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Network cable, Ethernet CAT6_A (10 Gbps), 8-position, PUR, water blue RAL 5021, Plug straight M12 SPEEDCON / IP65, coding: X, on Plug straight M12 SPEEDCON / IP65, coding: X, cable length: 20 m



Key Commercial Data

Packing unit	1 STK
GTIN	4 046356 504447
GTIN	4046356504447
Weight per Piece (excluding packing)	980.000 g
Custom tariff number	85444290
Country of origin	Poland

Technical data

Dimensions

Length of cable	20 m
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Ambient conditions

Degree of protection	IP65
	IP67
Ambient temperature (operation)	-25 °C 90 °C (Plug / socket)

General data

Rated current at 40°C	0.5 A
Rated voltage	48 V AC
	60 V DC



Technical data

General data

Number of positions	8
Signal type/category	Ethernet CAT6 _A , 10 Gbps
Overvoltage category	II
Degree of pollution	3
Alternative short product description	Ethernet cable

Characteristics head 1

Head type	Plug straight M12 SPEEDCON / IP65
No. of positions (pin connector pattern)	8 (8)
Coding	X (Data)
Color	black
Shielded	yes

Characteristics head 2

Head type	Plug straight M12 SPEEDCON / IP65
No. of positions (pin connector pattern)	8 (8)
Coding	X (Data)
Color	black
	black
Shielded	yes

Standards and Regulations

Flammability rating according to UL 94	НВ
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Cable

Cable type	Ethernet 10 Gbit
Cable type (abbreviation)	94F
UL AWM style	20963 (80°C/30 V)
Signal type/category	Ethernet CAT6 _A , 10 Gbps
Cable structure	4x2xAWG26/7; S/FTP
Conductor cross section	4x 2x 0.14 mm²
AWG signal line	26
Conductor structure signal line	7x 0.16 mm
Core diameter including insulation	1.04 mm
Wire colors	white/blue-blue, white/orange-orange, white/green-green, white/brown-brown
Twisted pairs	2 cores to the pair
Type of pair shielding	Aluminum-lined foil
Overall twist	4 pairs for core
Shielding	Tinned copper braided shield



Technical data

Cable

Optical shield covering	70 %
External sheath, color	water blue RAL 5021
Outer sheath thickness	0.65 mm
External cable diameter D	6.4 mm ±0.2 mm
Minimum bending radius, fixed installation	4 x D
Minimum bending radius, flexible installation	8 x D
Tensile strength GRP	≤ 100 N
Cable weight	42 kg/km
Outer sheath, material	PUR
Material conductor insulation	Foamed PE
Conductor material	Bare Cu litz wires
Insulation resistance	≥ 500 MΩ*km
Loop resistance	\leq 290.00 Ω /km
Wave impedance	100 Ω ±5 Ω (at 100 MHz)
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)
	36.3 dB (at 400 MHz)
	34.8 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)
	51.3 dB (at 25 MHz)
	49.9 dB (at 31.25 MHz)



Technical data

Cable

42.3 dB (at 100 MHz) 37.8 dB (at 200 MHz) 36.3 dB (at 250 MHz) 36.3 dB (at 250 MHz) 37.8 dB (at 250 MHz) 38.1 dB (at 300 MHz) 38.1 dB (at 400 MHz) 31.8 dB (at 500 MHz) 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) 25.5 dB (at 62.5 MHz) 41.4 dB (at 200 MHz) 41.4 dB (at 300 MHz) 41.4 dB (at 300 MHz) 42.5 dB (at 400 MHz) 43.6 dB (at 200 MHz) 44.6 dB (at 250 MHz) 51.4 dB (at 300 MHz) 60.1 dB (at 400 MHz) 60.1 dB (at 400 MHz) 61.4 dB (at 300 MHz) 62.5 dB (at 40 MHz) 23.5 dB (at 4 MHz) 24.5 dB (at 4 MHz) 25.5 dB (at 6 MHz) 25.5 dB (at 16 MHz) 25.5 dB (at 10 MHz) 42.5 dB (at 10 MHz) 42.5 dB (at 10 MHz) 25.5 dB (at 10 MHz) 26.5 dB (at 10 MHz) 27.5 dB (at 10 MHz) 28.5 dB (at 10 MHz) 29.5 dB (at 10 MHz) 40.6 dB (at 25 MHz) 41.4 dB (at 25 MHz) 42.3 dB (at 3.1.25 MHz) 42.3 dB (at 3.1.25 MHz) 43.3 dB (at 4.25 MHz) 44.4 dB (at 200 MHz)		
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20.7 dB (at 62.5 MHz) 19 dB (at 100 MHz) 16.4 dB (at 200 MHz)		24.2 dB (at 25 MHz)
19 dB (at 100 MHz) 16.4 dB (at 200 MHz)		23.3 dB (at 31.25 MHz)
16.4 dB (at 200 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 250 MHz)
15.6 dB (at 300 MHz)		15.6 dB (at 300 MHz)
15.6 dB (at 400 MHz)		15.6 dB (at 400 MHz)
15.6 dB (at 500 MHz)		15.6 dB (at 500 MHz)



Technical data

Cable

Signal runtime	5.13 ns/m
Shield attenuation	≥ 80 dB (at 30 100 MHz)
Nominal voltage, cable	≤ 100 V
Test voltage Core/Core	700 V (50 Hz, 1 min.)
Test voltage Core/Shield	700 V (50 Hz, 1 min.)
Flame resistance	according to IEC 60332-1-2
Halogen-free	according to IEC 60754-1
Resistance to oil	in accordance with DIN 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
Ambient temperature (storage/transport)	-20 °C 80 °C

Environmental Product Compliance

REACh SVHC	Lead 7439-92-1		
China RoHS	Environmentally Friendly Use Period = 50		
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"		

Drawings

Schematic diagram



M12 Cat6_A, 8-pos. plug pin assignment, pin side view

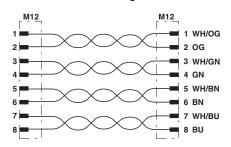
Cable cross section



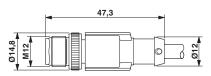
Ethernet 10 Gbit [94F]



Circuit diagram



Dimensional drawing



Contact assignment of the M12 plugs

Dimens. drawing: M12 connectors

Classifications

eCl@ss

eCl@ss 4.0	27060306
eCl@ss 4.1	27060306
eCl@ss 5.0	27061801
eCl@ss 5.1	19030300
eCl@ss 6.0	27061800
eCl@ss 7.0	27061801
eCl@ss 8.0	27061801
eCl@ss 9.0	27060308

ETIM

ETIM 2.0	EC000830
ETIM 3.0	EC000830
ETIM 4.0	EC002599
ETIM 5.0	EC002599
ETIM 6.0	EC000830

UNSPSC

UNSPSC 6.01	26121609
UNSPSC 7.0901	26121609
UNSPSC 11	26121609
UNSPSC 12.01	26121609
UNSPSC 13.2	26121604

Approvals

Approvals



Approvals

Approvals			
UL Listed / cUL Listed / cULus	Listed		
Ex Approvals			
Approval details			
UL Listed	UL LISTED	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 335024
Nominal voltage UN		30 V	
Nominal current IN		0.5 A	
cUL Listed	C UL	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 335024
Nominal voltage UN		30 V	
Nominal current IN		0.5 A	
Trommar samont in		0.071	
cULus Listed	C UL US		

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