

# NBC-R4QC/2,0-93B/R4QC - Network cable



1408979

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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: 2 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	1408979
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	4046356857093
Weight per piece (including packing)	198.9 g
Weight per piece (excluding packing)	152.778 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 $\Omega$

### Mechanical properties

#### Mechanical data

Insertion/withdrawal cycles	$\geq 250$
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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	2.00 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 <sup>®</sup> CAT5 (IEC 11801), 100 Mbps
Cable structure	1x4xAWG22/7, SF/TQ
External cable diameter	6.50 mm ±0.2 mm
Outer sheath, material	PVC
External sheath, color	green RAL 6018

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Thickness, outer sheath	approx. 0.90 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 <sup>2</sup>
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	2000.00 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
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)

## 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

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Standards/specifications

IEC PAS 61076-3-117

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