

1056209

https://www.phoenixcontact.com/us/products/1056209

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Device connector front mounting, Power, 3-position, Socket, straight, M12, coding: S , on free cable end, Front mounting, M16 x 1.5, Individual wires, UL/cUL stranded hook-up wire, Alternative product in accordance with RoHS II without Exemption 6c (Pb <0.1%) item no.: 1238227

Your advantages

- · For compact devices: transmit high power in a confined space
- · For industrial infrastructure applications
- · Protection against mismatching thanks to S-coding
- · Preassembled with litz wires for immediate use
- · Customer-specific assemblies and litz wire lengths available
- · Sealed on the litz wire side for optimum leak-tightness
- For high transmission safety: shield connection to the housing with optional EMC nut

Commercial data

Item number	1056209
Packing unit	1 pc
Minimum order quantity	50 pc
Note	Made to order (non-returnable)
Sales key	AB27
Product key	ABQCFG
GTIN	4055626695068
Weight per piece (including packing)	159 g
Weight per piece (excluding packing)	159 g
Customs tariff number	85444290
Country of origin	DE



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Technical data

Notes

The electrical and mechanical data specified assume that the connector pair is correctly locked and mounted. If the connector is unlocked and if there is a danger of contamination, the connector must be sealed using a protective cap > IP54. Influences arising from litz wires, cables or PCB assembly must also be taken into consideration.

Safety note

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.
- The products are suitable for applications in plant, controller, and electrical device engineering.
- When operating the connectors in outdoor applications, they must be separately protected against environmental influences.
- Assembled products may not be manipulated or improperly opened.
- 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).
- When using the product in direct connection with third-party manufacturers, the user is responsible.
- For operating voltages > 50 V AC, conductive connector housings must be grounded
- Ensure that when laying the cable, the tensile load on the connectors does not exceed the upper limit specified in the standards.
- Observe the corresponding technical data. You will find information:
- o On the product
- o On the packing label
- o In the supplied documentation
- o Online at phoenixcontact.com/products under the product
- · Only use tools recommended by Phoenix Contact
- 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 phoenixcontact.com/products



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Fisure that the protective or functional ground has been properly connected. VIDE of 1007, PS 411.1.3.2 and DIN EN 60 204/11.08 § 14.1.3 are applicable when combining several circuits in a cable and/or connector. The connector warms up in normal operation. Depending on the ambient conditions, the surface of the connector can confinue to warm up. In this case, the user is responsible for posting warnings (e.g. DIN EN ISO 13732-12008-12). Mounting Mounting type		
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Degree of pollution 3 Material specifications Flammability rating according to UL 94 V0 Seal material FKM Contact material CuZn Contact surface material Au Contact carrier material PA Material for screw connection Zinc die-cast, nickel-plated Conductor material Bare Cu litz wires Electrical properties Rated voltage in acc. with IEC 61076-2-101 630 V Rated surge voltage 6 kV AC Contact resistance ≤ 3 mΩ Insulation resistance ≥ 100 MΩ Nominal voltage U _N 630 V Nominal current I _N 16 A	Insulation characteristics	
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$\begin{tabular}{lllllllllllllllllllllllllllllllllll$	Material specifications	
	Flammability rating according to UL 94	V0
		FKM
	Contact material	CuZn
	Contact surface material	Au
	Contact carrier material	PA
Electrical properties Rated voltage in acc. with IEC 61076-2-101 Rated surge voltage $ \begin{array}{l} 630 \text{ V} \\ 6 \text{ kV AC} \\ 6 \text{ kV AC} \end{array} $ Contact resistance $ \begin{array}{l} \leq 3 \text{ m}\Omega \\ \text{Insulation resistance} \end{array} $ Insulation voltage U_N Nominal voltage U_N Nominal current I_N $ \begin{array}{l} 630 \text{ V} \\ 16 \text{ A} \end{array} $	Material for screw connection	Zinc die-cast, nickel-plated
	Conductor material	Bare Cu litz wires
Rated surge voltage 6 kV AC 6 kV AC Contact resistance ≤ 3 mΩ Insulation resistance ≥ 100 MΩ Nominal voltage U_N 630 V Nominal current I_N 16 A	Electrical properties	
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		6 kV AC
Insulation resistance ≥ 100 MΩ Nominal voltage U_N 630 V Nominal current I_N 16 A		6 kV AC
Nominal voltage U _N 630 V Nominal current I _N 16 A	Contact resistance	≤ 3 mΩ
Nominal current I _N 16 A	Insulation resistance	≥ 100 MΩ
	Nominal voltage U _N	630 V
Test voltage 6 kV	Nominal current I _N	16 A
	Test voltage	6 kV



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Connection data

Conductor connection

Connection method	Individual wires
Contact connection type	Socket
Conductor cross section	1.31
Tightening torque	3 Nm
	4 Nm

Mechanical properties

Mechanical data

modiamodi data		
	Insertion/withdrawal cycles	> 100

Connector

Connection 1

Head design	Socket
Head cable outlet	straight
Head thread type	M12
Coding	S

Connection 2

Head design fr	ree cable end
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Cable/line

Cable length	3	
Cable type	UL/cUL stranded hook-up wire	
Signal type/category	Power	
Wire diameter incl. insulation	2.2 mm	
Single wire, color	black 1, black 2, green/yellow	
Conductor material	Bare Cu litz wires	
AWG signal line	16	
Material wire insulation	mPPE	
Halogen-free	yes	
Flame resistance	in acc. to UL 1581 VW1	
Ambient temperature (operation)	-40 °C 105 °C (cable, fixed installation)	
	-20 °C 105 °C (Cable, flexible installation)	

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP67	
	IP65/IP67	
	-25 °C 85 °C (Plug / socket)	



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Ambient temperature (operation)	-20 °C 105 °C (Cable, flexible installation)
	-40 °C 105 °C (cable, fixed installation)
Standards and regulations	
Flame resistance	in acc. to UL 1581 VW1
M12	
Standard designation	M12 connector
Standards/specifications	based on IEC 61076-2-111
Note	In line with

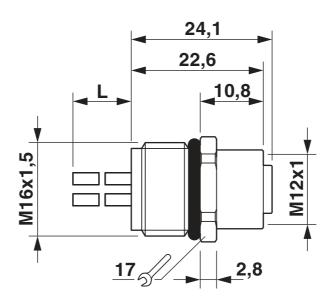


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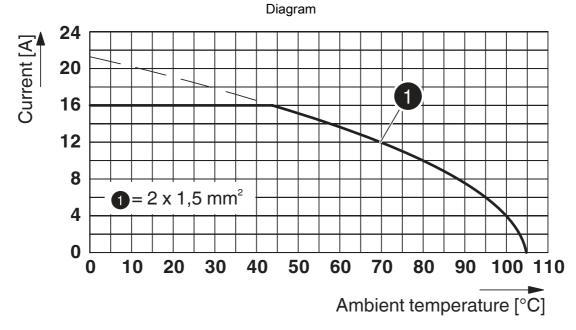
https://www.phoenixcontact.com/us/products/1056209

Drawings

Dimensional drawing



Dimensional drawing



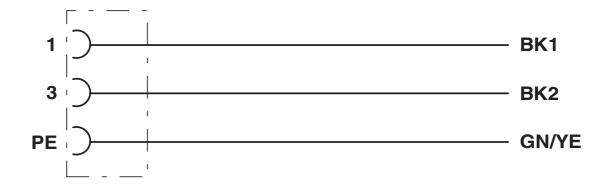
Derating diagram



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Circuit diagram



Schematic diagram



Pin assignment: M12 socket, 3-pos., S-coded, view of socket side



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Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1056209

EHC	EAC
LIIL	Approval ID: B.0168

.71	cUL Recognized Approval ID: E468743-2	0190917			
		Nominal voltage U _N	Nominal current I _N	Cross section AWG	Cross section mm ²
		600 V	12 A	- 16	-

7/	UL Recognized Approval ID: E468743-20190917					
		Nominal voltage U _N	Nominal current I _N	Cross section AWG	Cross section mm ²	
		600 V	12 A	- 16	-	

cULus Recognized



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Classifications

ECLASS

	ECLASS-11.0	27440102			
	ECLASS-12.0	27440116			
	ECLASS-13.0	27440116			
ETIM					
	•••				
	ETIM 8.0	EC002635			
LINICDCC					
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

SACC-E-MU-M16 - Flat nut

1504097

https://www.phoenixcontact.com/us/products/1504097

Flat nut, Screw mounting, M16 x 1.5, Alternative product in accordance with RoHS II without Exemption 6c (Pb <0.1%) item no.: 1239863



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