Wireless System

Compact Remote

Compact Lightweight

Area Approx. **61%** reduction*1

59.8 cm² ⬅ 155 cm²

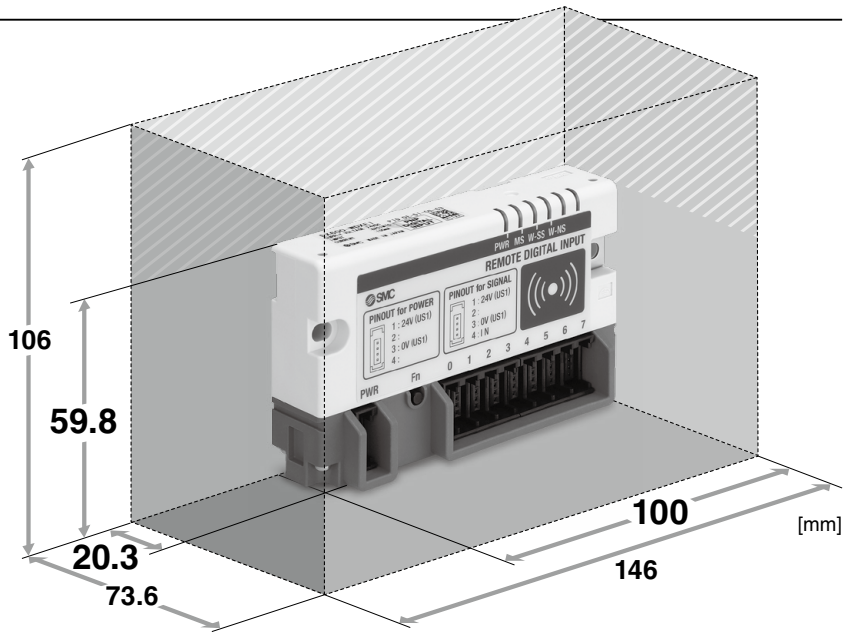
Volume Approx. **86%** reduction*1

159 cm³ ⬅ 1,139 cm³

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

130 g ⬅ 965 g

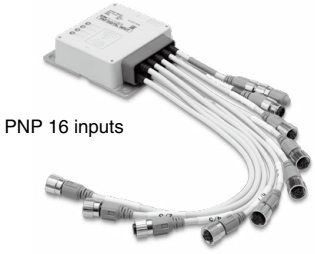
*1 For the e-CON type
Compared with the existing remote, M8 connector/ digital 8 inputs specification

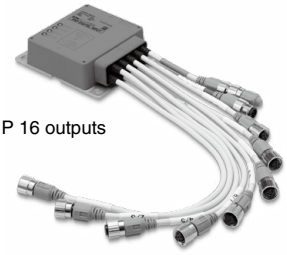


Variations

Grommet type

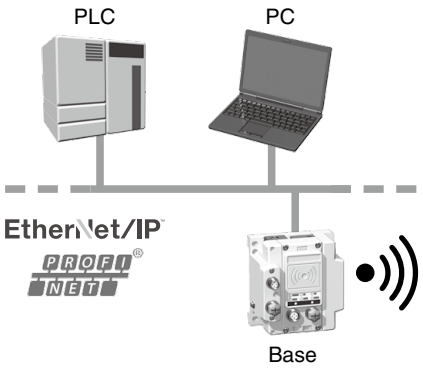
IP67


PNP 16 inputs


PNP 16 outputs

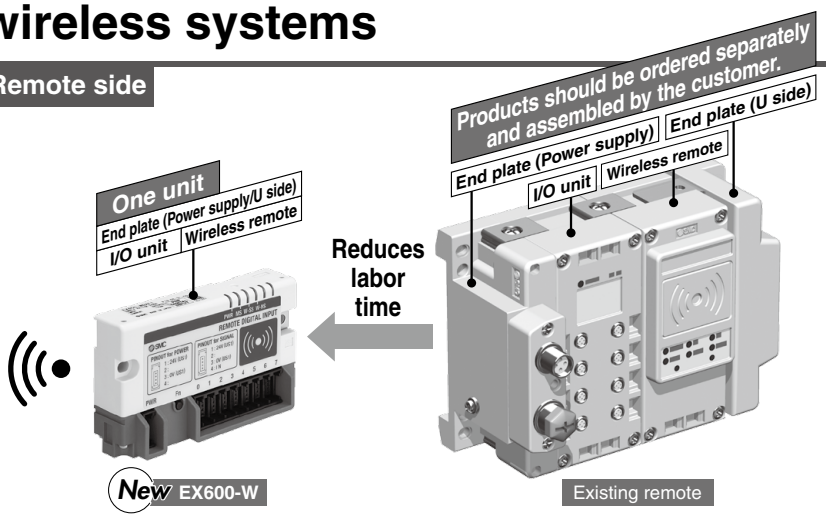
Applicable to existing wireless systems

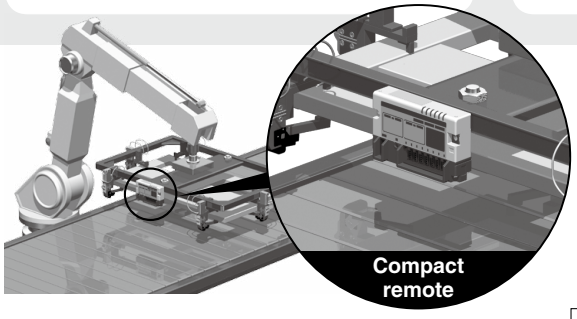
Base side

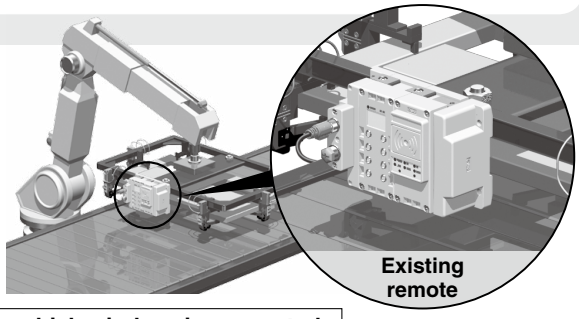


Trademark
EtherNet/IP™ is a trademark of ODVA.

Remote side







EX600-W Series

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

SMC

Specifications

Wireless Communication Specifications

Protocol	SMC original protocol
Radio wave type	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 back cover

Electrical Specifications/e-CON Type

Power supply voltage for control and input (US1)			24 VDC ±10%
Current consumption		**Input unit**	100 mA or less
		Output unit	50 mA or less
Power supply voltage for output (US2)			24 VDC ±10%
Input	**Number of inputs**		8 inputs (1 input/connector)
	Input type		PNP (-COM)
	Connector type		e-CON (4-pin)
	Max. sensor supply current		0.3 A/connector 2 A/unit
	Input resistance		1.5 kΩ
	Rated input current		5 mA or less
	Determined value	**OFF voltage/ OFF current**	5 VDC or less/2 mA or less
		ON voltage/ ON current	15 VDC or more/5 mA or more
	Protection		Short-circuit protection
Output	**Number of outputs**		8 outputs (1 output/connector)
	Output type		PNP (-COM)
	Connector type		e-CON (4-pin)
	Max. load current		100 mA (per output)
	Protection		Short-circuit protection

Electrical Specifications/Grommet Type

Power supply voltage for control and input (US1)			24 VDC ±10%
Current consumption		**Input unit**	100 mA
		Output unit	50 mA or less
Power supply voltage for output (US2)			24 VDC ±10%
Input	**Number of inputs**		16 inputs (2 inputs/connector)
	Input type		PNP (-COM)
	Connector type		M12 5-pin socket (Female)
	Max. sensor supply current		0.3 A/connector 2 A/unit
	Input resistance		1.5 kΩ
	Rated input current		5 mA or less
	Determined value	**OFF voltage/ OFF current**	5 VDC or less/2 mA or less
		ON voltage/ ON current	15 VDC or more/5 mA or more
	Protection		Short-circuit protection
Output	**Number of outputs**		16 outputs (2 outputs/connector)
	Output type		PNP (-COM)
	Connector type		M12 5-pin socket (Female)
	Max. load current		100 mA (per output)
	Protection		Short-circuit protection

General Specifications

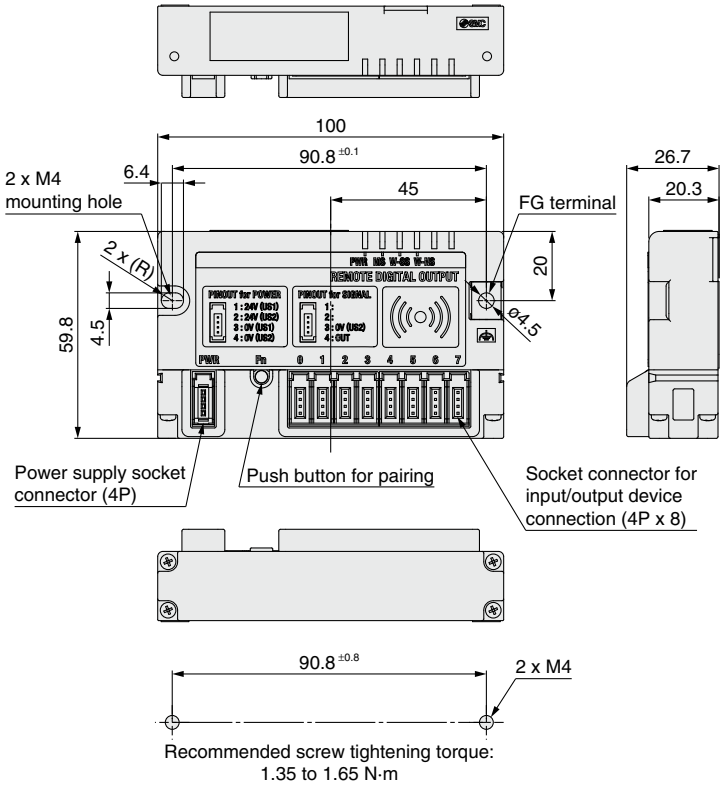
Enclosure	**e-CON type**	IP20
	Grommet type	IP67
Cable tensile strength	**e-CON type**	10 N
	Grommet type	100 N
Ambient temperature (Operating temperature)		0 to +50°C
Ambient temperature (Storage temperature)		−10 to +60°C
Ambient humidity		35 to 85% RH (No condensation)
Withstand voltage		500 VAC for 1 minute between external terminals and metallic parts
Insulation resistance		10 MΩ or more (500 VDC between external terminals and metallic parts)
Vibration resistance		Compliant with EN61131-2 $5 \leq f < 8.4$ Hz 3.5 mm $8.4 \leq f < 150$ Hz 9.8 m/s^2
Impact resistance		Compliant with EN61131-2 147 m/s^2, 11 ms
Mounting	**e-CON type**	M4 2 locations
	Grommet type	M5 4 locations
Weight	**e-CON type**	130 g (Body only)
	Grommet type	480 g (Body only)

Dimensions

Wireless remote/ Input

Wireless remote/ Output

e-CON Type



Recommended mounting thread hole dimension

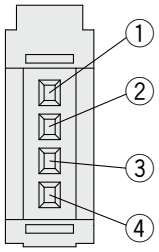
Applicable Connectors for Connection

Part no.	AWG No.	Conductor area [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

e-CON Connector Specifications (Input/Output)

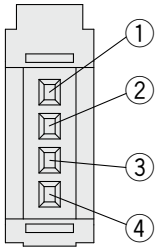
Input

Power supply socket connector wiring specifications



Pin no.	Terminal name
1	24 V (For control/input)
2	N.C.
3	0 V (For control/input)
4	N.C.

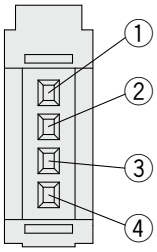
Socket connector for input device connection wiring specifications



Pin no.	Terminal name
1	24 V (For control/input)
2	N.C.
3	0 V (For control/input)
4	IN

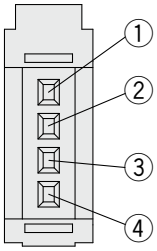
Output

Power supply socket connector wiring specifications



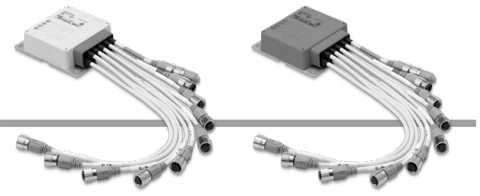
Pin no.	Terminal name
1	24 V (For control/input)
2	24 V (For output)
3	0 V (For control/input)
4	0 V (For output)

Socket connector for output device connection wiring specifications



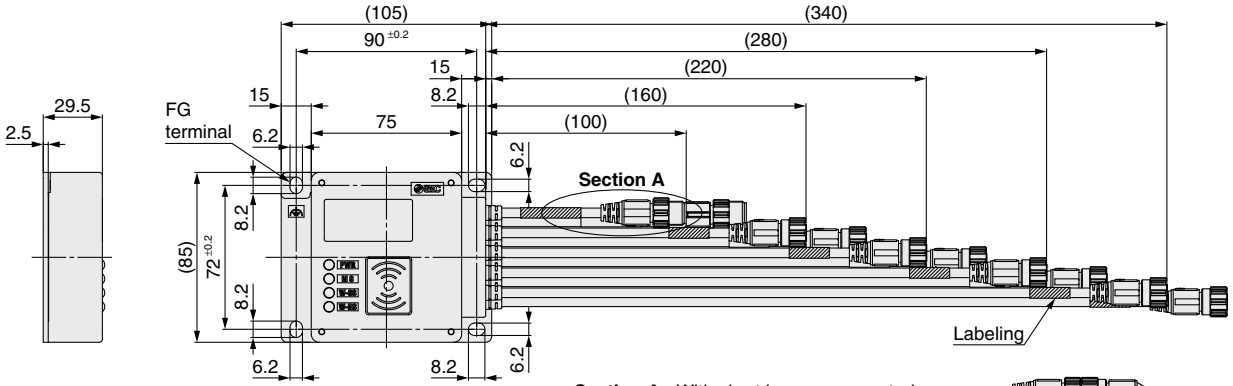
Pin no.	Terminal name
1	N.C.
2	N.C.
3	0 V (For output)
4	OUT

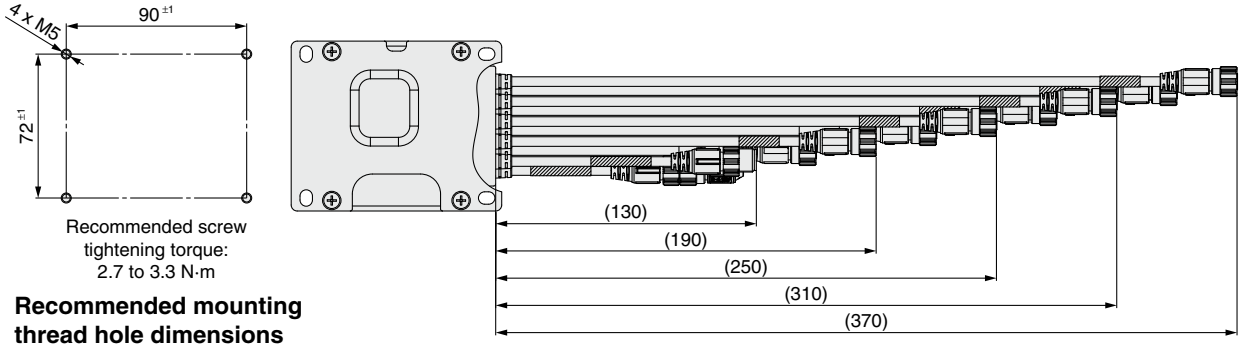
Dimensions



PNP 16 inputs PNP 16 outputs

Grommet Type





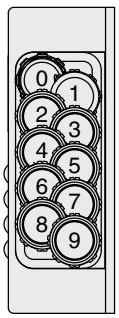
Recommended screw tightening torque: 2.7 to 3.3 N·m

Recommended mounting thread hole dimensions

Input

Connector Arrangement Specifications

No.	Description	Cable length [mm]	Labeling	Cable with M12 connector
0	Pairing line	100	PAIRING	M12, 4-pin, plug (Male)
1	Power supply line	130	POWER	
2	Input E/F	160	E/F	M12, 5-pin, socket (Female)
3	Input C/D	190	C/D	
4	Input A/B	220	A/B	
5	Input 8/9	250	8/9	
6	Input 6/7	280	6/7	
7	Input 4/5	310	4/5	
8	Input 2/3	340	2/3	
9	Input 0/1	370	0/1	



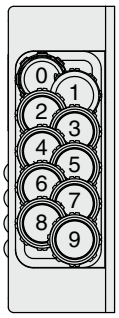
Connector Specifications

Labeling	PAIRING	POWER	0/1 to E/F	M12, 4-pin plug	M12, 5-pin socket
Pin no.	Description				
1	Short jumper Connected: Normal mode (3-pin to 4-pin short) Not connected: Pairing mode	Power supply for control: + (COM)	Power supply for control: + (COM)		
2		N.C.	Input n + 1		
3		Power supply for control: – (COM)	Power supply for control: – (COM)		
4		N.C.	Input n		
5	—	—	N.C.		

Output

Connector Arrangement Specifications

No.	Description	Cable length [mm]	Labeling	Cable with M12 connector
0	Pairing line	100	PAIRING	M12, 4-pin, plug (Male)
1	Power supply line	130	POWER	
2	Output E/F	160	E/F	M12, 5-pin, socket (Female)
3	Output C/D	190	C/D	
4	Output A/B	220	A/B	
5	Output 8/9	250	8/9	
6	Output 6/7	280	6/7	
7	Output 4/5	310	4/5	
8	Output 2/3	340	2/3	
9	Output 0/1	370	0/1	



Connector Specifications

Labeling	PAIRING	POWER	0/1 to E/F	M12, 4-pin plug	M12, 5-pin socket
Pin no.	Description				
1	Short jumper Connected: Normal mode (3-pin to 4-pin short) Not connected: Pairing mode	Power supply for control: + (COM)	N.C.		
2		Power supply for output: + (COM)	Output n + 1		
3		Power supply for control: – (COM)	Power supply for output: – (COM)		
4		Power supply for output: – (COM)	Output n		
5	—	—	N.C.		

EX600-W Series
Important

⚠Warning

●The product is certified as a wireless equipment in accordance with the Radio Act and the Japanese radio law has been obtained. Customers do not need to apply for a license to use this equipment.
Be sure to comply with the following precautions.
- Do not disassemble or modify the product. Disassembly and modification are prohibited by law.
- This product is for use in Japan, European countries (Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, U.K., Turkey), the U.S. and Canada. For use in other countries, please contact SMC.

●This product communicates by radio waves, and the communication may stop instantaneously due to ambient environments and operating methods. SMC will not be responsible for any secondary failure which may cause personal injury, or damage to other devices or equipment.

●When several units are installed closely to each other, slight interference may occur due to the characteristics of the wireless product.

●The electromagnetic waves emitted from this product may interfere with implantable medical devices such as cardiac pacemakers and cardioverter defibrillators, resulting in the malfunction of the medical device or other adverse effects.
Please use extreme caution when operating equipment which may have an adverse effect on your implantable medical device. Be sure to thoroughly read the precautions stated in the catalog, operation manual, etc., of your implantable medical device, or contact the manufacturer directly for further details on what types of equipment need to be avoided.

●The communication performance is affected by the ambient environment, so please perform the communication testing before use.

＊ As of end of September, 2020

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

SMC Corporation

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