

# Cable connector - SM-5ES1N8A8L33S - 1613429

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Cable connector, straight, SPEEDCON locking, M40, number of positions: 2+3+PE, type of contact: Socket, shielded: yes, cable diameter range: 14 mm ... 20.5 mm, 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	4046356400213

## Technical data

### General

Note	Order information: Order crimp contacts 2 x Ø 2 mm, 4 x Ø 3.6 mm separately
Type of locking	SPEEDCON locking
Coding	N
Contact connection method	Crimp connection
Type of contacts	Socket
Number of positions	6
Contact diameter of power contacts	3.6 mm
Rated current for power contacts	70 A
Contact diameter of signal contacts	2 mm
Nominal current per signal contact	30 A
Conductor entry	14 mm ... 20.5 mm

# Cable connector - SM-5ES1N8A8L33S - 1613429

## Technical data

### General

Pg housing screw connection	none
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### Ambient conditions

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

### Material

Housing material	Turned parts: copper zinc alloy (CuZn), aluminum (Al), 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	250 V
Rated surge voltage of signal contacts	4 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>

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### Technical data

#### Standards and Regulations

	<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>

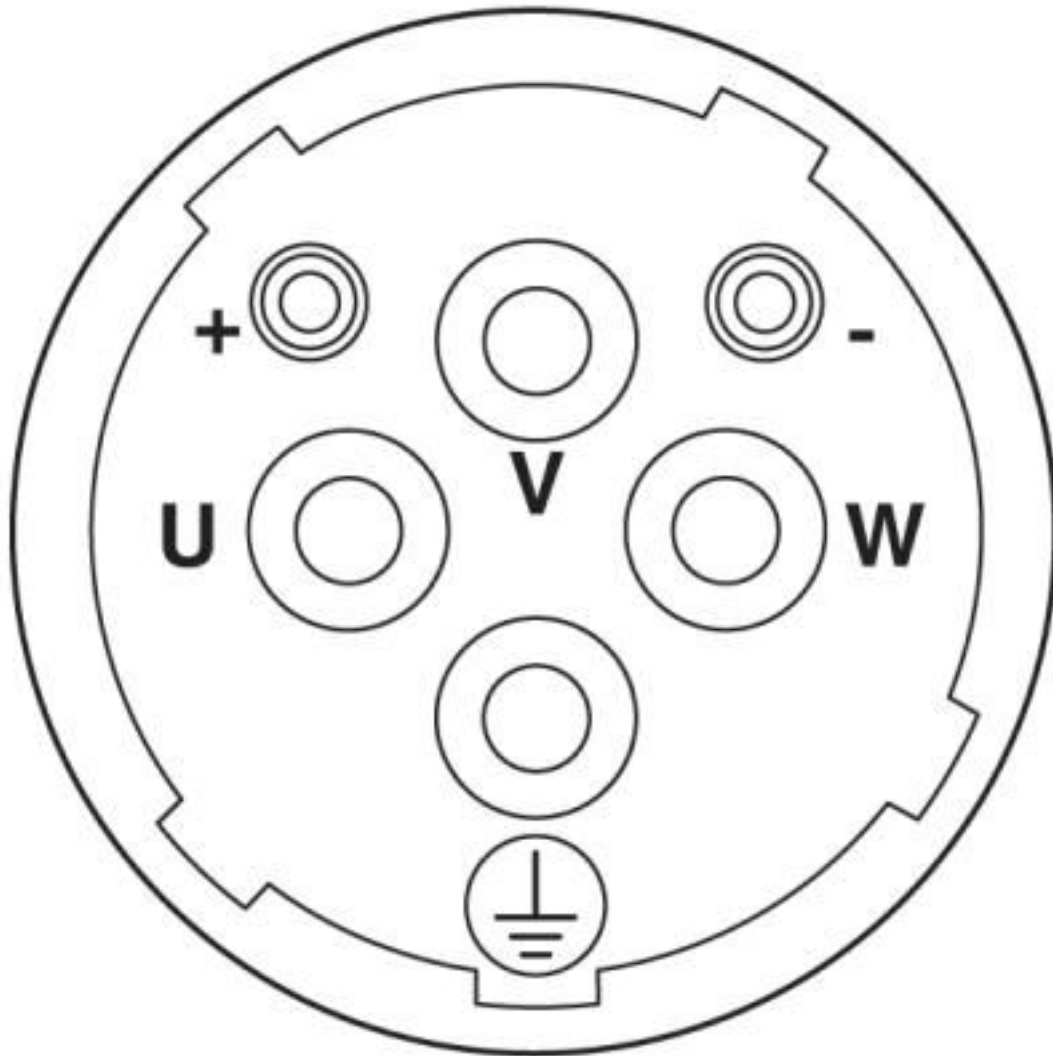
#### Environmental Product Compliance

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 - SM-5ES1N8A8L33S - 1613429

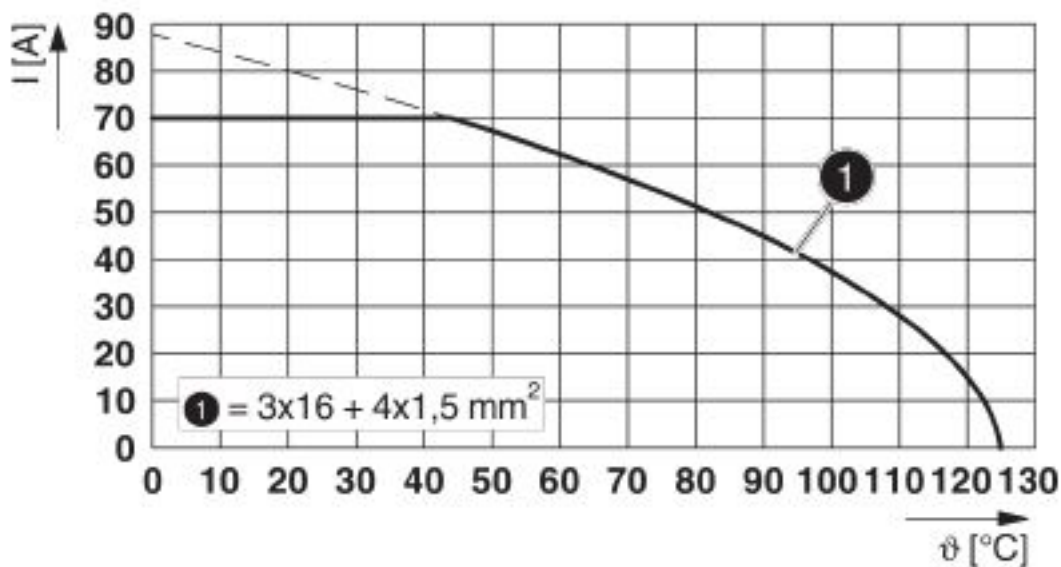
Schematic diagram



Connector pin assignment

# Cable connector - SM-5ES1N8A8L33S - 1613429

Diagram



I = current strength, T = ambient temperature

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

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## Classifications

### eCl@ss

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 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

#### 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>	FILE E 153698
Nominal voltage UN	600 V		
Nominal current IN	65 A		

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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>	FILE E 153698
Nominal voltage UN		600 V	
Nominal current IN		40 A	

EAC		B.01687
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cULus Recognized	
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## Accessories

### Accessories

#### Crimp contact

Crimp contact - SM-36KS001 - 1605756



Crimp contact, turned, Single contact, contact diameter: 3.6 mm, crimp range: 1 mm<sup>2</sup> ... 2.5 mm<sup>2</sup>

Crimp contact - SM-36KS002 - 1605758



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

Crimp contact - SM-36KS003 - 1605760



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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### Accessories

Crimp contact - SM-36KS004 - 1605762



Crimp contact, turned, Single contact, contact diameter: 3.6 mm, crimp range: 6 mm<sup>2</sup> ... 10 mm<sup>2</sup>

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Crimp contact - SF-7PS2000 - 1605636



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

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Crimp contact - SF-7NS2000 - 1605631



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

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Crimp contact - SF-7QS2000 - 1605643



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-7MS2000 - 1605628



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



## Cable connector - SM-5ES1N8A8L33S - 1613429

### Accessories

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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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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Square mounting flange - SM-Z0004 - 1607937



Square mounting flange, 4x Ø4,2

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Protective cover

## Cable connector - SM-5ES1N8A8L33S - 1613429

### Accessories

Protective cap - SM-Z0031 - 1624199



Plastic protection cap for connectors with M40 SPEEDCON knurled nut

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Metal protective cap - SM-Z0077 - 1627218



Metal protection cap with steel wire and loop for M40 connectors with knurled nut for fastening to the cable

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