

Cable connector - SM-5ES1N8A8L33S



1613429

<https://www.phoenixcontact.com/pc/products/1613429>

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Cable connector, straight, SPEEDCON locking, M40, number of positions: 2+3+PE, type of contact: Socket, shielded: yes, degree of protection: IP67, cable diameter range: 14 mm ... 20.5 mm, number of positions: 6, connection method: Crimp connection, series: SM

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

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Commercial Data

Item number	1613429
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to Order (non-returnable)
Product Key	ABRCCH
Catalog Page	Page 166 (C-2-2019)
GTIN	4046356400213
Weight per Piece (including packing)	425.2 g
Weight per Piece (excluding packing)	425.2 g
Customs tariff number	85366990
Country of origin	DE

Technical Data

Notes

Order information:	Order crimp contacts 2 x Ø 2 mm, 4 x Ø 3.6 mm separately
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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"> • Ensure that the protective or functional ground has been properly connected.
	<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"> • 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"> • 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 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 	

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warnings (e.g. DIN EN ISO 13732-1:2008-12).

Product properties

Product type	Circular connector (cable-side)
Number of positions	6
Connection profile	2+3+PE
Application	Power
Locking type	SPEEDCON locking
Series	SM
Shielded	yes
Coding	N
Thread type	M40

Ambient conditions

Degree of protection	IP67
Ambient temperature (operation)	-40 °C ... 125 °C
Altitude	3000 m

Connector

Type	straight
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Electrical properties

Contact

Contact diameter	3.6 mm
Max. current	70 A
Nominal voltage U_N	630 V
Overvoltage category	III
Rated surge voltage	6 kV

Contact

Contact diameter	2 mm
Max. current	30 A
Nominal voltage U_N	250 V
Overvoltage category	III
Rated surge voltage	4 kV

Material specifications

Seal material	FPM
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
Housing material	Metal

Connection data

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Conductor connection

Connection method

Crimp connection

Cable / line

Cable structure

External cable diameter

14 mm ... 20.5 mm

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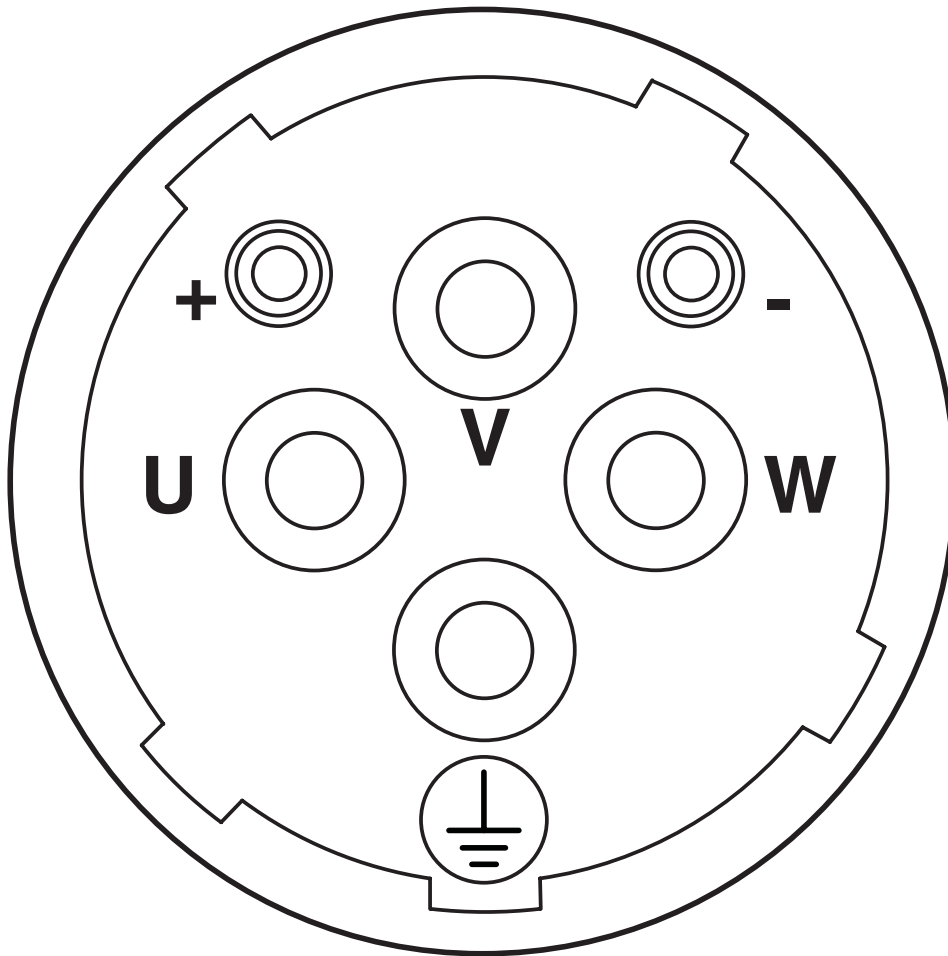


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Drawings

Schematic diagram



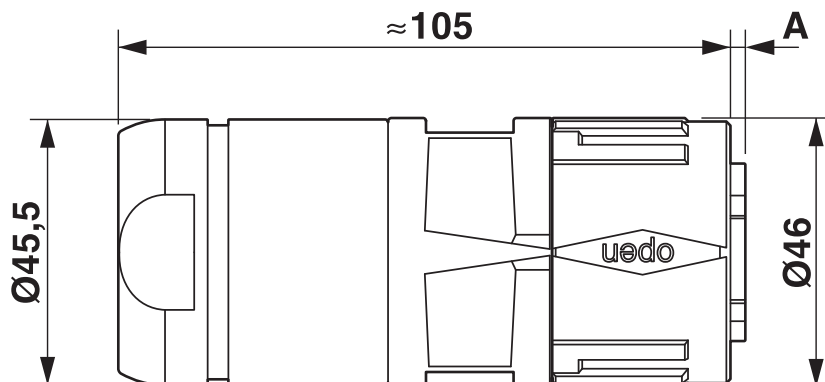
Connector pin assignment

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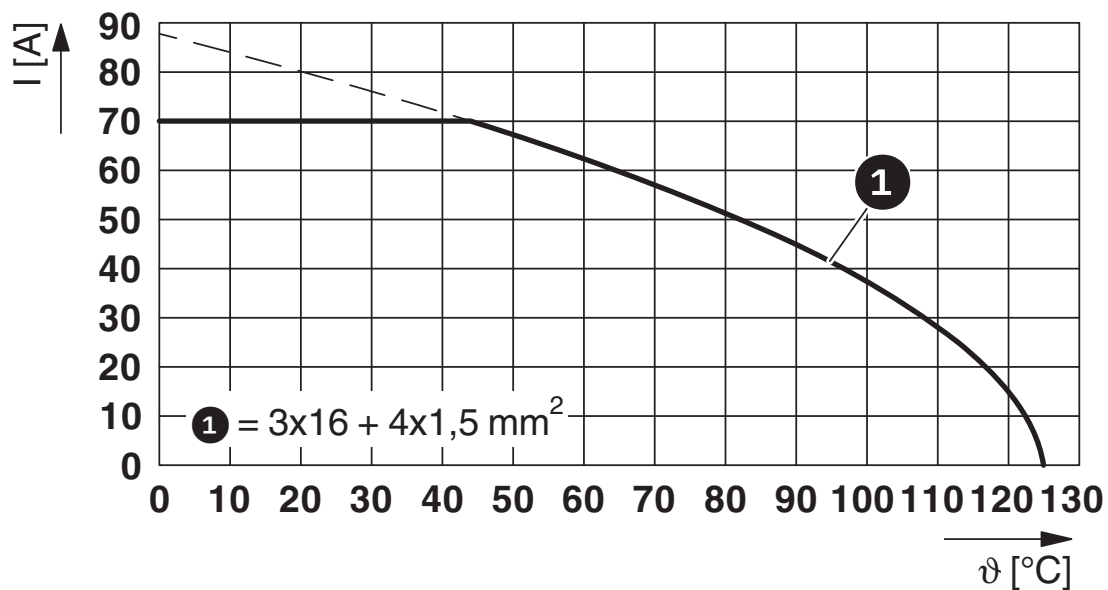
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Dimensional drawing



Dimensional drawing

Diagram



I = current strength, T = ambient temperature


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Approvals

 cUL Recognized Approval ID: E153698-20150903				
	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
Power	600 V	40 A	-	-
Signal	600 V	20 A	-	-

 UL Recognized Approval ID: E153698-20150903				
	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
Power	600 V	65 A	-	-
Signal	600 V	30 A	-	-

 EAC Approval ID: B.01687	
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cULus Recognized	
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Classifications

ECLASS

ECLASS-9.0	27440102
ECLASS-10.0.1	27440102
ECLASS-11.0	27440102

ETIM

ETIM 8.0	EC002635
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UNSPSC

UNSPSC 21.0	39121400
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Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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Accessories

Crimp contact

Crimp contact - SM-36KS001 - 1605756

<https://www.phoenixcontact.com/pc/products/1605756>



Crimp contact, turned, Single contact, contact diameter: 3.6 mm, crimp range: 1 mm² ... 2.5 mm²

Crimp contact

Crimp contact - SM-36KS002 - 1605758

<https://www.phoenixcontact.com/pc/products/1605758>



Crimp contact, turned, Single contact, contact diameter: 3.6 mm, crimp range: 2.5 mm² ... 4 mm²

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Crimp contact

Crimp contact - SM-36KS003 - 1605760

<https://www.phoenixcontact.com/pc/products/1605760>



Crimp contact, turned, Single contact, contact diameter: 3.6 mm, crimp range: 4 mm² ... 6 mm²

Crimp contact

Crimp contact - SM-36KS004 - 1605762

<https://www.phoenixcontact.com/pc/products/1605762>



Crimp contact, turned, Single contact, contact diameter: 3.6 mm, crimp range: 6 mm² ... 10 mm²

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Crimp contact

Crimp contact - SF-7PS2000 - 1605636

<https://www.phoenixcontact.com/pc/products/1605636>



Crimp contact, turned, Single contact, contact diameter: 2 mm, crimp range: 0.25 mm² ... 1 mm²

Crimp contact

Crimp contact - SF-7NS2000 - 1605631

<https://www.phoenixcontact.com/pc/products/1605631>



Crimp contact, turned, Single contact, contact diameter: 2 mm, crimp range: 0.75 mm² ... 1.5 mm²

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Crimp contact

Crimp contact - SF-7QS2000 - 1605643

<https://www.phoenixcontact.com/pc/products/1605643>



Crimp contact, turned, Single contact, contact diameter: 2 mm, crimp range: 1 mm² ... 2.5 mm²

Crimp contact

Crimp contact - SF-7MS2000 - 1605628

<https://www.phoenixcontact.com/pc/products/1605628>



Crimp contact, turned, Single contact, contact diameter: 2 mm, crimp range: 4 mm² ... 4 mm²

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Color-coding

Color-coding - SM-Z0025 - 1620558

<https://www.phoenixcontact.com/pc/products/1620558>

Color-coding, color: green



Color-coding

Color-coding - SM-Z0026 - 1620559

<https://www.phoenixcontact.com/pc/products/1620559>

Color-coding, color: orange



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Color-coding

Color-coding - SM-Z0027 - 1620560

<https://www.phoenixcontact.com/pc/products/1620560>

Color-coding, color: black



Protective cap

Protective cap - SM-Z0031 - 1624199

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Plastic protection cap for connectors with M40 SPEEDCON knurled nut



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Metal protective cap

Metal protective cap - SM-Z0077 - 1627218

<https://www.phoenixcontact.com/pc/products/1627218>



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

Square mounting flange with O-ring

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

<https://www.phoenixcontact.com/pc/products/1607935>



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

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Square mounting flange

Square mounting flange - SM-Z0004 - 1607937

<https://www.phoenixcontact.com/pc/products/1607937>



Square mounting flange, 4x Ø4,2, series: SM

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