

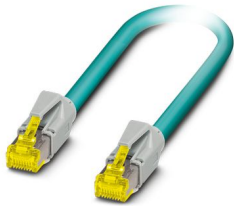
# NBC-R4AC-10G/20,0-94F/R4AC-10G - Patch cable



1416125

<https://www.phoenixcontact.com/us/products/1416125>

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Patch cable, degree of protection: IP20, cable length: 20 m, number of positions: 8, 10 Gbps, CAT6<sub>A</sub>, 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	1416125
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Sales key	AB11
Product key	ABNABF
GTIN	4055626063263
Weight per piece (including packing)	930 g
Weight per piece (excluding packing)	861.03 g
Customs tariff number	85444210
Country of origin	PL

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## Technical data

### Product properties

Product type	Data cable preassembled
Sensor type	Ethernet
Number of positions	8
Shielded	yes

### 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 $I_N$	0.5 A
Transmission medium	Copper
Transmission characteristics (category)	CAT6 <sub>A</sub>
Transmission speed	10 Gbps

### Mechanical properties

#### Mechanical data

Insertion/withdrawal cycles	200
Insertion force per signal contact	50.00 N
Extraction force per signal contact	30 N

### Material specifications

Outer sheath, material	PUR
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### Connector

#### Connection 1

Type	Plug straight RJ45
Shielded	yes
Degree of protection	IP20

#### Connection 2

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

### Cable/line

Cable length	20.00 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 <sub>A</sub> , 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 <sup>2</sup>
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.)
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

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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)
	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)

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	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	IP20
	IP20
Ambient temperature (operation)	-20 °C ... 70 °C (RJ45 connector)
	-20 °C ... 80 °C (cable, fixed installation)

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## Drawings

### Schematic diagram



Connector pin assignment plug RJ45

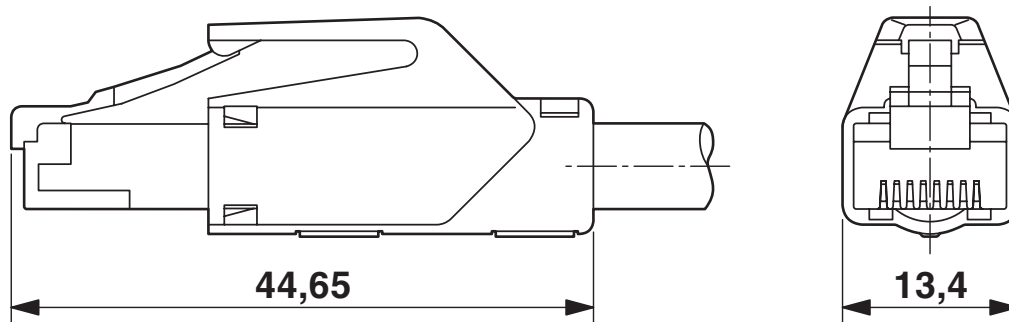
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Dimensional drawing



RJ45 connector, IP20

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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 8.0	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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