

# Wireless System Compact Remote



**Compact**   **Lightweight**

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

155 cm<sup>2</sup> → 59.8 cm<sup>2</sup>

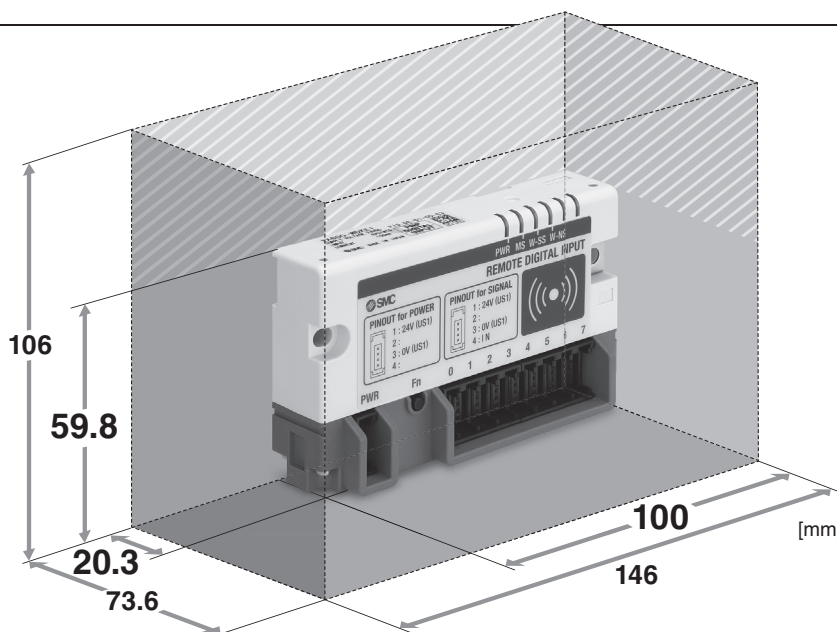
**Volume**   Approx. **86 % reduction**\*1

1,139 cm<sup>3</sup> → 159 cm<sup>3</sup>

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

965 g → 130 g

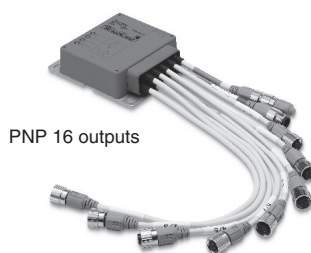
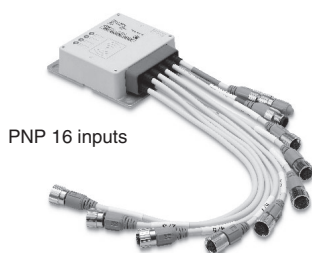
\*1 For the e-CON type  
Compared with the existing remote, M8 connector/  
digital 8 inputs specification



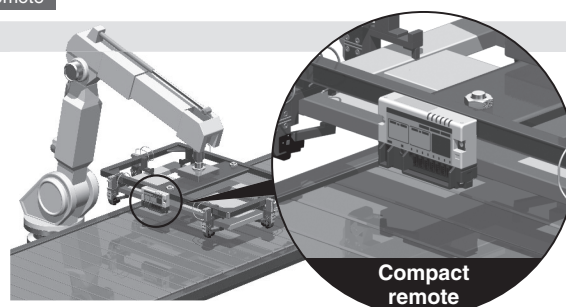
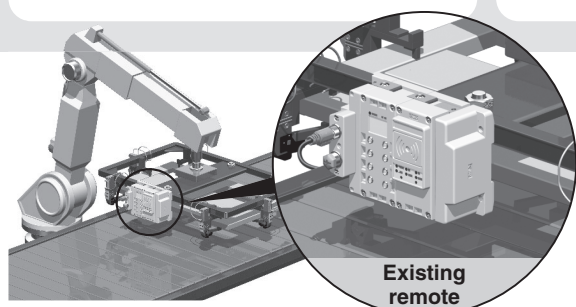
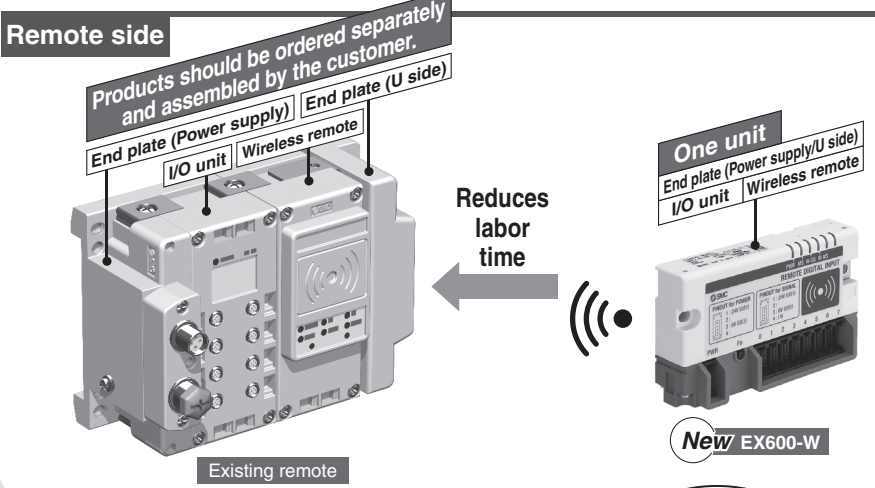
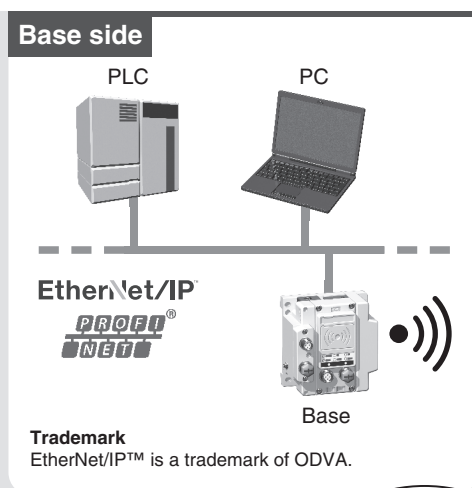
## Variations

Grommet type

**IP67**



## Applicable to existing wireless systems



# 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.



# EX600-W Series

## 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

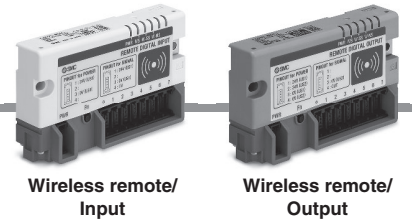
|  |                            |                              |                                |
|--|----------------------------|------------------------------|--------------------------------|
| Power supply voltage for control and input (US1) |                            | 24 VDC $\pm$ 10 %            |                                |
| Current consumption                              | Input unit                 | 100 mA or less               |                                |
|  | Output unit                | 50 mA or less                |                                |
| Power supply voltage for output (US2)            |                            | 24 VDC $\pm$ 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<br>2 A/unit  |                                |
|  | Input resistance           | 1.5 k $\Omega$               |                                |
|  | Rated input current        | 5 mA or less                 |                                |
|  | Determined value           | OFF voltage/<br>OFF current  | 5 VDC or less/2 mA or less     |
|  |                            | ON voltage/<br>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 $\pm$ 10 %              |                                  |
| Current consumption                              | Input unit                 | 100 mA                         |                                  |
|  | Output unit                | 50 mA or less                  |                                  |
| Power supply voltage for output (US2)            |                            | 24 VDC $\pm$ 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<br>2 A/unit    |                                  |
|  | Input resistance           | 1.5 k $\Omega$                 |                                  |
|  | Rated input current        | 5 mA or less                   |                                  |
|  | Determined value           | OFF voltage/<br>OFF current    | 5 VDC or less/2 mA or less       |
|  |                            | ON voltage/<br>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       |                                  |

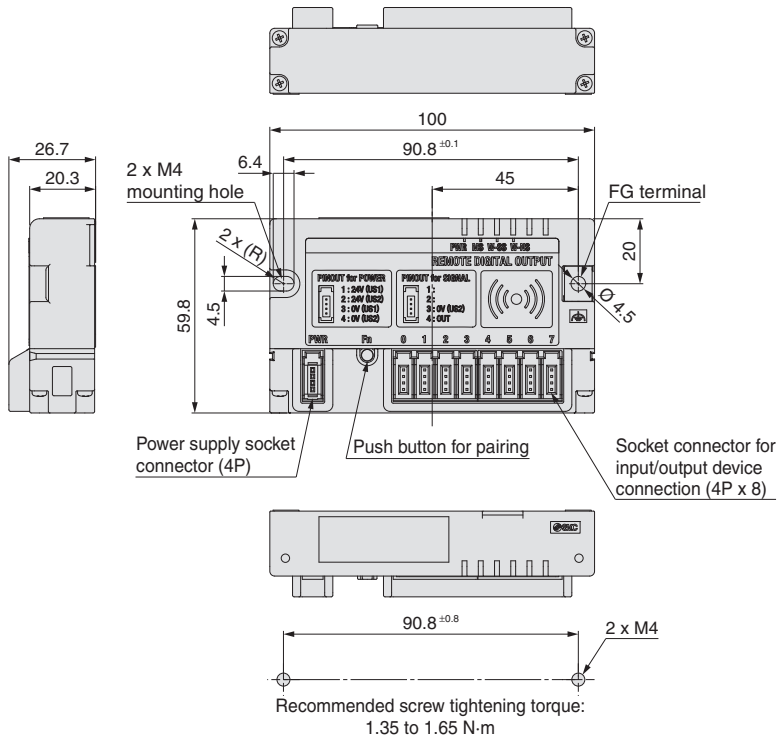
### General Specifications

|   |              |  |
|---|--------------|--|
| 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 M $\Omega$ or more (500 VDC between external terminals and metallic parts)                        |
| Vibration resistance                        |              | Compliant with EN61131-2<br>5 $\leq$ f < 8.4 Hz 3.5 mm<br>8.4 $\leq$ f < 150 Hz 9.8 m/s <sup>2</sup> |
| Impact resistance                           |              | Compliant with EN61131-2<br>147 m/s <sup>2</sup> , 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

### e-CON Type



**Recommended mounting thread hole dimension**

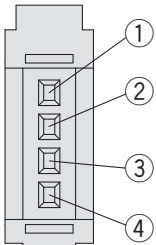
### Applicable Connectors for Connection

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

### e-CON Connector Specifications (Input/Output)

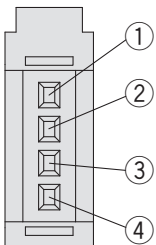
#### Input

#### 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.                     |

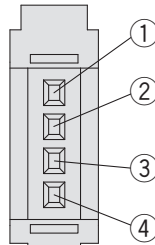
#### Socket connector for input device connection wiring specifications



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

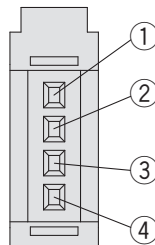
#### Output

#### 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

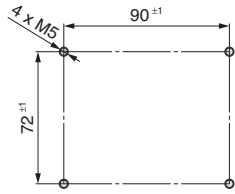
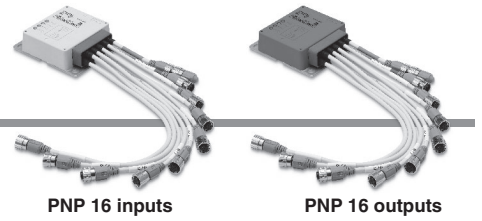


| Pin no. | Terminal name    |
|---------|------------------|
| 1       | N.C.             |
| 2       | N.C.             |
| 3       | 0 V (For output) |
| 4       | OUT              |

# EX600-W Series

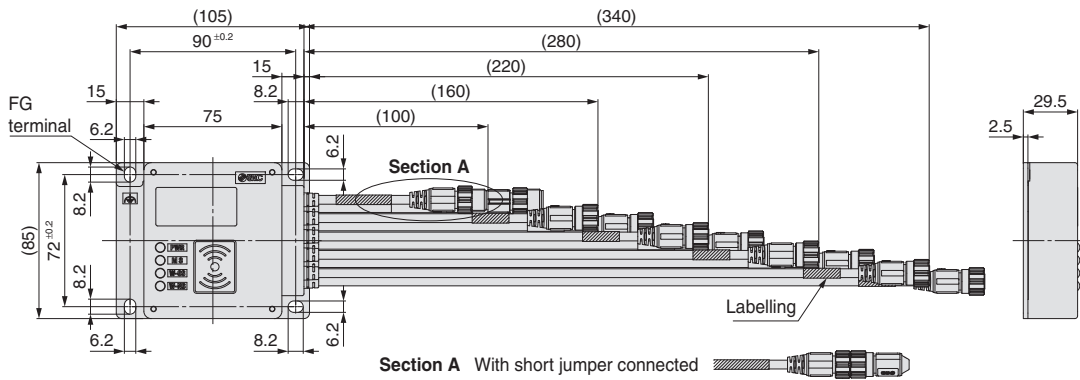
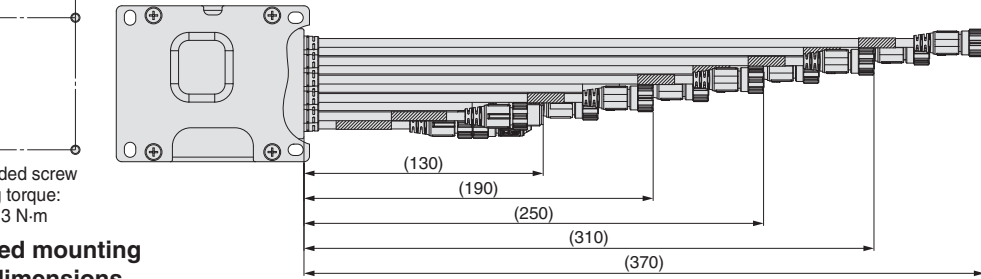
## Dimensions

### Grommet Type



Recommended screw tightening torque: 2.7 to 3.3 N·m

### Recommended mounting thread hole dimensions



Section A With short jumper connected

### Connector Arrangement Specifications

| No. | Description       | Cable length [mm] | Labelling | Cable with M12 connector    |
|-----|-------------------|-------------------|-----------|-----------------------------|
| 0   | Pairing line      | 100               | PAIRING   | M12, 5-pin, socket (Female) |
| 1   | Power supply line | 130               | POWER     |                             |
| 2   | Input E/F         | 160               | E/F       |                             |
| 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       |                             |

### Input

### Connector Specifications

| Labelling | 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) | Power supply for control: + (COM) | Power supply for control: + (COM) |                 |                   |
| 2         |  | N.C.                              | Input n + 1                       |                 |                   |
| 3         | Not connected: Pairing mode                                | 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] | Labelling | Cable with M12 connector    |
|-----|-------------------|-------------------|-----------|-----------------------------|
| 0   | Pairing line      | 100               | PAIRING   | M12, 5-pin, socket (Female) |
| 1   | Power supply line | 130               | POWER     |                             |
| 2   | Output E/F        | 160               | E/F       |                             |
| 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

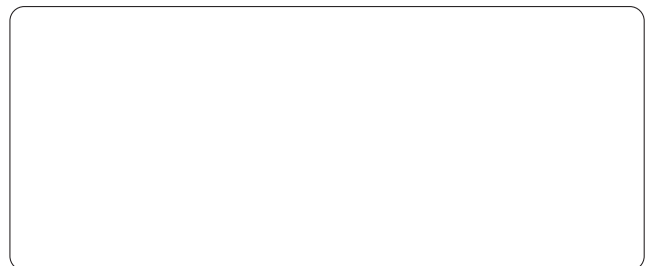
| Labelling | PAIRING  | POWER                             | 0/1 to E/F                       | M12, 4-pin plug | M12, 5-pin socket |
|-----------|--|-----------------------------------|----------------------------------|-----------------|-------------------|
| Pin no.   | Description  |                                   |                                  |                 |                   |
| 1         | Short jumper Connected: Normal mode (3-pin to 4-pin short) | Power supply for control: + (COM) | N.C.                             |                 |                   |
| 2         |  | Power supply for output: + (COM)  | Output n + 1                     |                 |                   |
| 3         | Not connected: Pairing mode                                | 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 catalogue, operation manual, etc., of your implantable medical device, or contact the manufacturer directly for further details on what types of equipment need to be avoided.
- The communication performance is affected by the ambient environment, so please perform the communication testing before use.

\* As of end of September, 2020



### SMC Corporation (Europe)

|                       |                   |                      |                        |                    |                     |                         |                             |
|-----------------------|-------------------|----------------------|------------------------|--------------------|---------------------|-------------------------|-----------------------------|
| <b>Austria</b>        | +43 (0)2262622800 | www.smc.at           | office@smc.at          | <b>Lithuania</b>   | +370 5 2308118      | www.smclt.lt            | info@smclt.lt               |
| <b>Belgium</b>        | +32 (0)33551464   | www.smc.be           | info@smc.be            | <b>Netherlands</b> | +31 (0)205318888    | www.smc.nl              | info@smc.nl                 |
| <b>Bulgaria</b>       | +359 (0)2807670   | www.smc.bg           | office@smc.bg          | <b>Norway</b>      | +47 67129020        | www.smc-norge.no        | post@smc-norge.no           |
| <b>Croatia</b>        | +385 (0)13707288  | www.smc.hr           | office@smc.hr          | <b>Poland</b>      | +48 222119600       | www.smc.pl              | office@smc.pl               |
| <b>Czech Republic</b> | +420 541424611    | www.smc.cz           | office@smc.cz          | <b>Portugal</b>    | +351 214724500      | www.smc.eu              | apoioclientept@smc.smces.es |
| <b>Denmark</b>        | +45 70252900      | www.smc.dk.com       | smc@smcdk.com          | <b>Romania</b>     | +40 213205111       | www.smcromania.ro       | smcromania@smcromania.ro    |
| <b>Estonia</b>        | +372 6510370      | www.smcneumatics.ee  | info@smcee.ee          | <b>Russia</b>      | +7 8123036600       | www.smc.eu              | sales@smcru.com             |
| <b>Finland</b>        | +358 207513513    | www.smc.fi           | smcfin@smc.fi          | <b>Slovakia</b>    | +421 (0)413213212   | www.smc.sk              | office@smc.sk               |
| <b>France</b>         | +33 (0)164761000  | www.smc-france.fr    | info@smc-france.fr     | <b>Slovenia</b>    | +386 (0)73885412    | www.smc.si              | office@smc.si               |
| <b>Germany</b>        | +49 (0)61034020   | www.smc.de           | info@smc.de            | <b>Spain</b>       | +34 945184100       | www.smc.eu              | post@smc.smces.es           |
| <b>Greece</b>         | +30 210 2717265   | www.smcHELLAS.gr     | sales@smcHELLAS.gr     | <b>Sweden</b>      | +46 (0)86031200     | www.smc.nu              | smc@smc.nu                  |
| <b>Hungary</b>        | +36 23513000      | www.smc.hu           | office@smc.hu          | <b>Switzerland</b> | +41 (0)523963131    | www.smc.ch              | helpcenter@smc.ch           |
| <b>Ireland</b>        | +353 (0)14039000  | www.smcautomation.ie | sales@smcautomation.ie | <b>Turkey</b>      | +90 212 489 0 440   | www.smc-pnomatik.com.tr | info@smc-pnomatik.com.tr    |
| <b>Italy</b>          | +39 03990691      | www.smcitalia.it     | mailbox@smcitalia.it   | <b>UK</b>          | +44 (0)845 121 5122 | www.smc.uk              | sales@smc.uk                |
| <b>Latvia</b>         | +371 67817700     | www.smc.lv           | info@smc.lv            |                    |                     |                         |                             |