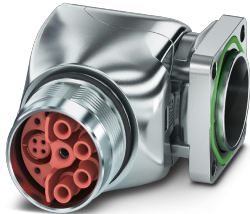


## Device connector, front mounting - SH-8ESS48AAD00S - 1621564

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



Device connector, front mounting, SH, angled rotatable, shielded: yes, for standard and SPEEDCON interlock, M23, No. of pos.: 8+4+PE, type of contact: Socket, Crimp connection, Axial O-ring, 4x Ø 3.2, flange dimensions: 26 mm x 26 mm, coding:N

### Your advantages

- ✓ Easy connection, thanks to infinitely adjustable cable outlet direction up to 310°
- ✓ All housing can be fitted with pin or socket contacts
- ✓ A total of eight contacts are available for signal transmission
- ✓ Safe use in the field, thanks to high degree of protection
- ✓ Consistent EMC protection for reliable connection solutions in the industrial environment

**RoHS**

### Key Commercial Data

|                                      |                                                                                                         |
|--------------------------------------|---------------------------------------------------------------------------------------------------------|
| Packing unit                         | 1 pc                                                                                                    |
| GTIN                                 | <br>4 046356 937122 |
| GTIN                                 | 4046356937122                                                                                           |
| Weight per Piece (excluding packing) | 120.000 g                                                                                               |
| Custom tariff number                 | 85366990                                                                                                |
| Country of origin                    | Germany                                                                                                 |

### Technical data

#### Temperature range

|                   |                                        |
|-------------------|----------------------------------------|
| Temperature range | -40 °C ... 115 °C (see derating curve) |
|-------------------|----------------------------------------|

#### Standards and Regulations

|             |                                                                                                                                                    |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Safety note | WARNING: The connectors may not be plugged in or disconnected under load. Ignoring the warning or improper use may damage persons and/or property. |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------|

## Device connector, front mounting - SH-8ESS48AAD00S - 1621564

### Technical data

#### Standards and Regulations

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <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 warnings (e.g. DIN EN ISO 13732-1:2008-12).</li> </ul>                                                                                                                                                                                             |

#### Data of the insulating body

|                                        |                                                                             |
|----------------------------------------|-----------------------------------------------------------------------------|
| Note                                   | Order information: Crimp contacts, 8 x Ø 1 mm, 5 x Ø 2 mm, order separately |
| Protection against electric shock      | IEC 61984 and VDE 0623                                                      |
| Coding                                 | N                                                                           |
| Insulator material                     | PA 6.6                                                                      |
| Insertion/withdrawal cycles mechanical | 100                                                                         |

## Device connector, front mounting - SH-8ESS48AAD00S - 1621564

### Technical data

#### Data of the insulating body

|                                                 |                                   |
|-------------------------------------------------|-----------------------------------|
| Contact connection method                       | Crimp connection                  |
| Type of contacts                                | Socket                            |
| Application                                     | Hybrid                            |
| Number of positions                             | 13                                |
| Contact diameter of power contacts              | 2 mm                              |
| Litz wire cross section of power contacts min.  | 0.25 mm <sup>2</sup>              |
| Litz wire cross section of power contacts max.  | 4 mm <sup>2</sup>                 |
| Rated current for power contacts                | 30 A                              |
| Rated surge voltage                             | 6 kV                              |
| Rated voltage (II/3) power contact              | 850 V DC                          |
| Rated voltage (III/3) power contact             | 630 V AC                          |
| Contact diameter of signal contacts             | 1 mm                              |
| Litz wire cross section of signal contacts min. | 0.06 mm <sup>2</sup>              |
| Litz wire cross section of signal contacts max. | 1 mm <sup>2</sup>                 |
| Nominal current per signal contact              | 8 A                               |
| Note                                            | for max. connection cross section |
| Rated surge voltage                             | 1.5 kV                            |
| Rated voltage (III/3) signal contact            | 50 V                              |
| Note                                            | for max. connection cross section |
| Installation height                             | 2000 m                            |

#### Housing data

|                                        |                                                                                                    |
|----------------------------------------|----------------------------------------------------------------------------------------------------|
| Note                                   | The suitability for assembly must be checked when fully assigned with maximum wire cross sections. |
| Housing material                       | Turned parts: copper zinc alloy (CuZn), die-cast parts: zinc (GD-Zn)                               |
| Flange dimensions                      | 26 mm x 26 mm                                                                                      |
| Type of locking                        | for standard and SPEEDCON interlock                                                                |
| Degree of protection (when plugged in) | IP67                                                                                               |
|                                        | IP68                                                                                               |
|                                        | IP69K                                                                                              |
| Thread type                            | M23                                                                                                |

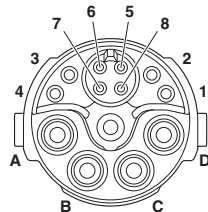
#### Environmental Product Compliance

|            |                                                                                                     |
|------------|-----------------------------------------------------------------------------------------------------|
| REACH SVHC | Lead 7439-92-1                                                                                      |
| China RoHS | Environmentally Friendly Use Period = 50 years                                                      |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

### Drawings

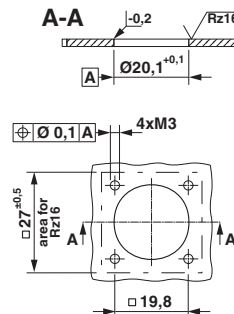
## Device connector, front mounting - SH-8ESS48AAD00S - 1621564

Schematic diagram



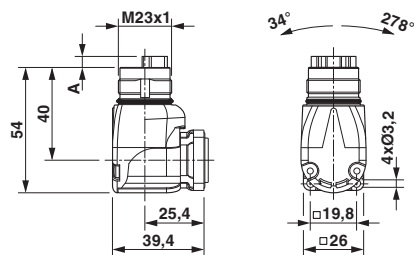
Socket pin assignment, signal

Dimensional drawing

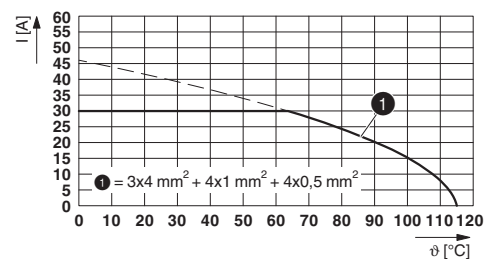


Installation dimensions

Dimensional drawing



Diagram



Pin version: dimension A = 4.7 mm, socket version: dimension A = 0 mm

I = current strength,  $\theta$  = ambient temperature, power contacts A-C: 3 x up to 30 A, signal contacts: 4 x 2 A constant, data contacts: 4 x 1 A constant

## Classifications

### eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27440109 |
| eCl@ss 11.0   | 27440109 |
| eCl@ss 4.0    | 27260700 |
| eCl@ss 4.1    | 27260700 |
| eCl@ss 5.0    | 27260700 |
| eCl@ss 5.1    | 27260700 |
| eCl@ss 6.0    | 27260700 |
| eCl@ss 7.0    | 27440102 |
| eCl@ss 9.0    | 27440103 |

### ETIM

|          |          |
|----------|----------|
| ETIM 4.0 | EC002635 |
| ETIM 6.0 | EC002061 |

## Device connector, front mounting - SH-8ESS48AAD00S - 1621564

### Classifications

#### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 13.2 | 39121413 |
| UNSPSC 18.0 | 39121413 |
| UNSPSC 19.0 | 39121413 |
| UNSPSC 20.0 | 39121413 |
| UNSPSC 21.0 | 39121413 |

### Approvals

#### Approvals

#### Approvals

EAC / UL Recognized / cUL Recognized / cULus Recognized

#### Ex Approvals

#### Approval details

|     |                                                                                     |         |
|-----|-------------------------------------------------------------------------------------|---------|
| EAC |  | B.01687 |
|-----|-------------------------------------------------------------------------------------|---------|

|                    |       |                                                                                     |                                                                                                                                                       |                  |  |
|--------------------|-------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--|
| UL Recognized      |       |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | E153698-20181206 |  |
|                    |       |                                                                                     |                                                                                                                                                       |                  |  |
| Nominal voltage UN | 600 V |                                                                                     |                                                                                                                                                       |                  |  |
| Nominal current IN | 24 A  |                                                                                     |                                                                                                                                                       |                  |  |
| mm²/AWG/kcmil      | 12    |                                                                                     |                                                                                                                                                       |                  |  |

|                    |  |                                                                                     |                                                                                                                                                       |                  |
|--------------------|--|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| cUL Recognized     |  |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | E153698-20181206 |
|                    |  |                                                                                     |                                                                                                                                                       |                  |
| Nominal voltage UN |  | 600 V                                                                               |                                                                                                                                                       |                  |
| Nominal current IN |  | 24 A                                                                                |                                                                                                                                                       |                  |
| mm²/AWG/kcmil      |  | 12                                                                                  |                                                                                                                                                       |                  |

## Device connector, front mounting - SH-8ESS48AAD00S - 1621564

### Approvals

cULus Recognized



### Accessories

#### Accessories

##### Crimp contact

Crimp contact - ST-10KS010 - 1618239



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

Crimp contact - ST-10KS035 - 1618464



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

Crimp contact - SF-20KS021 - 1621576



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

Crimp contact - SF-20KS022 - 1621577



Crimp contact, turned, contact diameter: 2 mm, crimp range: 1.5 mm<sup>2</sup> ... 2.5 mm<sup>2</sup>

## Device connector, front mounting - SH-8ESS48AAD00S - 1621564

### Accessories

Crimp contact - SF-20KS023 - 1621578



Crimp contact, turned, contact diameter: 2 mm, crimp range: 2.5 mm² ... 4 mm²

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### Mounting material

Color-coding - RF-Z0017 - 1620624



Color-coding, color: green

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Color-coding - RF-Z0018 - 1620625



Color-coding, color: orange

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Color-coding - RF-Z0019 - 1620626



Color-coding, color: anthracite

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### Protective cover

Protective cap - SH-Z2304 - 1622137



Plastic protection cap for M23 hybrid connectors with external thread

## Device connector, front mounting - SH-8ESS48AAD00S - 1621564

### Accessories

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Metal protective cap - SH-Z2303 - 1622138



Metal protection cap for M23 hybrid connectors with external thread

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Metal protective cap - SH-Z2302 - 1622139



Metal protection cap with steel wire, for M23 hybrid connectors with external thread

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