

# ST-7EP1N8A9003S - Coupler connector



1607741

<https://www.phoenixcontact.com/us/products/1607741>

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Coupler connector, straight, for standard and SPEEDCON interlock, M17, number of positions: 7+PE, contact connection type: Pin, shielded: yes, degree of protection: IP67, cable diameter range: 5 mm ... 8 mm, number of positions: 8, connection method: Crimp connection, series: ST, Alternative product in accordance with RoHS II without Exemption 6c (Pb < 0.1 %) item no.: 1242358

## Your advantages

- Consistent EMC protection for reliable connection solutions in the industrial environment
- Crimping connection: vibration- and temperature-resistant assembly
- Flexible use: reliably connect various cable diameters

## Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 1607741             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 1 pc                |
| Sales key                            | AB32                |
| Product key                          | ABRBEG              |
| Catalog page                         | Page 137 (C-2-2019) |
| GTIN                                 | 4046356274418       |
| Weight per piece (including packing) | 62.8 g              |
| Weight per piece (excluding packing) | 62.8 g              |
| Customs tariff number                | 85366990            |
| Country of origin                    | DE                  |

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## Technical data

### Notes

|                    |  |
|--------------------|--|
| Order information: | Order crimp contacts Ø 1 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 ambient conditions, the surface of the connector can continue to warm up. In this case, the user is responsible for posting</li></ul> |

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warnings (e.g. DIN EN ISO 13732-1:2008-12).

## Product properties

|                     |                                 |
|---------------------|---------------------------------|
| Product type        | Circular connector (cable-side) |
| Series              | ST                              |
| Application         | Power                           |
| Number of positions | 8                               |
| Connection profile  | 7+PE                            |
| Shielded            | yes                             |
| Coding              | N                               |
| Thread type         | M17                             |

## Data management status

|                  |    |
|------------------|----|
| Article revision | 12 |
|------------------|----|

## Material specifications

|                            |  |
|----------------------------|--|
| Seal material              | FPM  |
| Housing material           | Metal  |
| 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  |

## Connection data

### Conductor connection

|                   |                  |
|-------------------|------------------|
| Connection method | Crimp connection |
|-------------------|------------------|

## Electrical properties

### Contact

|                       |       |
|-----------------------|-------|
| Contact diameter      | 1 mm  |
| Max. current          | 14 A  |
| Nominal voltage $U_N$ | 630 V |
| Overvoltage category  | III   |
| Degree of pollution   | 3     |
| Rated surge voltage   | 6 kV  |

### Contact

|                  |      |
|------------------|------|
| Contact diameter | 1 mm |
|------------------|------|

## Connector

|                       |          |
|-----------------------|----------|
| Type                  | straight |
| Direction of rotation | Standard |

## Cable/line

|                         |               |
|-------------------------|---------------|
| External cable diameter | 5 mm ... 8 mm |
|-------------------------|---------------|

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## Environmental and real-life conditions

### Ambient conditions

|  |                   |
|--|-------------------|
| Degree of protection                     | IP67              |
| Ambient temperature (operation)          | -40 °C ... 125 °C |
| Ambient temperature (storage/transport)  | 15 °C ... 25 °C   |
| Altitude                                 | 2000 m            |
| Permissible humidity (storage/transport) | 50 % ... 65 %     |

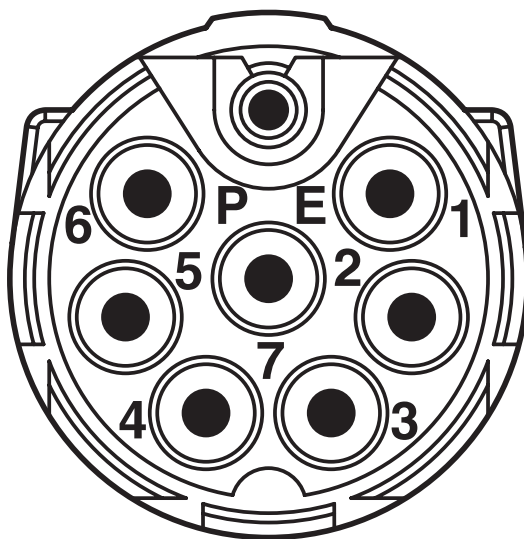
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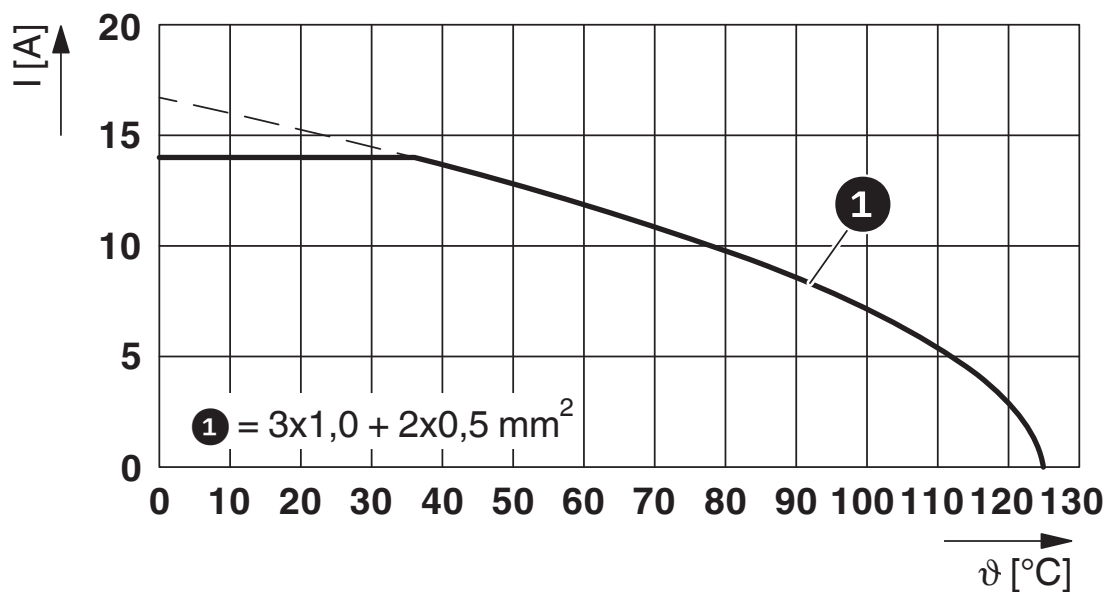
## Drawings

Schematic diagram



Connector pin assignment

Diagram



I = current strength, ϑ = ambient temperature, 3x 14 A + 2x 2 A constant

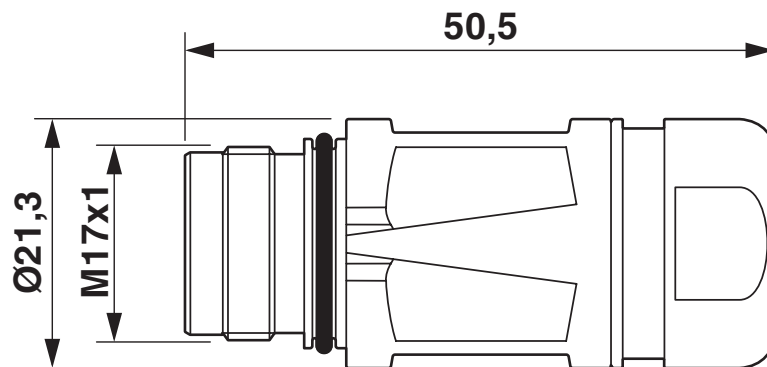
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Dimensional drawing



Technical drawings can be found under Downloads

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1607741>

|  <b>UL Recognized</b><br>Approval ID: E153698-20140124 |                       |                       |                   |                             |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
|   | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| Power   | 600 V                 | 5 A                   | -                 | -                           |
| Signal  | 600 V                 | 4 A                   | -                 | -                           |

|  <b>cUL Recognized</b><br>Approval ID: E153698-20140124 |                       |                       |                   |                             |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| Power  | 600 V                 | 5 A                   | -                 | -                           |
| Signal   | 600 V                 | 4 A                   | -                 | -                           |

|  <b>cUL Recognized</b><br>Approval ID: E335019-20111129 |                       |                       |                   |                             |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| Power  | 600 V                 | 5 A                   | -                 | -                           |
| Signal   | 600 V                 | 4 A                   | -                 | -                           |

|  <b>UL Recognized</b><br>Approval ID: E335019-20111129 |                       |                       |                   |                             |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
|   | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| Power   | 600 V                 | 5 A                   | -                 | -                           |
| Signal  | 600 V                 | 4 A                   | -                 | -                           |

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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

### EU RoHS

|   |      |
|---|------|
| Fulfills EU RoHS substance requirements | Yes  |
| Exemption                               | 6(c) |

### China RoHS

|  |   |
|--|---|
| Environment friendly use period (EFUP) | EFUP-50   |
|  | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |

### EU REACH SVHC

|                                     |                                      |
|-------------------------------------|--------------------------------------|
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1)                 |
| SCIP                                | 74425746-32b8-464d-9d04-c3f9ae11309b |

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## Accessories

### ST-10KP010 - Crimp contact

1618255

<https://www.phoenixcontact.com/us/products/1618255>



Crimp contact, Pin, turned, Single contact, contact diameter: 1 mm, crimp range: 0.06 mm<sup>2</sup> ... 0.25 mm<sup>2</sup>, Alternative product in accordance with RoHS II without Exemption 6c (Pb < 0.1 %) item no.: 1243215

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### ST-10KP035 - Crimp contact

1618458

<https://www.phoenixcontact.com/us/products/1618458>



Crimp contact, Pin, turned, contact diameter: 1 mm, crimp range: 0.25 mm<sup>2</sup> ... 1 mm<sup>2</sup>, Alternative product in accordance with RoHS II without Exemption 6c (Pb < 0.1 %) item no.: 1243215

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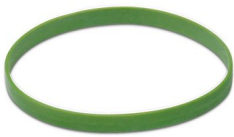
<https://www.phoenixcontact.com/us/products/1607741>

## ST-Z0016 - Color coding

1617993

<https://www.phoenixcontact.com/us/products/1617993>

Color coding, color: green



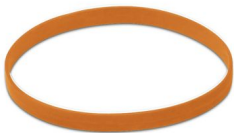
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## ST-Z0017 - Color coding

1618049

<https://www.phoenixcontact.com/us/products/1618049>

Color coding, color: orange



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<https://www.phoenixcontact.com/us/products/1607741>



## ST-Z0018 - Color coding

1618050

<https://www.phoenixcontact.com/us/products/1618050>

Color coding, color: black



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## ST-Z0002 - Square mounting flange with O-ring

1607771

<https://www.phoenixcontact.com/us/products/1607771>

Square mounting flange with O-ring, Axial O-ring, 4x Ø2,7, series: ST



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## ST-Z0003 - Square mounting flange with O-ring

1607772

<https://www.phoenixcontact.com/us/products/1607772>



Square mounting flange with O-ring, Axial O-ring, 4xM3, series: ST

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## ST-Z0004 - Square mounting flange

1607773

<https://www.phoenixcontact.com/us/products/1607773>



Square mounting flange, 4x Ø2,7, series: ST

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<https://www.phoenixcontact.com/us/products/1607741>



## ST-Z0005 - Square mounting flange

1607775

<https://www.phoenixcontact.com/us/products/1607775>



Square mounting flange, 4xM3, series: ST

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## ST-Z0014 - Metal protective cap

1616069

<https://www.phoenixcontact.com/us/products/1616069>



Metal protective cap, M17, degree of protection: IP67, series: ST, Alternative product in accordance with RoHS II without Exemption 6c (Pb < 0.1 %) item no.: 1243010

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## ST-Z0013 - Metal protective cap

1616068

<https://www.phoenixcontact.com/us/products/1616068>

Metal protective cap, M17, degree of protection: IP67, series: ST, Alternative product in accordance with RoHS II without Exemption 6c (Pb < 0.1 %) item no.: 1243009



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## PROT-M17PRO-OT-IP20 - Plastic protective cap

1055708

<https://www.phoenixcontact.com/us/products/1055708>

Plastic protective cap, M17, degree of protection: IP20, series: M17 PRO



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