

## Cable connector - SB-8EPCA8A8L33S - 1623333

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Cable connector, SB, straight long, shielded: yes, SPEEDCON locking, M40, No. of pos.: 4+4+4+PE / 3+N +PE, type of contact: Pin, Crimp connection, cable diameter range: 14 mm ... 20.5 mm

### 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



### Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4055626194172

### Technical data

#### Temperature range

Ambient temperature	-40 °C ... 130 °C
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#### 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.
	• 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.
	• 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

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## Technical data

### Standards and Regulations

	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"> <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>On the product</li> <li>On the packing label</li> <li>In the supplied documentation</li> <li>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 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

Data rate	100 Mbps
Coding	CAT5, coding 1
Contact connection method	Crimp connection
Type of contacts	Pin
Application	Hybrid
Number of positions	13
Direction of rotation	Standard
Contact diameter of power contacts	3.6 mm
Litz wire cross section of power contacts min.	1 mm <sup>2</sup>
Litz wire cross section of power contacts max.	16 mm <sup>2</sup>

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## Technical data

### Data of the insulating body

Rated current for power contacts	70 A
Note	for max. connection cross section
Rated voltage of power contact	630 V AC
Rated surge voltage	6 kV
Overvoltage category	III
Degree of pollution	3
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.	1.5 mm <sup>2</sup>
Nominal current per signal contact	8 A
Note	for max. connection cross section
Rated surge voltage	6 kV
Rated voltage (III/3) signal contact	500 V
Contact diameter, data contacts	0.8 mm
Litz wire cross section, data contacts, min.	0.08 mm <sup>2</sup>
Litz wire cross section, data contacts, max.	0.5 mm <sup>2</sup>
Rated current of each data contact at 25°C	3.6 A
Note	for max. connection cross section
Rated surge voltage	1.5 kV
Installation height	2000 m

### Housing data

Housing material	Turned parts: copper zinc alloy (CuZn), die-cast parts: zinc (GD-Zn)
Type of locking	SPEEDCON locking
Degree of protection (when plugged in)	IP68/IP69K
Thread type	M40

### Cable seal data

Cable diameter	14 mm ... 20.5 mm
Sealing material	FKM

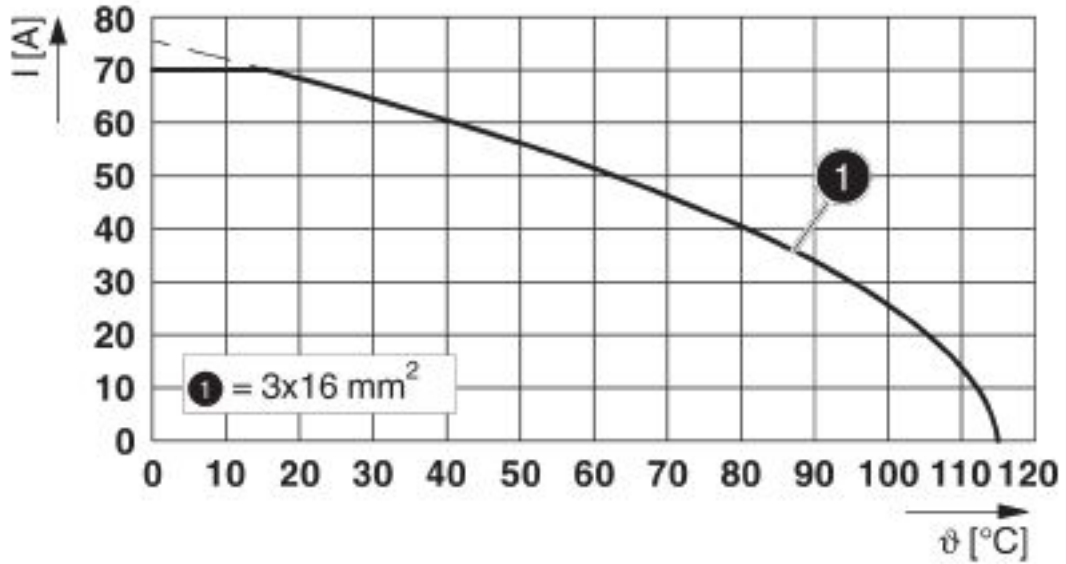
### Environmental Product Compliance

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

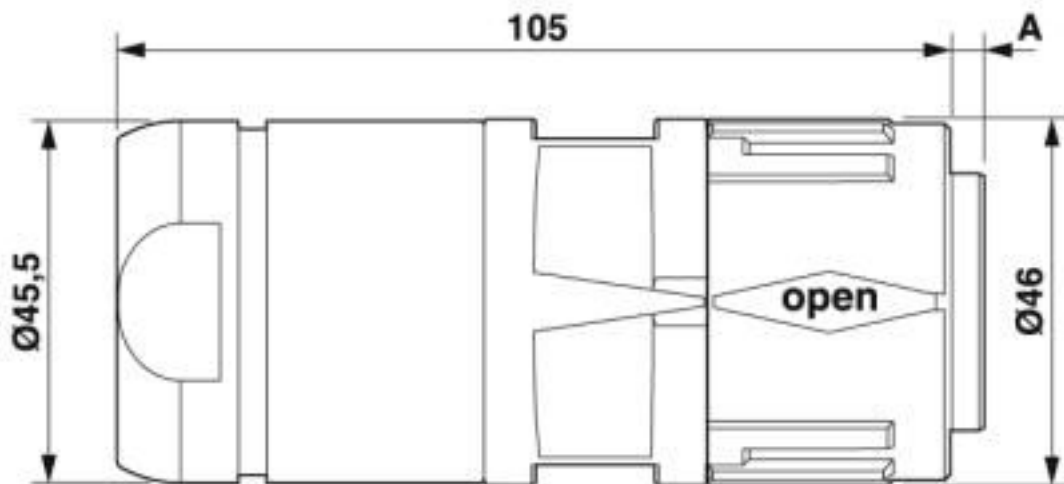
# Cable connector - SB-8EPCA8A8L33S - 1623333

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

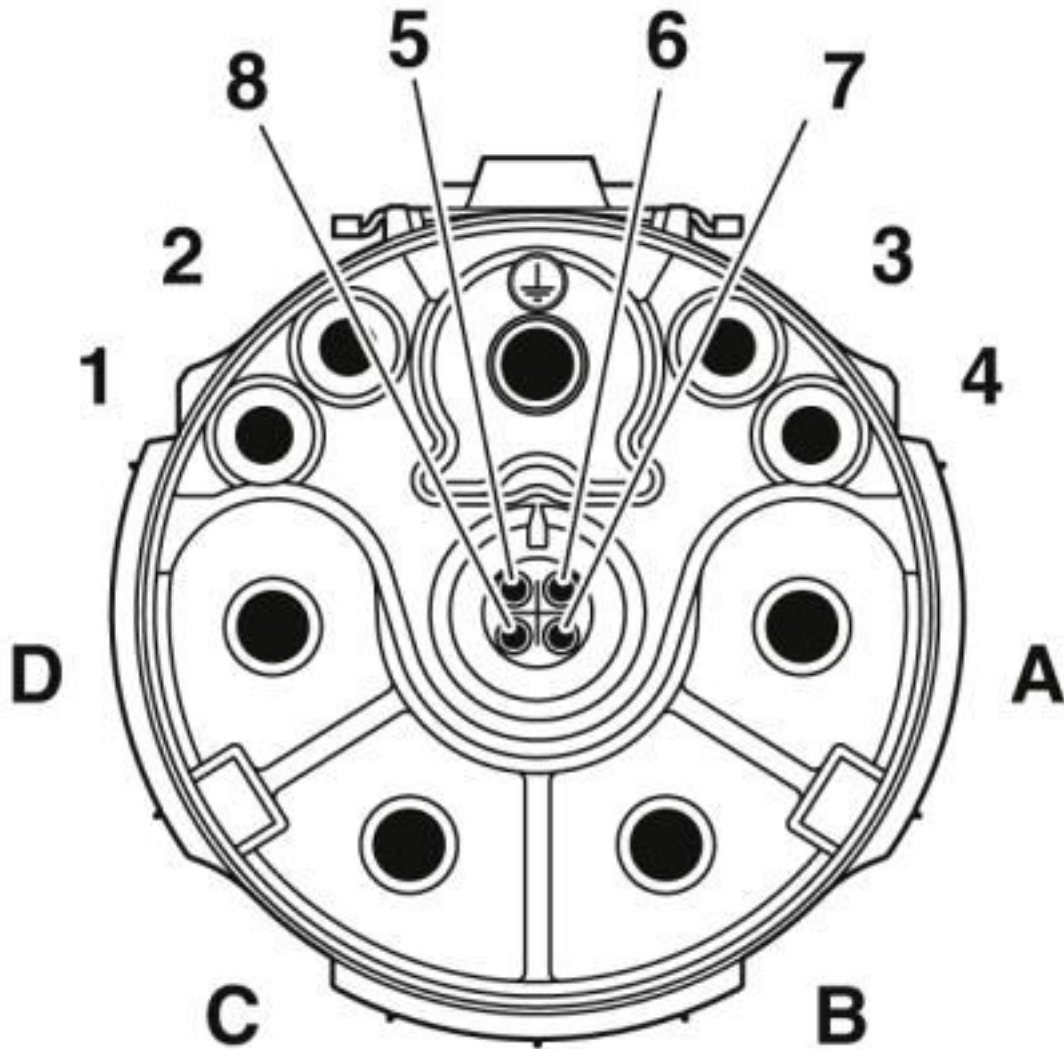
Dimensional drawing



Pin version: dimension A = 4.05 mm, socket version: dimension A = 0.4 mm

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Schematic diagram



Pin assignment of pin CAT5, coding 1

## Classifications

eCl@ss

eCl@ss 10.0.1	27440102
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 8.0	27440102
eCl@ss 9.0	27440102

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## Approvals


### Approvals


#### Approvals

UL Recognized / cUL Recognized / EAC / cULus Recognized

#### Ex Approvals

### Approval details

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> 20170915-E468743
Nominal voltage UN		600 V
Nominal current IN		50 A
mm <sup>2</sup> /AWG/kcmil		6

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> 20170915-E468743
Nominal voltage UN		600 V
Nominal current IN		42 A
mm <sup>2</sup> /AWG/kcmil		6

EAC		B.01687
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cULus Recognized	
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## Accessories

### Accessories

Cable by the meter

## Cable connector - SB-8EPCA8A8L33S - 1623333

### Accessories

Hybrid cable - KC-88014448/1,00 - 1627298



Hybrid cable, length: 1 m, color of outer sheath: orange RAL 2003

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Hybrid cable - KC-88014448/20,00 - 1627299



Hybrid cable, length: 20 m, color of outer sheath: orange RAL 2003

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Hybrid cable - KC-88014450-01,00 - 1629279



Hybrid cable, length: 1 m, color of outer sheath: orange RAL 2003

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Hybrid cable - KC-88014450-50,00 - 1629280



Hybrid cable, length: 50 m, color of outer sheath: orange RAL 2003

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### Crimp contact

Crimp contact - SF-08KP010 - 1621574



Crimp contact, turned, contact diameter: 0.8 mm, crimp range: 0.08 mm<sup>2</sup> ... 0.25 mm<sup>2</sup>

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## Cable connector - SB-8EPCA8A8L33S - 1623333

### Accessories

Crimp contact - SF-08KP020 - 1621575



Crimp contact, turned, contact diameter: 0.8 mm, crimp range: 0.34 mm<sup>2</sup> ... 0.5 mm<sup>2</sup>

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Crimp contact - SB-10KP001 - 1623607



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

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Crimp contact - SB-10KP002 - 1623611



Crimp contact, turned, contact diameter: 1 mm, crimp range: 0.34 mm<sup>2</sup> ... 0.5 mm<sup>2</sup>

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Crimp contact - SB-10KP003 - 1623612



Crimp contact, turned, Single contact, contact diameter: 1 mm, crimp range: 0.5 mm<sup>2</sup> ... 1 mm<sup>2</sup>

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Crimp contact - SB-10KP004 - 1623613



Crimp contact, turned, Single contact, contact diameter: 1 mm, crimp range: 1 mm<sup>2</sup> ... 1.5 mm<sup>2</sup>

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## Cable connector - SB-8EPCA8A8L33S - 1623333

### Accessories

Crimp contact - SB-36KP002 - 1623383



Crimp contact, turned, contact diameter: 3.6 mm, crimp range: 2.5 mm<sup>2</sup> ... 4 mm<sup>2</sup>

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Crimp contact - SB-36KP003 - 1623384



Crimp contact, turned, Single contact, contact diameter: 3.6 mm, crimp range: 4 mm<sup>2</sup> ... 6 mm<sup>2</sup>

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Crimp contact - SB-36KP004 - 1623385



Crimp contact, turned, Single contact, contact diameter: 3.6 mm, crimp range: 10 mm<sup>2</sup> ... 10 mm<sup>2</sup>

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Crimp contact - SB-36KP005 - 1623386



Crimp contact, turned, Single contact, contact diameter: 3.6 mm, crimp range: 16 mm<sup>2</sup> ... 16 mm<sup>2</sup>

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### Mounting material

Square mounting flange with O-ring - SM-Z0003 - 1607935



Square mounting flange with O-ring, Axial O-ring, 4x Ø4,2

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## Cable connector - SB-8EPCA8A8L33S - 1623333

### Accessories

Square mounting flange - SM-Z0004 - 1607937



Square mounting flange, 4x Ø4,2

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Color-coding - SM-Z0025 - 1620558



Color-coding, color: green

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Color-coding - SM-Z0026 - 1620559



Color-coding, color: orange

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Color-coding - SM-Z0027 - 1620560



Color-coding, color: black

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### Protective cover

Protective cap - SM-Z0031 - 1624199



Plastic protection cap for connectors with M40 SPEEDCON knurled nut

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