




The intended use of this product is to provide wireless communication between wireless adaptors via a wired connection using a Wireless system or Air Management System (AMS).

1 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) ^{*)}, and other safety regulations.

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

- Refer to product catalogue, Operation Manual and Handling Precautions for SMC Products for additional information.
- Keep this manual in a safe place for future reference.

 Caution	Caution indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.
 Warning	Warning indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.
 Danger	Danger indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.

 **Warning**

- **Always ensure compliance with relevant safety laws and standards.**
All work must be carried out in a safe manner by a qualified person in compliance with applicable national regulations.

2 Specifications

2.1 Electrical specifications

Item	Specification
US1 power supply voltage for control	24 VDC +/-10%
Current consumption	50 mA or less

2 Specifications (continued)

2.2 General specifications

Item	Specification
Enclosure rating	IP67
Ambient operating temperature	-10 to +50 °C
Ambient operating temperature for UL(CSA) compliance	0 to +50 °C (no freezing or condensation)
Ambient storage temperature	-20 to +60 °C
Ambient humidity	35 to 85% RH (no condensation)
Altitude for UL(CSA) compliance	3000 m maximum
Pollution Degree for UL(CSA) compliance	3
Installation location for UL(CSA) compliance	Indoors
Withstand voltage	500 VAC for 1 minute between external terminals (including the FE terminal) and enclosure screws
Insulation resistance	10 MΩ or more (500 VDC between external terminals (including the FE terminal) and enclosure screws
Vibration resistance	EN61131-2 compliant: 5 ≤ f < 8.4 Hz 3.5 mm 8.4 ≤ f < 150 Hz 9.8 m/s ²
Impact resistance	EN61131-2 compliant: 147 m/s ² , 11 ms
Weight	40 g (product) 20 g (mounting plate)

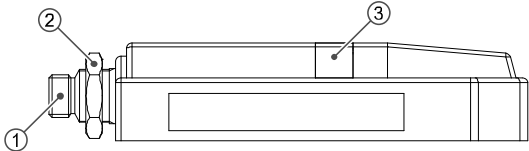
*1: UL (CSA) certification only applicable when connected to the air management system.
*: Products with tiny scratches or marks which do not affect the performance of the product are verified as conforming products.

2.3 Wireless Communication specifications

Item	Specifications
Protocol	SMC original protocol (SMC encryption)
Radio wave type (spread)	Frequency Hopping Spread Spectrum (FHSS)
Frequency band	2.4 GHz (2403 to 2481 MHz)
Frequency Channel Select (F.C.S) function	Supported (but not supported by the Air Management System)
Frequency channels	79 ch. max. (Bandwidth: 1.0 MHz)
Communication speed	250 kbps (v1.0) / 1 Mbps (v2.0)
Communication distance	Up to 100 m line of sight (depending on the environment)
Radio Law certificates	Refer to the SMC website for the latest information as to which countries the product is certified.

3 Name and Function of parts


- EXW1-A11# - Wireless Adaptor



No.	Item	Description
1	Connector	M8 connector for wireless adaptor cable.
2	Nut	For fixing to Air Management System.
3	LED display	Indicates the status of the adaptor.

4 Installation

4.1 Installation

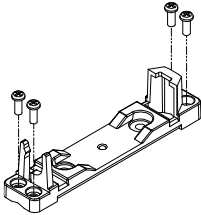
 **Warning**

- Do not install the product unless the safety instructions have been read and understood.

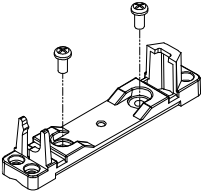
4.2 Mounting to a flat surface

- (1) Attachment of mounting plate
Attach the mounting plate in the required location using either of the following two methods.

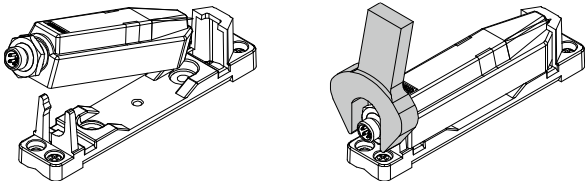
Installation using M3 screws x 4 positions
The recommended tightening torque is 0.4 N•m ± 10% (screws are not included).



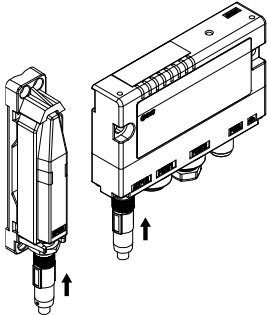
Installation using M4 screws x 2 positions
The recommended tightening torque is 0.6 N•m ± 10% (screws are not included).



- (2) Installation of wireless adaptor
Clip the wireless adaptor onto the mounting plate as shown below and secure the adaptor in place using the M10 nut already fitted to the wireless adaptor. The recommended tightening torque is 0.9 N•m ± 10%.

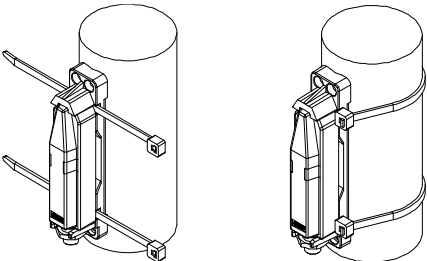


- (3) Connection of the cable for wireless adaptor
Connect the cable between the base / remote and the wireless adaptor.



4.3 Mounting to a curved surface

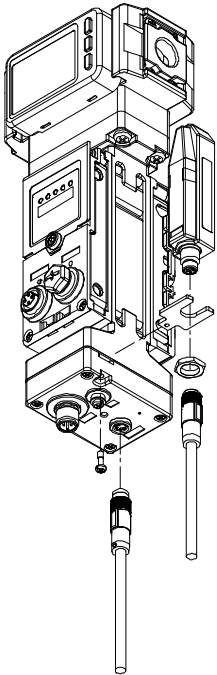
- (1) Thread 2 x cable ties through the mounting plate at the top and bottom.
(2) Secure the wireless adaptor to the mounting plate and then secure in the required position by tightening the cable ties.



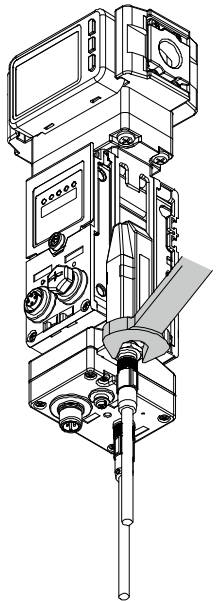
4 Installation (continued)

4.4 Mounting to the Air Management System (AMS)

Mount the wireless adaptor bracket to the Air Management System using the screw attached to the Air Management System (recommended torque: 0.3 ±10% N•m). Then attach the cable EXW1-AC1-X1 to between the wireless adaptor and Air Management System. (When inserting the cable into the Wireless adaptor, use an insertion force of 10 N or less).



Mount the wireless adaptor to the bracket of the Air Management System using the M10 nut already installed to the wireless adaptor (recommended torque: 0.9 ±10% N•m).



4 Installation (continued)

4.5 Environment

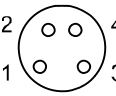
Warning

- Do not use in an environment where corrosive gases, chemicals, salt water or steam are present.
- Do not use in an explosive atmosphere.
- Do not expose to direct sunlight. Use a suitable protective cover.
- Do not install in a location subject to vibration or impact in excess of the product’s specifications.
- Do not mount in a location exposed to radiant heat that would result in temperatures in excess of the product’s specifications.

5 Wiring

5.1 Wiring Connections

- Connector

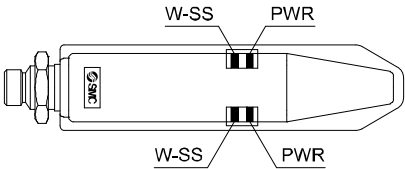
No.	Signal	M8, 4-pin, plug
		A-coded
1	24 V (US1)	
2	Internal Bus B	
3	0 V (US1)	
4	Internal Bus A	

Caution

- The EXW1-AC1-X1 is the optional cable which should be used for connection to the Wireless System or Air Management System.
- Radio laws require cables to be less than 3 m long, shielded and of a twisted pair construction.

6 LED Display

- The LED indicators on the wireless adaptor indicate the power supply, communication and diagnostic status.



LED	LED Colour	Operation
PWR	Green LED ON	US1 (for control) power supply is ON
	Orange LED flashing	Internal bus error is detected.
	Red LED ON	Unrecoverable error is detected.
	OFF	US1 (for control) power supply is OFF
W-SS	Green LED ON	The level of received radio wave power is 3.
	Green LED flashing (1 Hz)	The level of received radio wave power is 2.
	Green LED flashing (2 Hz)	The level of received radio wave power is 1.
	Red LED flashing	No Base or Remote that support protocol V.1.0 are connected.
	Orange LED flashing	No Base or Remote that support protocol V.2.0 are connected.
	OFF	Wireless Base or Remote is not registered.

7 How to Order

To obtain information about how to order this product, please refer to the SMC website (URL <https://www.smcworld.com>).

8 Outline Dimensions (mm)

To obtain the outline dimensions for this product, please refer to the SMC website (URL <https://www.smcworld.com>).

9 Maintenance

9.1 General Maintenance

Caution

- Not following proper maintenance procedures could cause the product to malfunction and lead to equipment damage.
- If handled improperly, compressed air can be dangerous.
- Maintenance of pneumatic systems should be performed only by qualified personnel.
- Before performing maintenance, turn off the power supply and be sure to cut off the supply pressure. Confirm that the air is released to atmosphere.
- After installation and maintenance, apply operating pressure and power to the equipment and perform appropriate functional and leakage tests to make sure the equipment is installed correctly.
- If any electrical connections are disturbed during maintenance, ensure they are reconnected correctly and safety checks are carried out as required to ensure continued compliance with applicable national regulations.
- Do not make any modification to the product.
- Do not disassemble the product, unless required by installation or maintenance instructions.

10 Limitations of Use

10.1 Limited warranty and Disclaimer/Compliance Requirements

Refer to Handling Precautions for SMC Products.

NOTE

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction 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.

- **Influence of radio frequency on implantable medical devices:**
The radio frequency generated by this product may give an adverse effect on implantable medical devices, such as implantable cardiac pacemakers and implantable cardioverter defibrillators. Please read catalogues or instruction manuals of the equipment and device which may be affected by radio frequencies for any instructions for use or contact their manufacturers.

11 Product Disposal

This product shall not be disposed of as municipal waste. Check your local regulations and guidelines to dispose of this product correctly, in order to reduce the impact on human health and the environment.

12 Contacts

Refer to www.smcworld.com or www.smc.eu for your local distributor / importer.

SMC Corporation

URL: <https://www.smcworld.com> (Global) <https://www.smceu.com> (Europe)
SMC Corporation, 4-14-1, Sotokanda, Chiyoda-ku, Tokyo 101-0021, Japan
Specifications are subject to change without prior notice from the manufacturer.
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