

1553996
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Bus system cable, Ethernet CAT5 (1 Gbps), 8-position, PUR halogen-free, water blue RAL 5021, shielded, Plug straight M12, coding: A, on Socket straight M12, coding: A, cable length: 1 m

Commercial data

Item number	1553996
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	AF1CMI
GTIN	4046356161848
Weight per piece (including packing)	81.8 g
Weight per piece (excluding packing)	80.3 g
Country of origin	DE

SAC-8P-M12MS/ 1,0-940/M12FS - Bus system cable



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Technical data

Product properties

Product type	Data cable preassembled
Application	Standard
Sensor type	Ethernet
Number of positions	8
No. of cable outlets	1
Shielded	yes
Coding	A

Insulation characteristics

Overvoltage category	II
Degree of pollution	3

Interfaces

Signal type/category	Ethernet CAT5 (IEC 11801), 1 Gbps
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Signaling

Status display	no
Status display present	no

Electrical properties

Insulation resistance	$\geq 100 \text{ M}\Omega$
Nominal voltage U_N	30 V AC
	30 V DC
Nominal current I_N	2 A
Transmission medium	Copper
Transmission speed	1 Gbps
Transmission characteristics (category)	CAT5 (IEC 11801:2002)

Mechanical properties

Mechanical data

Insertion/withdrawal cycles	≥ 100
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Material specifications

Flammability rating according to UL 94	HB
Seal material	NBR
Material of grip body	TPU, hardly inflammable, self-extinguishing
Contact material	CuZn
Contact surface material	Ni/Au
Contact carrier material	TPU GF
Material for screw connection	Zinc die-cast, nickel-plated

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Connector

Connection 1

Type	Plug straight M12
Number of positions	8
Coding type	A (Standard)

Connection 2

Type	Socket straight M12
Number of positions	8
Coding type	A (Standard)

Cable/line

Cable length	1 m
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Ethernet flexible CAT5, 4-pair [94B]

Dimensional drawing	
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/brown-brown
Thickness, outer sheath	1.05 mm
Twisted pairs	2 cores to the pair
Overall twist	4 pairs for core

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Optical shield covering	70 %
Insulation resistance	$\geq 5 \text{ G}\Omega\cdot\text{km}$
Coupling resistance	$\leq 100.00 \text{ m}\Omega/\text{m}$ (at 10 MHz)
Loop resistance	$\leq 290.00 \text{ }\Omega/\text{km}$
Wave impedance	$100 \text{ }\Omega \pm 5 \text{ }\Omega$ (at 100 MHz)
Cable capacity	$48 \text{ nF}/\text{km}$ (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 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	$\leq 100 \text{ N}$
Near end crosstalk attenuation (NEXT)	71.3 dB (with 1 MHz)
	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-summed 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)

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	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

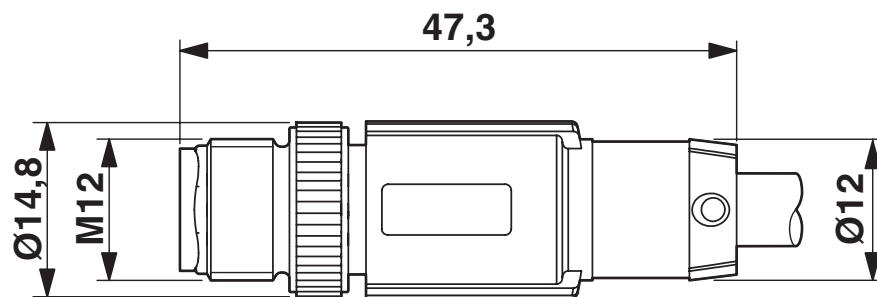
Environmental and real-life conditions

Ambient conditions

Degree of protection	IP65
	IP67
Ambient temperature (operation) (male connector/female connector)	-25 °C ... 90 °C (Plug / socket)
Ambient temperature (operation) (Cable, fixed installation)	-40 °C ... 70 °C (cable, fixed installation)
Ambient temperature (operation) (Cable, flexible installation)	-10 °C ... 50 °C (Cable, flexible installation)

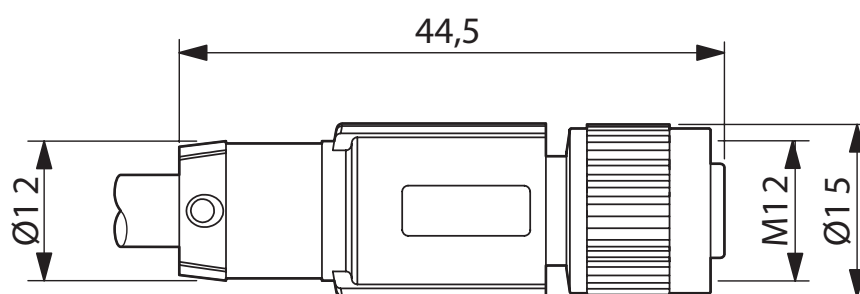
Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing

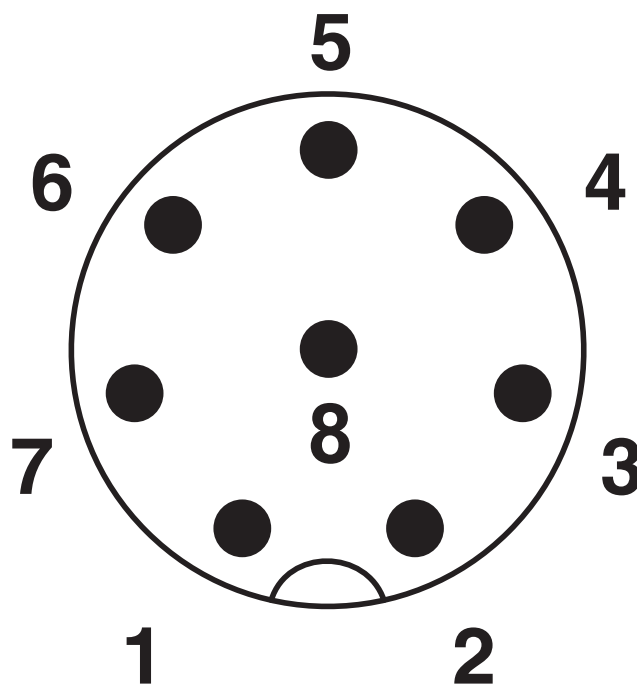


M12 x 1 socket, straight, shielded

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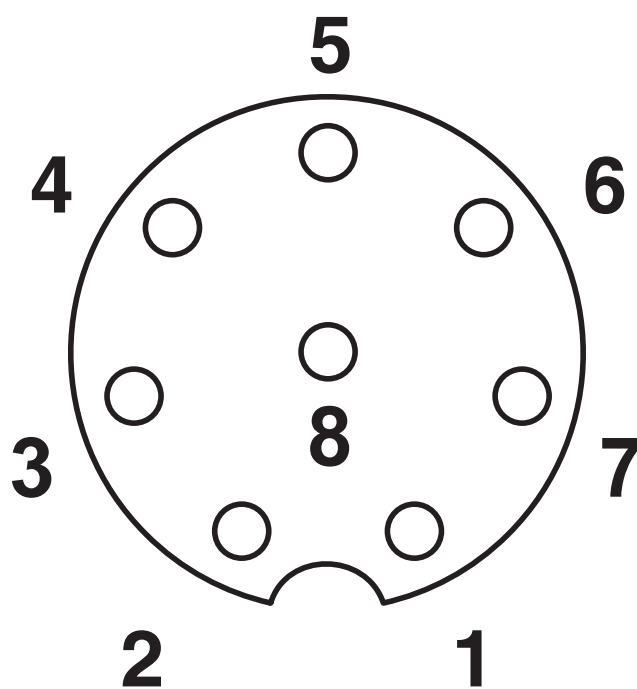
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Schematic diagram



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

Schematic diagram



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

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Classifications

ECLASS

ECLASS-13.0	27060307
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