

VS-FSDBPS-OE-937-2,0X - Device connector rear mounting



1238686

<https://www.phoenixcontact.com/us/products/1238686>

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Device connector rear mounting, PROFINET CAT5 (100 Mbps) CAT5 (100 Mbps), 4-position, Socket, straight, M12-SPEEDCON, D-coding, on free cable end, Cable connection, cable length: 5 m, Item is lead-free in accordance with RoHS II without Exemption 6c (Pb < 0.1 %)

Your advantages

- Preassembled 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
- Cable designs for all common networks and fieldbuses
- For high transmission safety: shield connection to the housing with optional EMC nut

Commercial data

Item number	1238686
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	ABQDGI
GTIN	4063151387655
Weight per piece (including packing)	151.8 g
Weight per piece (excluding packing)	150.469 g
Country of origin	DE

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Technical data

Notes

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 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 corresponding technical data. You will find information:<ul style="list-style-type: none">o On the producto On the packing labelo In the supplied documentationo Online at phoenixcontact.com/products under the product
	<ul style="list-style-type: none">• Only use tools recommended by Phoenix Contact
	<ul style="list-style-type: none">• 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
	<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">• 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	Data cable preassembled
Number of positions	4
No. of cable outlets	1
Coding	D
Thread type	M12

Insulation characteristics

Overvoltage category	II
Degree of pollution	3

Interfaces

Bus system	PROFINET
Signal type/category	PROFINET CAT5 (IEC 11801:2002), 100 Mbps

Electrical properties

Rated surge voltage	2.5 kV
Nominal voltage U_N	250 V
Nominal current I_N	4 A (Plug/socket in accordance with IEC 61076-2-101, cable technical data is to be observed)
Transmission medium	Copper
Transmission speed	100 Mbps
Transmission characteristics (category)	CAT5 (IEC 11801:2002)

Mechanical properties

Mechanical data

Insertion/withdrawal cycles	≥ 100
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Material specifications

Flammability rating according to UL 94	V0
Seal material	FKM
Contact surface material	Ni/Au
Contact carrier material	PA 6.6
Material for screw connection	Brass, nickel-plated

Connection data

Connection technology

Connection method	Cable connection
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Conductor connection

Contact connection type	Socket
Connection method	Cable connection
Tightening torque	2 Nm ... 3 Nm (Installation-side)

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Connector

Connection 1

Head design	Socket
Head cable outlet	straight
Head thread type	M12
Head locking type	SPEEDCON
Coding	D


Connection 2

Head design	free cable end
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Cable/line

Cable length	5 m
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PROFINET RADOX® railway application CAT5 [937]

Dimensional drawing	
Cable weight	70 kg/km
Number of positions	4
Shielded	yes
Cable type	PROFINET RADOX® railway application CAT5 [937]
Conductor structure	1x4xAWG22/7, SF/TQ
Signal speed	75 c
Conductor structure signal line	7x 0.25 mm
AWG signal line	22
Conductor cross-section	4x 0.34 mm ²
Wire diameter incl. insulation	approx. 1.5 mm
External cable diameter	6.60 mm ±0.4 mm
Outer sheath, material	PE-X
External sheath, color	black RAL 9005
Conductor material	silver-plated Cu litz wires
Material wire insulation	Foamed PE
Single wire, color	white-blue, orange-yellow
Thickness, outer sheath	approx. 1.00 mm
Overall twist	Star quad
Max. conductor resistance	≤ 54.4 Ω/km
Coupling resistance	200.00 mΩ/m (f ≤ 30 MHz)

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Wave impedance	100 Ω \pm 5 Ω (f = 100 MHz)
Working capacitance	\leq 65 pF (Line-line)
	\leq 100 pF (Line-shield)
Nominal voltage, cable	300 V AC
Test voltage	2000 V AC (50 Hz, 5 minutes)
Minimum bending radius, fixed installation	6 x D
Smallest bending radius, fixed installation	40 mm
Near end crosstalk attenuation (NEXT)	73 dB (with 1 MHz)
	70 dB (at 4 MHz)
	65 dB (at 10 MHz)
	57 dB (at 31.5 MHz)
	52 dB (at 62.5 MHz)
	48 dB (at 100 MHz)
Return attenuation (RL)	25 dB (at 4 MHz)
	30 dB (at 10 MHz)
	30 dB (at 31.5 MHz)
	30 dB (at 62.5 MHz)
	28 dB (at 100 MHz)
Remote crosstalk attenuation (FEXT)	78 dB (with 1 MHz)
	77 dB (at 4 MHz)
	70 dB (at 10 MHz)
	65 dB (at 31.5 MHz)
	56 dB (at 62.5 MHz)
	48 dB (at 100 MHz)
Shield attenuation	2 dB (with 1 MHz)
	4.4 dB (at 4 MHz)
	7.4 dB (at 10 MHz)
	14 dB (at 31.5 MHz)
	20 dB (at 62.5 MHz)
	26 dB (at 100 MHz)
	40.00 dB (30 MHz \leq f \leq 100 MHz)
Halogen-free	in accordance with EN 50267-2-1
Flame resistance	IEC 60332-1-2
	EN 50266
	EN 60332-3-25
	NF C32-070, 2.1
	NF C32-070, 2.2
	UL 1685, 12 (FT4)
	in accordance with ISO 6722-1 5.22 (UN ECE-R 118.01)
Fume corrosiveness	EN 50267-2-2
Fume toxicity	BS 6853 B.1
	EN 50305, 9.2
Concentration of fumes	BS 6853 D.8.7
	EN 61034-2

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	UL 1685, 12 (FT4)
Resistance to oil	according to IRM 902, 72 h at 100 °C
Fire protection in rail vehicles	BS 6853 (Category Ia, Ib, II)
	GM/RT 2130 (Category Ia, Ib, II)
	EN 45545 (Risk level HL1 - HL3)
	DIN 5510 (Fire protection level 1, 2, 3, 4)
	NF F16-101 (Category A1, A2, B)
	NF F16-101 (Class C/F0)
	NFPA 130
	UNI CEI 11170 (Risk level LR1 - LR4)
Other resistance	Resistance to fuels (according to IRM 903, 168 h at 70 °C)
Ambient temperature (operation)	-50 °C ... 90 °C (cable, fixed installation)
	-40 °C ... 90 °C (Cable, flexible installation)
Ambient temperature (installation)	-25 °C ... 90 °C

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP65
	IP67
Ambient temperature (operation)	-25 °C ... 85 °C (Plug / socket)
Ambient temperature (operation) (male connector/female connector)	-40 °C ... 85 °C (without mechanical actuation)
UL Type Rating	Type 4 (indoor use only)

Standards and regulations

Standard designation	M12 circular connector
Standards/specifications	according to IEC 61076-2-101

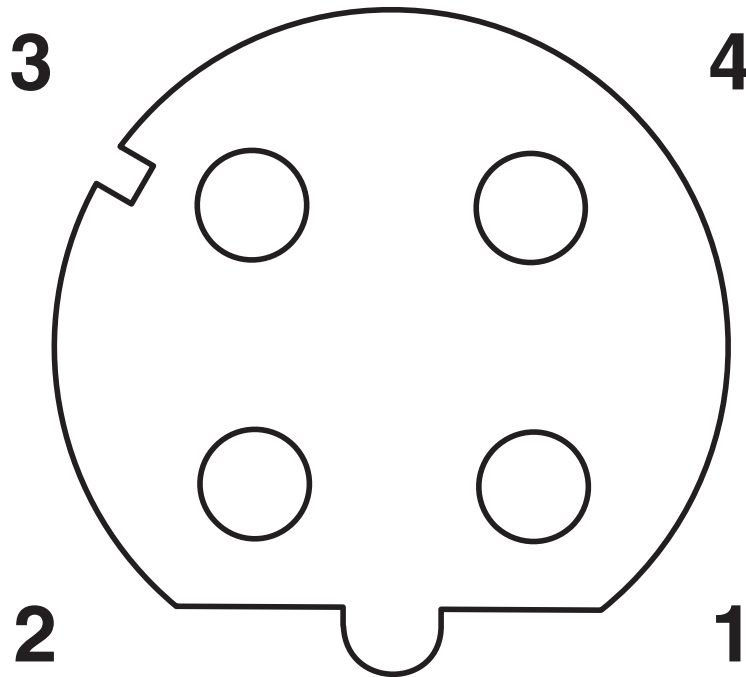
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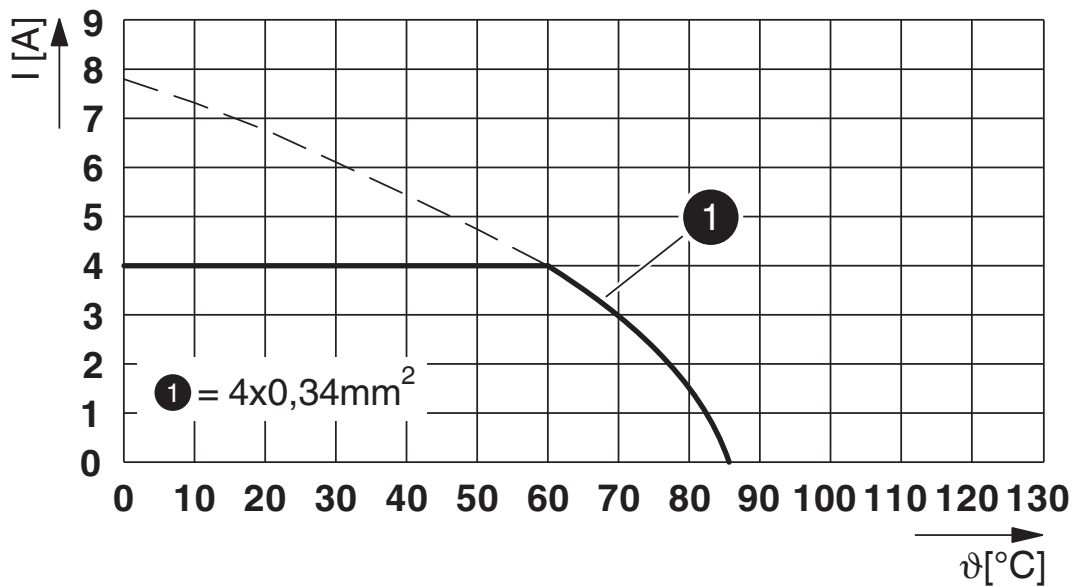
Drawings

Schematic diagram



Connector pin assignment

Diagram



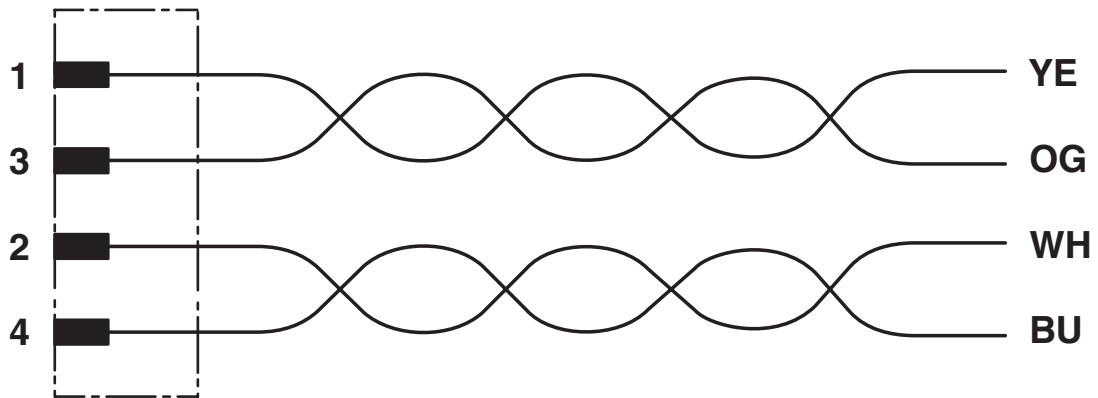
I = current strength, T = ambient temperature

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Circuit diagram



Contact assignment of the M12 socket

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Classifications

ECLASS

ECLASS-13.0

27440103

ETIM

ETIM 9.0

EC003570

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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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