

1437795

https://www.phoenixcontact.com/us/products/1437795

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Device connector, rear mounting, PROFINET CAT5 (100 Mbps), EtherCAT® CAT5 (100 Mbps), 4-position, PVC halogen-free, green RAL 6018, shielded, Socket, straight, M12-SPEEDCON, coding: D , on free cable end, Rear mounting, Cable lug connection, cable length: 5 m, PROFINET PVC stranded CAT5, Alternative product in accordance with RoHS II without Exemption 6c (Pb <0.1%) item no.: 1239683

### 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	1437795
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	AB25
Product key	ABQDGJ
Catalog page	Page 397 (C-2-2019)
GTIN	4046356458535
Weight per piece (including packing)	360.1 g
Weight per piece (excluding packing)	346 g
Customs tariff number	85444290
Country of origin	DE



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#### Technical data

#### **Notes**

General	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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	<ul> <li>Ensure that the protective or functional ground has been properly connected.</li> </ul>
	<ul> <li>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</li> </ul>
	<ul> <li>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).</li> </ul>
lounting	
Mounting type	Rear mounting
Connection method	Cable lug connection
roduct properties	
Product type	Circular connectors (device side)
Sensor type	PROFINET
Number of positions	4
Application	Data
No. of cable outlets	1
Shielded	yes
Coding	D
Insulation characteristics	
Overvoltage category  Degree of pollution	3
Degree or politition	3
laterial specifications	
Flammability rating according to UL 94	V0
Seal material	FKM
Contact material	CuZn
Contact surface material	Ni/Au
Contact carrier material	PA 6.6
Material for screw connection	Brass, nickel-plated
Outer sheath, material	PVC
lectrical properties	
Rated surge voltage	2.5 kV
Contact resistance	≤ 3 mΩ
Insulation resistance	≥ 100 MΩ
Nominal voltage U <sub>N</sub>	250 V
Nominal current I <sub>N</sub>	4 A (Plug/socket in accordance with IEC 61076-2-101, cable technical data is to be observed)
Transmission medium	Copper
Transmission characteristics (category)	CAT5 (IEC 11801:2002)



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#### Connection data

#### Conductor connection

Connection method	Cable lug connection
Tightening torque	2 Nm
	3 Nm

### Mechanical properties

#### Mechanical data

Insertion/withdrawal cycles	≥ 100
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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

### Cable/line

Cable length	5 m
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### PROFINET PVC stranded CAT5 [93B]

Dimensional drawing



Cable weight	67 kg/km
UL AWM Style	21694
Number of positions	4
Shielded	yes
Cable type	PROFINET PVC stranded CAT5 [93B]
Conductor structure	1x4xAWG22/7, SF/TQ
Signal runtime	5.3 ns/m
Signal speed	0.66 c



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Conductor atrusture signal line	7v 0 25 mm
Conductor structure signal line	7x 0.25 mm
AWG signal line	4x 0.34 mm²
Conductor cross section  Wire diameter incl. inculation	
Wire diameter incl. insulation	1.55 mm
External cable diameter	6.5 mm ±0.2 mm
Outer sheath, material	PVC
External sheath, color	green RAL 6018
Conductor material	Tin-plated Cu litz wires
Material wire insulation	PE
Single wire, color	white, yellow, blue, orange
Thickness, outer sheath	approx. 0.9 mm
Overall twist	Star quad
Optical shield covering	85 %
Insulation resistance	≥ 500 MΩ*km
Coupling resistance	≤ 20.00 mΩ/m (at 10 MHz)
Loop resistance	≤ 120.00 Ω/km
Wave impedance	100 Ω ±15 Ω (at 100 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.)
Minimum bending radius, fixed installation	3 x D
Minimum bending radius, flexible installation	7 x D
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)
Shield 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)
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)



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	-40 °C 70 °C (Cable, flexible installation)
Ambient temperature (installation)	-20 °C 60 °C

### Environmental and real-life conditions

### Ambient conditions

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

### Standards and regulations

### M12

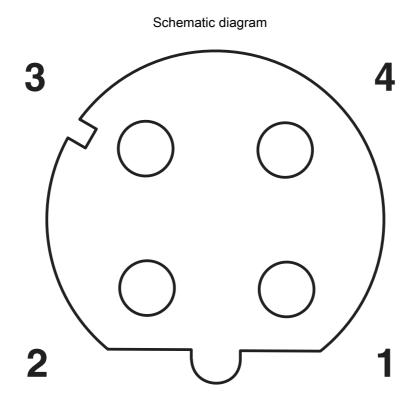
Standard designation	M12 connector
Standards/specifications	IEC 61076-2-101



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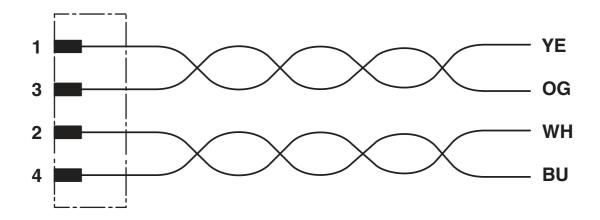
https://www.phoenixcontact.com/us/products/1437795

### Drawings



Pin assignment M12 socket, 4-pos., D-coded, female side

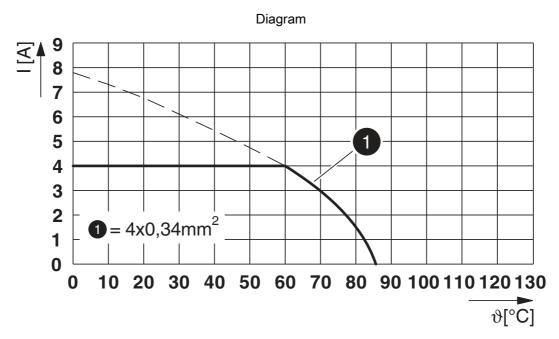
Circuit diagram





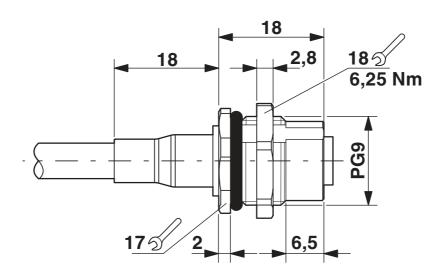
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I = current strength, T = ambient temperature

Dimensional drawing

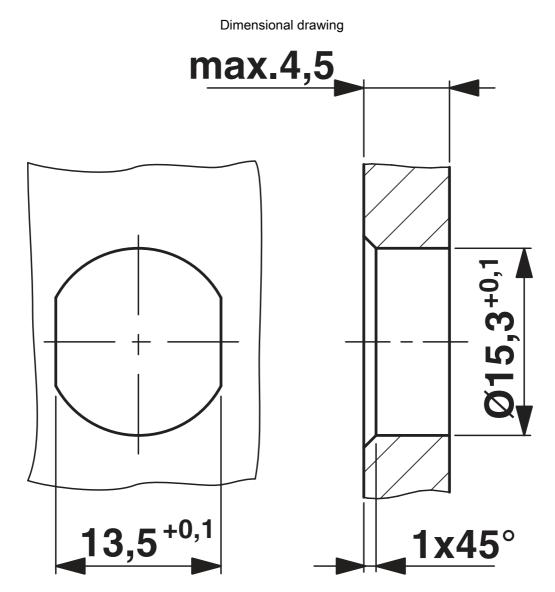


Dimensional drawing



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



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### Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1437795

<i>71</i>	UL Recognized Approval ID: E118976-20100522				
		Nominal voltage U <sub>N</sub>	Nominal current I <sub>N</sub>	Cross section AWG	Cross section mm <sup>2</sup>
		250 V	4 A	- 22	-

ERC	EAC
LIIL	Approval ID: B.01687

<b>.71</b>	<b>cUL Recognized</b> Approval ID: E221474-2	0220908			
		Nominal voltage U <sub>N</sub>	Nominal current I <sub>N</sub>	Cross section AWG	Cross section mm <sup>2</sup>
		250 V	1.5 A	-	-

7/	<b>UL Recognized</b> Approval ID: E221474-20	<b>ed</b> 1474-20220908				
		Nominal voltage U <sub>N</sub>	Nominal current I <sub>N</sub>	Cross section AWG	Cross section mm <sup>2</sup>	
		250 V	4 A	-	-	



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### Classifications

### **ECLASS**

	ECLASS-11.0	27440103	
	ECLASS-12.0	27440103	
	ECLASS-13.0	27440103	
ETIM			
	ETIM 8.0	EC003570	
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-M16-SEALING PLUG SET - Screw plug

1453368

https://www.phoenixcontact.com/us/products/1453368



Screw plug, Rear mounting, M16 x 1.5, Alternative product in accordance with RoHS II without Exemption 6c (Pb <0.1%) item no.: 1239800

### PROT-M12 - Screw plug

1680539

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



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



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### PROT-M12 SH - Screw plug

1503302

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



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

### PROT-M12 FB - Screw plug

1555538

https://www.phoenixcontact.com/us/products/1555538



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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### SACC-M16-SEAL CLM - Flat gasket

1430394

https://www.phoenixcontact.com/us/products/1430394

M16 flat gasket for M12 flush-type connectors with M16 fastening thread



### CUTFOX 12 - Cable-cutting tool

1212128

https://www.phoenixcontact.com/us/products/1212128



Cable cutter, for copper and aluminum up to 12 mm diameter (up to 35 mm<sup>2</sup>)



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### CUTFOX-S VDE - Diagonal cutter

1212207

https://www.phoenixcontact.com/us/products/1212207



Diagonal cutter for hard (piano wire) and soft wires, VDE 1000 V AC/1500 V DC tested

### VS-CABLE-STRIP-VARIO - Stripping tool

1657407

https://www.phoenixcontact.com/us/products/1657407

Stripping tool, for the multi-level stripping of shielded cables





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### MICROFOX-SP-1 - Diagonal cutter

1212487

https://www.phoenixcontact.com/us/products/1212487



Electronic diagonal cutter, tapered head, without chamfer, with opening spring, non-reflective phosphate-treated surface, punched version

### WIREFOX 4 - Stripping tool

1212156

https://www.phoenixcontact.com/us/products/1212156



Stripping tool, for cables and conductors (especially for rubber and silicone insulations) from 0.1 - 4 mm<sup>2</sup>, self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm<sup>2</sup> stranded/1.5 mm<sup>2</sup> solid, replaceable stripping blade



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#### WIREFOX-E 4 - Stripping tool

1212704

https://www.phoenixcontact.com/us/products/1212704



Stripping tool, for cables and conductors (especially for rubber and silicone insulations) from 0.1 - 4  $\,\mathrm{mm}^2$ , self-adjusting, stripping length of up to 18  $\,\mathrm{mm}$ , cutting capacity of up to 10  $\,\mathrm{mm}^2$  stranded/1.5  $\,\mathrm{mm}^2$  solid, replaceable stripping blade

### WIREFOX 10 - Stripping tool

1212150

https://www.phoenixcontact.com/us/products/1212150



Stripping tool, for cables and conductors from 0.02 - 10 mm<sup>2</sup>, self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm<sup>2</sup> stranded/1.5 mm<sup>2</sup> solid, replaceable stripping blade



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

1/2288/

https://www.phoenixcontact.com/us/products/1422884



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

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

3240681

https://www.phoenixcontact.com/us/products/3240681



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



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

3240839

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

#### SACC-M12MSD-4QO SH PN - Data connector

1411068

https://www.phoenixcontact.com/us/products/1411068



Data connector, PROFINET CAT5 (100 Mbps), 4-position, halogen-free, shielded, Plug straight M12, D, Insulation displacement connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 5 mm ... 9.7 mm



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### SACC-M12MRD-4Q SH PN - Data connector

1554539

https://www.phoenixcontact.com/us/products/1554539



Data connector, PROFINET CAT5 (100 Mbps), 4-position, shielded, Plug angled M12, D, Insulation displacement connection, knurl material: Brass, nickel-plated, external cable diameter 4 mm ... 8 mm

#### SACC-M12FSD-4QO SH PN - Data connector

1411071

https://www.phoenixcontact.com/us/products/1411071



Data connector, PROFINET CAT5 (100 Mbps), 4-position, halogen-free, shielded, Socket straight M12, D, Insulation displacement connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 5 mm ... 9.7 mm



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### SACC-M12FRD-4Q SH PN - Data connector

1554542

https://www.phoenixcontact.com/us/products/1554542



Data connector, PROFINET CAT5 (100 Mbps), 4-position, shielded, Socket angled M12, D, Insulation displacement connection, knurl material: Brass, nickel-plated, external cable diameter 4 mm ... 8 mm

#### SACC-CC-4QO SH PN - Conductor connectors

1414416

https://www.phoenixcontact.com/us/products/1414416



Cable connector, PROFINET CAT5 (100 Mbps), 4-pos., halogen-free, shielded, insulation displacement connection, housing material: zinc die-cast, nickel-plated, outer cable diameter of 5 mm ... 9.7 mm



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### SACC-M12MSD-4PL SH PN - Connector

1424682

https://www.phoenixcontact.com/us/products/1424682



Connector, PROFINET CAT5 (100 Mbps), 4-position, shielded, Plug straight M12, D, Push-lock spring connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

### SACC-M12MRD-4PL SH PN - Connector

1424684

https://www.phoenixcontact.com/us/products/1424684



Connector, PROFINET CAT5 (100 Mbps), 4-position, shielded, Plug angled M12, D, Push-lock spring connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm



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### SACC-M12FSD-4PL SH PN - Connector

1424683

https://www.phoenixcontact.com/us/products/1424683



Connector, PROFINET CAT5 (100 Mbps), 4-position, shielded, Socket straight M12, D, Push-lock spring connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

#### SACC-M12FRD-4PL SH PN - Connector

1424685

https://www.phoenixcontact.com/us/products/1424685



Connector, PROFINET CAT5 (100 Mbps), 4-position, shielded, Socket angled M12, D, Push-lock spring connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm



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#### SACC-M12MSD-4CT-CM SH PN - Data connector

1422846

https://www.phoenixcontact.com/us/products/1422846



Data connector, PROFINET CAT5 (100 Mbps), 4-position, shielded, Plug straight M12, D, Crimp connection, knurl material: Zinc die-cast, tin-plated, external cable diameter 4.5 mm ... 7.5 mm, without crimp contacts

#### SACC-M12MRD-4CT-CM SH PN - Data connector

1422847

https://www.phoenixcontact.com/us/products/1422847



Data connector, PROFINET CAT5 (100 Mbps), 4-position, shielded, Plug angled M12, D, Crimp connection, knurl material: Zinc die-cast, tin-plated, external cable diameter 4.5 mm ... 7.5 mm, without crimp contacts



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#### SACC-M12FSD-4CT-CM SH PN - Data connector

1422848

https://www.phoenixcontact.com/us/products/1422848



Data connector, PROFINET CAT5 (100 Mbps), 4-position, shielded, Socket straight M12, D, Crimp connection, knurl material: Zinc die-cast, tin-plated, external cable diameter 4.5 mm ... 7.5 mm, without crimp contacts

#### SACC-M12FRD-4CT-CM SH PN - Data connector

1422849

https://www.phoenixcontact.com/us/products/1422849



Data connector, PROFINET CAT5 (100 Mbps), 4-position, shielded, Socket angled M12, D, Crimp connection, knurl material: Zinc die-cast, tin-plated, external cable diameter 4.5 mm ... 7.5 mm, without crimp contacts



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### VS-PN-RJ45-5-Q/IP20 - RJ45 connector

1658435

https://www.phoenixcontact.com/us/products/1658435



RJ45 connector, design: RJ45, degree of protection: IP20, number of positions: 4, 100 Mbps, CAT5, material: Plastic, connection method: Insulation displacement connection, cable outlet: straight, color: traffic grey A RAL 7042, PROFINET

#### CUC-IND-C1ZNI-S/R4IP8 - RJ45 connector

1421126

https://www.phoenixcontact.com/us/products/1421126



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 23- 22, cable outlet: straight, color: green, Ethernet/PROFINET



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#### CUC-IND-C1ZNI-T/R4IP8 - RJ45 connector

1421128

https://www.phoenixcontact.com/us/products/1421128



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 23- 22, cable outlet: angled, Ethernet/PROFINET

#### CUC-IND-C1ZNI-B/R4IP8 - RJ45 connector

1421127

https://www.phoenixcontact.com/us/products/1421127



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 23- 22, cable outlet: angled, Ethernet/PROFINET



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#### CUC-V14-C1ZNI-S/R4P8 - RJ45 connector

1422664

https://www.phoenixcontact.com/us/products/1422664



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 23- 22, cable outlet: straight, Ethernet

#### CUC-V14-C1ZNI-T/R4P8 - RJ45 connector

1422667

https://www.phoenixcontact.com/us/products/1422667



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 23- 22, cable outlet: angled, Ethernet



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### CUC-V14-C1ZNI-B/R4P8 - RJ45 connector

1422665

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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 23- 22, cable outlet: angled, Ethernet

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