

# SB-8EPSA8AWT00S - Device connector front mounting



1623375

<https://www.phoenixcontact.com/us/products/1623375>

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M40, Device connector front mounting, application: Hybrid, series: SB, straight, shielded: yes, for standard and SPEEDCON interlock, No. of pos.: 8+4+PE, contact connection type: Pin, Crimp connection, Axial O-ring, flange dimensions: 40 mm x 40 mm, coding: Signal, coding 1, Item is lead-free in accordance with RoHS II without Exemption 6c (Pb < 0.1 %)

The figure shows the product with assembled crimp contacts. Please order crimp contacts separately.

## Your advantages

- All housing can be fitted with pin or socket contacts
- A total of eight contacts are available for signal transmission
- Mechanical coding reliably prevents incorrect connections
- Safe use in the field, thanks to high degree of protection
- Consistent EMC protection for reliable connection solutions in the industrial environment

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1623375       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | AB33          |
| Product key                          | ABRCEL        |
| GTIN                                 | 4055626195155 |
| Weight per piece (including packing) | 209.3 g       |
| Weight per piece (excluding packing) | 135.115 g     |
| Customs tariff number                | 85366990      |
| Country of origin                    | DE            |

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## Technical data

### Notes

|                    |  |
|--------------------|--|
| Order information: | Crimp contacts, 8 x Ø 1 mm, 5 x Ø 3.6 mm, order separately |
|--------------------|--|

### Safety note

|  |  |
|--|--|
| 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.   |
|  | <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>• 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>• Observe the corresponding technical data. You will find information:<ul style="list-style-type: none"><li>o On the product</li><li>o On the packing label</li><li>o In the supplied documentation</li><li>o Online at <a href="https://www.phoenixcontact.com/products">phoenixcontact.com/products</a> under the product</li></ul></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>• Use a protective cap to protect connectors that are not in use. The suitable accessories are available online in the accessory section of the product at <a href="https://www.phoenixcontact.com/products">phoenixcontact.com/products</a></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</li></ul> |  |

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|  |  |
|--|--|
|  | standards.   |
|  | <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> |

## Product properties

|              |                                   |
|--------------|-----------------------------------|
| Product type | Circular connectors (device side) |
|--------------|-----------------------------------|

## Connector

### Insulating body

|   |  |
|---|--|
| Coding  | Signal, coding 1   |
| Connection method                               | Crimp connection   |
| Contact switching type                          | Pin  |
| Application                                     | Hybrid   |
| Number of positions                             | 13   |
| Connection profile                              | 8+4+PE   |
| Installation height                             | 2000 m (4000 m at 300 V system voltage in accordance with DIN EN 606664-1) |
| Number (Contact group 1)                        | 5  |
| Contact diameter (Contact group 1)              | 3.6 mm   |
| Litz wires Min. cross section (Contact group 1) | 2.5 mm <sup>2</sup>  |
| Litz wires Max. cross section (Contact group 1) | 16 mm <sup>2</sup>   |
| Rated current Contact (Contact group 1)         | 70 A (for max. connection cross section)                                   |
| Rated voltage Contact (Contact group 1)         | 630 V AC (Overvoltage category III/3)<br>850 V (Overvoltage category II/3) |
| Rated surge voltage                             | 6 kV   |
| Overvoltage category                            | III  |
| Degree of pollution                             | 3  |
| Number (Contact group 2)                        | 4  |
| Contact diameter (Contact group 2)              | 0.8 mm   |
| Litz wires Max. cross section (Contact group 2) | 0.5 mm <sup>2</sup>  |
| Rated current Contact (Contact group 2)         | 8 A (for max. connection cross section)                                    |
| Rated voltage Contact (Contact group 2)         | 50 V AC/DC (Contact 5 ... 8)   |
| Rated surge voltage                             | 1.5 kV   |
| Overvoltage category                            | III  |
| Degree of pollution                             | 3  |
| Number (Signal contacts)                        | 4  |
| Contact diameter (Signal contacts)              | 1 mm   |
| Litz wires Max. cross section (Signal contacts) | 1.5 mm <sup>2</sup>  |
| Rated current Contact (Signal contacts)         | 8 A (for max. connection cross section)                                    |
| Rated voltage Contact (Signal contacts)         | 500 V AC/DC (Contact 1 ... 4)  |
| Rated surge voltage                             | 6 kV   |

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|                      |     |
|----------------------|-----|
| Overvoltage category | III |
| Degree of pollution  | 3   |

## Housing

|                                   |  |
|-----------------------------------|--|
| Type                              | Flange housing   |
| Thread type                       | M40  |
| Design                            | straight   |
| Type of locking                   | for standard and SPEEDCON interlock                                  |
| Pg screw connection               | none   |
| Mounting type                     | Front mounting/square flange (4x Ø 4,2 mm)                           |
| Flange dimensions                 | 40 mm x 40 mm  |
| Housing material                  | Turned parts: copper zinc alloy (CuZn), die-cast parts: zinc (GD-Zn) |
| Material for screw connection     | CuZn   |
| Degree of protection (plugged in) | IP68/IP69K   |
| Seal for the device               | Axial O-ring   |

## Environmental and real-life conditions

### Ambient conditions

|                                 |  |
|---------------------------------|--|
| Ambient temperature (operation) | -40 °C ... 115 °C (see derating curve) |
|---------------------------------|--|

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## Drawings

Dimensional drawing



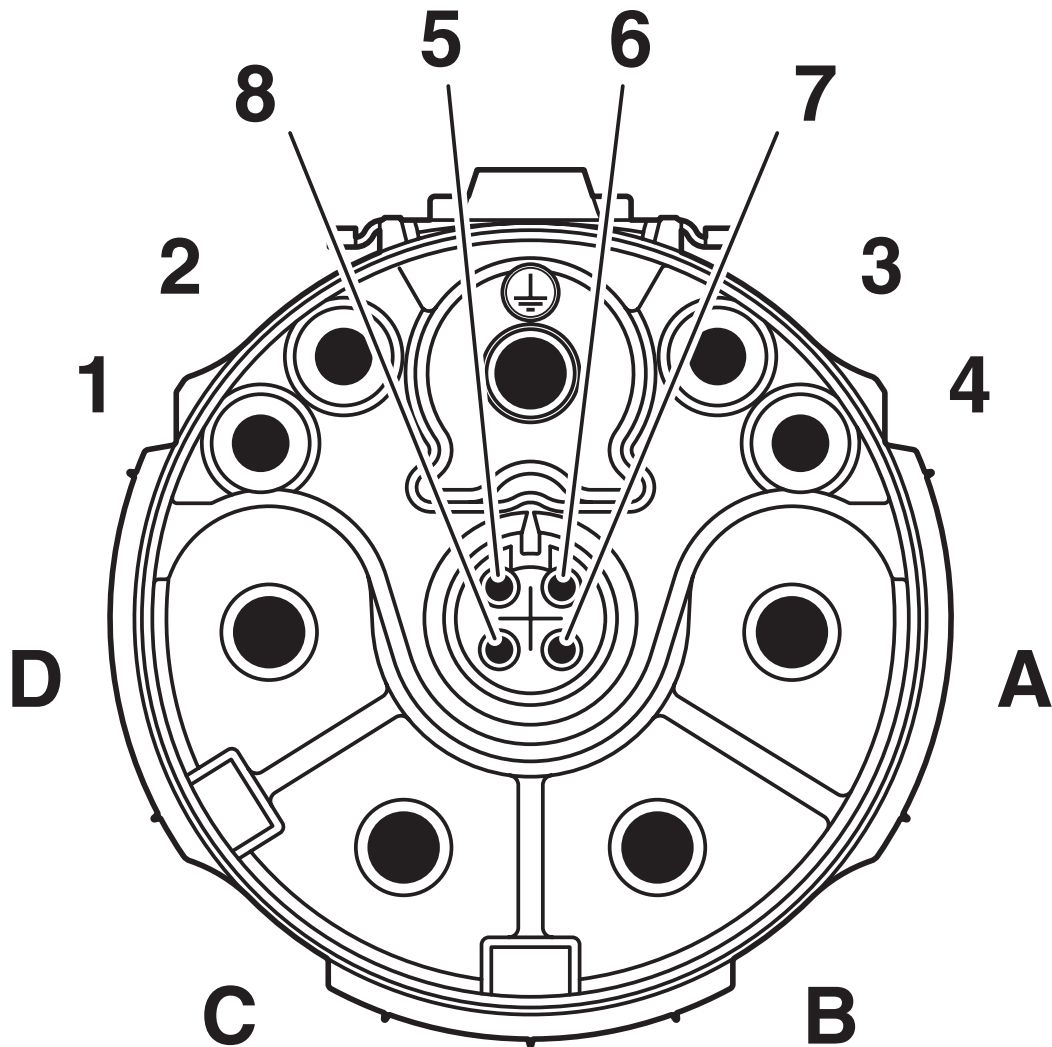
Installation dimensions

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Schematic diagram



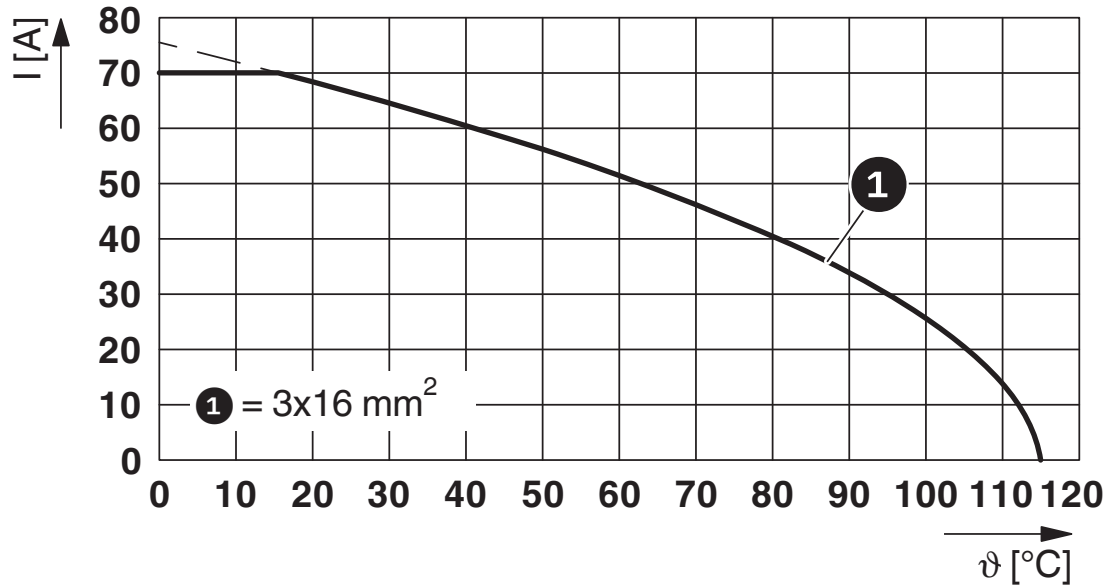
Pin assignment of pin signal, coding 1

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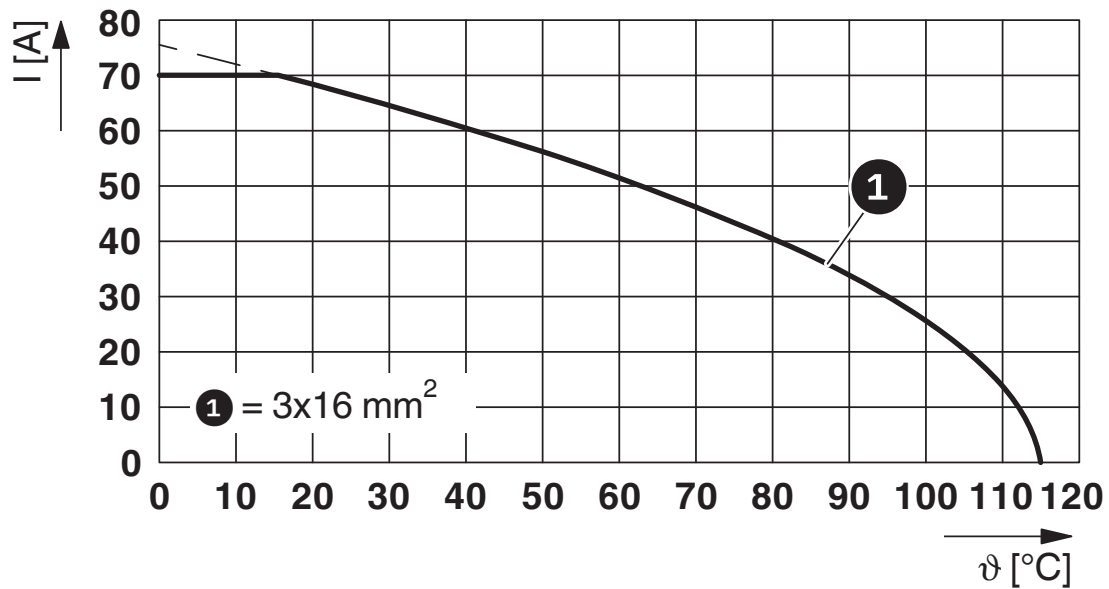
<https://www.phoenixcontact.com/us/products/1623375>

Diagram



$I$  = current strength,  $\vartheta$  = ambient temperature, power contacts A-C: 3x up to 70 A, signal contacts: 4x 2 A constant, data contacts: no load

Diagram



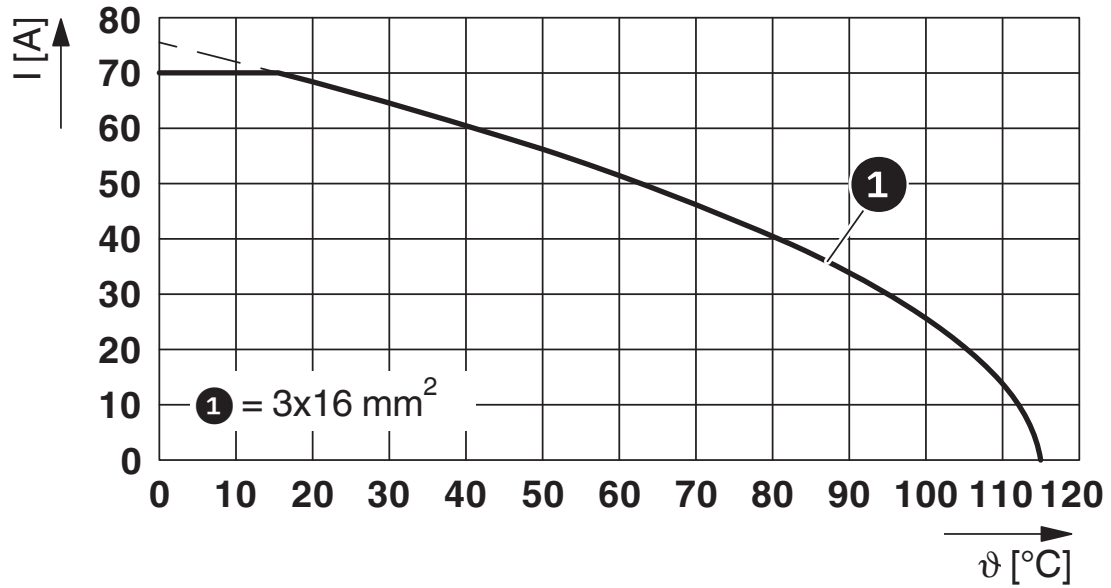
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Diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1623375>

|  <b>cUL Recognized</b><br>Approval ID: E153698-20190718 |                       |                       |                   |                             |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine  |                       |                       |                   |                             |
| Power  | 600 V                 | 24 A                  | 6                 | -                           |
| Signal   | 500 V                 | 4 A                   | 1,5               | -                           |
| Data   | 50 V                  | 1 A                   | 0,34              | -                           |

|  <b>UL Recognized</b><br>Approval ID: E153698-20190718 |                       |                       |                   |                             |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
|   | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine   |                       |                       |                   |                             |
| Power   | 600 V                 | 32 A                  | 6                 | -                           |
| Signal  | 500 V                 | 4 A                   | 1,5               | -                           |
| Data  | 50 V                  | 1 A                   | 0,34              | -                           |

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27440109 |
| ECLASS-15.0 | 27440109 |

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | EC003569 |
|-----------|----------|

### UNSPSC

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

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## Environmental product compliance

### EU RoHS

|   |                    |
|---|--------------------|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |
|---|--------------------|

### China RoHS

|  |  |
|--|--|
| Environment friendly use period (EFUP) | EFUP-E                                   |
|  | No hazardous substances above the limits |

### EU REACH SVHC

|                                     |                            |
|-------------------------------------|----------------------------|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

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