

NBC-R4QC/1,0-93B/R4QC - Network cable



1408978

<https://www.phoenixcontact.com/us/products/1408978>

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Assembled PROFINET cable, CAT5e, shielded, star quad, 22 AWG stranded (7-wire), RAL 6018 (yellow-green), RJ45 plug/IP67 push/pull plastic housing to RJ45 plug/IP67 push/pull plastic housing, line, length: 1 m

Your advantages

- Compact angle
- Perfect for industrial applications
- PVC cable for flexible installations
- Worldwide approval with CE, UL, WEEE, and EAC
- Secure connection and disconnection with reliable locking clip protection
- Ideal EMC properties, thanks to 360° shielding
- Simultaneous power transmission with PoE++
- Resistant to shock and vibrations, thanks to robust molding
- High-speed data transmission with up to 1 Gbps (CAT5)

Commercial data

Item number	1408978
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Sales key	AB11
Product key	ABNABA
Catalog page	Page 397 (C-2-2019)
GTIN	4046356857079
Weight per piece (including packing)	133.3 g
Weight per piece (excluding packing)	83.389 g
Customs tariff number	85444210
Country of origin	PL

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Technical data

Product properties

Product type	Data cable preassembled
Sensor type	PROFINET
Number of positions	4
Connection profile	RJ45 8(4)
No. of cable outlets	1
Number of slots	1
Shielded	yes
Cable outlet	straight

Insulation characteristics

Overvoltage category	I
Degree of pollution	2

Signaling

Status display	No
Status display present	No

Electrical properties

Rated voltage (III/3)	72 V (DC)
Nominal voltage U_N	48 V
Nominal current I_N	1 A
Transmission medium	Copper
Transmission characteristics (category)	CAT5 (IEC 11801:2002)
Transmission speed	100 Mbps
Wave impedance	100 Ω

Mechanical properties

Mechanical data

Insertion/withdrawal cycles	≥ 250
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Material specifications

Color	black
Flammability rating according to UL 94	V0
Outer sheath, material	PVC
Conductor material	Tin-plated Cu litz wires

Connector

Connection 1

Type	Plug straight RJ45
Locking type	Push Pull

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Handle color	black
Material	CuSn (Contact)
	Ni/Au (Contact surface)
	PC (Contact carriers)
	PA GF (Housing)
Insertion/withdrawal cycles	≥ 750
Degree of protection	IP67
Ambient temperature (operation)	-40 °C ... 70 °C

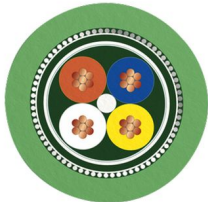
Connection 2

Type	Plug straight RJ45
Locking type	Push Pull
Handle color	black
Material	CuSn (Contact)
	Ni/Au (Contact surface)
	PC (Contact carriers)
	PA GF (Housing)
Insertion/withdrawal cycles	≥ 750
Degree of protection	IP67
Ambient temperature (operation)	-40 °C ... 70 °C

Cable/line

Cable length	1.00 m
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PROFINET PVC stranded CAT5 [93B]

Dimensional drawing	
Shielded	yes
UL AWM Style	21694
Cable weight	67 kg/km
Cable type	PROFINET PVC stranded CAT5
Short symbol	2YY(ST)CY
Cable type (abbreviation)	93B
Signal type/category	PROFINET CAT5 (IEC 11801), 100 Mbps
	EtherCAT® CAT5 (IEC 11801), 100 Mbps
Cable structure	1x4xAWG22/7, SF/TQ
External cable diameter	6.5 mm ±0.2 mm
Outer sheath, material	PVC
External sheath, color	green RAL 6018

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Thickness, outer sheath	approx. 0.9 mm
Material, inner sheath	PVC
Conductor material	Tin-plated Cu litz wires
Conductor structure signal line	7x 0.25 mm
AWG signal line	22
Conductor cross section	4x 0.34 mm ²
Material wire insulation	PE
Wire diameter incl. insulation	1.55 mm
Single wire, color	white, yellow, blue, orange
Overall twist	Star quad
Shielding	Aluminum-coated foil, tinned copper braided shield
Optical shield covering	85 %
Nominal voltage, cable	600 V
Test voltage Core/Core	2000 V (50 Hz, 1 min.)
Test voltage Core/Shield	2000 V (50 Hz, 1 min.)
Cable insulation resistance	≥ 500 MΩ*km
Coupling resistance	≤ 20.00 mΩ/m (at 10 MHz)
Wave impedance	100 Ω ±15 Ω (at 100 MHz)
Loop resistance	≤ 120.00 Ω/km
Signal runtime	5.3 ns/m
Signal speed	0.66 c
Minimum bending radius, fixed installation	3 x D
Minimum bending radius, flexible installation	7 x D
Damping	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)
Near end crosstalk attenuation (NEXT)	80 dB (with 1 MHz) 76 dB (at 4 MHz) 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)
Resistance to oil	Resistant to oil to a limited extent
Flame resistance	according to UL 1685 (CSA FT 4)
Other resistance	UV resistant (According to UL 1581, Section 1200)
Ambient temperature (operation)	-40 °C ... 70 °C (Cable, flexible installation) -40 °C ... 70 °C (cable, fixed installation)

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Environmental and real-life conditions

Ambient conditions

Degree of protection	IP67 (RJ45 connector)
	IP65/IP67
Ambient temperature (operation)	-40 °C ... 70 °C (RJ45 connector)

Standards and regulations

Standards/specifications	IEC PAS 61076-3-117
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Drawings

Schematic diagram



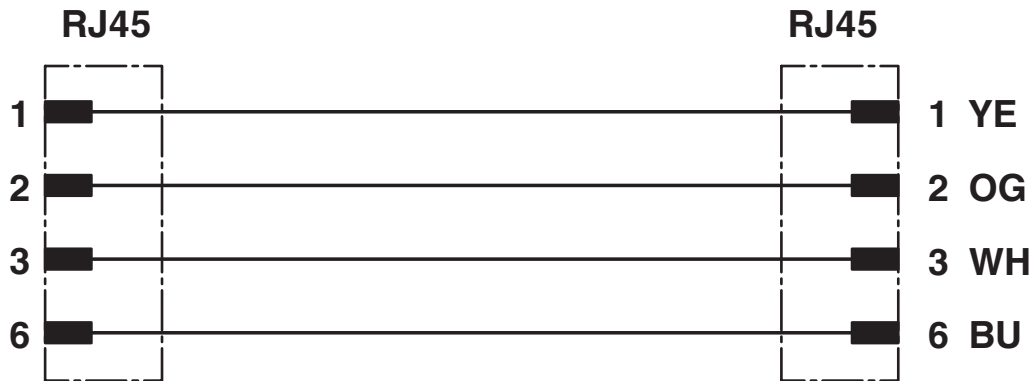
Connector pin assignment plug RJ45

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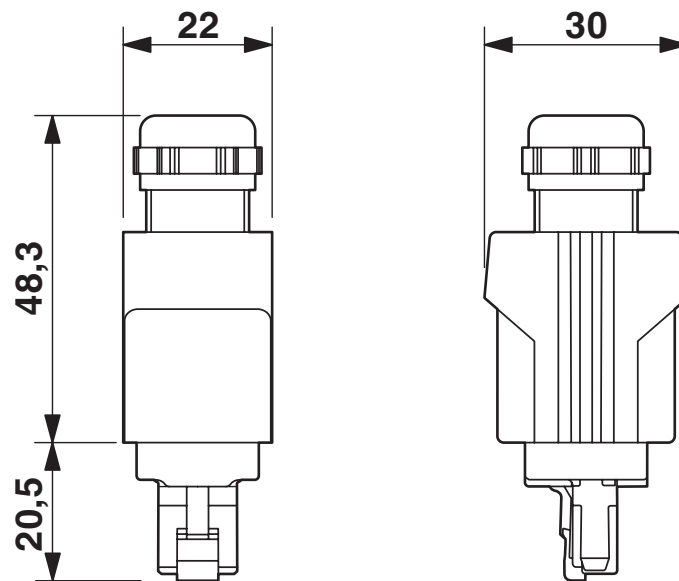
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Circuit diagram



Dimensional drawing



RJ45 Push-Pull connector, IP67

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1408978>



EAC

Approval ID: 19060508

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Classifications

ECLASS

ECLASS-11.0	27060308
ECLASS-12.0	27060308
ECLASS-13.0	27060307

ETIM

ETIM 9.0	EC002599
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UNSPSC

UNSPSC 21.0	26121600
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Environmental product compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

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