

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 |
| GTIN | 4046356857079 |
| Weight per piece (including packing) | 133.3 g |
| Weight per piece (excluding packing) | 119.85 g |
| Customs tariff number | 85444210 |
| Country of origin | PL |

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Technical data

Product properties

| | |
|---------------------|--------------------------|
| Product type | Data cable preassembled |
| Product family | RJ45 INDUSTRIAL PN4 CAT5 |
| Number of positions | 4 |
| Number of slots | 1 |
| Shielded | yes |

Insulation characteristics

| | |
|----------------------|---|
| Overvoltage category | I |
| Degree of pollution | 2 |

Interfaces

| | |
|----------------------|--------------------------------------|
| Signal type/category | PROFINET CAT5 (IEC 11801), 100 Mbps |
| | EtherCAT® CAT5 (IEC 11801), 100 Mbps |

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 speed | 100 Mbps |
| Transmission characteristics (category) | CAT5 (IEC 11801:2002) |
| Transmission speed | 100 Mbps |
| Wave impedance | 100 Ω |

Material specifications

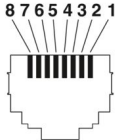
| | |
|--|--------------------------|
| Color | black |
| Flammability rating according to UL 94 | V0 |
| Outer sheath, material | PVC |
| Conductor material | Tin-plated Cu litz wires |

Connector

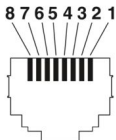
Connection 1

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| | |
|--|---|
| Dimensional drawing |  <p>Connector pin assignment plug RJ45</p> |
| Type | RJ45 Plug, straight, 4-position, Push Pull |
| Number of positions | 4 |
| Shielded | yes |
| Signal type/category | Ethernet CAT5 (IEC 11801:2002), 100 Mbps |
| Insertion/withdrawal cycles | ≥ 500 |
| Degree of pollution | 2 |
| Material Contact | CuSn |
| Material Contact surface | Ni/Au |
| Material Contact carrier | PC |
| Material Housing | Plastic |
| Color (Housing) | black |
| Flammability rating according to UL 94 | V2 |
| Degree of protection | IP67 IP65 |
| Ambient temperature (operation) | -40 °C ... 70 °C |

Connection 2

| | |
|-----------------------------|---|
| Dimensional drawing |  <p>Connector pin assignment plug RJ45</p> |
| Type | RJ45 Plug, straight, 4-position, Push Pull |
| Number of positions | 4 |
| Shielded | yes |
| Signal type/category | Ethernet CAT5 (IEC 11801:2002), 100 Mbps |
| Insertion/withdrawal cycles | ≥ 500 |
| Degree of pollution | 2 |
| Material Contact | CuSn |
| Material Contact surface | Ni/Au |
| Material Contact carrier | PC |

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| | |
|--|------------------|
| Material Housing | Plastic |
| Color (Housing) | black |
| Flammability rating according to UL 94 | V2 |
| Degree of protection | IP67 IP65 |
| Ambient temperature (operation) | -40 °C ... 70 °C |

Cable/line

| | |
|--------------|--------|
| Cable length | 1.00 m |
|--------------|--------|

PROFINET PVC stranded CAT5 [93B]

| | |
|---|---|
| Dimensional drawing |  |
| UL AWM Style | 21695 (80 °C / 600 V) |
| Number of positions | 4 |
| Shielded | yes |
| Cable type | PROFINET PVC stranded CAT5 [93B] |
| Conductor structure | 1x4xAWG22/7, SF/TQ |
| AWG signal line | 22 |
| Conductor cross-section | 4x 0.34 mm ² |
| Wire diameter incl. insulation | 1.5 mm ±0.1 mm |
| External cable diameter | 6.50 mm ±0.2 mm |
| Outer sheath, material | PVC |
| External sheath, color | green RAL 6018 |
| Conductor material | Tin-plated Cu litz wires |
| Material wire insulation | PE |
| Single wire, color | white, yellow, blue, orange |
| Overall twist | Star quad |
| Optical shield covering | 85 % |
| Insulation resistance | ≥ 5 GΩ*km |
| Loop resistance | ≤ 120.00 Ω/km |
| Wave impedance | 100 Ω ±5 Ω (at 100 MHz) |
| 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)) |
| Minimum bending radius, fixed installation | 4 x D |
| Minimum bending radius, flexible installation | 8 x D |

UL 1581, Section 1060 and UL 2556, Section 9.3 (FT1)

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| | |
|---------------------------------|--|
| Flame resistance | UL 1685 (CSA FT 4) |
| | UL 1581, Section 1100 and UL 2556, Section 9.1 (HFT/FT2) |
| Resistance to oil | OIL RES I according to UL 2256 |
| Other resistance | UV resistant (according to UL 1581, Section 1200) |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation) |
| | -10 °C ... 70 °C (Cable, flexible installation) |

Environmental and real-life conditions

Ambient conditions

| | |
|----------------------|-----------|
| Degree of protection | IP65/IP67 |
|----------------------|-----------|

Standards and regulations

| | |
|--------------------------|---------------------|
| Standards/specifications | IEC PAS 61076-3-117 |
|--------------------------|---------------------|

Drawings

Schematic diagram



Connector pin assignment plug RJ45

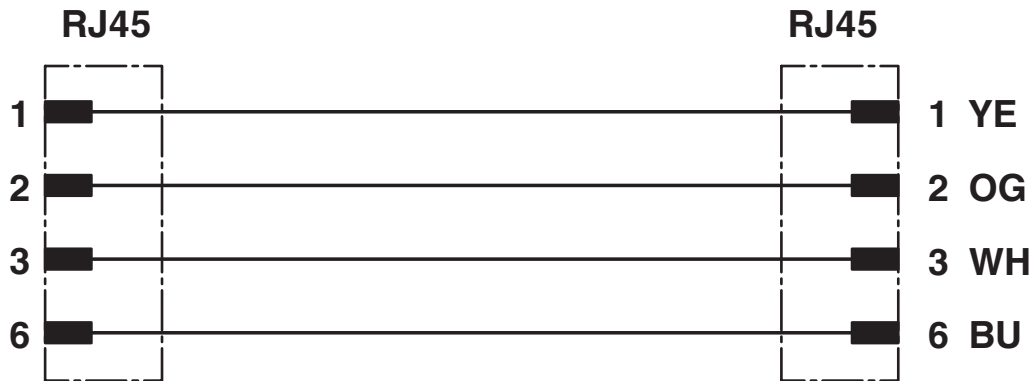
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Circuit diagram



Contact assignment of RJ45 plugs

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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-13.0 | 27060307 |
| ECLASS-15.0 | 27060307 |

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 26121600 |
|-------------|----------|

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Environmental product compliance

EU RoHS

| | |
|---|--------------------|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |
|---|--------------------|

China RoHS

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

EU REACH SVHC

| | |
|-------------------------------------|--|
| REACH candidate substance (CAS No.) | 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol(CAS: 119-47-1) |
| | 2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol (UV-329)(CAS: 3147-75-9) |
| SCIP | c564d2b2-724d-4d66-a2bc-7c948a6ba413 |

EF3.1 Climate Change

| | |
|---------|---------------|
| CO2e kg | 4.692 kg CO2e |
|---------|---------------|

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