

1410147

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Device connector rear mounting, Ethernet CAT6 $_{\rm A}$ (10 Gbps) CAT6 $_{\rm A}$, 8-position, PUR, water blue RAL 5021, shielded, Socket, straight, M12-SPEEDCON, coding: X, on free cable end, M16 x 1.5, Bus line, cable length: 10 m, Ethernet 10 Gbit, Alternative product in accordance with RoHS II without Exemption 6c (Pb < 0.1 %) item no.: 1238833

Commercial data

Item number	1410147
Packing unit	1 pc
Minimum order quantity	20 pc
Product key	ABQDGI
GTIN	4046356892353
Weight per piece (including packing)	510 g
Weight per piece (excluding packing)	446.5 g
Customs tariff number	85444290
Country of origin	DE



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Technical data

Notes

Notes	On	Onorg	tion
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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
- Ensure that the protective or functional ground has been properly connected.



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	 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).
Product properties	
Product type	Data cable preassembled
Sensor type	Ethernet
Number of positions	8
No. of cable outlets	1
Shielded	yes
Coding	X
Insulation characteristics	
Overvoltage category	III
Degree of pollution	3
nterfaces	
Signal type/category	Ethernet CAT6 _A , 10 Gbps
Electrical properties	
Rated surge voltage	0.8 kV
Contact resistance	≤ 3 mΩ
Insulation resistance	≥ 100 MΩ
Nominal voltage U _N	50 V AC
	60 V DC
Nominal current I _N	0.5 A (Plug/socket in accordance with IEC 61076-2-101, cable technical data is to be observed)
Transmission medium	Copper
Transmission characteristics (category)	CAT6 _A
Mechanical properties Mechanical data	
Insertion/withdrawal cycles	≥ 100
Material specifications	
Flammability rating according to UL 94	V0
Seal material	FKM
Contact material	CuZn
Contact material Contact surface material	
	CuZn Au PPA
Contact surface material	Au



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Connection data

Connection ted	chnology
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Connection method	Bus line
Conductor connection	
Contact connection type	Crimp contacts
Connection method	Bus line
Tightening torque	2 Nm 3 Nm (Installation-side)

Connector

Connection 1

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

Connection 2

Head design	free cable end
i lead design	li ee cable end

Cable/line

Cable length	10 m
Cable leffulfi	10 111

Ethernet 10 Gbit [94F]

Dimensional drawing



Cable weight	42 kg/km
UL AWM Style	20963 (80°C/30 V)
Number of positions	8
Shielded	yes
Cable type	Ethernet 10 Gbit [94F]
Conductor structure	4x2xAWG26/7; S/FTP
Signal runtime	5.13 ns/m
Conductor structure signal line	7x 0.16 mm
AWG signal line	26
Conductor cross section	4x 2x 0.14 mm²
Wire diameter incl. insulation	1.04 mm
External cable diameter	6.40 mm ±0.2 mm



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Outer sheath, material	PUR
xternal sheath, color	water blue RAL 5021
Conductor material	Bare Cu litz wires
faterial wire insulation	Foamed PE
Single wire, color	white/blue-blue, white/orange-orange, white/green-green, white/brown-brown
Thickness, outer sheath	0.65 mm
wisted pairs	2 cores to the pair
ype of pair shielding	Aluminum-lined foil
Overall twist	4 pairs for core
Optical shield covering	70 %
nsulation resistance	≥ 500 MΩ*km
Loop resistance	≤ 290.00 Ω/km
Nave impedance	100 Ω ±5 Ω (at 100 MHz)
Cable capacity	47 nF/km
Nominal voltage, cable	≤ 100 V
Test voltage Core/Core	700 V (50 Hz, 1 min.)
Test voltage Core/Shield	700.00 V (50 Hz, 1 min.)
Minimum bending radius, fixed installation	4 x D
Minimum bending radius, flexible installation	8 x D
Smallest bending radius, fixed installation	26 mm
Smallest bending radius, movable installation	52 mm
Tensile strength	≤ 100 N
Near end crosstalk attenuation (NEXT)	75.3 dB (with 1 MHz)
	66.3 dB (at 4 MHz)
	61.8 dB (at 8 MHz)
	60.3 dB (at 10 MHz)
	57.2 dB (at 16 MHz)
	55.8 dB (at 20 MHz)
	54.3 dB (at 25 MHz)
	52.8 dB (at 31.25 MHz)
	48.4 dB (at 62.5 MHz)
	45.3 dB (at 100 MHz)
	40.8 dB (at 200 MHz)
	39.3 dB (at 250 MHz)
	38.1 dB (at 300 MHz)
	38.1 dB (at 400 MHz)
	38.1 dB (at 500 MHz)
Power-summated near end crosstalk attenuation (PSNEXT)	72.3 dB (with 1 MHz)
	63.3 dB (at 4 MHz)
	58.8 dB (at 8 MHz)
	57.3 dB (at 10 MHz)
	54.2 dB (at 16 MHz)
	52.8 dB (at 20 MHz)



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	51.3 dB (at 25 MHz)
	49.9 dB (at 31.25 MHz)
	45.4 dB (at 62.5 MHz)
	42.3 dB (at 100 MHz)
	37.8 dB (at 200 MHz)
	36.3 dB (at 250 MHz)
	35.1 dB (at 300 MHz)
	33.3 dB (at 400 MHz)
	31.8 dB (at 500 MHz)
Return attenuation (RL)	20 dB (with 1 MHz)
	23 dB (at 4 MHz)
	24.5 dB (at 8 MHz)
	25 dB (at 10 MHz)
	25 dB (at 16 MHz)
	25 dB (at 20 MHz)
	24.2 dB (at 25 MHz)
	23.3 dB (at 31.25 MHz)
	20.7 dB (at 62.5 MHz)
	19 dB (at 100 MHz)
	16.4 dB (at 200 MHz)
	15.6 dB (at 250 MHz)
	15.6 dB (at 300 MHz)
	15.6 dB (at 400 MHz)
	15.6 dB (at 500 MHz)
Shield attenuation	3.1 dB (with 1 MHz)
	5.7 dB (at 4 MHz)
	8 dB (at 8 MHz)
	8.9 dB (at 10 MHz)
	11.2 dB (at 16 MHz)
	12.6 dB (at 20 MHz)
	14.1 dB (at 25 MHz)
	15.8 dB (at 31.25 MHz)
	22.5 dB (at 62.5 MHz)
	28.7 dB (at 100 MHz)
	41.4 dB (at 200 MHz)
	46.6 dB (at 250 MHz)
	51.4 dB (at 300 MHz)
	60.1 dB (at 400 MHz)
	67.9 dB (at 500 MHz)
Halana for	≥ 80.00 dB (at 30 100 MHz)
Halogen-free	according to IEC 60754-1
Flame resistance	according to IEC 60332-1-2
Resistance to oil	in accordance with DIN EN 60811-2-1
Ambient temperature (operation)	-40 °C 80 °C (cable, fixed installation)



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	-20 °C 80 °C (Cable, flexible installation)
Ambient temperature (installation)	-20 °C 80 °C

Environmental and real-life conditions

Ambient conditions

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

Standards and regulations

M12

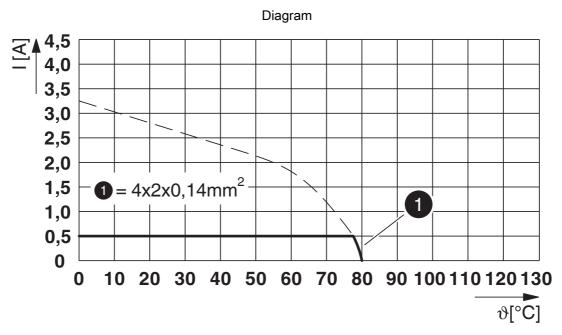
Standard designation	M12 connector
Standards/specifications	IEC 61076-2-109



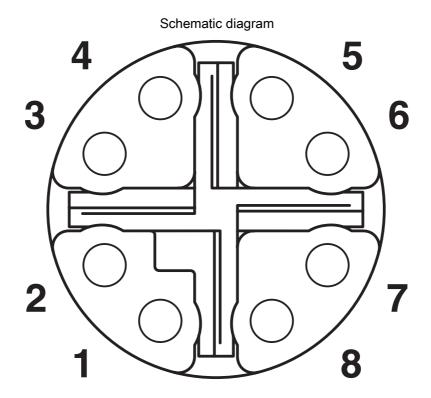
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Drawings



I = current strength, T = ambient temperature

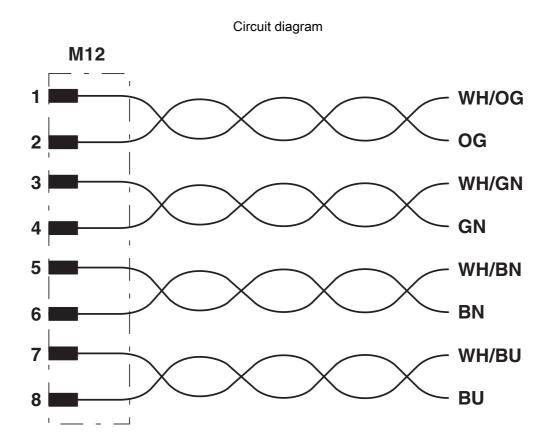


M12 socket pin assignment, 8-pos, view of socket side



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Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/pc/products/1410147

.71	CUL Recognized Approval ID: E335024-20120308			
	Nominal voltage U_N	Nominal current I _N	Cross section AWG	Cross section mm ²
	60 V	0.5 A	-	-

<i>7</i> 1	UL Recognized Approval ID: E335024-20120308				
		Nominal voltage U _N	Nominal current I _N	Cross section AWG	Cross section mm ²
		60 V	0.5 A	-	-

cULus Recognized



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Classifications

UNSPSC 21.0

ECLASS

	ECLASS-11.0	27281101
	ECLASS-12.0	27281101
	ECLASS-13.0	27281101
ETIM		
	ETIM 8.0	EC000761
UNSPSC		

39131500



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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	6(c)
China RoHS	
Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.
EU REACH SVHC	
REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	53542df3-4030-4e17-9a59-385d1653f889



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Accessories

PROT-M12 - Screw plug

1680539

https://www.phoenixcontact.com/pc/products/1680539



An M12 screw plug for the unoccupied M12 sockets of the sensor/actuator cable, boxes and flush-type connectors

PROT-M12 SH - Screw plug

1503302

https://www.phoenixcontact.com/pc/products/1503302



An M12 screw plug for the unoccupied M12 sockets of the shielded sensor/actuator cable, boxes and flush-type connectors



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PROT-M12 MS-M - Screw plug

1414148

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Screw plug, Alternative product in accordance with RoHS II without Exemption 6c (Pb < 0.1 %)

PROT-M12 FB - Screw plug

1555538

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M12 high-grade steel screw plug, for unoccupied M12 sockets of the sensor/actuator cables, boxes and flush-type connectors for the food industry



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PROT-M12 MS-PA-CHAIN - Screw plug

1430899

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M12 sealing cap with fixing band, for sensor cables, for free M12 sockets



WP-CTA POM 13,0 BK - Protective hose adapter

1422884

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Protective hose adapter, for corrugated hoses with a nominal size of 13 (10 \times 13), corrugated in parallel



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WP-PA HF 13,0 BK - Protective hose

3240681

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Protective hose, material: PA 6, UV-resistant: yes, flexible, degree of protection: IP68, color: black, flammability rating in acc. with UL 94: V0, inner diameter: 10 mm, Total length: 50 m

WP-PA HF-HB 13,0 BK - Protective hose

3240839

https://www.phoenixcontact.com/pc/products/3240839



Protective hose, material: PA 6, UV-resistant: yes, flexible, degree of protection: IP68, color: black, flammability rating in acc. with UL 94: HB, inner diameter: 10 mm, Total length: 50 m



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SACC-M12MS-8QO SH ETH - Data connector

1421679

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Data connector, Ethernet CAT5 (1 Gbps), 8-position, halogen-free, shielded, Plug straight M12, coding: A, Insulation displacement connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 5 mm ... 9.7 mm

SACC-M12MR-8Q SH - Data connector

1553653

https://www.phoenixcontact.com/pc/products/1553653



Data connector, Ethernet CAT5 (1 Gbps), 8-position, shielded, Plug angled M12, coding: A, Insulation displacement connection, knurl material: Brass, nickel-plated, external cable diameter 4 mm ... 8 mm



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SACC-M12FS-8QO SH ETH - Data connector

1421680

https://www.phoenixcontact.com/pc/products/1421680



Data connector, Ethernet CAT5 (1 Gbps), 8-position, halogen-free, shielded, Socket straight M12, coding: A, Insulation displacement connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 5 mm ... 9.7 mm

SACC-M12FR-8Q SH - Data connector

1553666

https://www.phoenixcontact.com/pc/products/1553666



Data connector, Ethernet CAT5 (1 Gbps), 8-position, shielded, Socket angled M12, coding: A, Insulation displacement connection, knurl material: Brass, nickel-plated, external cable diameter 4 mm ... 8 mm



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VS-08-RJ45-5-Q/IP20 - RJ45 connector

1656725

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RJ45 connector, design: RJ45, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5, material: Plastic, connection method: Insulation displacement connection, connection cross section: AWG 26- 23, cable outlet: straight, color: traffic grey A RAL 7042, Ethernet

VS-08-RJ45-5-Q/IP20 BK - RJ45 connector

1658008

https://www.phoenixcontact.com/pc/products/1658008



RJ45 connector, design: RJ45, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5, material: Plastic, connection method: Insulation displacement connection, connection cross section: AWG 26- 23, cable outlet: straight, color: black, Ethernet



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CUC-IND-C1ZNI-S/R4IE8 - RJ45 connector

1421607

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RJ45 connector, design: RJ45, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5, material: Metal, connection method: Insulation displacement connection, connection cross section: AWG 26- 24, cable outlet: straight, color: green, Ethernet

CUC-IND-C1ZNI-T/R4IE8 - RJ45 connector

1421877

https://www.phoenixcontact.com/pc/products/1421877



RJ45 connector, design: RJ45, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5, material: Metal, connection method: Insulation displacement connection, connection cross section: AWG 26- 24, cable outlet: angled, Ethernet



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CUC-IND-C1ZNI-B/R4IE8 - RJ45 connector

1421876

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RJ45 connector, design: RJ45, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5, material: Metal, connection method: Insulation displacement connection, connection cross section: AWG 26- 24, cable outlet: angled, Fthernet

CUC-V06-C1PGY-S/R4CE8:1 - RJ45 connector

1414383

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RJ45 connector, design: RJ45, degree of protection: IP67, number of positions: 8, 1 Gbps, CAT6, material: Plastic, connection method: Crimp connection, connection cross section: AWG 27- 24, cable outlet: straight, color: gray, Ethernet/PROFINET



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CUC-V06-C1PBK-S/R4CE8:1 - RJ45 connector

1414408

https://www.phoenixcontact.com/pc/products/1414408



RJ45 connector, design: RJ45, degree of protection: IP67, number of positions: 8, 1 Gbps, CAT6, material: Plastic, connection method: Crimp connection, connection cross section: AWG 24- 27, cable outlet: straight, color: black, Ethernet/PROFINET

CUC-V14-C1ZNI-S/R4E8 - RJ45 connector

1422661

https://www.phoenixcontact.com/pc/products/1422661



RJ45 connector, degree of protection: IP65/IP67, number of positions: 8, 1 Gbps, CAT5, material: Metal, connection method: IDC fast connection, connection cross section: AWG 26- 24, cable outlet: straight, Ethernet



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CUC-V14-C1ZNI-T/R4E8 - RJ45 connector

1422663

https://www.phoenixcontact.com/pc/products/1422663



RJ45 connector, degree of protection: IP65/IP67, number of positions: 8, 1 Gbps, CAT5, material: Metal, connection method: IDC fast connection, connection cross section: AWG 26- 24, cable outlet: angled, Ethernet

CUC-V14-C1ZNI-B/R4E8 - RJ45 connector

1422662

https://www.phoenixcontact.com/pc/products/1422662



RJ45 connector, degree of protection: IP65/IP67, number of positions: 8, 1 Gbps, CAT5, material: Metal, connection method: IDC fast connection, connection cross section: AWG 26- 24, cable outlet: angled, Ethernet



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VS-PPC-C1-RJ45-POBK-PG9-8Q5 - RJ45 connector

1657834

https://www.phoenixcontact.com/pc/products/1657834



RJ45 connector, degree of protection: IP65/IP67, number of positions: 8, 1 Gbps, CAT5 (IEC 11801:2002), material: Plastic, connection method: IDC fast connection, connection cross section: AWG 26- 22, cable outlet: straight, color: black, Ethernet

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