

1407427

https://www.phoenixcontact.com/us/products/1407427

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Network cable, Ethernet CAT5 (1 Gbps), 8-position, PUR halogen-free, water blue RAL 5021, shielded, Plug straight M12 SPEEDCON, coding: A / IP67, on Plug straight RJ45 Push Pull / IP67, cable length: 2 m

Commercial data

Item number	1407427
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF04
Product key	AF1CMI
GTIN	4046356775496
Weight per piece (including packing)	112.98 g
Weight per piece (excluding packing)	112.98 g
Customs tariff number	85444210
Country of origin	PL



1407427

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Technical data

Notes

General	Further products with variable cable type and variable cable
	length can be found in the accessories section

Product properties

Product type	Data cable preassembled
Application	Standard
Sensor type	Ethernet
Number of positions	8
Shielded	yes
Coding	A

Interfaces

Bus system	Ethernet
Signal type/category	Ethernet CAT5 (based on IEC 11801), 1 Gbps

Signaling

Status display	no
Status display present	no

Electrical properties

Nominal voltage U _N	30 V AC
	30 V DC
Nominal current I _N	1 A
Transmission medium	Copper
Transmission speed	1 Gbps
Transmission characteristics (category)	CAT5 (IEC 11801:2002)

Connector

Connection 1

Dimensional drawing	Pin assignment M12 plug, 8-pos., A-coded, view plug side
Туре	M12 Plug, angled, 8-position, shielded (Advanced Shielding Technology), Keying: A
Number of positions	8
Shielded	yes
Shielding	Advanced Shielding Technology



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Signal type/category	Ethernet CAT5, 1 bps
Insertion/withdrawal cycles	≥ 100
Insulation resistance	≥ 100 Ω
Overvoltage category	II
Degree of pollution	3
Tightening torque	0.4 Nm (M12 connector)
Material Contact	CuZn
Material Contact surface	Ni/Au
Material Contact carrier	PA 6.6
Material Screw connection	Die-cast zinc, nickel-plated
Material Grip body	TPU, hardly inflammable, self-extinguishing
Material Seal	FKM
Flammability rating according to UL 94	V0
Ambient temperature (operation)	-25 °C 85 °C
Standard designation	M12 connector
Standards/regulations	IEC 61076-2-101

Connection 2

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Connector pin assignment plug RJ45

Туре	RJ45 Plug, straight
Insertion/withdrawal cycles	≥ 750
Insulation resistance	≥ 100 MΩ
Overvoltage category	l I
Degree of pollution	2
Material Contact	CuSn
Material Contact surface	Ni/Au
Material Contact carrier	PC
Material Housing	Metal
Flammability rating according to UL 94	V0
Degree of protection	IP67
Ambient temperature (operation)	-40 °C 70 °C

Cable/line

Cable length	2 m
Ethernet flexible CAT5, 4-pair [94B]	



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Cable weight 47 kg/km UL AWM Style 20963 (80°C/30 V) Number of positions 8 Shielded yes Cable type Ethernet flexible CAT5, 4-pair [94B] Conductor structure 4x2xAWG26/7, SF/UTP Signal runtime 5.3 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 0.96 mm External cable diameter 6.40 mm ±0.2 mm Outer sheath, material PUR External sheath, color water blue RAL 5021 Conductor material Bare Cu litz wires Material wire insulation Foamed PE Single wire, color white/blue-blue, white/orange-orange, white/green-green, white/green-green, white/green-green, white/brown-brown Thickness, outer sheath 1.05 mm Twisted pairs 2 cores to the pair Overall twist 4 pairs for core Optical shield covering 70 % Insulation resistance ≤ 50 mkm Coupling resistance ≤ 100.	Dimensional drawing	
UL AWM Style 20963 (80°C/30 V) Number of positions 8 Shielded yes Cable type Ethernet flexible CAT5, 4-pair [94B] Conductor structure 4x2xAWC26/7, SF/UTP Signal runtime 5.3 ns/m Conductor structure signal line 7x 0.16 mm AWC signal line 26 Conductor cross section 4x 2x 0.14 mm² Wire diameter ind, insulation 0.96 mm External cable diameter 6.40 mm ±0.2 mm Outer sheath, material PUR External sheath, color water blue RAL 5021 Conductor material Bare Cu litz wires Material wire insulation Foamed PE Single wire, color white/blue-blue, white/orange-orange, white/green-green, white/	Cable weight	47 kg/km
Shielded yes Cable type Ethernet flexible CAT5, 4-pair [94B] Conductor structure 4x2xAWG26/7, SF/UTP Signal runtime 5.3 ns/m Conductor structure signal line 7x 0.16 mm AWG signal line 26 Conductor cross section $4x 2x 0.14 \text{ mm}^2$ Wire diameter incl. insulation 0.96 mm External cable diameter 6.40 mm ±0.2 mm Outer sheath, material PUR External sheath, color water blue RAL 5021 Conductor material Bare Cu litz wires Material wire insulation Foamed PE Single wire, color white/blue-blue, white/orange-orange, white/green-green, writtle/brown-brown Thickness, outer sheath 1.05 mm Twisted pairs 2 cores to the pair Overall twist 4 pairs for core Optical shield covering 70 % Insulation resistance \leq 5 GC*km Coupling resistance \leq 100.00 mΩ/m (at 10 MHz) Cuopir gresistance \leq 100.00 mΩ/m (at 100 MHz) Cable capacity 48 nF/km (at 1 kHz) Vave impedanc	UL AWM Style	20963 (80°C/30 V)
Cable type Ethernet flexible CAT5, 4-pair [94B] Conductor structure $4x2xAWG26/7$, SF/UTP Signal runtime 5.3 ns/m Conductor structure signal line $7x.0.16 \text{ mm}$ AWG signal line 26 Conductor cross section $4x.2x.0.14 \text{ mm}^+$ Wire diameter incl. insulation 0.96 mm External cable diameter $6.40 \text{ mm} \pm 0.2 \text{ mm}$ Outer sheath, material PUR External sheath, color water blue RAL 5021 Conductor material Bare Cu litz wires Material wire insulation Foamed PE Single wire, color white/blue-blue, white/orange-orange, white/green-green, white	Number of positions	8
Conductor structure $4x2xAWG28/7$, SF/UTP Signal runtime 5.3 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 0.96 mm External cable diameter 6.40 mm ± 0.2 mm Outer sheath, material PUR External sheath, color water blue RAL 5021 Conductor material Bare Cu litz wires Material wire insulation Foarmed PE Single wire, color white/blue-blue, white/orange-orange, white/green-green, white/gree	Shielded	yes
Signal runtime 5.3 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 0.96 mm External cable diameter 6.40 mm ± 0.2 mm Outer sheath, material PUR External sheath, color water blue RAL 5021 Conductor material Bare Cu litz wires Material wire insulation Foamed PE Single wire, color white/blue-blue, white/orange-orange, white/green-green, white/green-green, white/prown-brown Thickness, outer sheath 1.05 mm Twisted pairs 2 cores to the pair Overall tvist 4 pairs for core Optical shield covering 70 % Insulation resistance ≥ 5 GQ*km Coupling resistance ≤ 100.00 mΩ/m (at 10 MHz) Loop resistance ≤ 290.00 Ω/km Wave impedance ≤ 100 V Cable capacity 48 nF/km (at 1 kHz) Nominal voltage, cable ≤ 100 V Test voltage Core/Core 700 V (50 Hz, 1 min.) Test voltage Core/Shield </td <td>Cable type</td> <td>Ethernet flexible CAT5, 4-pair [94B]</td>	Cable type	Ethernet flexible CAT5, 4-pair [94B]
Conductor structure signal line 7x 0.16 mm AWG signal line 26 Conductor cross section 4x 2x 0.14 mm² Wire diameter incl. insulation 0.96 mm External cable diameter 6.40 mm ±0.2 mm Outer sheath, material PUR External sheath, color water blue RAL 5021 Conductor material Bare Cu litz wires Material wire insulation Foamed PE Single wire, color white/blue-blue, white/orange-orange, white/green-green, white/green-green, white/prown-brown Thickness, outer sheath 1.05 mm Twisted pairs 2 cores to the pair Overall twist 4 pairs for core Optical shield covering 70 % Insulation resistance ≥ 5 GQ*km Coupling resistance ≤ 100.00 mΩ/m (at 10 MHz) Loop resistance ≤ 290.00 Ω/km Wave impedance 100 Ω ± 5 Ω (at 100 MHz) Cable capacity 48 nF/km (at 1 kHz) 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.) <	Conductor structure	4x2xAWG26/7, SF/UTP
AWG signal line 26 Conductor cross section 4x 2x 0.14 mm² Wire diameter incl. insulation 0.96 mm External cable diameter 6.40 mm ±0.2 mm Outer sheath, material PUR External sheath, color water blue RAL 5021 Conductor material Bare Cu litz wires Material wire insulation Foamed PE Single wire, color white/blue-blue, white/orange-orange, white/green-green, white/gre	Signal runtime	5.3 ns/m
Conductor cross section $4x 2x 0.14 \text{ mm}^2$ Wire diameter incl. insulation 0.96 mm External cable diameter $6.40 \text{ mm} \pm 0.2 \text{ mm}$ Outer sheath, material PUR External sheath, color water blue RAL 5021 Conductor material Bare Cu litz wires Material wire insulation Foamed PE Single wire, color white/blue-blue, white/orange-orange, white/green-green, white/green-green, white/grown-brown Thickness, outer sheath 1.05 mm Twisted pairs $2 \text{ cores to the pair}$ Overall twist 4 pairs for core Optical shield covering 70% Insulation resistance $2 \text{ G} \Omega^* \text{km}$ Coupling resistance $5 \text{ G} \Omega^* \text{km}$ Coupling resistance $5 \text{ G} \Omega \times \text{km}$ Vave impedance $100 \Omega \times 5 \Omega \times \text{ (at } 100 \text{ MHz})$ Cable capacity $48 \text{ nF/km} (\text{at } 1 \text{ kHz})$ Nominal voltage, cable $40 \text{ V} \times \text{ (50 Hz}, 1 \text{ min.)}$ Test voltage Core/Core $700 \text{ V} \times \text{ (50 Hz}, 1 \text{ min.)}$ Test voltage Core/Shield $700.00 \text{ V} \times \text{ (50 Hz}, 1 \text{ min.)}$ Minimum bending radius, fixed installation $8 \times D$ <td>Conductor structure signal line</td> <td>7x 0.16 mm</td>	Conductor structure signal line	7x 0.16 mm
Wire diameter incl. insulation 0.96 mm External cable diameter 6.40 mm ±0.2 mm Outer sheath, material PUR External sheath, color water blue RAL 5021 Conductor material Bare Cu litz wires Material wire insulation Foamed PE Single wire, color white/blue-blue, white/orange-orange, white/green-green, white/brown-brown Thickness, outer sheath 1.05 mm Twisted pairs 2 cores to the pair Overall twist 4 pairs for core Optical shield covering 70 % Insulation resistance ≤ 5 GΩ*km Coupling resistance ≤ 100.00 mΩ/m (at 10 MHz) Uave impedance 100 Ω ± 5 Ω (at 100 MHz) Wave impedance 100 Ω ± 5 Ω (at 100 MHz) Cable capacity 48 nF/km (at 1 kHz) 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 8 x D Smallest bending radius, fixed installation 52 mm	AWG signal line	26
External cable diameter $6.40 \text{ mm} \pm 0.2 \text{ mm}$ Outer sheath, material PUR External sheath, color water blue RAL 5021 Conductor material Bare Cu litz wires Material wire insulation Foamed PE Single wire, color white/blue-blue, white/orange-orange, white/green-green, white/brown-brown Thickness, outer sheath 1.05 mm Twisted pairs $2 \text{ cores to the pair}$ Overall twist 4 pairs for core Optical shield covering 70% Insulation resistance $2 5 \text{ GM}^*\text{km}$ Coupling resistance $5 100.00 \text{ m/m}$ (at 10 MHz) Loop resistance $5 200.00 \text{ Q/km}$ Wave impedance $100 \Omega \pm 5 \Omega$ (at 100 MHz) Cable capacity 48 nF/km (at 1 kHz) Nominal voltage, cable $5 100 \text{ V}$ Test voltage Core/Core 700 V (50 Hz, 1 min.) Test voltage Core/Shield 70.00 V (50 Hz, 1 min.) Minimum bending radius, fixed installation $8 \times D$ Smallest bending radius, fixed installation 26 mm Smallest bending radius, movable installation 50 mm	Conductor cross section	4x 2x 0.14 mm²
Outer sheath, material PUR External sheath, color water blue RAL 5021 Conductor material Bare Cu litz wires Material wire insulation Foamed PE Single wire, color white/blue-blue, white/orange-orange, white/green-green, white/green-green, white/brown-brown Thickness, outer sheath 1.05mm Twisted pairs $2 \text{cores to the pair}$ Overall twist 4pairs for core Optical shield covering 70% Insulation resistance $2 5 \text{GM}^*\text{km}$ Coupling resistance $5 100.00 \text{m} \text{m/m}$ (at 10MHz) Loop resistance $5 100.00 \text{m} \text{m/m}$ (at 10MHz) Wave impedance $100 \Omega \pm 5 \Omega$ (at 100MHz) Cable capacity 48nF/km (at 1kHz) Nominal voltage, cable $5 100.00 \text{m}$ Test voltage Core/Core 700.00V (50 Hz, 1min.) Test voltage Core/Shield 700.00V (50 Hz, 1min.) Minimum bending radius, fixed installation $8 \text{x} \text{D}$ Smallest bending radius, fixed installation 26mm Smallest bending radius, movable installation 50mm	Wire diameter incl. insulation	0.96 mm
External sheath, color water blue RAL 5021 Conductor material Bare Cu litz wires Material wire insulation Foamed PE Single wire, color white/brown-brown Thickness, outer sheath 1.05 mm Twisted pairs 2 cores to the pair Overall twist 4 pairs for core Optical shield covering 70 % Insulation resistance $\geq 5 \text{ GO*km}$ Coupling resistance $\leq 100.00 \text{ m/m}$ (at 10 MHz) Loop resistance $\leq 290.00 \text{ O/km}$ Wave impedance $\leq 100 \text{ V}$ (50 Hz, 1 min.) Test voltage Core/Core 700.00 V (50 Hz, 1 min.) Test voltage Core/Shield 700.00 Kg his blallation $\leq x \text{ V}$ D Minimum bending radius, fixed installation $\leq x \text{ V}$ D Smallest bending radius, movable installation $\leq 26 \text{ mm}$ Smallest bending radius, movable installation $\leq 26 \text{ mm}$	External cable diameter	6.40 mm ±0.2 mm
Conductor material Bare Cu litz wires Material wire insulation Foamed PE Single wire, color white/blue-blue, white/orange-orange, white/green-green, white/brown-brown Thickness, outer sheath 1.05 mm Twisted pairs $2 \text{ cores to the pair}$ Overall twist 4 pairs for core Optical shield covering 70 % Insulation resistance $\leq 5 \text{ G}\Omega^*\text{km}$ Coupling resistance $\leq 100.00 \text{ m}\Omega/\text{m}$ (at 10 MHz) Loop resistance $\leq 290.00 \Omega/\text{km}$ Wave impedance $100 \Omega \pm 5 \Omega$ (at 100 MHz) Cable capacity 48 nF/km (at 1 kHz) Nominal voltage, cable $\leq 100 \text{ V}$ Test voltage Core/Core $700 \text{ V (50 Hz, 1 min.)}$ Test voltage Core/Shield $700.00 \text{ V (50 Hz, 1 min.)}$ Minimum bending radius, fixed installation $4 \times D$ Minimum bending radius, fixed installation $8 \times D$ Smallest bending radius, fixed installation 26 mm Smallest bending radius, movable installation 52 mm	Outer sheath, material	PUR
Material wire insulationFoamed PESingle wire, colorwhite/blue-blue, white/orange-orange, white/green-green, white/brown-brownThickness, outer sheath 1.05 mm Twisted pairs $2 \text{ cores to the pair}$ Overall twist 4 pairs for core Optical shield covering 70 % Insulation resistance $\geq 5 \text{ GO}^*\text{km}$ Coupling resistance $\leq 100.00 \text{ m}\Omega/\text{m}$ (at 10 MHz)Loop resistance $\leq 290.00 \Omega/\text{km}$ Wave impedance $100 \Omega \pm 5 \Omega$ (at 100 MHz)Cable capacity 48 nF/km (at 1 kHz)Nominal voltage, cable $\leq 100 \text{ V}$ 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 $4 \times D$ Minimum bending radius, flexible installation $8 \times D$ Smallest bending radius, movable installation 26 mm Smallest bending radius, movable installation 52 mm	External sheath, color	water blue RAL 5021
Single wire, colorwhite/blue-blue, white/orange-orange, white/green-green, white/brown-brownThickness, outer sheath 1.05 mm Twisted pairs $2 \text{ cores to the pair}$ Overall twist 4 pairs for core Optical shield covering 70% Insulation resistance $\geq 5 \text{ G}\Omega^*\text{km}$ Coupling resistance $\leq 100.00 \text{ m}\Omega/\text{m}$ (at 10 MHz)Loop resistance $\leq 290.00 \Omega/\text{km}$ Wave impedance $100 \Omega \pm 5 \Omega$ (at 100 MHz)Cable capacity 48 nF/km (at 1 kHz)Nominal voltage, cable $\leq 100 \text{ V}$ 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 $4 \times D$ Smallest bending radius, fixed installation $8 \times D$ Smallest bending radius, movable installation 26 mm Smallest bending radius, movable installation 52 mm	Conductor material	Bare Cu litz wires
Thickness, outer sheath 1.05 mm Twisted pairs $2 \text{ cores to the pair}$ Overall twist 4 pairs for core Optical shield covering 70% Insulation resistance $\geq 5 \text{ G}\Omega^*\text{km}$ Coupling resistance $\leq 100.00 \text{ m}\Omega/\text{m}$ (at 10 MHz)Loop resistance $\leq 290.00 \Omega/\text{km}$ Wave impedance $100 \Omega \pm 5 \Omega$ (at 100 MHz)Cable capacity 48 nF/km (at 1 kHz)Nominal voltage, cable $\leq 100 \text{ V}$ Test voltage Core/Core $700 \text{ V (50 Hz, 1 min.)}$ Test voltage Core/Shield $700.00 \text{ V (50 Hz, 1 min.)}$ Minimum bending radius, fixed installation $4 \times D$ Smallest bending radius, fixed installation $8 \times D$ Smallest bending radius, movable installation 52 mm	Material wire insulation	Foamed PE
Twisted pairs 2 cores to the pair Overall twist 4 pairs for core Optical shield covering 70 % Insulation resistance $\geq 5 \text{ G}\Omega^*\text{km}$ Coupling resistance $\leq 100.00 \text{ m}\Omega/\text{m} (\text{at } 10 \text{ MHz})$ Loop resistance $\leq 290.00 \Omega/\text{km}$ Wave impedance $100 \Omega \pm 5 \Omega (\text{at } 100 \text{ MHz})$ Cable capacity $48 \text{ nF/km} (\text{at } 1 \text{ kHz})$ Nominal voltage, cable $\leq 100 \text{ V}$ Test voltage Core/Core $700 \text{ V } (50 \text{ Hz}, 1 \text{ min.})$ Test voltage Core/Shield $700.00 \text{ V } (50 \text{ Hz}, 1 \text{ min.})$ Minimum bending radius, fixed installation $4 \times D$ Minimum bending radius, fixed installation $8 \times D$ Smallest bending radius, movable installation 52 mm	Single wire, color	
Overall twist 4 pairs for core Optical shield covering 70 % Insulation resistance ≥ 5 GΩ*km Coupling resistance ≤ 100.00 mΩ/m (at 10 MHz) Loop resistance ≤ 290.00 Ω/km Wave impedance 100 Ω ±5 Ω (at 100 MHz) Cable capacity 48 nF/km (at 1 kHz) 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	Thickness, outer sheath	1.05 mm
Optical shield covering 70 % Insulation resistance ≥ 5 GΩ*km Coupling resistance ≤ 100.00 mΩ/m (at 10 MHz) Loop resistance ≤ 290.00 Ω/km Wave impedance 100 Ω ±5 Ω (at 100 MHz) Cable capacity 48 nF/km (at 1 kHz) 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, fixed installation 8 x D Smallest bending radius, movable installation 26 mm Smallest bending radius, movable installation 52 mm	Twisted pairs	2 cores to the pair
Insulation resistance ≥ 5 GΩ*km Coupling resistance ≤ 100.00 mΩ/m (at 10 MHz) Loop resistance ≤ 290.00 Ω/km Wave impedance 100 Ω ±5 Ω (at 100 MHz) Cable capacity 48 nF/km (at 1 kHz) 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	Overall twist	4 pairs for core
Coupling resistance≤ 100.00 mΩ/m (at 10 MHz)Loop resistance≤ 290.00 Ω/kmWave impedance $100 Ω ±5 Ω (at 100 MHz)$ Cable capacity $48 nF/km (at 1 kHz)$ Nominal voltage, cable≤ 100 VTest 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 $4 × D$ Minimum bending radius, flexible installation $8 × D$ Smallest bending radius, fixed installation $26 mm$ Smallest bending radius, movable installation $52 mm$	Optical shield covering	70 %
Loop resistance≤ 290.00 Ω/kmWave impedance $100 Ω ± 5 Ω (at 100 MHz)$ Cable capacity $48 nF/km (at 1 kHz)$ 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 $4 × D$ Minimum bending radius, flexible installation $8 × D$ Smallest bending radius, fixed installation $26 mm$ Smallest bending radius, movable installation $52 mm$	Insulation resistance	≥ 5 GΩ*km
Wave impedance $100 Ω ±5 Ω (at 100 MHz)$ Cable capacity $48 nF/km (at 1 kHz)$ 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 $4 × D$ Minimum bending radius, flexible installation $8 × D$ Smallest bending radius, movable installation $26 mm$ Smallest bending radius, movable installation $52 mm$	Coupling resistance	≤ 100.00 mΩ/m (at 10 MHz)
Cable capacity 48 nF/km (at 1 kHz) 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	Loop resistance	≤ 290.00 Ω/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	Wave impedance	100 Ω ±5 Ω (at 100 MHz)
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, movable installation 26 mm Smallest bending radius, movable installation 52 mm	Cable capacity	48 nF/km (at 1 kHz)
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	Nominal voltage, cable	≤ 100 V
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	Test voltage Core/Core	700 V (50 Hz, 1 min.)
Minimum bending radius, flexible installation 8 x D Smallest bending radius, fixed installation 26 mm Smallest bending radius, movable installation 52 mm	Test voltage Core/Shield	700.00 V (50 Hz, 1 min.)
Smallest bending radius, fixed installation26 mmSmallest bending radius, movable installation52 mm	Minimum bending radius, fixed installation	4 x D
Smallest bending radius, movable installation 52 mm	Minimum bending radius, flexible installation	8 x D
	Smallest bending radius, fixed installation	26 mm
Tensile strength ≤ 100 N	Smallest bending radius, movable installation	52 mm
	Tensile strength	≤ 100 N



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Near end crosstalk attenuation (NEXT)	62.3 dB (at 4 MHz)
	56.3 dB (at 10 MHz)
	53.2 dB (at 16 MHz)
	51.8 dB (at 20 MHz)
	48.9 dB (at 31.25 MHz)
	44.4 dB (at 62.5 MHz)
	41.3 dB (at 100 MHz)
Power-summated near end crosstalk attenuation (PSNEXT)	62.3 dB (with 1 MHz)
	53.3 dB (at 4 MHz)
	47.3 dB (at 10 MHz)
	44.2 dB (at 16 MHz)
	42.8 dB (at 20 MHz)
	39.9 dB (at 31.25 MHz)
	35.4 dB (at 62.5 MHz)
	32.3 dB (at 100 MHz)
Return attenuation (RL)	23 dB (at 4 MHz)
	24.1 dB (at 8 MHz)
	25 dB (at 10 MHz)
	25 dB (at 16 MHz)
	25 dB (at 20 MHz)
	23.6 dB (at 31.25 MHz)
	21.5 dB (at 62.5 MHz)
	20.1 dB (at 100 MHz)
Shield attenuation	3.2 dB (with 1 MHz)
	6 dB (at 4 MHz)
	9.5 dB (at 10 MHz)
	12.1 dB (at 16 MHz)
	13.6 dB (at 20 MHz)
	17.1 dB (at 31.25 MHz)
	24.8 dB (at 62.5 MHz)
	32 dB (at 100 MHz)
Halogen-free	according to IEC 60754-1
Flame resistance	according to IEC 60332-1-2
Resistance to oil	in accordance with EN 60811-2-1
Ambient temperature (operation)	-40 °C 80 °C (cable, fixed installation)
	-20 °C 80 °C (Cable, flexible installation)
Ambient temperature (installation)	-20 °C 80 °C

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP65 (M12 connector)	
	IP67 (M12 connector)	
	IP67 (RJ45 connector)	



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Ambient temperature (operation) (male connector/female connector)	-25 °C 90 °C (M12 connector)
	-40 °C 70 °C (RJ45 connector)

Standards and regulations

M12

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

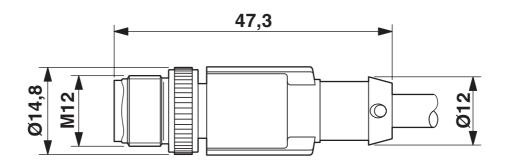


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Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

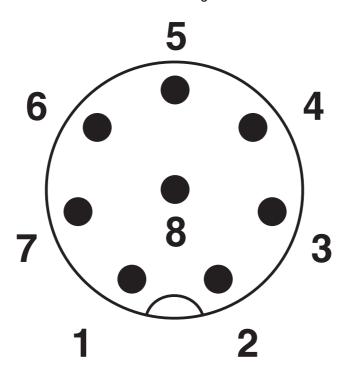
RJ45 Push-Pull connector, IP67



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Schematic diagram



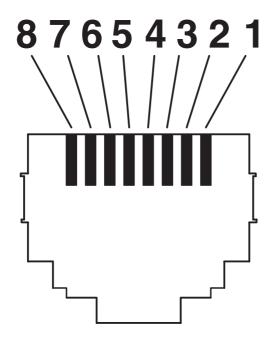
Pin assignment M12 plug, 8-pos., A-coded, view plug side



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Schematic diagram

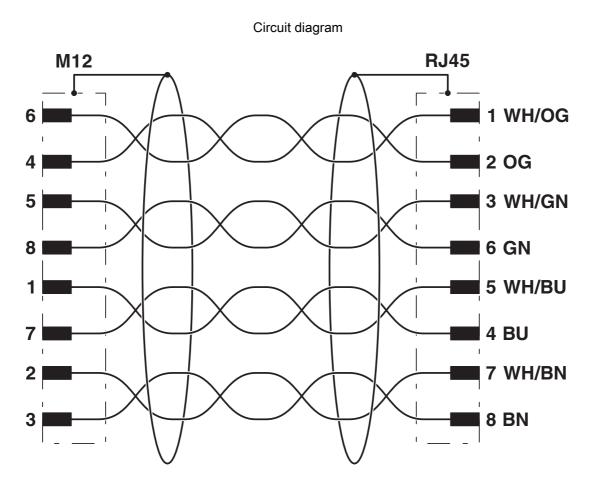


Connector pin assignment plug RJ45



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Contact assignment of the M12 and RJ45 plug



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Classifications

	ECLASS-13.0	27060307		
ETIM				
	ETIM 9.0	EC001855		
UNSPSC				
	UNSPSC 21.0	26121600		



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Environmental product compliance

EU RoHS

Yes, No exemptions
EFUP-E
No hazardous substances above the limits
6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol(CAS: n/a)
73088356-ff69-4753-978a-c2a600f48e94

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