

# NBC-R4OC/2,0-BC6A/R4OC-BK - Patch cable

1639421

<https://www.phoenixcontact.com/us/products/1639421>



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Patch cable, RJ45/IP20 straight on RJ45/IP20 straight, cable length: 2 m, number of positions: 8, 10 Gbps, CAT6<sub>A</sub>, connection cross section: AWG 26- 26, Ethernet, 4x2xAWG26/7; S/FTP, black



## Your advantages

- Perfect for office, building, and protected industrial applications (e.g., in control cabinets)
- 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++
- Future-proof high-speed data transmission with up to 10 Gbps (CAT6<sub>A</sub>)

## Commercial data

Item number	1639421
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	AB11
Product key	ABNABH
GTIN	4067923164673
Weight per piece (including packing)	122.1 g
Weight per piece (excluding packing)	109 g
Customs tariff number	85444210
Country of origin	CN

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## Technical data

### Product properties

Product type	Data cable preassembled
Product family	RJ45 STANDARD CAT6A
Sensor type	Ethernet
Number of positions	8
Shielded	yes

### Electrical properties

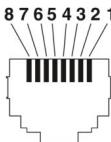
Rated voltage (III/2)	72 V
Transmission medium	Copper
Transmission speed	10 Gbps
Transmission speed	10 Gbps
Power transmission	PoE++

### Dimensions

Width	11.6 mm
Height	14.8 mm
Length	40 mm

### Connector

#### Connection 1

Dimensional drawing	
	Connector pin assignment plug RJ45
Type	RJ45 Plug, straight, 8-position
Number of positions	8
Shielded	yes
Signal type/category	Ethernet CAT6A (IEC 11801:2002), 10 Gbps
Insertion/withdrawal cycles	≥ 750
Insertion force	30 N (per signal contact)
Withdrawal force	50 N (per signal contact)
Overvoltage category	I
Degree of pollution	2
Material Contact	Brass
Material Contact surface	Au

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Material Contact carrier	PC
Color (Housing)	black
Flammability rating according to UL 94	V0
Degree of protection	IP20
Ambient temperature (operation)	-20 °C ... 80 °C

## Connection 2

Dimensional drawing	
	Connector pin assignment plug RJ45
Type	RJ45 Plug, straight, 8-position
Number of positions	8
Shielded	yes
Signal type/category	Ethernet CAT6A (IEC 11801:2002), 10 Gbps
Insertion/withdrawal cycles	≥ 750
Insertion force	30 N (per signal contact)
Withdrawal force	50 N (per signal contact)
Overshoot category	I
Degree of pollution	2
Material Contact	Brass
Material Contact surface	Au
Material Contact carrier	PC
Color (Housing)	black
Flammability rating according to UL 94	V0
Degree of protection	IP20
Ambient temperature (operation)	-20 °C ... 80 °C

## Cable/line

Cable length	2.00 m
Ethernet, Type B, 8-pos., CAT6A, LSZH [BC6A]	
Number of positions	8
Shielded	yes
Cable type	Ethernet, Type B, 8-pos., CAT6A, LSZH [BC6A]
Conductor structure	4x2xAWG26/7; S/FTP
Conductor structure signal line	7x 0.16 mm
AWG signal line	26
Wire diameter incl. insulation	1 mm
External cable diameter	6.50 mm ±0.3 mm

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Outer sheath, material	LSZH
External sheath, color	black
Conductor material	Bare Cu litz wires
Material wire insulation	PE
Single wires, quantity	8
Single wire, cross section [AWG]	26
Thickness, outer sheath	approx. 0.70 mm
Optical shield covering	70 %
Insulation resistance	$\geq 5000 \text{ M}\Omega\text{-km}$
Loop resistance	$\leq 148.00 \text{ }\Omega/\text{km}$
Wave impedance	100 $\Omega$
Minimum bending radius, fixed installation	8 x D
Smallest bending radius, fixed installation	52 mm
Near end crosstalk attenuation (NEXT)	75 dB (with 1 MHz) 66.3 dB (at 4 MHz) 60.3 dB (at 10 MHz) 57.2 dB (at 16 MHz) 55.8 dB (at 20 MHz) 52.9 dB (at 31.25 MHz) 48.4 dB (at 62.5 MHz) 45.3 dB (at 100 MHz) 40.8 dB (at 200 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) 45.4 dB (at 62.5 MHz) 42.3 dB (at 100 MHz) 37.8 dB (at 200 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)

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	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 300 MHz)
	15.6 dB (at 400 MHz)
	15.6 dB (at 500 MHz)
Shield attenuation	3.1 dB (with 1 MHz)
	5.7 dB (at 4 MHz)
	8.9 dB (at 10 MHz)
	11.2 dB (at 16 MHz)
	12.6 dB (at 20 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)
	51.4 dB (at 300 MHz)
	60.1 dB (at 400 MHz)
	67.9 dB (at 500 MHz)
Halogen-free	complying with IEC 60754-1/2
Flame resistance	IEC 60332-1-2/IEC 60332-3-24/CM
Ambient temperature (operation)	-20 °C ... 80 °C (cable, fixed installation)
	-20 °C ... 80 °C (Cable, flexible installation)
Ambient temperature (installation)	0 °C ... 60 °C

## Environmental and real-life conditions

### Ambient conditions

Ambient temperature (operation)	-20 °C ... 80 °C
Ambient temperature (storage/transport)	0 °C ... 40 °C

## Standards and regulations

Flame resistance	IEC 60332-1-2
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## Approvals

ⓘ To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1639421>



**UL Listed**

Approval ID: E335024\_20210804



**cUL Listed**

Approval ID: E335024\_20210804

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## Classifications

### ECLASS

ECLASS-13.0	27060307
ECLASS-15.0	27060307

### ETIM

ETIM 9.0	EC001855
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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### China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

### EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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