

# Coupler connector - SH-8ESS48A9LDLS - 1621544

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Coupling connector, SH, straight long, shielded: yes, for standard and SPEEDCON interlock, M23, No. of pos.: 8+4+PE, type of contact: Socket, Crimp connection, cable diameter range: 7.5 mm ... 18 mm

## Your advantages

- ✓ 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



## Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 936927
GTIN	4046356936927

## 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 relevant symbol on the packaging indicates that only personnel familiar with electrical engineering are allowed to install and operate the product.

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## Technical data

### Standards and Regulations

	<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 phoenixcontact.com/products).</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 phoenixcontact.com/products 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
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

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### Technical data

#### Data of the insulating body

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)
Type of locking	for standard and SPEEDCON interlock
Degree of protection (when plugged in)	IP67
	IP68
Thread type	M23

#### Cable seal data

Cable diameter	7.5 mm ... 18 mm
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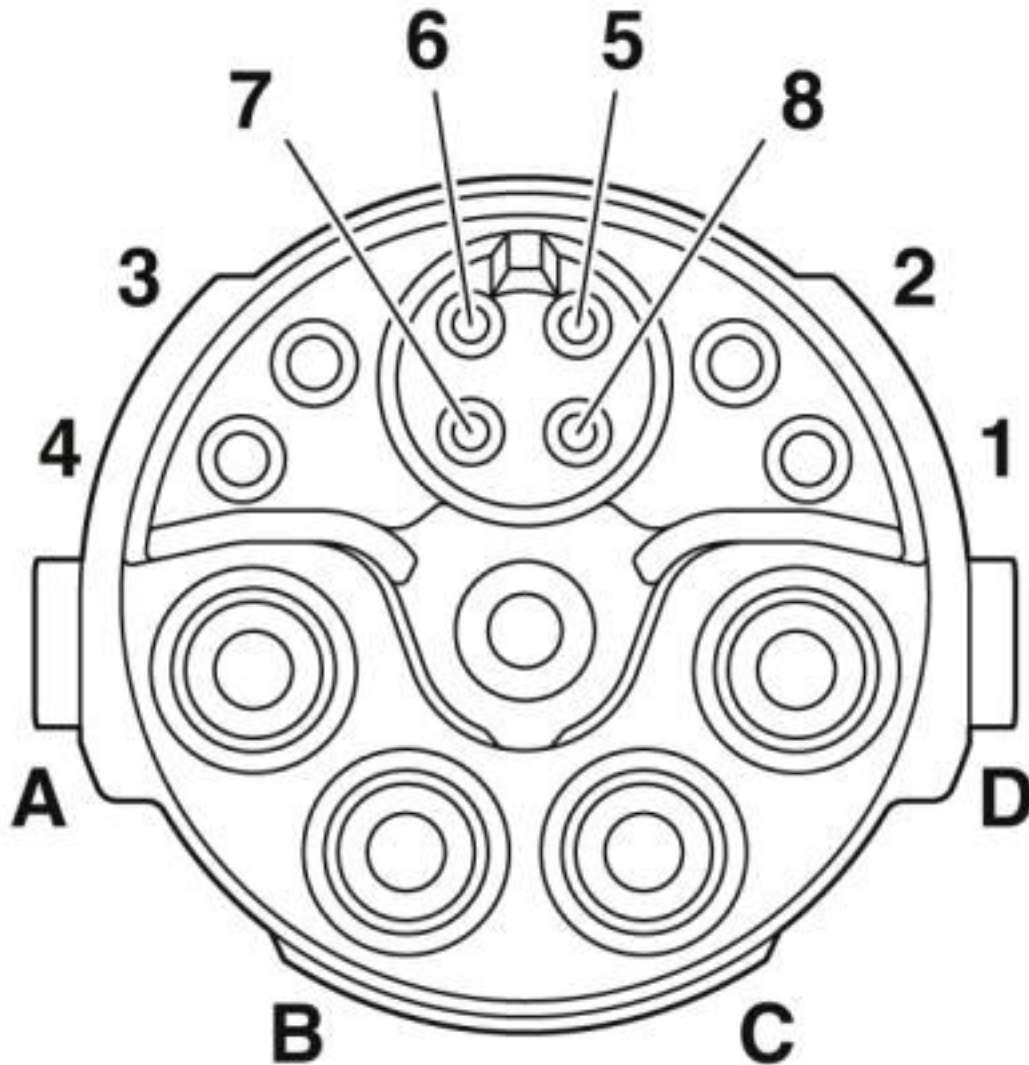
#### Environmental Product Compliance

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

## Coupler connector - SH-8ESS48A9LDLS - 1621544

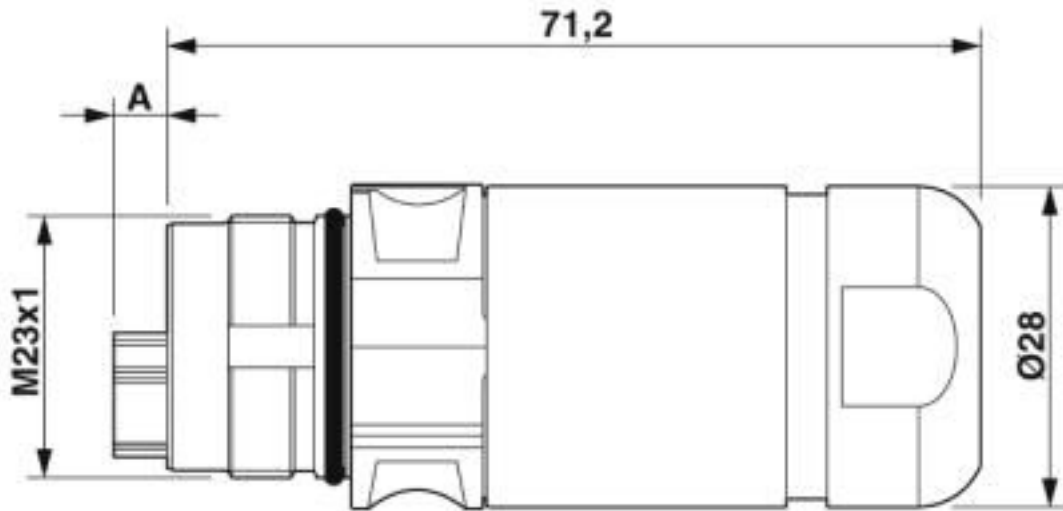
Schematic diagram



Socket pin assignment, signal

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Dimensional drawing



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

## 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

### ETIM

ETIM 4.0	EC002635
ETIM 5.0	EC002635
ETIM 6.0	EC002061

### UNSPSC

UNSPSC 13.2	39121413
UNSPSC 18.0	39121413
UNSPSC 19.0	39121413
UNSPSC 20.0	39121413
UNSPSC 21.0	39121413

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## Approvals

### Approvals

#### Approvals

EAC / UL Recognized / cUL Recognized / cULus Recognized

#### Ex Approvals

### Approval details

EAC		B.01687
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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
mm <sup>2</sup> /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
mm <sup>2</sup> /AWG/kcmil		12

cULus Recognized	
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## Accessories

### Accessories

Crimp contact

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### Accessories

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>

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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>

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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>

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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>

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Crimp contact - SF-20KS023 - 1621578



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

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### Mounting material

## Coupler connector - SH-8ESS48A9LDLS - 1621544

### Accessories

Square mounting flange - SF-Z0068 - 1620927



Square mounting flange, 4xM3, flange dimensions: 38 mm x 38 mm

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Color-coding - SF-Z0064 - 1620585



Color-coding, color: green

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Color-coding - SF-Z0065 - 1620586



Color-coding, color: orange

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Color-coding - SF-Z0066 - 1620587



Color-coding, color: black

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### Protective cover

Protective cap - SH-Z2304 - 1622137



Plastic protection cap for M23 hybrid connectors with external thread

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## Coupler connector - SH-8ESS48A9LDLS - 1621544

### Accessories

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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