

SB-8ESCD8A8L33S - Cable connector



1623684

<https://www.phoenixcontact.com/us/products/1623684>

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M40, Cable connector, application: Hybrid, series: SB, straight long, shielded: yes, SPEEDCON, No. of pos.: 4+4+4+PE / 3+N+PE, contact connection type: Socket, Crimp connection, cable diameter range: 14 mm ... 20.5 mm, coding: CAT5, coding 2, this item is expected to be lead-free from Q2 2026 in accordance with RoHS II without exception 6c (Pb < 0.1%), a lead-free alternative is possible on request in advance

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

Your advantages

- Transmission of signals, data, and power in just a single connector
- CAT5 data interface for up to 100 Mbps
- Reduced connection time with SPEEDCON fast locking system
- 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 | 1623684 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Note | Made to order (non-returnable) |
| Sales key | AB33 |
| Product key | ABRCEB |
| GTIN | 4055626194028 |
| Weight per piece (including packing) | 435.1 g |
| Weight per piece (excluding packing) | 371.782 g |
| Customs tariff number | 85366990 |
| Country of origin | DE |

Technical data

Notes

| | |
|--------------------|--|
| Order information: | Crimp contacts, 4 x Ø 0.8 mm, 4 x Ø 1 mm, 5 x Ø 3.6 mm, order 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"> • 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. |
| | <ul style="list-style-type: none"> • 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. |
| | <ul style="list-style-type: none"> • The products are suitable for applications in plant, controller, and electrical device engineering. |
| | <ul style="list-style-type: none"> • When operating the connectors in outdoor applications, they must be separately protected against environmental influences. |
| | <ul style="list-style-type: none"> • Assembled products may not be manipulated or improperly opened. |
| | <ul style="list-style-type: none"> • 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 phoenixcontact.com/products). |
| | <ul style="list-style-type: none"> • When using the product in direct connection with third-party manufacturers, the user is responsible. |
| | <ul style="list-style-type: none"> • For operating voltages > 50 V AC, conductive connector housings must be grounded |
| | <ul style="list-style-type: none"> • 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 |
| | <ul style="list-style-type: none"> • Observe the corresponding technical data. You will find information: <ul style="list-style-type: none"> o On the product o On the packing label o In the supplied documentation o Online at phoenixcontact.com/products under the product |
| | <ul style="list-style-type: none"> • Only use tools recommended by Phoenix Contact |
| | <ul style="list-style-type: none"> • The installation notes/Design In documents online on the download page at phoenixcontact.com/products must be observed for this product. |
| | <ul style="list-style-type: none"> • 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 phoenixcontact.com/products |
| <ul style="list-style-type: none"> • Operate the connector only when it is fully plugged in and interlocked. | |
| <ul style="list-style-type: none"> • Ensure that when laying the cable, the tensile load on the | |

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| | connectors does not exceed the upper limit specified in the standards. |
| | <ul style="list-style-type: none">• Observe the minimum bending radius of the cable. Lay the cable without twisting it. |
| | <ul style="list-style-type: none">• 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). |

Product properties

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|--------------|---------------------------------|
| Product type | Circular connector (cable-side) |
|--------------|---------------------------------|

Connector

Connection 1

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

Insulating body

| | |
|--|---|
| Protection against electric shock | IEC 61984 |
| Data rate | 100 Mbps |
| Coding | CAT5, coding 2 |
| Connection method | Crimp connection |
| Contact switching type | Socket |
| Application | Hybrid |
| Number of positions | 13 |
| Connection profile | 4+4+4+PE / 3+N+PE |
| Installation height | 2000 m (4000 m at 300 V system voltage in accordance with DIN EN 606664-1) |
| Number (Power contacts) | 5 |
| Contact diameter (Power contacts) | 3.6 mm |
| Litz wires Min. cross section (Power contacts) | 2.5 mm ² |
| Litz wires Max. cross section (Power contacts) | 16 mm ² |
| Rated current Contact (Power contacts) | 70 A (for max. connection cross section) |
| Rated voltage Contact (Power contacts) | 630 V AC (Overvoltage category III/3) 850 V DC (Overvoltage category II/3) |
| Rated surge voltage | 6 kV |
| Overvoltage category | III |
| Degree of pollution | 3 |
| Number (Data contacts) | 4 |
| Contact diameter (Data contacts) | 0.8 mm |
| Litz wires Max. cross section (Data contacts) | 0.5 mm ² |
| Rated current Contact (Data contacts) | 3.6 A (for max. connection cross section) |
| Rated voltage Contact (Data contacts) | 50 V (Contact 5 ... 8) |
| Rated surge voltage | 1.5 kV |
| Overvoltage category | II, III |
| Degree of pollution | 3 |
| Number (Contact group 3) | 4 |

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|---|---|
| Contact diameter (Contact group 3) | 1 mm |
| Litz wires Max. cross section (Contact group 3) | 1.5 mm ² |
| Rated current Contact (Contact group 3) | 8 A (for max. connection cross section) |
| Rated voltage Contact (Contact group 3) | 500 V AC/DC (Contact 1 ... 4) |
| Rated surge voltage | 6 kV |
| Overvoltage category | III |
| Degree of pollution | 3 |

Housing

| | |
|-----------------------------------|--|
| Type | Cable connector housing |
| Thread type | M40 |
| Design | straight long |
| Type of locking | SPEEDCON |
| Pg screw connection | none |
| 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

| | |
|-------------------------|-------------------|
| External cable diameter | 14 mm ... 20.5 mm |
| Seal material | FKM |

Environmental and real-life conditions

Ambient conditions

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

Drawings

Schematic diagram



Pin assignment of socket CAT5, coding 2



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



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1623684>

|  cUL Recognized Approval ID: E468743-20170914 | | | | |
|--|-----------------------|-----------------------|-------------------|----------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| keine | | | | |
| Power | 600 V | 42 A | - 6 | - |
| Signal | 500 V | 4 A | - 16 | - |
| Data | 30 V | 1 A | - 22 | - |

|  UL Recognized Approval ID: E468743-20170914 | | | | |
|---|-----------------------|-----------------------|-------------------|----------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| keine | | | | |
| Power | 600 V | 50 A | - 6 | - |
| Signal | 500 V | 4 A | - 16 | - |
| Data | 30 V | 1 A | - 22 | - |

|  UL Recognized Approval ID: E153698-20190718 | | | | |
|---|-----------------------|-----------------------|-------------------|----------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| keine | | | | |
| Power | 600 V | 70 A | - | - |
| Signal | 500 V | 4 A | - | - |
| Data | 50 V | 1 A | - | - |

|  cUL Recognized Approval ID: E153698-20190718 | | | | |
|--|-----------------------|-----------------------|-------------------|----------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| keine | | | | |
| Power | 600 V | 28 A | - | - |
| Signal | 500 V | 4 A | - | - |
| Data | 50 V | 1 A | - | - |

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Classifications

ECLASS

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|-------------|----------|
| ECLASS-13.0 | 27440116 |
| ECLASS-15.0 | 27440116 |

ETIM

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|-----------|----------|
| ETIM 10.0 | EC002635 |
|-----------|----------|

UNSPSC

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

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Environmental product compliance

EU RoHS

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

China RoHS

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|--|---|
| 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 | acd97429-d36b-40d0-a126-fc41586ae9cb |

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