

1413925

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Device connector rear mounting, 4-position, Socket, M12, coding: D, on free cable end, Rear wall/screw mounting, M16 x 1.5, Bus line, Alternative product in accordance with RoHS II without Exemption 6c (Pb < 0.1 %) item no.: 1239045

#### Commercial data

Item number	1413925
Packing unit	50 pc
Minimum order quantity	50 pc
Product key	ABQDGI
GTIN	4055626012544
Weight per piece (including packing)	42.9 g
Weight per piece (excluding packing)	42.9 g
Country of origin	DE



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#### Technical data

#### **Notes**

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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.
- 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



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	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).
<i>f</i> lounting	
Mounting type	Rear wall/screw mounting M16 x 1.5
Product properties	
Product type	Circular connectors (device side)
Application	Data
Number of positions	4
Coding	D
Thread type	M12
Insulation characteristics	
Overvoltage category	II II
Degree of pollution	3
Electrical properties	
Rated surge voltage	2.5 kV AC
Nominal voltage U <sub>N</sub>	250 V
Nominal current I <sub>N</sub>	4 A
Nominal current I <sub>N</sub> Transmission medium  Connection data	4 A Copper
Transmission medium	
Transmission medium  Connection data  Conductor connection	Copper
Transmission medium  Connection data  Conductor connection  Connection method	Copper  Bus line
Transmission medium  Connection data  Conductor connection  Connection method  Contact connection type  Conductor cross section	Copper  Bus line Socket
Transmission medium  Connection data  Conductor connection  Connection method  Contact connection type  Conductor cross section  Connector	Copper  Bus line Socket
Transmission medium  Connection data  Conductor connection  Connection method  Contact connection type  Conductor cross section  Connector  Connection 1	Bus line Socket 0.34
Transmission medium  Connection data  Conductor connection  Connection method  Contact connection type  Conductor cross section  Connector  Connection 1  Head design	Bus line Socket 0.34  Socket
Transmission medium  Connection data  Conductor connection  Connection method  Contact connection type  Conductor cross section  Connector  Connection 1  Head design  Head thread type	Copper  Bus line Socket 0.34  Socket M12
Transmission medium  Connection data  Conductor connection  Connection method  Contact connection type  Conductor cross section  Connector  Connector  Connection 1  Head design  Head thread type  Coding	Bus line Socket 0.34  Socket M12
Transmission medium  Connection data  Conductor connection  Connection method  Contact connection type  Conductor cross section  Connector  Connection 1  Head design  Head thread type  Coding  Connection 2	Bus line Socket 0.34  Socket M12 D



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Cable weight         67 kg/km           UL AWM Style         21694           Number of positions         4           Shielded         yes           Cable type         PROFINET PVC stranded CAT5 [93B]           Conductor structure         1x4xWG227, SFTQ           Signal runtime         5.3 ns/m           Signal speed         0.66 c           Conductor structure signal line         7x 0.25 mm           AWG signal line         22           Conductor cross section         4x 0.34 mm²           Wire diameter incl. insulation         1.55 mm           External cable diameter         6.50 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. 0.90 mm           Overall twist         Star quad           Outer sheath         ≥ 500 MΩ²km           Coupling resistance         ≤ 20.00 mΩ²km           Coupling resistance         ≤ 20.00 mΩ²km           Vave impedance         100 Ω ±12 (at 10 MHz)	Dimensional drawing	
UL AWM Style         21694           Number of positions         4           Shielded         yes           Cable type         PROFINET PVC stranded CAT5 [93B]           Conductor structure         1x4xAWG22/7, SFTQ           Signal runtime         5.3 ns/m           Signal speed         0.66 c           Conductor structure signal line         7x 0.25 mm           AWG signal line         22           Conductor cross section         4x 0.34 mm²           Wire diameter incl. insulation         1.55 mm           External cable diameter         6.50 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. 0.90 mm           Optical shield covering         85 %           Insulator resistance         ≤ 500 MΩ*m           Loop resistance         ≤ 20.00 mΩ/m (at 10 MHz)           Loop resistance         ≤ 20.00 mΩ/m (at 10 MHz)           Loop resistance         ≤ 20.00 mΩ/m (at 10 MHz)           Loop resistance         ≤ 20.	Cable weight	67 kg/km
Shielded         yes           Cable type         PROFINET PVC stranded CATS [93B]           Conductor structure         1x4xAW02277, SF/TQ           Signal runtime         5.3 ns/m           Signal speed         0.66 c           Conductor structure signal line         7x 0.25 mm           AWG signal line         22           Conductor cross section         4x 0.34 mm²           Wire diameter incl. insulation         1.55 mm           External cable diameter         6.50 mm ±0.2 mm           Outer sheath, material         PVC           Statenal sheath, color         green RAL 6018           Conductor material         Tim-plated Cu litz wires           Material wire insulation         PE           Single wire, color         white, yellow, blue, orange           Thickness, outer sheath         approx. 0.90 mm           Optical shield covering         85 %           Insulation resistance         ≤ 500 MΩ'km           Coupling resistance         ≤ 2000 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 volta		
Shielded         yes           Cable type         PROFINET PVC stranded CATS [93B]           Conductor structure         1x4xAW02277, SF/TQ           Signal runtime         5.3 ns/m           Signal speed         0.66 c           Conductor structure signal line         7x 0.25 mm           AWG signal line         22           Conductor cross section         4x 0.34 mm²           Wire diameter incl. insulation         1.55 mm           External cable diameter         6.50 mm ±0.2 mm           Outer sheath, material         PVC           Statenal sheath, color         green RAL 6018           Conductor material         Tim-plated Cu litz wires           Material wire insulation         PE           Single wire, color         white, yellow, blue, orange           Thickness, outer sheath         approx. 0.90 mm           Optical shield covering         85 %           Insulation resistance         ≤ 500 MΩ'km           Coupling resistance         ≤ 2000 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 volta	Number of positions	4
Conductor structure         1x4xAWG22/7, SF/TQ           Signal runtime         5.3 ns/m           Signal speed         0.66 c           Conductor structure signal line         7x 0.25 mm           AWG signal line         22           Conductor cross section         4x 0.34 mm²           Wire diameter incl. insulation         1.55 mm           External cable diameter         6.50 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. 0.90 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         2000 V (50 Hz, 1 min.)           Test voltage Core/Core         2000 V (50 Hz, 1 min.)           Test voltage Core/Shied         200.00 V (50 Hz, 1 min.) </td <td></td> <td>yes</td>		yes
Signal runtime $5.3 \text{ ns/m}$ Signal speed $0.66 \text{ c}$ Conductor structure signal line $7x 0.25 \text{ mm}$ AWG signal line $22$ Conductor cross section $4x 0.34 \text{ mm}^2$ Wire diameter incl. insulation $1.55 \text{ mm}$ External cable diameter $6.50 \text{ mm} \pm 0.2 \text{ mm}$ 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. 0.90 mm         Overall twist       Star quad         Optical shield covering $85 \%$ Insulation resistance $$500 \text{ MΩ}^{\text{tm}}$ Coupling resistance $$20.00 \text{ mΩ}^{\text{tm}}$ (at $10 \text{ MHz}$ )         Loop resistance $$120.00 \text{ nΩ}^{\text{tm}}$ Wave impedance $100.0 \pm 15 \text{ ng}$ (at $100 \text{ MHz}$ )         Nominal voltage, cable $600 \text{ V}$ Test voltage Core/Core $2000 \text{ V (50 Hz, 1 min.)}$ Test voltage Core/Shield $2000.00 \text{ V (50 Hz, 1 min.)}$ Minimum bending radius, fixed installation	Cable type	PROFINET PVC stranded CAT5 [93B]
Signal runtime $5.3 \text{ ns/m}$ Signal speed $0.66 \text{ c}$ Conductor structure signal line $7x 0.25 \text{ mm}$ AWG signal line $22$ Conductor cross section $4x 0.34 \text{ mm}^2$ Wire diameter incl. insulation $1.55 \text{ mm}$ External cable diameter $6.50 \text{ mm} \pm 0.2 \text{ mm}$ Outer sheath, material       PVC         External sheath, color       green RAL 6018         Conductor material       Tin-plated Cu litz wires         Material wire insulation       PE         Single wire, color       white, yellow, blue, orange         Thickness, outer sheath       approx. 0.90 mm         Overall twist       Star quad         Optical shield covering $85 \%$ Insulation resistance $$500 \text{ MΩ}^{\text{tm}}$ Coupling resistance $$20.00 \text{ mΩ}^{\text{tm}}$ (at $10 \text{ MHz}$ )         Loop resistance $$120.00 \text{ nΩ}^{\text{tm}}$ Wave impedance $100.0 \pm 15 \text{ ng}$ (at $100 \text{ MHz}$ )         Nominal voltage, cable $600 \text{ V}$ Test voltage Core/Core $2000 \text{ V (50 Hz, 1 min.)}$ Test voltage Core/Shield $2000.00 \text{ V (50 Hz, 1 min.)}$ Minimum bending radius, fixed installation	Conductor structure	1x4xAWG22/7, SF/TQ
Conductor structure signal line         7x 0.25 mm           AWG signal line         22           Conductor cross section         4x 0.34 mm²           Wire diameter incl. insulation         1.55 mm           External cable diameter         6.50 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. 0.90 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         2000.00 V (50 Hz, 1 min.)           Minimum bending radius, fixed installation         7 x D           Smallest bending radius, fixed installation         20 mm           Smallest bending radius, mo	Signal runtime	5.3 ns/m
AWG signal line 22  Conductor cross section $4x 0.34 \text{ mm}^2$ Wire diameter incl. insulation 1.55 mm  External cable diameter 6.50 mm $\pm 0.2 \text{ mm}$ 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. 0.90 mm  Overall twist Star quad  Optical shield covering 85 %  Insulation resistance $\pm 500 \text{ m}\Omega/\text{m}$ (at 10 MHz)  Loop resistance $\pm 120.00 \Omega/\text{km}$ Wave impedance $\pm 120.00 \Omega/\text{km}$ Wave impedance $\pm 120.00 \Omega/\text{km}$ Test voltage Core/Core $\pm 200.00 \text{ V}$ (50 Hz, 1 min.)  Test voltage Core/Shield $\pm 3 \times D$ Minimum bending radius, fixed installation $\pm 3 \times D$ Smallest bending radius, fixed installation $\pm 0.00 \times D$ (50 mm)  Smallest bending radius, movable installation $\pm 0.00 \times D$ (50 mm)  Smallest bending radius, movable installation $\pm 0.00 \times D$ (50 mm)	Signal speed	0.66 c
Conductor cross section $4x 0.34 \text{ mm}^2$ Wire diameter incl. insulation $1.55 \text{ mm}$ External cable diameter $6.50 \text{ mm} \pm 0.2 \text{ mm}$ 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. 0.90 mm  Overall twist Star quad  Optical shield covering 85 %  Insulation resistance $500 \text{ m}\Omega/\text{m}$ (at 10 MHz)  Loop resistance $500 \text{ m}\Omega/\text{m}$ (at 100 MHz)  Wave impedance $100 \text{ G}\Omega \times 150 \text{ G}\Omega \times 100 \text{ MHz}$ Nominal voltage, cable $600 \text{ V}$ Test voltage Core/Core $2000 \text{ V} (50 \text{ Hz}, 1 \text{ min.})$ Test voltage Core/Shield $3 \times D$ Minimum bending radius, fixed installation $3 \times D$ Smallest bending radius, fixed installation $200 \text{ mm}$ Smallest bending radius, movable installation $400 \text{ mm}$	Conductor structure signal line	7x 0.25 mm
Wire diameter incl. insulation $1.55 \text{ mm}$ External cable diameter $6.50 \text{ mm} \pm 0.2 \text{ mm}$ 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. $0.90 \text{ mm}$ Overall twist       Star quad         Optical shield covering       85 %         Insulation resistance $\geq 500 \text{ M}\Omega^*\text{km}$ Coupling resistance $\leq 20.00 \text{ m}\Omega/\text{m}$ (at $10 \text{ MHz}$ )         Loop resistance $\leq 120.00 \text{ Q/km}$ Wave impedance $100 \Omega \pm 15 \Omega$ (at $100 \text{ MHz}$ )         Nominal voltage, cable $600 \text{ V}$ Test voltage Core/Core $2000 \text{ V}$ (50 Hz, 1 min.)         Test voltage Core/Shield $2000.00 \text{ V}$ (50 Hz, 1 min.)         Minimum bending radius, fixed installation $3 \times D$ Minimum bending radius, fixed installation $7 \times D$ Smallest bending radius, fixed installation $20 \text{ mm}$ Smallest bending radius, fixed installation $46 \text{ mm}$	AWG signal line	22
External cable diameter $6.50 \text{ mm} \pm 0.2 \text{ mm}$ 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. $0.90 \text{ mm}$ Overall twist       Star quad         Optical shield covering $85 \%$ Insulation resistance $\geq 500 \text{ M}\Omega^*\text{km}$ Coupling resistance $\leq 20.00 \text{ m}\Omega/\text{m}$ (at $10 \text{ MHz}$ )         Loop resistance $\leq 120.00 \Omega/\text{km}$ Wave impedance $100 \Omega \pm 15 \Omega$ (at $100 \text{ MHz}$ )         Nominal voltage, cable $600 \text{ V}$ Test voltage Core/Core $2000 \text{ V } (50 \text{ Hz}, 1 \text{ min.})$ Test voltage Core/Shield $2000.00 \text{ V } (50 \text{ Hz}, 1 \text{ min.})$ Minimum bending radius, fixed installation $3 \times D$ Minimum bending radius, fixed installation $7 \times D$ Smallest bending radius, fixed installation $20 \text{ mm}$ Smallest bending radius, movable installation $46 \text{ mm}$	Conductor cross section	4x 0.34 mm²
Outer sheath, materialPVCExternal sheath, colorgreen RAL 6018Conductor materialTin-plated Cu litz wiresMaterial wire insulationPESingle wire, colorwhite, yellow, blue, orangeThickness, outer sheathapprox. 0.90 mmOverall twistStar quadOptical shield covering $85\%$ Insulation resistance $\geq 500 \text{ M}\Omega^*\text{km}$ Coupling resistance $\leq 20.00 \text{ m}\Omega/\text{m}$ (at $10 \text{ MHz}$ )Loop resistance $\leq 120.00 \Omega/\text{km}$ Wave impedance $100 \Omega \pm 15 \Omega$ (at $100 \text{ MHz}$ )Nominal voltage, cable $600 \text{ V}$ Test voltage Core/Core $2000 \text{ V}$ (50 Hz, 1 min.)Test voltage Core/Shield $2000.00 \text{ V}$ (50 Hz, 1 min.)Minimum bending radius, fixed installation $3 \times D$ Minimum bending radius, fixed installation $7 \times D$ Smallest bending radius, fixed installation $20 \text{ mm}$ Smallest bending radius, movable installation $46 \text{ mm}$	Wire diameter incl. insulation	1.55 mm
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. 0.90 mm  Overall twist Star quad  Optical shield covering 85 %  Insulation resistance $\geq 500 \text{ M}\Omega^*\text{km}$ Coupling resistance $\leq 20.00 \text{ m}\Omega/\text{m}$ (at $10 \text{ MHz}$ )  Loop resistance $\leq 120.00 \Omega/\text{km}$ Wave impedance $\leq 120.00 \Omega/\text{km}$ Nominal voltage, cable $\leq 100 \Omega \times 1$	External cable diameter	6.50 mm ±0.2 mm
Conductor material       Tin-plated Cu litz wires         Material wire insulation       PE         Single wire, color       white, yellow, blue, orange         Thickness, outer sheath       approx. 0.90 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       2000.00 V (50 Hz, 1 min.)         Minimum bending radius, fixed installation       3 x D         Minimum bending radius, fixed installation       7 x D         Smallest bending radius, fixed installation       20 mm         Smallest bending radius, movable installation       46 mm	Outer sheath, material	PVC
Material wire insulationPESingle wire, colorwhite, yellow, blue, orangeThickness, outer sheathapprox. $0.90 \text{ mm}$ Overall twistStar quadOptical shield covering $85\%$ Insulation resistance $\geq 500 \text{ M}\Omega'\text{km}$ Coupling resistance $\leq 20.00 \text{ m}\Omega/\text{m}$ (at $10 \text{ MHz}$ )Loop resistance $\leq 120.00 \Omega/\text{km}$ Wave impedance $100 \Omega \pm 15 \Omega$ (at $100 \text{ MHz}$ )Nominal voltage, cable $600 \text{ V}$ Test voltage Core/Core $2000 \text{ V}$ ( $50 \text{ Hz}$ , $1 \text{ min.}$ )Test voltage Core/Shield $2000.00 \text{ V}$ ( $50 \text{ Hz}$ , $1 \text{ min.}$ )Minimum bending radius, fixed installation $3 \times D$ Minimum bending radius, fixed installation $7 \times D$ Smallest bending radius, fixed installation $20 \text{ mm}$ Smallest bending radius, movable installation $46 \text{ mm}$	External sheath, color	green RAL 6018
Single wire, color       white, yellow, blue, orange         Thickness, outer sheath       approx. 0.90 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       2000.00 V (50 Hz, 1 min.)         Minimum bending radius, fixed installation       3 x D         Minimum bending radius, flexible installation       7 x D         Smallest bending radius, fixed installation       20 mm         Smallest bending radius, movable installation       46 mm	Conductor material	Tin-plated Cu litz wires
Thickness, outer sheathapprox. 0.90 mmOverall twistStar quadOptical shield covering85 %Insulation resistance≥ 500 MΩ*kmCoupling resistance≤ 20.00 mΩ/m (at 10 MHz)Loop resistance≤ 120.00 Ω/kmWave impedance100 $Ω ± 15 Ω$ (at 100 MHz)Nominal voltage, cable600 VTest voltage Core/Core2000 V (50 Hz, 1 min.)Test voltage Core/Shield2000.00 V (50 Hz, 1 min.)Minimum bending radius, fixed installation3 x DMinimum bending radius, fixed installation7 x DSmallest bending radius, fixed installation20 mmSmallest bending radius, movable installation46 mm	Material wire insulation	PE
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       2000.00 V (50 Hz, 1 min.)         Minimum bending radius, fixed installation       3 x D         Minimum bending radius, flexible installation       7 x D         Smallest bending radius, movable installation       20 mm         Smallest bending radius, movable installation       46 mm	Single wire, color	white, yellow, blue, orange
Optical shield covering       85 %         Insulation resistance       ≥ 500 MΩ*km         Coupling resistance       ≤ 20.00 mΩ/m (at 10 MHz)         Loop resistance       ≤ 120.00 $\Omega$ /km         Wave impedance       100 $\Omega$ ±15 $\Omega$ (at 100 MHz)         Nominal voltage, cable       600 V         Test voltage Core/Core       2000 V (50 Hz, 1 min.)         Test voltage Core/Shield       2000.00 V (50 Hz, 1 min.)         Minimum bending radius, fixed installation       3 x D         Minimum bending radius, flexible installation       7 x D         Smallest bending radius, fixed installation       20 mm         Smallest bending radius, movable installation       46 mm	Thickness, outer sheath	approx. 0.90 mm
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       2000.00 V (50 Hz, 1 min.)         Minimum bending radius, fixed installation       3 x D         Minimum bending radius, flexible installation       7 x D         Smallest bending radius, fixed installation       20 mm         Smallest bending radius, movable installation       46 mm	Overall twist	Star quad
Coupling resistance≤ 20.00 mΩ/m (at 10 MHz)Loop resistance≤ 120.00 Ω/kmWave 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 $2000.00 V (50 Hz, 1 min.)$ Minimum bending radius, fixed installation $3 × D$ Minimum bending radius, flexible installation $7 × D$ Smallest bending radius, fixed installation $20 mm$ Smallest bending radius, movable installation $46 mm$	Optical shield covering	85 %
Loop resistance≤ 120.00 Ω/kmWave 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 $2000.00 V (50 Hz, 1 min.)$ Minimum bending radius, fixed installation $3 × D$ Minimum bending radius, flexible installation $7 × D$ Smallest bending radius, fixed installation $20 mm$ Smallest bending radius, movable installation $46 mm$	Insulation resistance	≥ 500 MΩ*km
Wave impedance $100 \Omega \pm 15 \Omega$ (at $100 \text{ MHz}$ )Nominal voltage, cable $600 \text{ V}$ Test voltage Core/Core $2000 \text{ V}$ (50 Hz, 1 min.)Test voltage Core/Shield $2000.00 \text{ V}$ (50 Hz, 1 min.)Minimum bending radius, fixed installation $3 \times D$ Minimum bending radius, flexible installation $7 \times D$ Smallest bending radius, fixed installation $20 \text{ mm}$ Smallest bending radius, movable installation $46 \text{ mm}$	Coupling resistance	≤ 20.00 mΩ/m (at 10 MHz)
Nominal voltage, cable  Fest voltage Core/Core  2000 V (50 Hz, 1 min.)  Test voltage Core/Shield  2000.00 V (50 Hz, 1 min.)  Minimum bending radius, fixed installation  3 x D  Minimum bending radius, flexible installation  7 x D  Smallest bending radius, movable installation  46 mm	Loop resistance	≤ 120.00 Ω/km
Test voltage Core/Core 2000 V (50 Hz, 1 min.)  Test voltage Core/Shield 2000.00 V (50 Hz, 1 min.)  Minimum bending radius, fixed installation 3 x D  Minimum bending radius, flexible installation 7 x D  Smallest bending radius, fixed installation 20 mm  Smallest bending radius, movable installation 46 mm	Wave impedance	100 $\Omega$ ±15 $\Omega$ (at 100 MHz)
Test voltage Core/Shield  2000.00 V (50 Hz, 1 min.)  Minimum bending radius, fixed installation  3 x D  Minimum bending radius, flexible installation  7 x D  Smallest bending radius, fixed installation  20 mm  Smallest bending radius, movable installation  46 mm	Nominal voltage, cable	600 V
Minimum bending radius, fixed installation 3 x D  Minimum bending radius, flexible installation 7 x D  Smallest bending radius, fixed installation 20 mm  Smallest bending radius, movable installation 46 mm	Test voltage Core/Core	2000 V (50 Hz, 1 min.)
Minimum bending radius, flexible installation 7 x D  Smallest bending radius, fixed installation 20 mm  Smallest bending radius, movable installation 46 mm	Test voltage Core/Shield	2000.00 V (50 Hz, 1 min.)
Smallest bending radius, fixed installation 20 mm  Smallest bending radius, movable installation 46 mm	Minimum bending radius, fixed installation	3 x D
Smallest bending radius, movable installation 46 mm	Minimum bending radius, flexible installation	7 x D
	Smallest bending radius, fixed installation	20 mm
Near end crosstalk attenuation (NEXT) 80 dB (with 1 MHz)	Smallest bending radius, movable installation	46 mm
	Near end crosstalk attenuation (NEXT)	80 dB (with 1 MHz)



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	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 Ambient temperature (operation)	UV resistant (according to UL 1581, Section 1200)
	-40 °C 70 °C (cable, fixed installation)
	-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)
Ambient temperature (operation)	-2585
UL Type Rating	Type 4 (indoor use only)

#### Standards and regulations

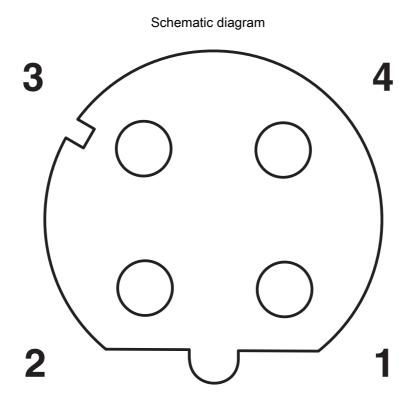
Standards/specifications	according to IEC 61076-2-101



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### Drawings



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



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### Classifications

F(	JL	A;	SS	S

	ECLASS-13.0	27440103
ΕΊ	ГІМ	
	ETIM 9.0	EC002635
U	NSPSC	
	UNSPSC 21.0	39121400



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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	9afe860c-8f86-456c-a784-f3f63898a0c7

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