

NBC-FSBPXS/1,0-94F/R4AC-10G - Network cable



1412315

<https://www.phoenixcontact.com/in/products/1412315>

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Network cable, degree of protection: IP67/IP20, cable length: 1 m, number of positions: 8, 10 Gbps, CAT6_A, cable outlet: straight, Ethernet

Your advantages

- Perfect for industrial applications
- Perfect for office, building, and protected industrial applications (e.g., in control cabinets)
- Compact angle

Commercial data

Item number	1412315
Packing unit	1 pc
Minimum order quantity	10 pc
Sales key	ABN
Product key	ABNPAC
GTIN	4046356953566
Weight per piece (including packing)	85.3 g
Weight per piece (excluding packing)	82.2 g
Customs tariff number	85444290
Country of origin	PL

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Technical data

Mounting

Mounting type	Screw mounting
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Product properties

Type	M12
Product type	Circular connectors (device side)
Sensor type	Ethernet
Number of positions	8
Number of slots	1
Shielded	yes
Coding	X
Cable outlet	straight

Insulation characteristics

Degree of pollution	3
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Material specifications

Material	Zinc die-cast (nickel-plated)
Flammability rating according to UL 94	V2
Seal material	FKM
Material of grip body	Zinc die-cast, nickel-plated
Contact material	CuZn
Contact surface material	gold-plated
Contact carrier material	PPA
Material for screw connection	Zinc die-cast, nickel-plated
Outer sheath, material	PUR

Electrical properties

Rated voltage (III/3)	72 V (DC)
Nominal voltage U_N	48 V
Nominal current I_N	0.5 A
Transmission medium	Copper
Transmission characteristics (category)	CAT6 _A
Transmission speed	10 Gbps

Connector

Connection 1

Type	Flush-type female connector straight M12
Locking type	SPEEDCON
Coding type	X (Data)
Degree of protection	IP67

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Connection 2

Type	Plug straight RJ45
Degree of protection	IP20

Cable/line

Cable length	1.00 m
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Ethernet 10 Gbit [94F]

Dimensional drawing	
Shielded	yes
UL AWM Style	20963 (80°C/30 V)
Cable weight	42 kg/km
Cable type	Ethernet 10 Gbit
Short symbol	02YSC11Y
Cable type (abbreviation)	94F
Signal type/category	Ethernet CAT6 _A , 10 Gbps
Cable structure	4x2xAWG26/7; S/FTP
External cable diameter	6.4 mm ±0.2 mm
Outer sheath, material	PUR
External sheath, color	water blue RAL 5021
Thickness, outer sheath	0.65 mm
Conductor material	Bare Cu litz wires
Conductor structure signal line	7x 0.16 mm
AWG signal line	26
Conductor cross section	4x 2x 0.14 mm ²
Material wire insulation	Foamed PE
Wire diameter incl. insulation	1.04 mm
Single wire, color	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
Optical shield covering	70 %
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.)

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Cable insulation resistance	≥ 500 MΩ*km
Wave impedance	100 Ω ±5 Ω (at 100 MHz)
Loop resistance	≤ 290.00 Ω/km
Cable capacity	47 nF/km
Signal runtime	5.13 ns/m
Tensile strength	≤ 100 N
Minimum bending radius, fixed installation	4 x D
Minimum bending radius, flexible installation	8 x D
Damping	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)
	22.5 dB (at 62.5 MHz)
	28.7 dB (at 100 MHz)
	41.4 dB (at 200 MHz)
	46.6 dB (at 250 MHz)
	51.4 dB (at 300 MHz)
	60.1 dB (at 400 MHz)
67.9 dB (at 500 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)
	38.1 dB (at 400 MHz)
38.1 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)

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	51.3 dB (at 25 MHz)
	49.9 dB (at 31.25 MHz)
	45.4 dB (at 62.5 MHz)
	42.3 dB (at 100 MHz)
	37.8 dB (at 200 MHz)
	36.3 dB (at 250 MHz)
	35.1 dB (at 300 MHz)
	33.3 dB (at 400 MHz)
	31.8 dB (at 500 MHz)
Return attenuation (RL)	20 dB (with 1 MHz)
	23 dB (at 4 MHz)
	24.5 dB (at 8 MHz)
	25 dB (at 10 MHz)
	25 dB (at 16 MHz)
	25 dB (at 20 MHz)
	24.2 dB (at 25 MHz)
	23.3 dB (at 31.25 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 300 MHz)
	15.6 dB (at 400 MHz)
	15.6 dB (at 500 MHz)
Shield attenuation	≥ 80 dB (at 30 ... 100 MHz)
Halogen-free	according to IEC 60754-1
Resistance to oil	in accordance with DIN EN 60811-2-1
Flame resistance	according to IEC 60332-1-2
Ambient temperature (operation)	-20 °C ... 80 °C (Cable, flexible installation)
	-40 °C ... 80 °C (cable, fixed installation)

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP67 (M12 socket)
	IP20 (RJ45 connector)
	IP67/IP20
Ambient temperature (operation)	-25 °C ... 60 °C (Plug / socket)

Drawings

Schematic diagram

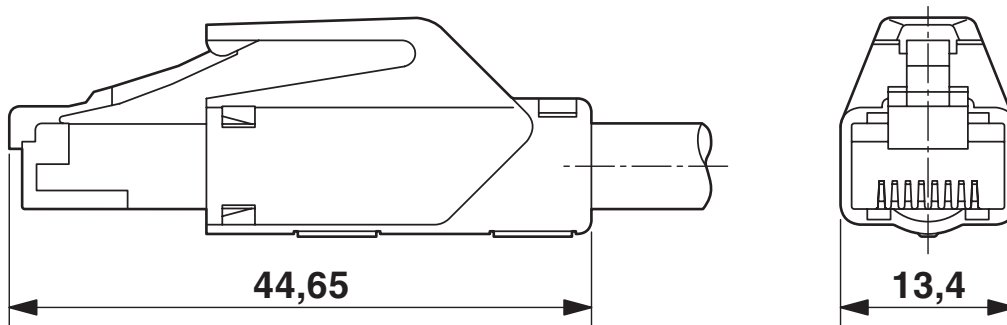


Connector pin assignment plug RJ45

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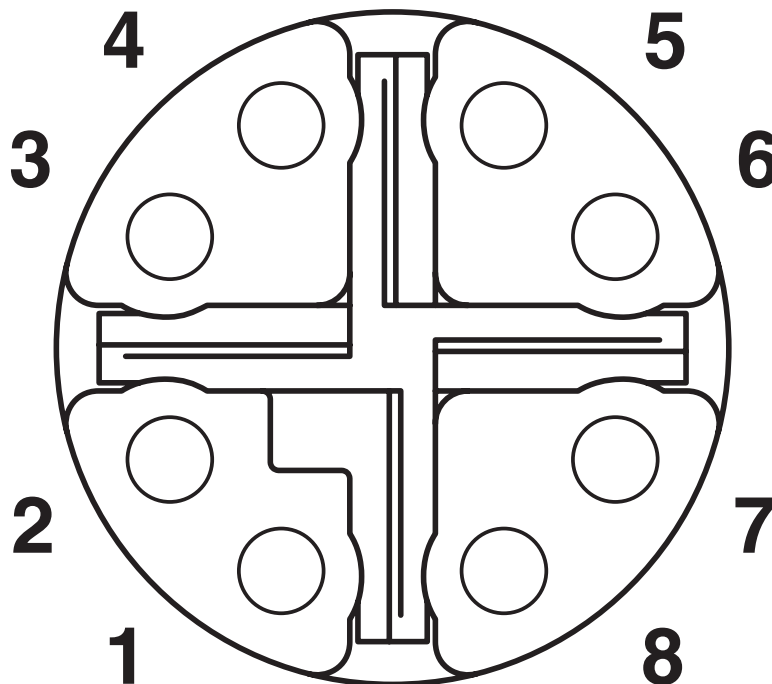
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Dimensional drawing



RJ45 connector, IP20

Schematic diagram



M12 socket pin assignment, 8-pos, view of socket side

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Approvals

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EAC

Approval ID: 19060508

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Classifications

ECLASS

ECLASS-11.0	27060307
ECLASS-12.0	27060307
ECLASS-13.0	27060307

ETIM

ETIM 9.0	EC001855
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UNSPSC

UNSPSC 21.0	26121600
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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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