

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (http://phoenixcontact.com/download)



Bus system flush-type plug, PROFINET, 4-pos., M12, shielded, D-coded, SPEEDCON, rear/screw mounting with Pg9 thread, with 1.0 m bus cable,  $2 \times 2 \times 0.34$  mm<sup>2</sup>

### Your advantages

- Pre-assembled with cables in various standard lengths for immediate use
- ☑ Customer-specific assemblies and cable lengths can be supplied
- Sealed on the cable side for optimum tightness of seal
- For high transmission safety: shield connection to the housing with optional EMC nut



### **Key Commercial Data**

Packing unit	1 pc
GTIN	4 0 4 6 3 5 6 4 5 8 5 5 9
GTIN	4046356458559

### Technical data

#### **Dimensions**

Length of cable	1 m

#### Ambient conditions

Ambient temperature (operation)	-25 °C 85 °C (Plug / socket)
	-40 °C 85 °C (without mechanical actuation)
Degree of protection	IP67 (When plugged in)
	IP65 (When plugged in)

### General

	The electrical and mechanical data specified assume that the connector
Note	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



### Technical data

### General

	a protective cap > IP54. Influences arising from litz wires, cables or PCB assembly must also be taken into consideration.
Rated current at 40°C	4 A (Plug/socket in accordance with IEC 61076-2-101, cable technical data is to be observed)
Rated voltage	250 V AC
Rated surge voltage	2.5 kV
Number of positions	4
Insulation resistance	≥ 100 MΩ
Coding	D - data
Standards/regulations	M12 connector IEC 61076-2-101
Signal type/category	PROFINET CAT5 (IEC 11801:2002), 100 Mbps
	EtherCAT <sup>®</sup> CAT5 (IEC 11801), 100 Mbps
Overvoltage category	II
Degree of pollution	3
Insertion/withdrawal cycles	≥ 100
Torque	2 Nm 3 Nm (Installation-side)
Transmission characteristics (category)	CAT5 (IEC 11801:2002)

### Material

Flammability rating according to UL 94	V0
Contact material	CuZn
Contact surface material	Ni/Au
Contact carrier material	PA 6.6
Sealing material	FKM

### Standards and Regulations

Standards/specifications	M12 connector IEC 61076-2-101
Flammability rating according to UL 94	V0
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.



### Technical data

### Standards and Regulations

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
Ensure that the protective or functional ground has been properly connected.
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
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).

### Cable

Cable type	PROFINET PVC stranded CAT5
Cable type (abbreviation)	93B
UL AWM style	21694
Signal type/category	PROFINET CAT5 (IEC 11801), 100 Mbps
	EtherCAT <sup>®</sup> CAT5 (IEC 11801), 100 Mbps
Cable structure	1x4xAWG22/7; SF/TQ
Conductor cross section	4x 0.34 mm²
AWG signal line	22
Conductor structure signal line	7x 0.25 mm
Core diameter including insulation	1.55 mm
Wire colors	White, yellow, blue, orange
Overall twist	Star quad
Shielding	Aluminum-coated foil, tinned copper braided shield
Optical shield covering	85 %
External sheath, color	green RAL 6018
Outer sheath thickness	approx. 0.9 mm



### Technical data

### Cable

External cable diameter D	6.5 mm ±0.2 mm
Minimum bending radius, fixed installation	3 x D
Minimum bending radius, flexible installation	7 x D
Cable weight	67 kg/km
Outer sheath, material	PVC
Material, inner sheath	PVC
Material conductor insulation	PE
Conductor material	Tin-plated Cu litz wires
Insulation resistance	≥ 500 MΩ*km
Loop resistance	≤ 120.00 Ω/km
Wave impedance	100 Ω ±15 Ω (at 100 MHz)
Near end crosstalk attenuation (NEXT)	80 dB (with 1 MHz)
	76 dB (at 4 MHz)
	70 dB (at 10 MHz)
	65 dB (at 16 MHz)
	63 dB (at 20 MHz)
	60 dB (at 31.25 MHz)
	55 dB (at 62.5 MHz)
	50 dB (at 100 MHz)
Attenuation	2.1 dB (with 1 MHz)
	4 dB (at 4 MHz)
	6.3 dB (at 10 MHz)
	8 dB (at 16 MHz)
	9 dB (at 20 MHz)
	11.4 dB (at 31.25 MHz)
	16.5 dB (at 62.5 MHz)
	21.3 dB (at 100 MHz)
Signal speed	0.66 c
Signal runtime	5.3 ns/m
Coupling resistance	$\leq$ 20.00 m $\Omega$ /m (at 10 MHz)
Nominal voltage, cable	600 V
Test voltage Core/Core	2000 V (50 Hz, 1 min.)
Test voltage Core/Shield	2000 V (50 Hz, 1 min.)
Flame resistance	according to UL 1685 (CSA FT 4)
Resistance to oil	Resistant to oil to a limited extent
Other resistance	UV resistant According to UL 1581, Section 1200
Ambient temperature (operation)	-40 °C 70 °C (cable, fixed installation)
	-40 °C 70 °C (cable, flexible installation)
Ambient temperature (installation)	-20 °C 60 °C



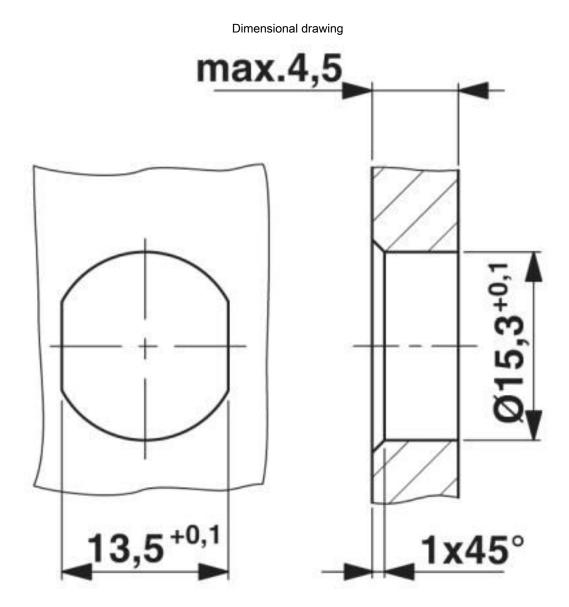
### Technical data

### Cable

Ambient temperature (storage/transport)	-50 °C 70 °C
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"

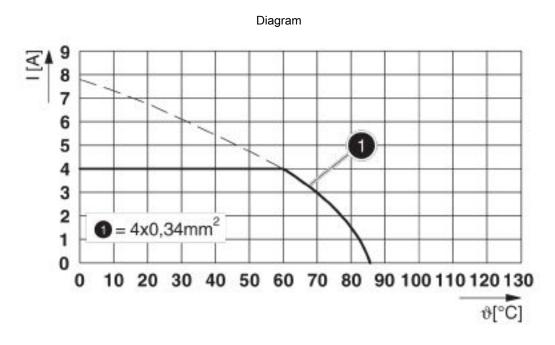
### Drawings





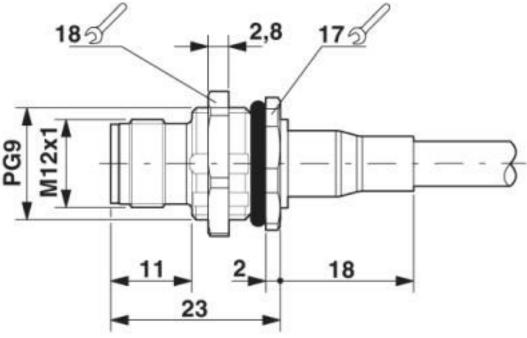
Housing cutout for Pg9 fastening thread, mounting panel with feed-through hole (alternatively with surface as protection against rotation)





I = current strength, T = ambient temperature

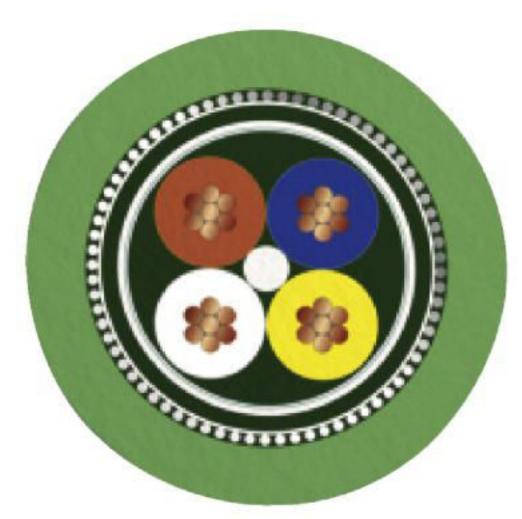
### Dimensional drawing



M12 panel feed-through



Cable cross section



PROFINET PVC stranded CAT5 [93B]

### Classifications

### eCl@ss

eCl@ss 10.0.1	27440102
eCl@ss 4.0	27140800
eCl@ss 4.1	27140800
eCl@ss 5.0	27143400
eCl@ss 5.1	27143400
eCl@ss 6.0	27279200
eCl@ss 7.0	27440103
eCl@ss 8.0	27440103
eCl@ss 9.0	27440102



### Classifications

### **ETIM**

ETIM 3.0	EC002061
ETIM 4.0	EC002061
ETIM 5.0	EC002061
ETIM 6.0	EC002061

### **UNSPSC**

UNSPSC 6.01	31251501
UNSPSC 7.0901	31251501
UNSPSC 11	31251501
UNSPSC 12.01	31251501
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 / EAC

Ex Approvals

### Approval details

UL Recognized	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 118976
Nominal voltage UN	250 V	
Nominal current IN	4 A	
mm²/AWG/kcmil	22	

E/	AC EA		B.01687
----	-------	--	---------



#### Accessories

Accessories

Plug for cable screw gland

Screw plug - SACC-M16-SEALING PLUG SET - 1453368



M16 screw plug for unused M12 housing cutouts

#### Protective cap

Sealing cap - PROT-M12 FS - 1560251



M12 sealing cap for unoccupied M12 plugs of the sensor/actuator cable, flush-type plugs and I/O devices in the field

#### Sealing cap - PROT-M12 FS-M - 1430488



M12 metal sealing cap for unoccupied M12 plugs of the sensor/actuator cable, flush-type plugs and I/O devices in the field

#### Seal

Flat gasket - SACC-M16-SEAL CLM - 1430394



M16 flat gasket, for rear mounting of M12 flush-type connectors with M16 fastening thread



Phoenix Contact 2020 © - all rights reserved http://www.phoenixcontact.com

PHOENIX CONTACT GmbH & Co. KG Flachsmarktstr. 8 32825 Blomberg Germany Tel. +49 5235 300 Fax +49 5235 3 41200

http://www.phoenixcontact.com

### **X-ON Electronics**

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Ethernet Cables / Networking Cables category:

Click to view products by Phoenix Contact manufacturer:

Other Similar products are found below:

73-6670-7 73-6680-15 73-7797-25 MCJB2-10P6Q7-120 84909-0204 1200700174 1200860368 E16A06002M030 E200102-009-S1

AX105346-EW MT14-187L 17-103530 ERWPAB3002M005 190-038045-01 NK5EPC18RDY NK5EPC18VLY NK5EPC18YLY

NK5EPC1GRY NK5EPC4Y NK5EPC6YLY NK5EPC8BLY NK5EPC9YLY 1969343-6 C501100010 C501106002 C501106007

C501106015 C501106025 C601102010 C601104010 C601106007 C601106015 2142758-2 2168427-2 CAT1106007 21949-1 2J1866A

RJF SFTP 5E 0500 AX100351 MN14CEC/ST C501100015 C501106004 C501106010 C5F1108007 C601104004 C601106004

CA21106004 CA21106010 CA21106015 CA21109007