

# Cable connector - ST-6EP1N8A8004S



1613561

<https://www.phoenixcontact.com/pc/products/1613561>

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Cable connector, straight, SPEEDCON locking, M17, number of positions: 6+PE, type of contact: Pin, shielded: yes, degree of protection: IP67, cable diameter range: 8 mm ... 10 mm, number of positions: 7, connection method: Crimp connection, series: ST

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## 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
- Molded designs with pre-assembled cables on one or both sides

# Cable connector - ST-6EP1N8A8004S



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## Commercial Data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1613561                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 1 pc                           |
| Note                                 | Made to Order (non-returnable) |
| Product Key                          | ABRCAH                         |
| Catalog Page                         | Page 136 (C-2-2019)            |
| GTIN                                 | 4046356401111                  |
| Weight per Piece (including packing) | 70.3 g                         |
| Weight per Piece (excluding packing) | 59.2 g                         |
| Customs tariff number                | 85366990                       |
| Country of origin                    | DE                             |

## 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> </ul>  |
|  | <ul style="list-style-type: none"> <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> </ul> |
|  | <ul style="list-style-type: none"> <li>• The products are suitable for applications in plant, controller, and electrical device engineering.</li> </ul>  |
|  | <ul style="list-style-type: none"> <li>• When operating the connectors in outdoor applications, they must be separately protected against environmental influences.</li> </ul>   |
|  | <ul style="list-style-type: none"> <li>• Assembled products may not be manipulated or improperly opened.</li> </ul>  |
|  | <ul style="list-style-type: none"> <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> </ul>   |
|  | <ul style="list-style-type: none"> <li>• When using the product in direct connection with third-party manufacturers, the user is responsible.</li> </ul>   |
|  | <ul style="list-style-type: none"> <li>• For operating voltages &gt; 50 V AC, conductive connector housings must be grounded</li> </ul>  |
|  | <ul style="list-style-type: none"> <li>• Ensure that the protective or functional ground has been properly connected.</li> </ul>   |
|  | <ul style="list-style-type: none"> <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> </ul>  |
|  | <ul style="list-style-type: none"> <li>• Only use tools recommended by Phoenix Contact</li> </ul>  |
|  | <ul style="list-style-type: none"> <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> </ul>   |
|  | <ul style="list-style-type: none"> <li>• Operate the connector only when it is fully plugged in and interlocked.</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Ensure that when laying the cable, the tensile load on the connectors does not exceed the upper limit specified in the standards.</li> </ul>  |  |
| <ul style="list-style-type: none"> <li>• Observe the minimum bending radius of the cable. Lay the cable without twisting it.</li> </ul>  |  |
| <ul style="list-style-type: none"> <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) |
| Number of positions | 7                               |
| Connection profile  | 6+PE                            |
| Application         | Power                           |
| Locking type        | SPEEDCON locking                |
| Series              | ST                              |
| Shielded            | yes                             |
| Coding              | N                               |
| Thread type         | M17                             |

## Ambient conditions

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

## Connector

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

## Electrical properties

### Contact

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

### Contact

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

## Connection data

### Conductor connection

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

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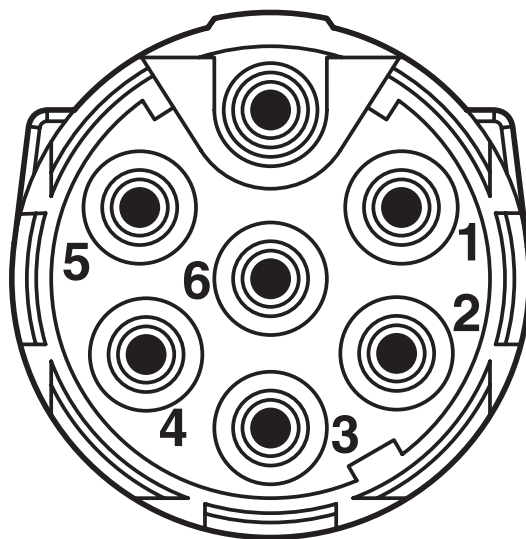
## Cable / line

### Cable structure

|                         |                |
|-------------------------|----------------|
| External cable diameter | 8 mm ... 10 mm |
|-------------------------|----------------|

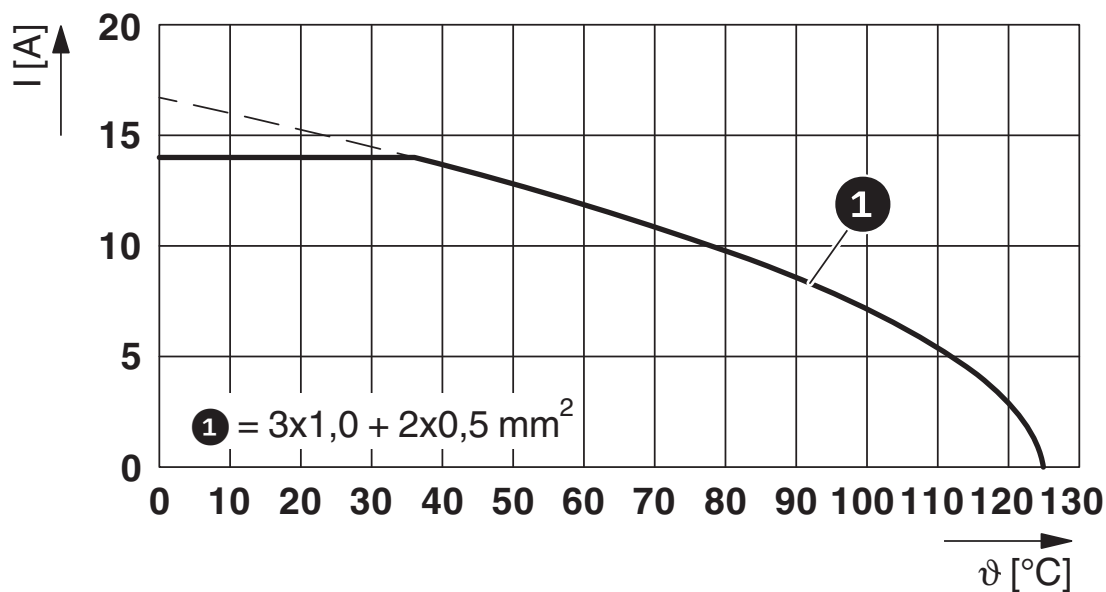
## Drawings

Schematic diagram



Connector pin assignment

Diagram



$I$  = current strength,  $\vartheta$  = ambient temperature, 3x 14 A + 2x 2 A constant

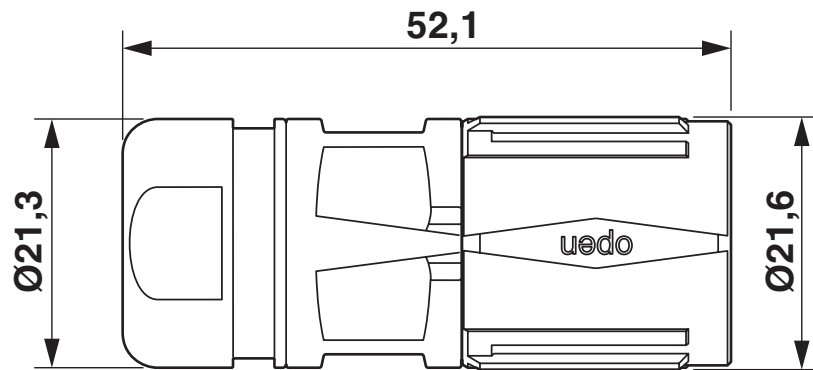
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Dimensional drawing



# Cable connector - ST-6EP1N8A8004S



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## Approvals



**cUL Recognized**  
Approval ID: FILE E 335019



**UL Recognized**  
Approval ID: FILE E 335019



**EAC**  
Approval ID: B.01687



**UL Listed**  
Approval ID: E468743-20210825

|        | Nominal Voltage $U_N$ | Nominal Current $I_N$ | Cross Section AWG | Cross Section $\text{mm}^2$ |
|--------|-----------------------|-----------------------|-------------------|-----------------------------|
| Power  | 600 V                 | 10 A                  | -                 | - 18                        |
| Signal | 60 V                  | 2 A                   | -                 | - 18                        |



**cUL Listed**  
Approval ID: E468743-20210825

|        | Nominal Voltage $U_N$ | Nominal Current $I_N$ | Cross Section AWG | Cross Section $\text{mm}^2$ |
|--------|-----------------------|-----------------------|-------------------|-----------------------------|
| Power  | 600 V                 | 8 A                   | - 18              | -                           |
| Signal | 60 V                  | 2 A                   | - 18              | -                           |



**UL Recognized**  
Approval ID: E153698-20140124



**cUL Recognized**  
Approval ID: E153698-20140124

**cULus Listed**

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## Classifications

### ECLASS

|               |          |
|---------------|----------|
| ECLASS-9.0    | 27440102 |
| ECLASS-10.0.1 | 27440102 |
| ECLASS-11.0   | 27440102 |

### ETIM

|          |          |
|----------|----------|
| ETIM 8.0 | 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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## Accessories

### Crimp contact

Crimp contact - ST-10KP010 - 1618255

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



Crimp contact, turned, Single contact, contact diameter: 1 mm, crimp range: 0.06 mm<sup>2</sup> ... 0.25 mm<sup>2</sup>

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### Crimp contact

Crimp contact - ST-10KP035 - 1618458

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



Crimp contact, turned, contact diameter: 1 mm, crimp range: 0.25 mm<sup>2</sup> ... 1 mm<sup>2</sup>

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## Protective cap

Protective cap - ST-Z0007 - 1607777

<https://www.phoenixcontact.com/pc/products/1607777>



Plastic protection cap for connectors with M17 knurled nut and M17 SPEEDCON knurled nut

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## Color-coding

Color-coding - ST-Z0016 - 1617993

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



Color-coding, color: green

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1613561

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## Color-coding

Color-coding - ST-Z0017 - 1618049

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

Color-coding, color: orange



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## Color-coding

Color-coding - ST-Z0018 - 1618050

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

Color-coding, color: black



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## Square mounting flange with O-ring

Square mounting flange with O-ring - ST-Z0002 - 1607771

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



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

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## Square mounting flange with O-ring

Square mounting flange with O-ring - ST-Z0003 - 1607772

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



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

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1613561

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## Square mounting flange

Square mounting flange - ST-Z0004 - 1607773

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



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

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## Square mounting flange

Square mounting flange - ST-Z0005 - 1607775

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



Square mounting flange, 4xM3, series: ST

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