **010** | 1000 mm |
| **020** | 2000 mm |
| **030** | 3000 mm |
| **050** | 5000 mm |
| **100** | 10000 mm |




Connections (Straight cable)

### PCA-1446566 (Plug)



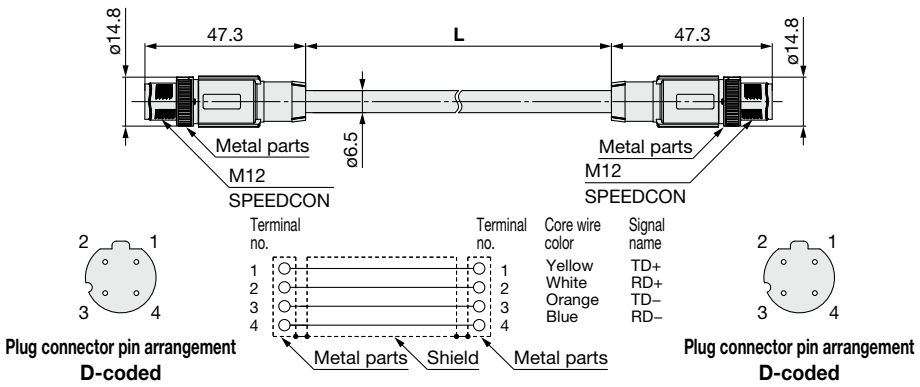

Connections

**Straight connector type**

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

**Cable length (L)**

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



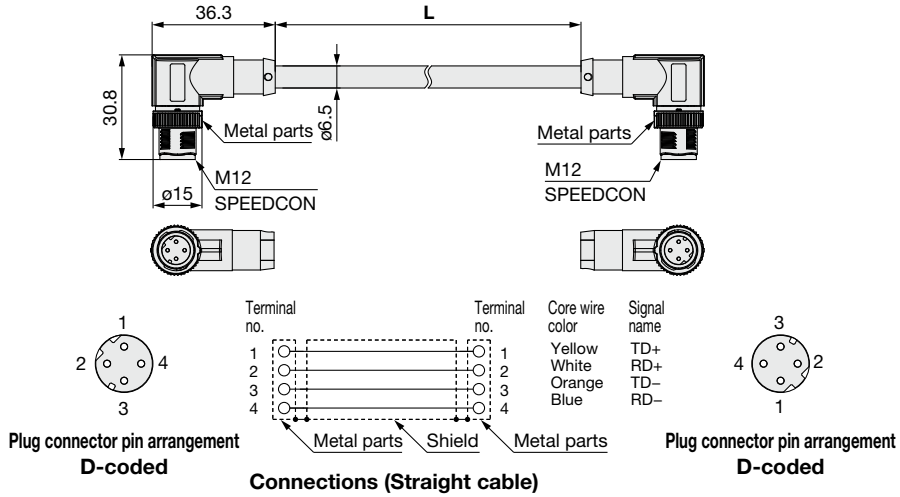

Connections (Straight cable)

**Angled connector type**

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

**Cable length (L)**

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

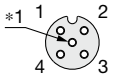



Connections (Straight cable)

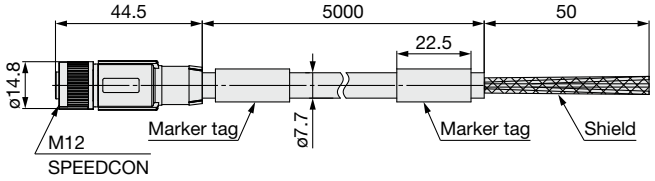
## ❷ Communication Cable

**For CC-Link**

**PCA-1567720**
**(Socket)**

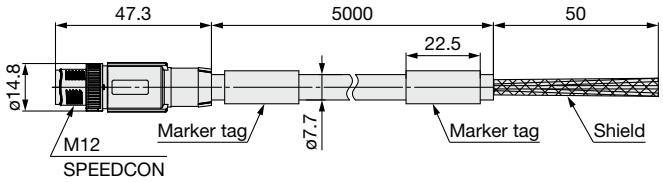


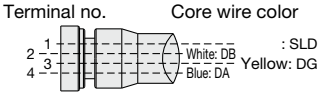

**Socket connector pin arrangement**
**A-coded (Normal key)**
*1 Number of holes: 5,
Total number of pins: 4




**PCA-1567717**
**(Plug)**


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




**Connections**

| Item | | Specifications |
|---|---|---|
| **Cable O.D.** | | ø7.7 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 |

**Made to Order**

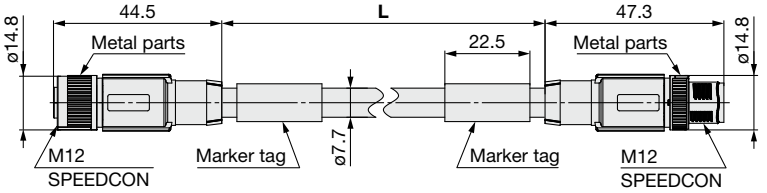
| | | |
|---|---|---|
| Cable length | 10000 mm | Refer to page 54. |

### Straight connector type

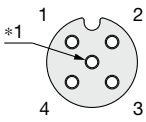
**EX9-AC 005 MJ-SSPS (With connector on both sides (Socket/Plug))**

**Cable length (L)**

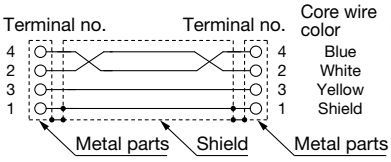
| | |
|---|---|
| **005** | 500 mm |
| **010** | 1000 mm |
| **020** | 2000 mm |
| **030** | 3000 mm |
| **050** | 5000 mm |
| **100** | 10000 mm |



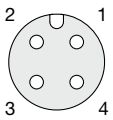

| Item | | Specifications |
|---|---|---|
| **Cable O.D.** | | ø7.7 mm |
| **Conductor nominal cross section** | **Data pair** | 0.5 mm²/AWG20 |
| | **Drain** | 0.34 mm²/AWG22 |
| **Wire O.D. (Including insulator)** | | 2.55 mm |
| **Min. bending radius (Fixed)** | | 77 mm |




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




**Connections**



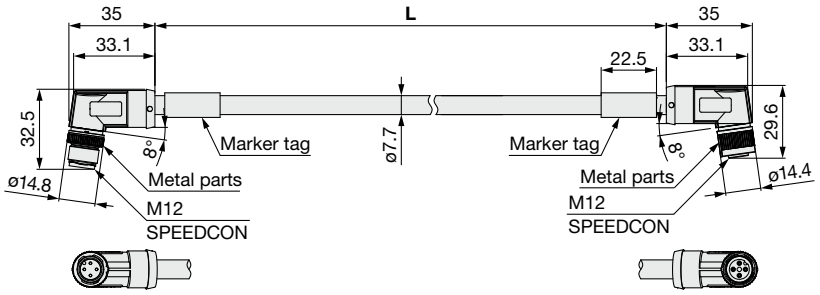

**Plug connector pin arrangement**
**A-coded (Normal key)**

### Angled connector type

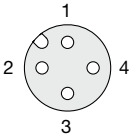
**EX9-AC 005 MJ-SAPA (With angled connector on both sides (Socket/Plug))**

**Cable length (L)**

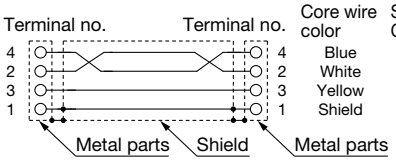
| | |
|---|---|
| **005** | 500 mm |
| **010** | 1000 mm |
| **020** | 2000 mm |
| **030** | 3000 mm |
| **050** | 5000 mm |
| **100** | 10000 mm |



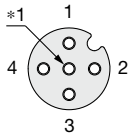

| Item | | Specifications |
|---|---|---|
| **Cable O.D.** | | ø7.7 mm |
| **Conductor nominal cross section** | **Data pair** | 0.5 mm²/AWG20 |
| | **Drain** | 0.34 mm²/AWG22 |
| **Wire O.D. (Including insulator)** | | 2.55 mm |
| **Min. bending radius (Fixed)** | | 77 mm |




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




**Connections**




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

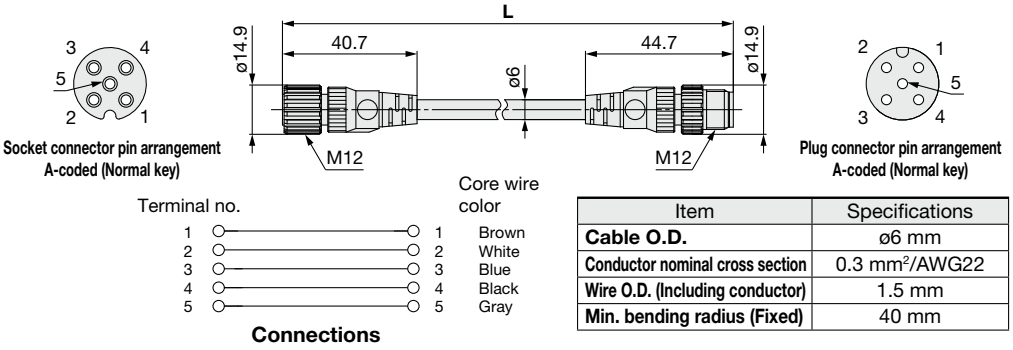
## ❸ Cable and Connector for Connection Component

**For IO-Link** | **For Analog Input**

### EX9-AC 005 -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 |




**Connections**

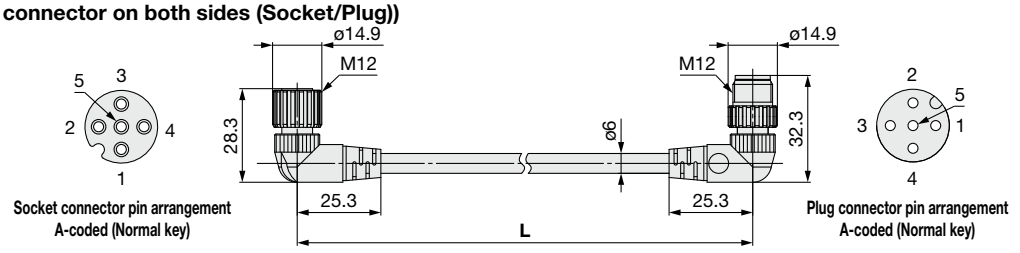
| Item | Specifications |
|---|---|
| **Cable O.D.** | ø6 mm |
| **Conductor nominal cross section** | 0.3 mm²/AWG22 |
| **Wire O.D. (Including conductor)** | 1.5 mm |
| **Min. bending radius (Fixed)** | 40 mm |

**Angled connector type**

### EX9-AC 005 -SAPA (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 |




**Connections**

| Item | Specifications |
|---|---|
| **Cable O.D.** | ø6 mm |
| **Conductor nominal cross section** | 0.3 mm²/AWG22 |
| **Wire O.D. (Including conductor)** | 1.5 mm |
| **Min. bending radius (Fixed)** | 40 mm |

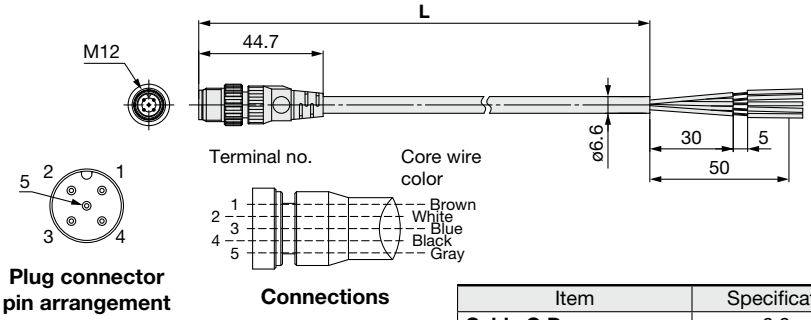
Connects the output block to the output device

**Straight connector type**

### EX9-AC 030 -7

**Cable length (L)**

| | |
|---|---|
| **010** | 1000 mm |
| **030** | 3000 mm |




**Plug connector pin arrangement**

**Connections**

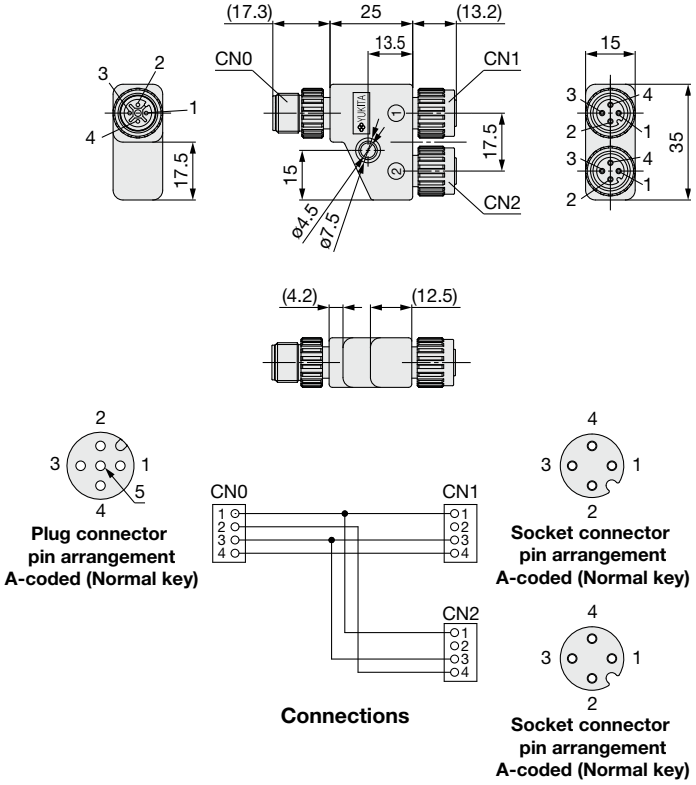
| Item | Specifications |
|---|---|
| **Cable O.D.** | ø6.6 mm |
| **Conductor nominal cross section** | 0.3 mm²/AWG22 |
| **Wire O.D. (Including insulator)** | 1.65 mm |
| **Min. bending radius (Fixed)** | 40 mm |

## ❸ Cable and Connector for Connection Component

**For IO-Link** | **For Analog Input**

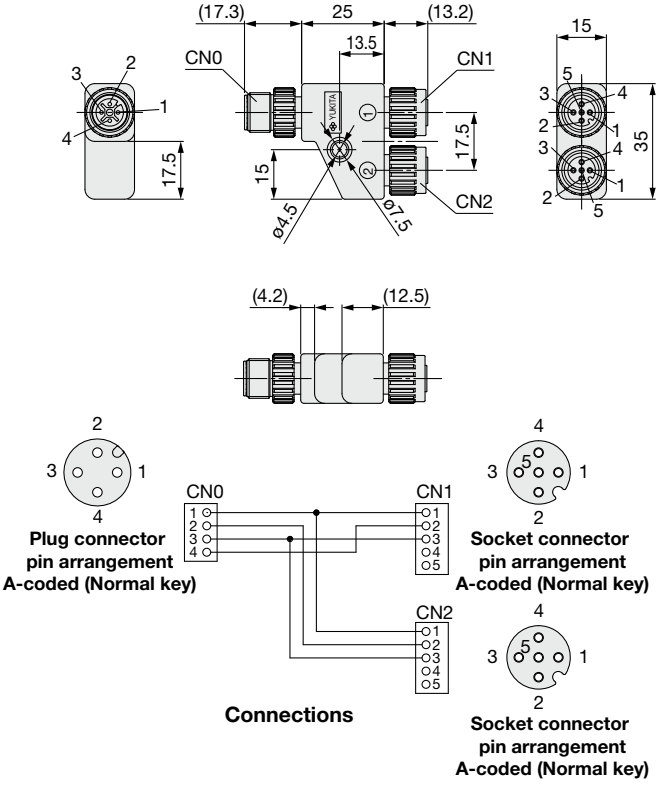
### EXW1-ACY1 (For IO-Link)

**Y-branch Connector for Port Class A**




### EXW1-ACY2 (For analog input)

**Y-branch Connector**



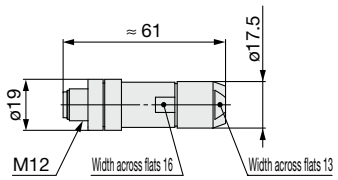
## ❹ Field-wireable Communication Connector

### Plug

**For EtherCAT** **For PROFINET** **For EtherNet/IP™**

**PCA-1446553**

**D-coded**




**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.

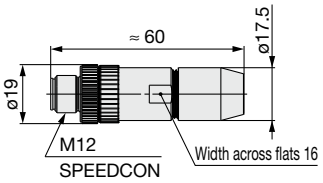
---

### Plug

**For DeviceNet®**

**PCA-1075528**

**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) |

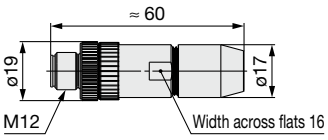
---

### Plug

**For CC-Link**

**PCA-1075526**

**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 0.5 mm²/AWG26 to 20 |

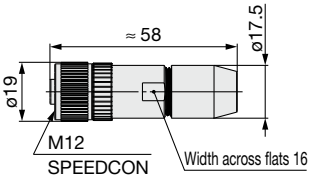
---

### Socket

**For DeviceNet®**

**PCA-1075529**

**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) |

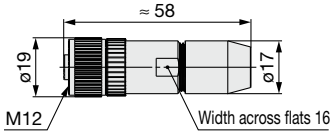
---

### Socket

**For CC-Link**

**PCA-1075527**

**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 0.5 mm²/AWG26 to 20 |

## ❺ Wireless Adapter Cable

### EXW1-AC1-X1

**●Secondary battery compatible**

**EXW1-AC001-SAPU**
**EXW1-AC030-SSPS**

* Refer to page 31 for the dimensions and parts description.
* This cable is required to connect the wireless base and wireless adapter.

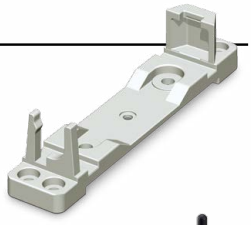
## ❻ Wireless Adapter

### EXW1-A11□

A wireless adapter cable is required to connect the wireless base and wireless adapter.
An installation plate (EXW1-AB4) is included as an accessory.

* Refer to page 30 for the dimensions and parts description.

## ❼ Installation Plate



### EXW1-AB4

Included as an accessory with the wireless adapter (EXW1-A11□)

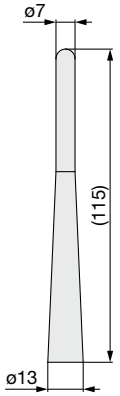
* Refer to page 30 for the dimensions.

## ❽ External Antenna Set

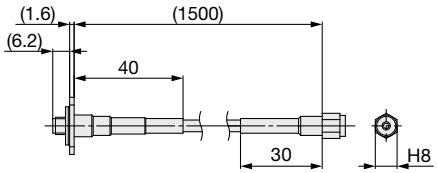
### EXW1-EA1

(A set containing a whip antenna, coaxial cable, and bracket)

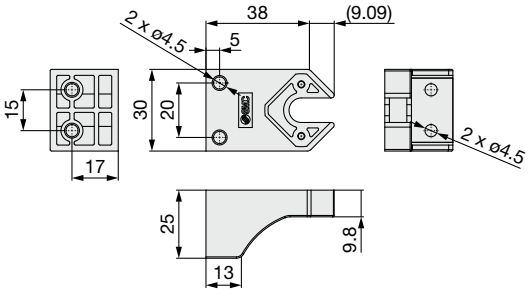
*1 The set is included with the external antenna specification. Only the included whip antenna and coaxial cable can be used with the product. Be sure to use them as a set.
*2 The external antenna set cannot be used for the internal antenna specification.
*3 It is not possible to use the external antenna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




① **Whip antenna**




② **Coaxial cable**

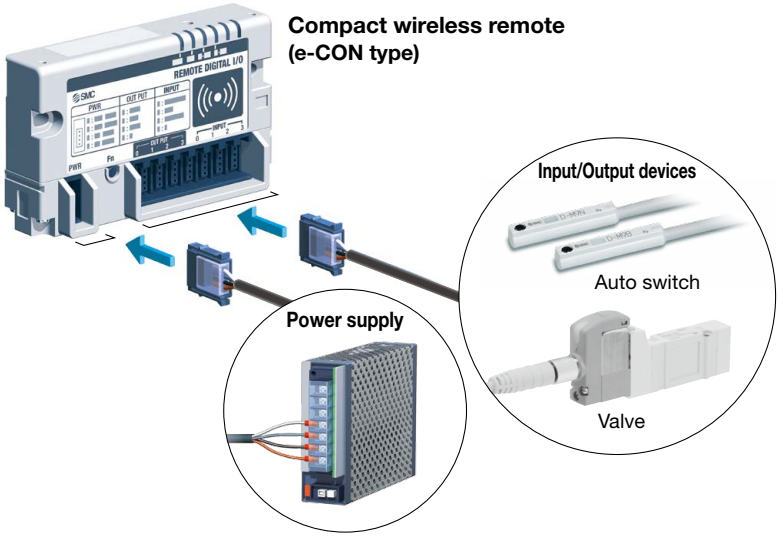



③ **Bracket**

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

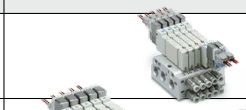
Select the applicable e-CON connectors based on the lead wire specifications of the components to be connected.
Both the power supply and I/O connectors have the same shape as the e-CON (4-pin, socket).
The lead wire specifications of each of our I/O devices are shown below for reference.

### Connecting the remote and I/O devices




### e-CON Part Nos. List

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

| Input/ Output | Product | Series | Appearance | Conductor cross section [mm²] | Insulator O.D. [mm] | Applicable e-CON part no. |
|---|---|---|---|---|---|---|
| Output | Valve | **JSY1000 Plug lead (V050-30-4A-□)** |  | 0.3 | ø1.55 | ZS-28-C-4 ZS-28-CA-5 |
| | | **JSY3000, 5000/SY/SYJ/SJ Plug lead (SY100-30-4A-□)** |  | 0.3 | ø1.55 | ZS-28-C-4 ZS-28-CA-5 |
| | | **SY/SYJ M8 connector (V100-49-1-□)** |  | 0.16 (AWG25) | ø1.2 | ZS-28-C-1 ZS-28-CA-4 |
| | Ejector | **ZB (AXT661-13A/14A-□)** |  | AWG24 | ø1.4 | ZS-28-C-2 ZS-28-CA-5 |
| | | **ZL/ZM (SY100-30-4A-□)** |  | 0.3 | ø1.55 | ZS-28-C-4 ZS-28-CA-5 |
| | | **ZK2 (ZK2-LV□□-A)** |  | 0.2 (AWG24) | ø1.4 | ZS-28-C-2 ZS-28-CA-5 |
| Input | Pressure | **Z/ISE10, 20** |  | 0.15 (AWG26) | ø1.0 | ZS-28-C-1 ZS-28-CA-2 |
| | | **PS1000** |  | 0.18 | ø0.96 | ZS-28-CA-2 |
| | Auto switch | **D-M9** |  | 0.15 | ø0.88 | ZS-28-CA-1 |
| | Flow | **PF2M** |  | AWG26 (0.13) | ø1 | ZS-28-CA-2 |

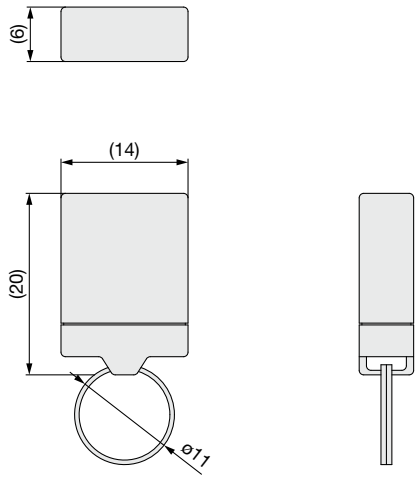
## ⑩ Seal Cap (10 pcs.)

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

**EX9-AWTS**
**For M12**

## ⑪ IO-Link Device Tool License Key

**USB dongle**
**EX9-ZSW-LDT1**




* The IO-Link Device Tool V5-PE (V5 or later only) manufactured by TMG is required for setting IO-Link devices.
The IO-Link Device Tool can be downloaded for free from TMG's website. However, to use it for more than 30 days, a license key for the IO-Link Device Tool is required.

# Made to Order

Please contact SMC for detailed specifications and lead times.

Made to Order

## ❶ Communication Cable

**With connector on one side (Socket)**
**Cable length: 10000 mm**

**For CC-Link**

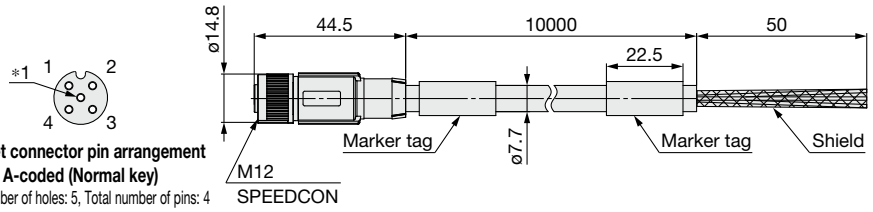
**For DeviceNet®**

**EX9-AC100 MJ -X12**

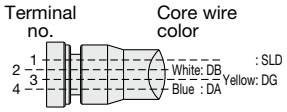
● **Applicable protocol**

| | |
|---|---|
| **MJ** | CC-Link |
| **DN** | DeviceNet® |

### For CC-Link



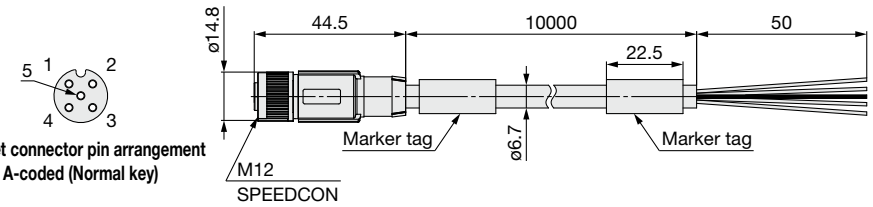

**Socket connector pin arrangement**
**A-coded (Normal key)**
*1 Number of holes: 5, Total number of pins: 4



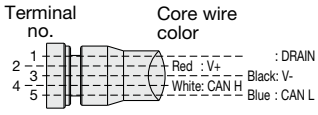

**Connections**

| Item | | Specifications |
|---|---|---|
| **Cable O.D.** | | ø7.7 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 |

### For DeviceNet®




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




**Connections**

| Item | | Specifications |
|---|---|---|
| **Cable O.D.** | | ø6.7 mm |
| **Conductor nominal cross section** | **Power pair** | 0.34 mm²/AWG22 |
| | **Data pair** | 0.25 mm²/AWG24 |
| **Wire O.D. (Including insulator)** | **Power pair** | 1.4 mm |
| | **Data pair** | 2.05 mm |
| **Min. bending radius (Fixed)** | | 67 mm |

# Wireless System

# Modular Type

# EX600-W Series

## How to Order

### Wireless Unit

**EX600 – W SV 1**

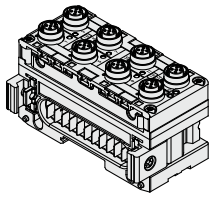
- **W**: Wireless compatible
- **SV**: Remote module
- **1**: Output type

| Symbol | Specifications |
|---|---|
| 1 | PNP |
| 2 | NPN |

Remote module

### Digital Input Unit*1

**EX600 – DX P D**



- **DX**: Digital input
- **P**: Input type

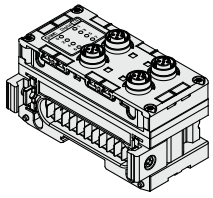
| Symbol | Description |
|---|---|
| P | PNP |
| N | NPN |

- **D**: Number of inputs and connector

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

### Digital Output Unit*1

**EX600 – DY P B**



- **DY**: Digital output
- **P**: Output type

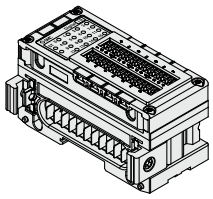
| Symbol | Description |
|---|---|
| P | PNP |
| N | NPN |

- **B**: Number of outputs and connector

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

### Digital Input/Output Unit*1

**EX600 – DM P F**



- **DM**: Digital input/output
- **P**: Input/Output type

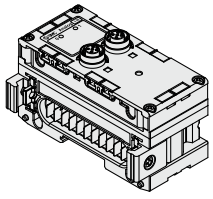
| Symbol | Description |
|---|---|
| P | PNP |
| N | NPN |

- **F**: Number of inputs/outputs and connector

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

### Analog Input Unit*1

**EX600 – AX A**



- **AX**: Analog input
- **A**: Number of input channels and connector

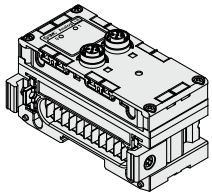
| Symbol | Number of input channels | Connector |
|---|---|---|
| A | 2 channels | M12 connector (5 pins) 2 pcs. |

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

## How to Order

### Analog Output Unit*1

**EX600 – AY A**



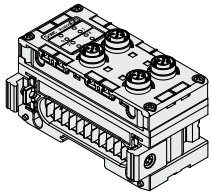
**Analog output**

**Number of output channels and connector**

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

### Analog Input/Output Unit*1

**EX600 – AM B**



**Analog input/output**

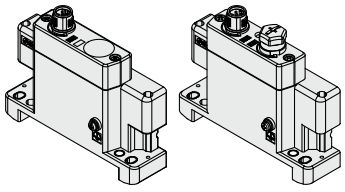
**Number of input/output channels and connector**

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

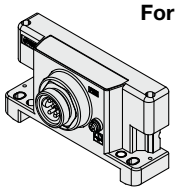
*1 For specifications, refer to the Fieldbus system EX600 series in the **Web Catalog**.

### End Plate (D side)

**EX600 – E D 2 – 2**



**For M12**



**For 7/8 inch**

**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 60.

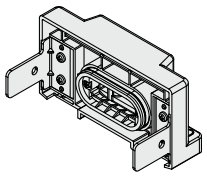
**Mounting method**

| 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.

### NFC Reader/Writer

**EXW1 – NT1**

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

**● Fixing bracket (Option)**

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

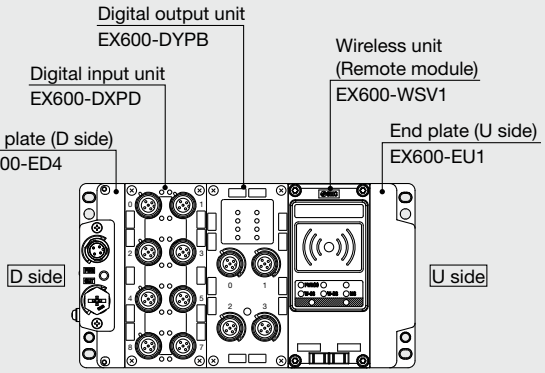
**EXW1-AB 1**

**Variations**

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

## Ordering Example of the Remote Module

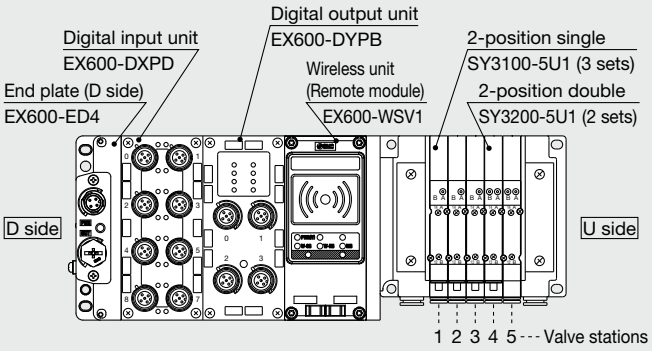
**Remote module: Without valve manifold and with input/output unit**




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

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

**Manifold with remote module: With input/output unit**




**SS5Y3-10S6WS72-05B-C6**
**(Type 10 5-station manifold base, remote)**
**Negative common, M12 connector IN/OUT pin arrangement 1, I/O unit: 2 stations**
**＊SY3100-5U1** ····· **3 sets (2-position single part no.)**
**＊SY3200-5U1** ····· **2 sets (2-position double part no.)**
**＊EX600-DXPD** ····· **1 set I/O unit part no. (Stations 1)**
**＊EX600-DYPB** ····· **1 set I/O unit part no. (Stations 2)**
**→The asterisk denotes the symbol for the assembly. Prefix it to the part numbers of the valve, etc.**

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

## 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)<br>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 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<br>5 ≤ f < 8.4 Hz 3.5 mm<br>8.4 ≤ f < 150 Hz 9.8 m/s² (Excludes valve manifold) |
| | Impact resistance | | Conforms to EN 61131-2<br>147 m/s², 11 ms<br>(Excludes valve manifold) |
| | Standards | | CE/UKCA 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)

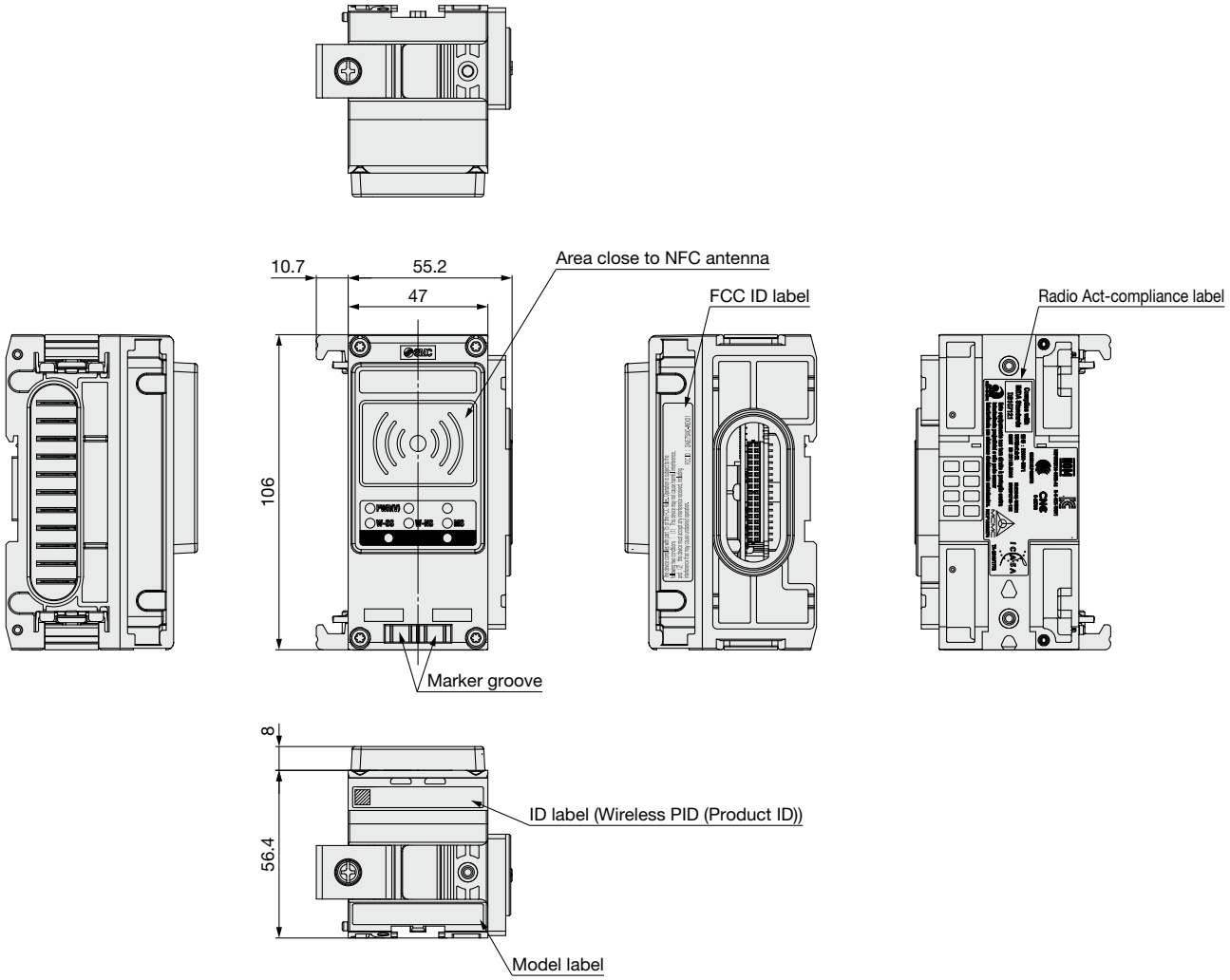
| Model | | | EX600-ED2-□ | EX600-ED3-□ | EX600-ED4/5-□ |
|---|---|---|---|---|---|
| Electrical | Power supply connector | PWR IN | M12 (5-pin) plug | 7/8 inch (5-pin) plug | M12 (4-pin) plug |
| | | PWR OUT | — | — | M12 (5-pin) socket |
| | Rated voltage | Power supply for control/input | 24 VDC ±10% | | |
| | | 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/UKCA marking, UL (CSA) | | |
| Weight | | | 170 g | 175 g | 170 g |

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

## Dimensions

### Remote Module

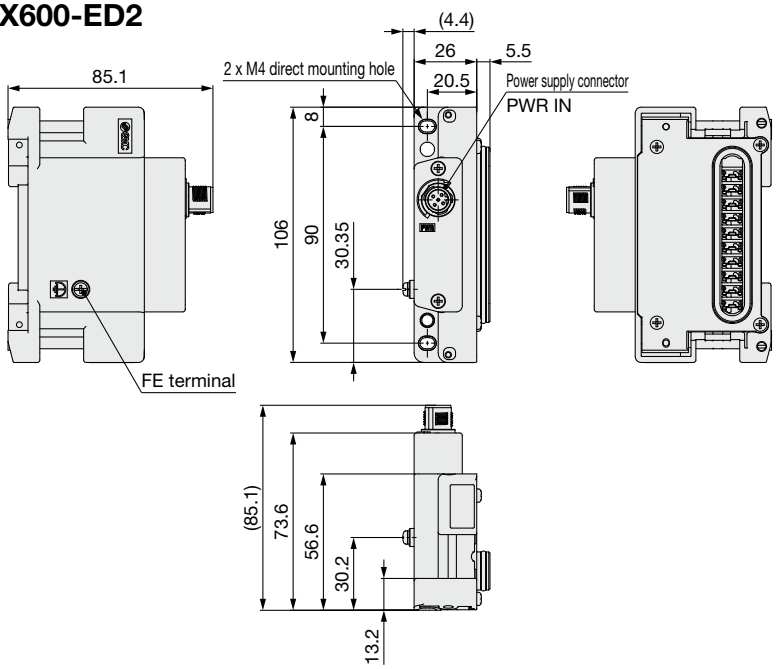
**EX600-WSV□**



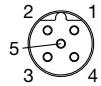
## Dimensions

### End Plate (D side)

#### EX600-ED2

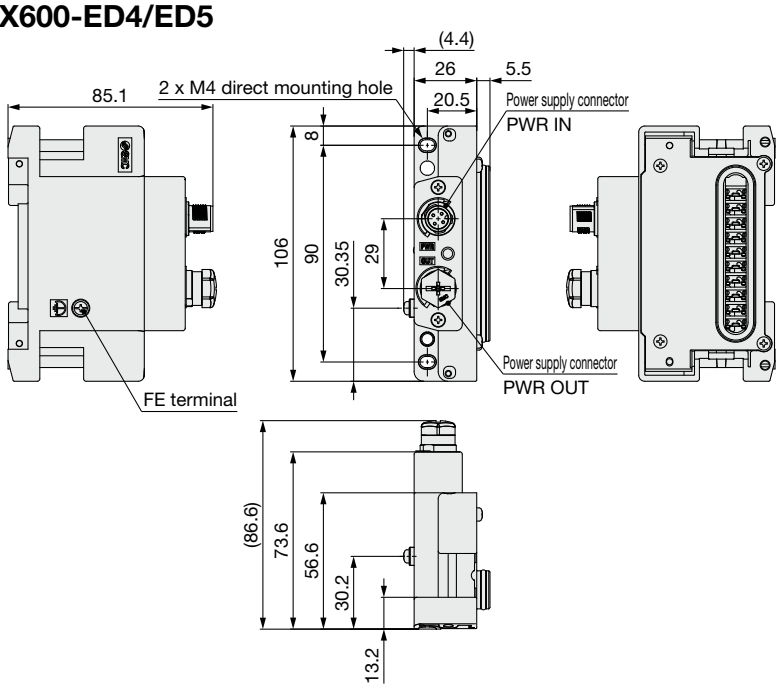



**Power supply connector PWR IN: M12 5-pin plug, B-coded**

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



#### EX600-ED4/ED5




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

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



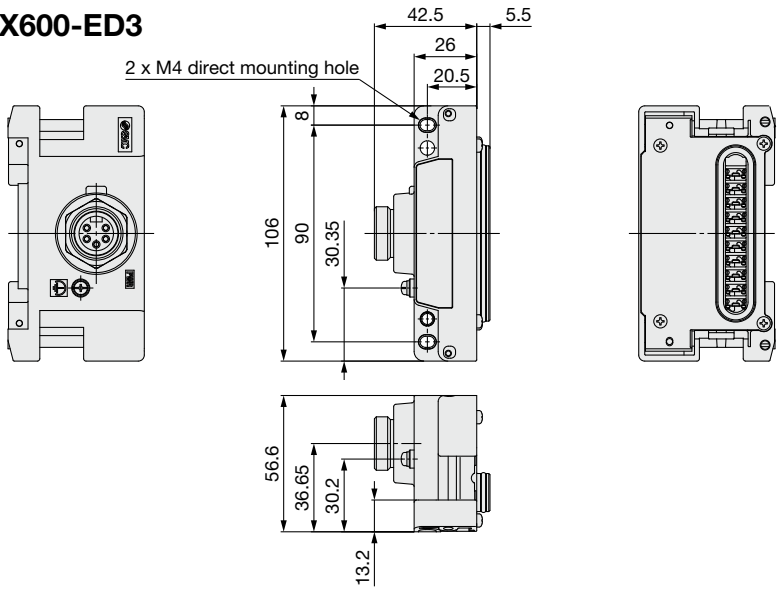
**Power supply connector PWR OUT: M12 5-pin socket, A-coded**

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

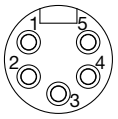
## Dimensions

### End Plate (D side)

**EX600-ED3**



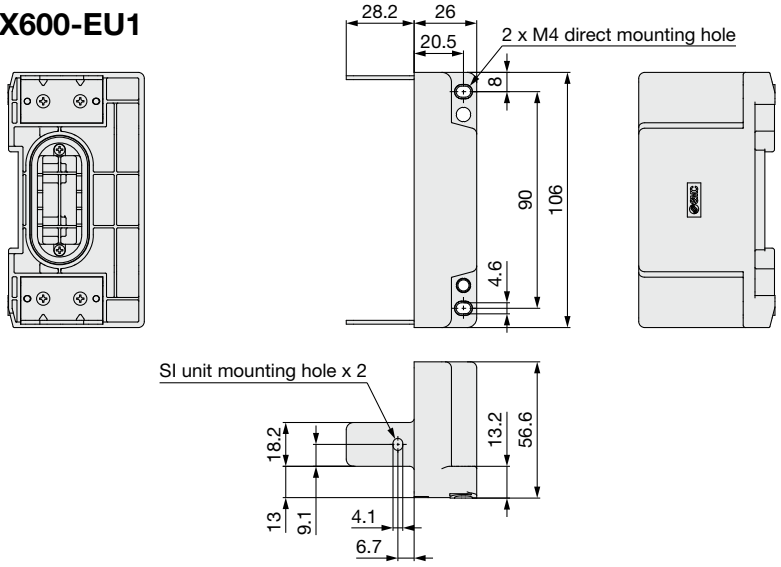

**Power supply connector PWR: 7/8 inch 5-pin plug**

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



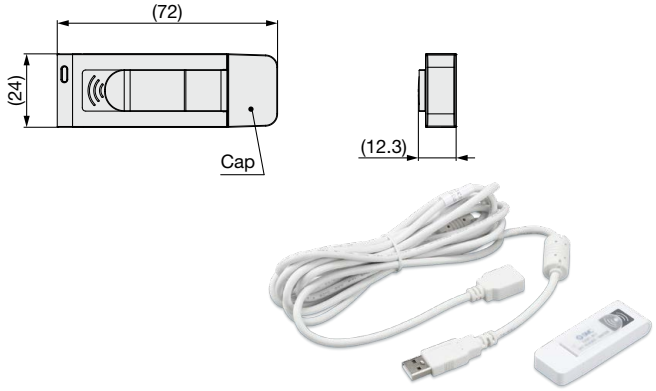
### End Plate (U side)

**EX600-EU1**



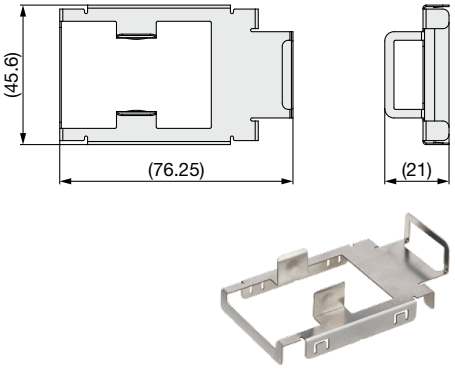

### NFC Reader/Writer

**EXW1-NT1**



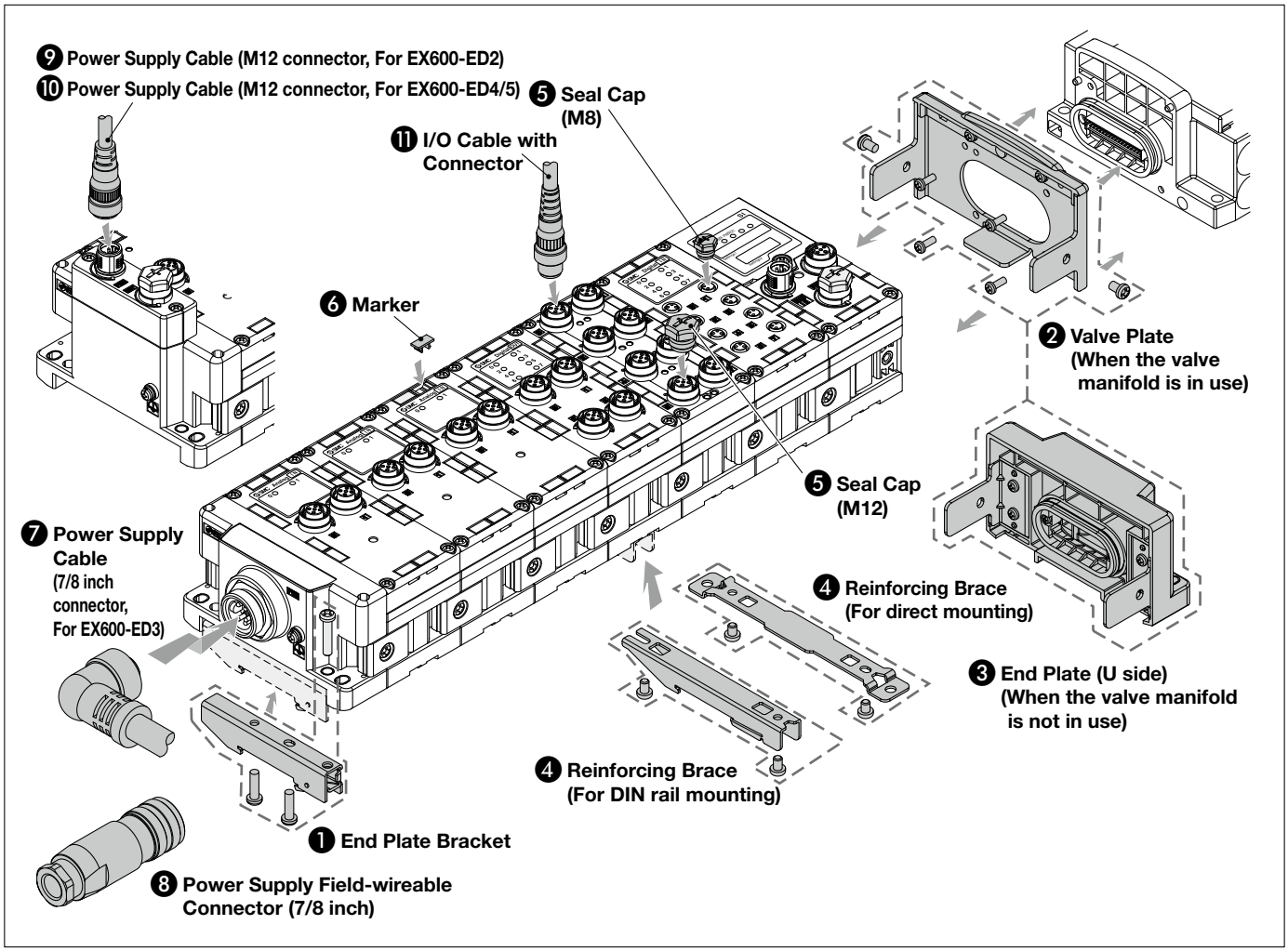

### Fixing Bracket

**EXW1-AB1 (Option, For EX600-W)**




∗ Order a fixing bracket.

# *EX600-W Series*
# Accessories (Optional Parts)




## 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. |

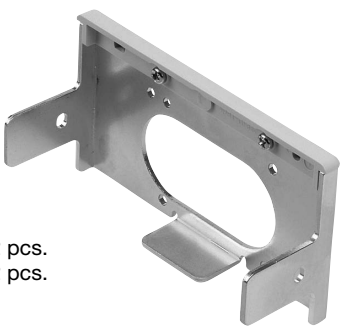
## ❷ Valve Plate

### 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. |

## ❸ End Plate (U side)

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

**EX600- E U 1 - 2**

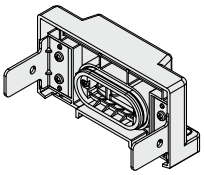
- **End plate**
- **End plate mounting position: U side**
- **Specification**

| Symbol | Specification |
|---|---|
| 1 | Waterproof cover |

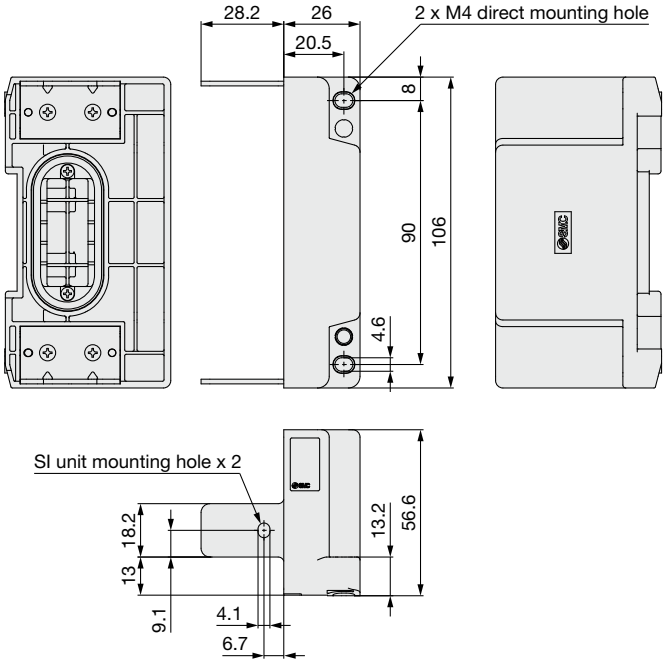
- **Mounting method**

| 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 |

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



**EX600-EU1**




**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.

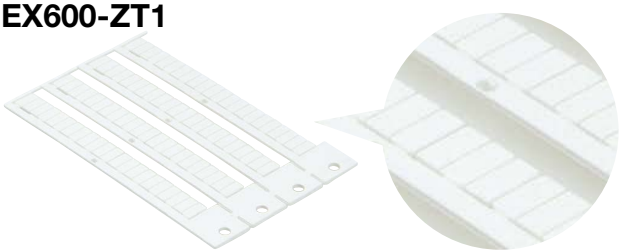
**EX9-AWES**
**For M8**

**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.

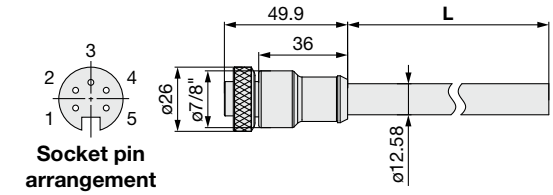
**EX600-ZT1**



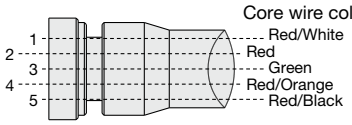
## ❼ Power Supply Cable (7/8 inch connector, For EX600-ED3)

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

### Straight connector type

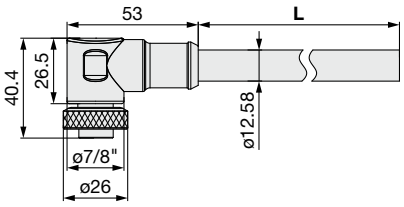


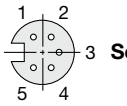

Socket pin arrangement



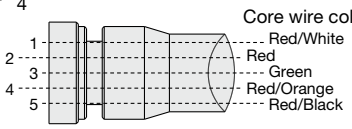

Connections

### Angled connector type




Socket pin arrangement




Connections

| Item | Specifications |
|---|---|
| **Cable O.D.** | ø12.58 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

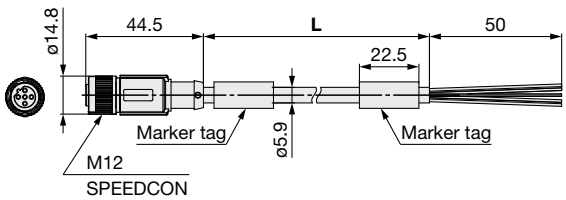
| Item | Specifications |
|---|---|
| **Cable O.D.** | ø12.0 to 14.0 mm |
| **Wire gauge (Stranded wire cross section)** | 0.34 to 1.5 mm² AWG22 to 16 |

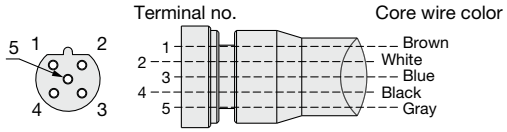
## ❾ Power Supply Cable (M12 connector, For EX600-ED2) * The shape of the M12 connector is B-coded (Reverse key).

**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

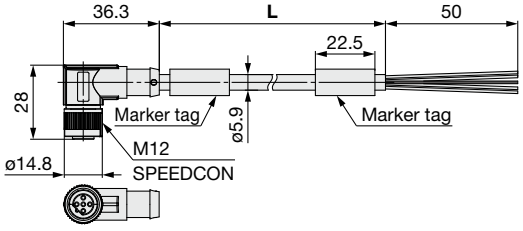


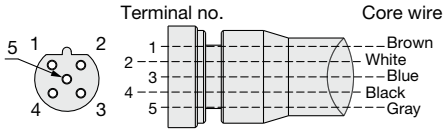




Socket connector pin arrangement
B-coded (Reverse key)

Connections

### Angled connector type




Socket connector pin arrangement
B-coded (Reverse key)

Connections

| Item | Specifications |
|---|---|
| **Cable O.D.** | ø5.9 mm |
| **Conductor nominal cross section** | 0.34 mm²/AWG22 |
| **Wire O.D. (Including insulator)** | 1.27 mm |
| **Min. bending radius (Fixed)** | 59 mm |

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

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

**EX500-AP 050 - S**

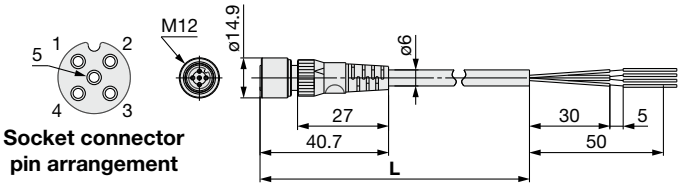
**Cable length (L)**

| | |
|---|---|
| **010** | 1000 mm |
| **050** | 5000 mm |

**Connector specification**

| | |
|---|---|
| **S** | Straight |
| **A** | Angled |

### Straight connector type

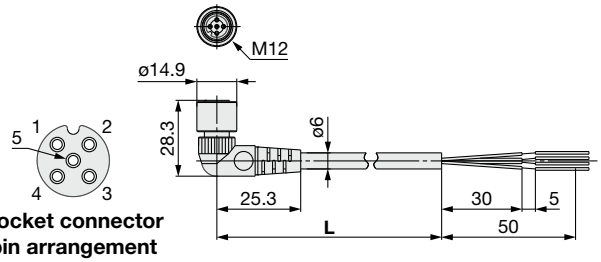



**Socket connector pin arrangement**

**A-coded (Normal key)**

| 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) |

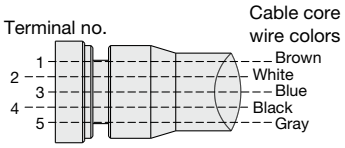
### Angled connector type




**Socket connector pin arrangement**

**A-coded (Normal key)**

| 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) |



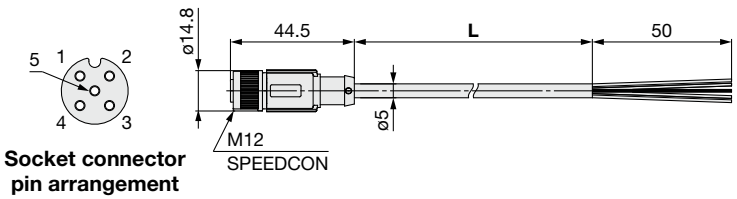

**Connections**

### SPEEDCON

**PCA- 1401804**

**Cable length (L)**

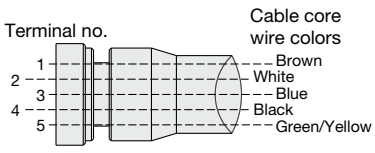
| | |
|---|---|
| **1401804** | 1500 mm |
| **1401805** | 3000 mm |
| **1401806** | 5000 mm |




**Socket connector pin arrangement**

**A-coded (Normal key)**

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

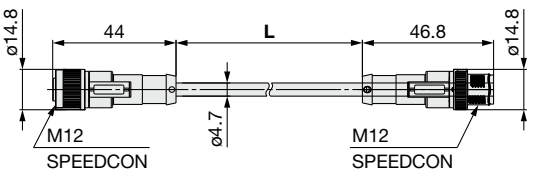


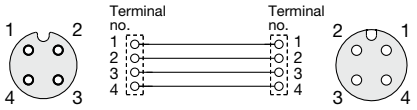

**Connections**

**PCA- 1557769**

**Cable length (L)**

| | |
|---|---|
| **1557769** | 3000 mm |




**Socket connector pin arrangement**

**A-coded (Normal key)**

**Connections**

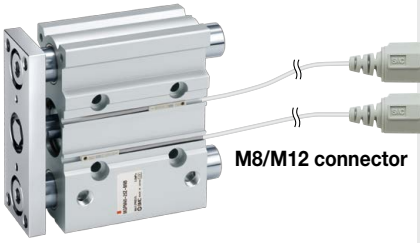
**Plug connector pin arrangement**

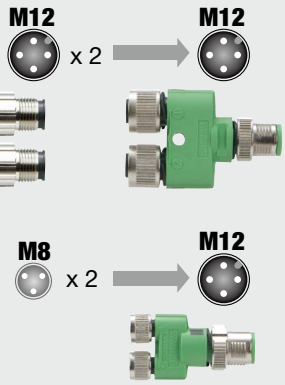
**A-coded (Normal key)**

## ⓫ I/O Cable with Connector, I/O Connector

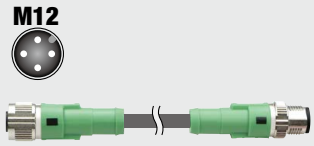
| Name | Use | Part no. | Description |
|---|---|---|---|
| **Cable with connector** | For sensor  | **PCA-1557769** | Cable with M12 connector (4 pins/3 m) |
| | | **PCA-1557772** | Cable with M8 connector (3 pins/3 m) |
| **Field-wireable connector** | For sensor  | **PCA-1557730** | Field-wireable 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 **Web Catalog**.
* When using the Y connector, connect it to the connector on the I/O unit through the sensor cable (PCA-1557769) with the M12 connector.

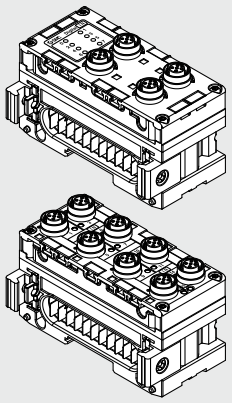



Y connector




Cable with connector

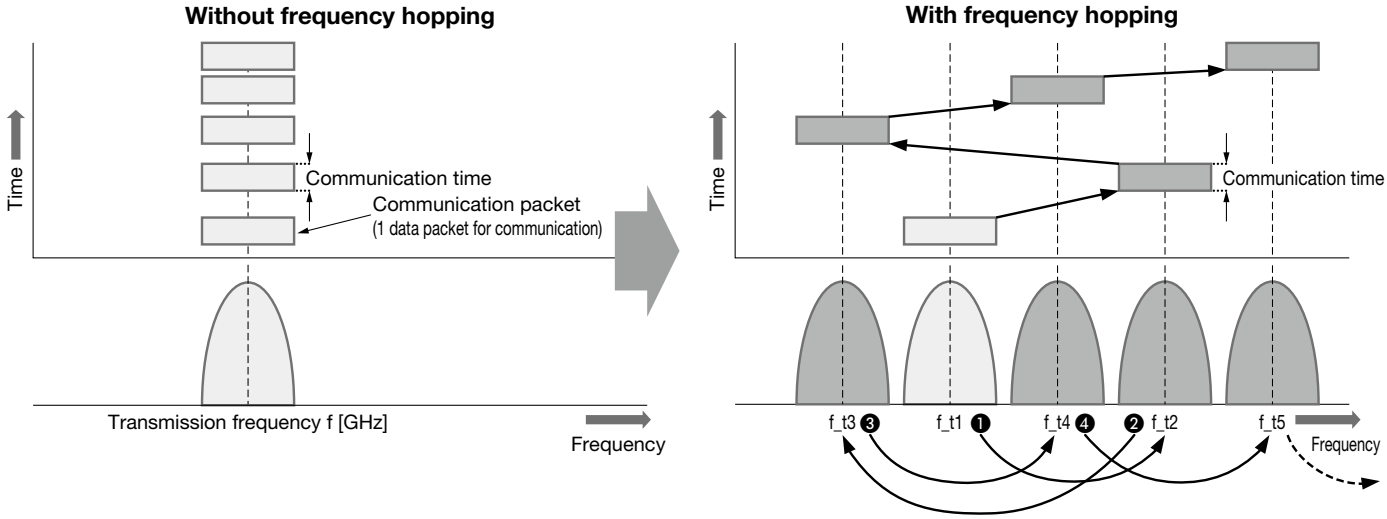


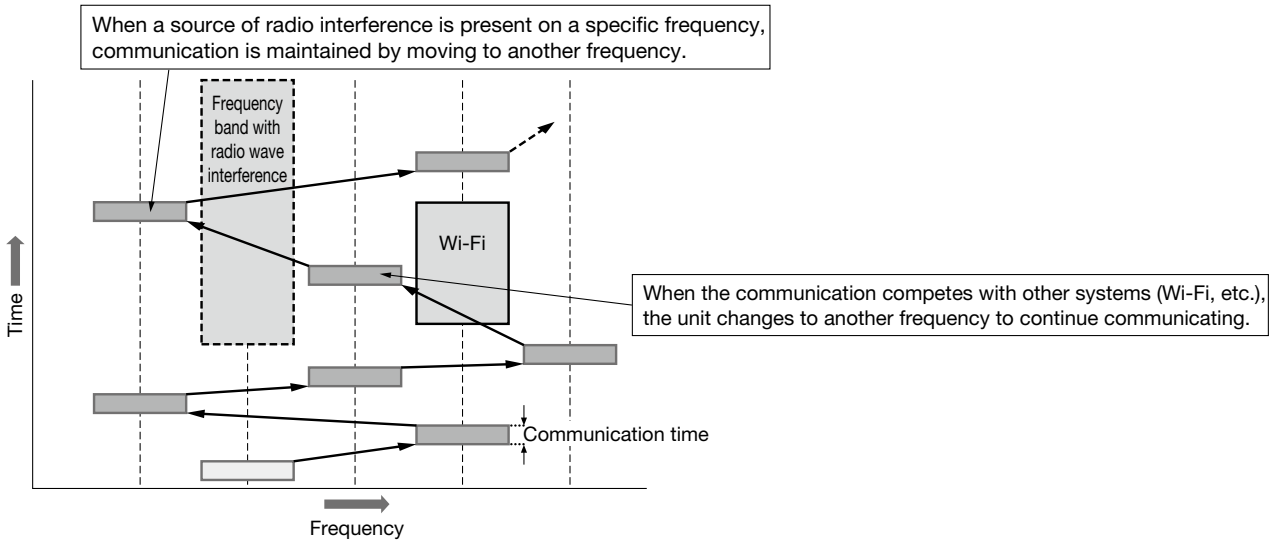
I/O unit

# Technical Data

## Frequency Hopping (FHSS: Frequency Hopping Spread Spectrum)

**This communication technology uses spread spectrum transmission with frequency hopping to rapidly switch between frequencies. Because the frequency is constantly changing, this communication method is resistant to radio wave interference due to reflections or noise from other wireless equipment. It also allows for a high level of data security. Multiple systems can be installed in the same area, and it is a suitable technology for point-to-multipoint communication.**




## ⚠Warning <Important>

- This product is already certified in accordance with the Radio Act and the Japanese Radio Law, so customers do not need to apply for a license to use this product.
  However, be sure to comply with the following.
  · Do not disassemble or modify the product. Disassembly and modification are prohibited by law.
  · Customers in countries that comply with the Radio Law should refer to the "Country-specific Radio Law Compliance Table."
- As this product communicates by radio waves, communication may stop temporarily due to the ambient environment and/or operating method. SMC will not be held responsible for any secondary failure which may cause personal injury or damage to other devices or equipment.
- When several units are installed in close proximity 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 be sure to perform communication testing before use.

# *EXW1/EX600-W Series*
# Country-specific Radio Law Compliance Table

As of June 2024

| | | Wireless system | | | | | |
|---|---|---|---|---|---|---|---|
| | | Compact type **EXW1** | | | | Modular type **EX600-W** | NFC reader/writer |
| | | Wireless adapter **EXW1-A1□** | | Compact base/remote CC-Link/e-CON | | | |
| | |  | |  External antenna  External antenna set  Internal antenna | |  |  |
| Area | Country/Region | Part number suffix: **E** type | Part number suffix: **N** type | Part number suffix: **E** type | Part number suffix: **N** type | **EX600-W** | **EXW1-NT1** |
| Europe CE | 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 | ○ | ○ | ○ | ○ | ○ | ○ |
| | Romania | ○ | ○ | ○ | ○ | ○ | ○ |
| | Luxembourg | ○ | ○ | ○ | ○ | ○ | ○ |
| Other Europe | Iceland | ○ | ○ | ○ | ○ | ○ | ○ |
| | Liechtenstein | ○ | ○ | ○ | ○ | ○ | ○ |
| | Switzerland | ○ | ○ | ○ | ○ | ○ | ○ |
| | Norway | ○ | ○ | ○ | ○ | ○ | ○ |
| | Turkey | ○ | ○ | ○ | ○ | ○ | ○ |
| | U.K. | ○ | ○ | ○ | ○ | ○ | ○ |
| | Ukraine | – | – | – | – | ○ | ○ |
| | Israel | ○ | ○ | – | – | – | – |
| | Saudi Arabia | ○ | ○ | – | – | – | – |
| | United Arab Emirates | ○ | ○ | – | – | – | – |
| | Serbia | ○ | ○ | – | – | – | – |
| Africa | South Africa | ○ | ○ | – | – | ○ | ○ |
| | Egypt | ○ | ○ | – | – | – | – |
| | Morocco | – | – | – | – | ○ | ○ |
| North, Central, and South America | U.S. | – | ○ | – | ○ | ○ | ○ |
| | Argentina | – | ○ | – | ○ | ○ | ○ |
| | Canada | – | ○ | – | ○ | ○ | ○ |
| | Chile | ○ | ○ | – | – | – | ○ |
| | Colombia | ○ | ○ | ○ | ○ | ○ | ○ |
| | Peru | ○ | ○ | – | – | – | ○ |
| | Brazil | – | ○ | – | ○ | ○ | ○ |
| | Mexico | – | ○ | – | ○ | ○ | ○ |
| Asia | India | ○ | ○ | ○ | ○ | ○ | ○ |
| | Pakistan | ○ | ○ | – | – | – | – |
| | Indonesia | ○ | ○ | – | – | – | ○ |
| | Australia | ○ | ○ | ○ | ○ | ○ | ○ |
| | South Korea | – | ○ | – | ○ | ○ | ○ |
| | Singapore | ○ | ○ | – | – | ○ | ○ |
| | Thailand | ○ | ○ | ○ | ○ | ○ | ○ |
| | China | ○ | ○ | ○ | ○ | ○ | ○ |
| | Japan | ○ | ○ | ○ | ○ | ○ | ○ |
| | New Zealand | ○ | ○ | ○ | ○ | ○ | ○ |
| | Philippines | ○ | ○ | – | – | ○ | ○ |
| | Myanmar | ○ | ○ | – | – | – | ○ |
| | Vietnam | ○ | ○ | ○ | ○ | ○ | ○ |
| | Bangladesh | ○ | ○ | – | – | – | ○ |
| | Hong Kong | ○ | ○ | – | – | – | ○ |
| | Malaysia*1 | ○ | ○ | ○ | ○ | ○ | ○ |
| | Taiwan | – | ○ | – | – | ○ | ○ |

*1 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.

# *EXW1/EX600-W Series*
# Specific Product Precautions

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

**Notice**

## ⚠ Caution

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

**Handling Precautions**

## ⚠ Caution

**1. This equipment complies with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules.**
**This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the operation manual, may cause harmful interference to radio communications.**
**Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.**

**2. This device complies with Industry Canada's license-exempt RSSs.**
**Operation is subject to the following two conditions:**
**(1) This device may not cause interference; and**
**(2) This device must accept any interference, including interference that may cause undesired operation of the device.**

**3. When operating the product, please be sure to maintain a separation distance of at least 20 cm between your body (excluding fingers, hands, wrists, ankles, and feet) and the product to meet RF exposure safety requirements as determined by FCC and Innovation, Science and Economic Development Canada.**
**Installation of this device must ensure that at 20 cm separation distance is maintained between the device and end users.**

# ⚠ 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.

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

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

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

*1) ISO 4414: Pneumatic fluid power - General rules and safety requirements for systems and their components
ISO 4413: Hydraulic fluid power - General rules and safety requirements for systems and their components
IEC 60204-1: Safety of machinery - Electrical equipment of machines - Part 1: General requirements
ISO 10218-1: Robots and robotic devices - Safety requirements for industrial robots - Part 1:Robots
etc.

## ⚠ Warning

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

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

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

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

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

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

**4. SMC products cannot be used beyond their specifications. They are not developed, designed, and manufactured to be used under the following conditions or environments. Use under such conditions or environments is not allowed.**

1. Conditions and environments outside of the given specifications, or use outdoors or in a place exposed to direct sunlight.
2. Use for nuclear power, railways, aviation, space equipment, ships, vehicles, military application, equipment affecting human life, body, and property, combustion equipment, entertainment equipment, emergency shut-off circuits, press clutches, brake circuits, safety equipment, etc., and use for applications that do not conform to standard specifications such as catalogs and operation manuals.
3. Use for interlock circuits, except for use with double interlock such as installing a mechanical protection function in case of failure. Please periodically inspect the product to confirm that the product is operating properly.

## ⚠ Caution

**SMC develops, designs, and manufactures products to be used for automatic control equipment, and provides them for peaceful use in manufacturing industries.**
**Use in non-manufacturing industries is not allowed.**
Products SMC manufactures and sells cannot be used for the purpose of transactions or certification specified in the Measurement Act of each country. The new Measurement Act prohibits use of any unit other than SI units in Japan.

## Limited warranty and Disclaimer/ Compliance Requirements

The product used is subject to the following "Limited warranty and Disclaimer" and "Compliance Requirements".
Read and accept them before using the product.

### Limited warranty and Disclaimer

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

*2) **Suction cups (Vacuum pads) are excluded from this 1 year warranty.**
A suction cup (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 suction cup (vacuum pad) or failure due to the deterioration of rubber material are not allowed 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.

**Revision History**

**Edition B** * A U-side end plate (for the SY) has been added.

**Edition C** * The EXW1 series compact wireless system has been added.

**Edition D** * UKCA compliance has been added.
* Countries in which the product is Radio Law certified have been added.

**Edition E** * EtherCAT (protocol) has been added to the EXW1 series (compact type).
* The number of pages has been increased from 48 to 52.

**Edition F** * IO-Link has been added as a protocol for the compact type EXW1 series wireless remote.
* The number of pages has been increased from 52 to 60.

**Edition G** * DeviceNet has been added to the EXW1 series (compact type).
* The number of pages has been increased from 60 to 67.

**Edition H** * Analog input, digital input/output, and valve manifold have been added to the compact type EXW1 series.
* The number of pages has been increased from 67 to 72.

| ⚠ Safety Instructions | Be sure to read the "Handling Precautions for SMC Products" (M-E03-3) and "Operation Manual" before use. |
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