

# NBC-R4ACS/3,0-93M/R4ACS - Patch cable



1112921

<https://www.phoenixcontact.com/us/products/1112921>

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Patch cable, degree of protection: IP20, cable length: 3 m, number of positions: 4, 100 Mbps, CAT5, material: PP, connection method: Pierce connection, connection cross section: AWG 23-22, cable outlet: straight, PROFINET

## Your advantages

- Perfect for industrial applications
- PUR cable for moving applications (bend)
- 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 100 Mbps (CAT5)

## Commercial data

Item number	1112921
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	AB11
Product key	ABNABA
GTIN	4063151034603
Weight per piece (including packing)	224.4 g
Weight per piece (excluding packing)	22.22 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
Shielded	yes
Cable outlet	straight

### Insulation characteristics

Overvoltage category	I
Degree of pollution	2

### Electrical properties

Rated voltage (III/2)	72 V
Rated current	1.75 A
Insulation resistance	> 1 TΩ
Contact resistance	< 20 mΩ
Transmission characteristics (category)	CAT5
Transmission speed	100 Mbps

### Mechanical properties

#### Mechanical data

Insertion force per signal contact	50.00 N
Extraction force per signal contact	30 N

### Material specifications

Flammability rating according to UL 94	V2
Contact material	CuSn6
Contact surface material	Ni/Au
Contact carrier material	PC
Housing material	PP

### Dimensions

Width	13.8 mm
Height	14.8 mm
Length	44.2 mm

### Connection data

#### Connection technology

Connection method	Pierce connection
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#### Conductor connection

Connection method	Pierce connection
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## Connector

### Connection 1

Type	Plug straight RJ45
Shielded	yes
Handle color	black
Insertion/withdrawal cycles	≥ 750
Degree of protection	IP20
Number of positions	4
Insertion/withdrawal cycles	750


### Connection 2

Type	Plug straight RJ45
Shielded	yes
Insertion/withdrawal cycles	≥ 750
Number of positions	4
Degree of protection	IP20

## Cable/line

Cable length	3.00 m
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### PROFINET stranded CAT5 [93M]

Dimensional drawing	
Shielded	yes
UL AWM Style	20236 (80°C/30 V)
Cable weight	65 kg/km
Cable type	PROFINET stranded CAT5
Cable type (abbreviation)	93M
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	PUR
External sheath, color	green RAL 6018
Thickness, outer sheath	approx. 0.9 mm
Material, inner sheath	PVC
Conductor material	Tin-plated Cu litz wires

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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	approx. 1.5 mm
Single wire, color	white, yellow, blue, orange
Overall twist	Star quad
Shielding	Aluminum-coated foil, tinned copper braided shield
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
Working capacitance	52 pF
Signal runtime	5.3 ns/m
Minimum bending radius, fixed installation	4 x D
Minimum bending radius, flexible installation	8 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)
Ambient temperature (operation)	-40 °C ... 80 °C (Cable, flexible installation) -40 °C ... 80 °C

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 85 °C (RJ45 connector)
Ambient temperature (storage/transport)	-40 °C ... 85 °C (RJ45 connector)

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## Standards and regulations

Standards/specifications

IEC 60603-7

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## Classifications

### ECLASS

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

### ETIM

ETIM 8.0	EC002599
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### UNSPSC

UNSPSC 21.0	39121400
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