

## Coupler connector - SF-5EP1N8A9LB1 - 1605505

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Coupler connector, straight long, for standard and SPEEDCON interlock, M23, number of positions: 5+PE, type of contact: Pin, shielded: yes, cable diameter range: 15 mm ... 18 mm, Compatible with mating connectors with SPEEDCON or M23 standard knurled nuts, number of positions: 6, connection method: Crimp connection

The figure shows the 8-pos. (4+3+PE) product version

### Your advantages

- Consistent EMC protection for reliable connection solutions in the industrial environment
- Crimping connection: vibration- and temperature-resistant assembly
- Flexible use: reliably connect various cable diameters



### Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4046356253208

### Technical data

#### General

Note	Order information: Order crimp contacts 6 x Ø 2 mm separately
Type of locking	for standard and SPEEDCON interlock
Coding	N
Contact connection method	Crimp connection
Type of contacts	Pin
Number of positions	6
Contact diameter of power contacts	2 mm
Rated current for power contacts	30 A
Contact diameter of signal contacts	2 mm
Nominal current per signal contact	30 A
Conductor entry	15 mm ... 18 mm
Pg housing screw connection	none

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## Technical data

### Ambient conditions

Ambient temperature	-40 °C ... 125 °C
Degree of protection	IP67

### Material

Housing material	Turned parts: copper zinc alloy (CuZn), die-cast parts: zinc (GD-Zn)
Insulator material	PA 6.6
Gasket and O-ring material	FPM

### Specifications according to DIN EN 61984:2001

Installation height max.	3000 m
Nominal / operating voltage of power contacts	630 V
Rated surge voltage of power contacts	6 kV
Overvoltage category of power contacts	III
Degree of pollution of power contacts	3
Nominal / operating voltage of signal contacts	630 V
Rated surge voltage of signal contacts	6 kV
Overvoltage category of signal contacts	III
Degree of pollution of signal contacts	3

### 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.
	<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>

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### Technical data

#### Standards and Regulations

	<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>

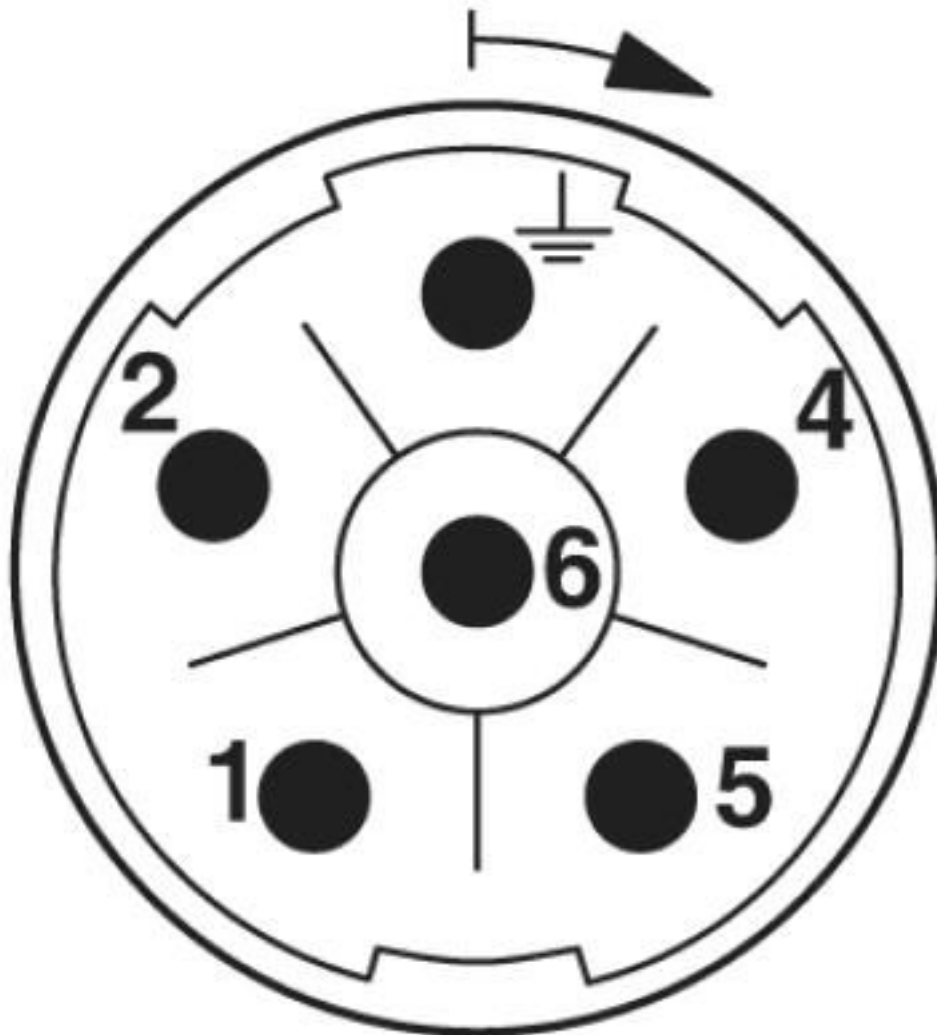
#### Environmental Product Compliance

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 - SF-5EP1N8A9LB1 - 1605505

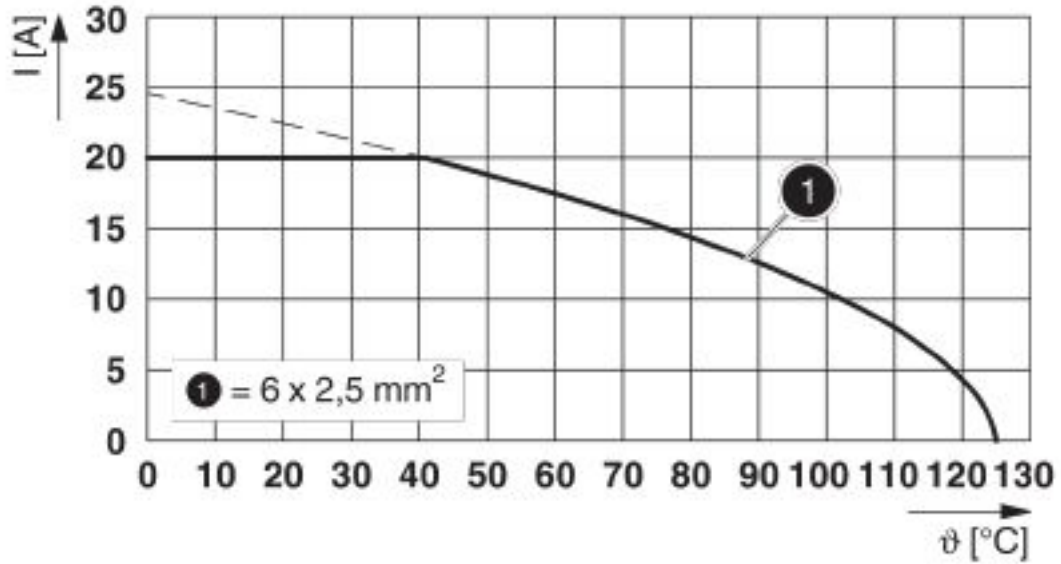
Schematic diagram



Connector pin assignment

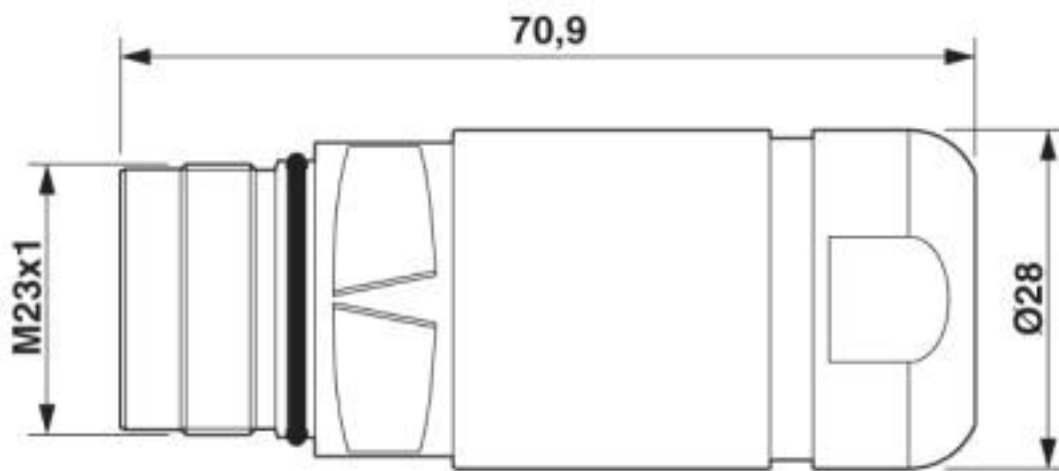
# Coupler connector - SF-5EP1N8A9LB1 - 1605505

Diagram



$I$  = current strength,  $\vartheta$  = ambient temperature, 6x 20 A

Dimensional drawing



Dimensional drawing

## 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

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## Classifications

### eCl@ss

eCl@ss 6.0	27260700
eCl@ss 7.0	27440102
eCl@ss 8.0	27440102
eCl@ss 9.0	27440102

### ETIM

ETIM 3.0	EC001121
ETIM 4.0	EC001121
ETIM 5.0	EC002635
ETIM 6.0	EC002061

### UNSPSC

UNSPSC 6.01	43172015
UNSPSC 7.0901	43201404
UNSPSC 11	43172015
UNSPSC 12.01	43201404
UNSPSC 13.2	39121413
UNSPSC 18.0	39121413
UNSPSC 19.0	39121413
UNSPSC 20.0	39121413
UNSPSC 21.0	39121413

## Approvals

### Approvals

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#### Approvals


UL Recognized / cUL Recognized / EAC / cULus Recognized

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#### Ex Approvals

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### 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> E153698-20041116
Nominal voltage UN	600 V	
Nominal current IN	27 A	
mm <sup>2</sup> /AWG/kcmil	12	

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## Approvals

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> E153698-20041116
Nominal voltage UN	600 V	
Nominal current IN	18 A	
mm <sup>2</sup> /AWG/kcmil	12	

EAC		B.01687
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cULus Recognized	
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## Accessories

### Accessories

#### Crimp contact

Crimp contact - SF-7RP2000 - 1605646



Crimp contact, turned, Single contact, contact diameter: 2 mm, crimp range: 0.14 mm<sup>2</sup> ... 0.25 mm<sup>2</sup>

Crimp contact - SF-7PP2000 - 1605634



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

Crimp contact - SF-20KP004 - 1607376



Crimp contact, turned, contact diameter: 2 mm, crimp range: 0.75 mm<sup>2</sup> ... 1.5 mm<sup>2</sup>

## Coupler connector - SF-5EP1N8A9LB1 - 1605505

### Accessories

Crimp contact - SF-7QP2000 - 1605639



Crimp contact, turned, Single contact, contact diameter: 2 mm, crimp range: 1 mm<sup>2</sup> ... 2.5 mm<sup>2</sup>

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Crimp contact - SF-7MP2000 - 1605626



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

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### Mounting material

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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## Coupler connector - SF-5EP1N8A9LB1 - 1605505

### Accessories

Square mounting flange - SF-Z0068 - 1620927



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

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### Protective cover

Protective cap - SF-Z0019 - 1607449



Plastic protection cap, with eye, IP40 for connectors with M23 external thread, RF, SF series

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Protective cap - RC-Z2059 - 1604225



Plastic protection cap for connectors with M23 external thread

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Plastic anti-static dust protection cap - RC-Z2469 - 1611797



Plastic protection cap, antistatic, for RF, SF, CA, RC series connectors, with M23 external thread

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Metal protective cap - SC-Z2319 - 1605456



Metal protection cap for power connectors with M23 external thread

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## Coupler connector - SF-5EP1N8A9LB1 - 1605505

### Accessories

Metal protective cap - SC-Z2320 - 1605457



Metal protection cap with steel wire for power connectors with M23 external thread

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