

# SM-7ES1N8AY000 - Device connector front mounting with knurled nut



1605865  
<https://www.phoenixcontact.com/us/products/1605865>

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Device connector front mounting with knurled nut, straight, Screw locking mechanism, M40, number of positions: 4+3+PE, contact connection type: Socket, Axial O-ring, 4x Ø4,2, shielded: yes, flange dimensions: 40 mm x 40 mm, degree of protection: IP67, cable diameter range: 0 mm ... 0 mm, number of positions: 8, connection method: Crimp connection, series: SM, Alternative product in accordance with RoHS II without Exemption 6c (Pb < 0.1 %) item no.: 1242014

## Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 1605865             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 1 pc                |
| Sales key                            | AB32                |
| Product key                          | ABRBGN              |
| Catalog page                         | Page 167 (C-2-2019) |
| GTIN                                 | 4046356255370       |
| Weight per piece (including packing) | 323 g               |
| Weight per piece (excluding packing) | 268.766 g           |
| Customs tariff number                | 85366990            |
| Country of origin                    | DE                  |

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## Technical data

### Notes

|             |  |
|-------------|--|
| General     | Order crimp contacts 4 x Ø 2 mm, 4 x Ø 3.6 mm separately   |
| Safety note |  |
| Safety note | <p>WARNING: The connectors may not be plugged in or disconnected under load. Ignoring the warning or improper use may damage persons and/or property.</p> <ul style="list-style-type: none"><li>• WARNING: Commission properly functioning products only. The products must be regularly inspected for damage. Decommission defective products immediately. Replace damaged products. Repairs are not possible.</li><li>• WARNING: Only electrically qualified personnel may install and operate the product. They must observe the following safety notes. The qualified personnel must be familiar with the basics of electrical engineering. They must be able to recognize and prevent danger. The relevant symbol on the packaging indicates that only personnel familiar with electrical engineering are allowed to install and operate the product.</li><li>• The products are suitable for applications in plant, controller, and electrical device engineering.</li><li>• When operating the connectors in outdoor applications, they must be separately protected against environmental influences.</li><li>• Assembled products may not be manipulated or improperly opened.</li><li>• Only use mating connectors that are specified in the technical data of the standards listed (e.g. the ones listed in the product accessories online at <a href="https://www.phoenixcontact.com/products">phoenixcontact.com/products</a>).</li><li>• When using the product in direct connection with third-party manufacturers, the user is responsible.</li><li>• For operating voltages &gt; 50 V AC, conductive connector housings must be grounded</li><li>• Ensure that the protective or functional ground has been properly connected.</li><li>• VDE 0100/1.97 § 411.1.3.2 and DIN EN 60 204/11.98 § 14.1.3 are applicable when combining several circuits in a cable and/or connector</li><li>• Only use tools recommended by Phoenix Contact</li><li>• The installation notes/Design In documents online on the download page at <a href="https://www.phoenixcontact.com/products">phoenixcontact.com/products</a> must be observed for this product.</li><li>• Operate the connector only when it is fully plugged in and interlocked.</li><li>• Ensure that when laying the cable, the tensile load on the connectors does not exceed the upper limit specified in the standards.</li><li>• Observe the minimum bending radius of the cable. Lay the cable without twisting it.</li><li>• The connector warms up in normal operation. Depending on the</li></ul> |

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ambient conditions, the surface of the connector can continue to warm up. In this case, the user is responsible for posting warnings (e.g. DIN EN ISO 13732-1:2008-12).

## Mounting

|          |         |
|----------|---------|
| Mounting | 4x Ø4,2 |
|----------|---------|

## Product properties

|                     |                                   |
|---------------------|-----------------------------------|
| Product type        | Circular connectors (device side) |
| Number of positions | 8                                 |
| Connection profile  | 4+3+PE                            |
| Application         | Power                             |
| Series              | SM                                |
| Shielded            | yes                               |
| Coding              | N                                 |
| Thread type         | M40                               |

## Dimensions

### Housing

|                   |               |
|-------------------|---------------|
| Flange dimensions | 40 mm x 40 mm |
|-------------------|---------------|

## Material specifications

|                            |  |
|----------------------------|--|
| Seal material              | FPM  |
| Housing material           | Turned parts: copper zinc alloy (CuZn), die-cast parts: zinc (GD-Zn) |
| Insulator material         | PA 6.6   |
| Gasket and O-ring material | FPM  |
| Housing material           | Metal  |

## Electrical properties

### Contact

|                       |        |
|-----------------------|--------|
| Contact diameter      | 3.6 mm |
| Max. current          | 70 A   |
| Nominal voltage $U_N$ | 630 V  |
| Overvoltage category  | III    |
| Degree of pollution   | 3      |
| Rated surge voltage   | 6 kV   |

### Contact

|                       |       |
|-----------------------|-------|
| Contact diameter      | 2 mm  |
| Max. current          | 30 A  |
| Nominal voltage $U_N$ | 250 V |
| Overvoltage category  | III   |
| Degree of pollution   | 3     |

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|                     |      |
|---------------------|------|
| Rated surge voltage | 4 kV |
|---------------------|------|

## Connection data

### Conductor connection

|                         |                  |
|-------------------------|------------------|
| Connection method       | Crimp connection |
| Contact connection type | Socket           |

## Connector

|      |          |
|------|----------|
| Type | straight |
|------|----------|

### Connection 1

|             |        |
|-------------|--------|
| Head design | Socket |
|-------------|--------|

## Cable/line

|                         |               |
|-------------------------|---------------|
| External cable diameter | 0 mm ... 0 mm |
|-------------------------|---------------|

## Environmental and real-life conditions

### Ambient conditions

|                                 |                   |
|---------------------------------|-------------------|
| Degree of protection            | IP67              |
| Ambient temperature (operation) | -40 °C ... 125 °C |
| Altitude                        | 3000 m            |

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27440102 |
| ECLASS-12.0 | 27440116 |
| ECLASS-13.0 | 27440116 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC002635 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39121400 |
|-------------|----------|

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## Environmental product compliance

|            |  |
|------------|--|
| REACH SVHC | Lead 7439-92-1   |
| China RoHS | Environmentally Friendly Use Period = 50 years   |
|            | For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads" |

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