

NBC-FSBPX/0,5-94F/R4AC-10G - Network cable



1417828

<https://www.phoenixcontact.com/us/products/1417828>

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Network cable, degree of protection: IP67/IP20, cable length: 0.5 m, number of positions: 8, 10 Gbps, CAT6_A, cable outlet: straight, Ethernet

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 1417828 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | AB18 |
| Product key | ABNPAC |
| GTIN | 4055626126470 |
| Weight per piece (including packing) | 63.2 g |
| Weight per piece (excluding packing) | 59.96 g |
| Customs tariff number | 85444290 |
| Country of origin | PL |

Technical data

Product properties

| | |
|---------------------|-----------------------------------|
| Product type | Circular connectors (device side) |
| Sensor type | Ethernet |
| Number of positions | 8 |
| Number of slots | 1 |
| Shielded | yes |
| Coding | X |
| Cable outlet | straight |

Insulation characteristics

| | |
|---------------------|---|
| Degree of pollution | 3 |
|---------------------|---|

Material specifications

| | |
|--|-------------------------------|
| Material | Zinc die-cast (nickel-plated) |
| Flammability rating according to UL 94 | V2 |
| Seal material | FKM |
| Material of grip body | Zinc die-cast, nickel-plated |
| Contact material | CuZn |
| Contact surface material | gold-plated |
| Contact carrier material | PPA |
| Material for screw connection | Zinc die-cast, nickel-plated |
| Outer sheath, material | PUR |

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 _A |

Connector

Connection 1

| | |
|----------------------|--|
| Type | Flush-type female connector straight M12 |
| Locking type | SPEEDCON |
| Degree of protection | IP67 |

Connection 2

| | |
|------|--------------------|
| Type | Plug straight RJ45 |
|------|--------------------|

Cable/line

| | |
|--------------|--------|
| Cable length | 0.50 m |
|--------------|--------|


Ethernet 10 Gbit [94F]

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| | |
|---|--|
| 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 _A , 10 Gbps |
| Cable structure | 4x2xAWG26/7; S/FTP |
| External cable diameter | 6.40 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 ² |
| 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 | 700.00 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 |
| Minimum bending radius, fixed installation | 4 x D |
| Minimum bending radius, flexible installation | 8 x D |

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| | |
|--|------------------------|
| 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) |
| | 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) |

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| | |
|---------------------------------|---|
| | 15.6 dB (at 500 MHz) |
| Shield attenuation | ≥ 80.00 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) |

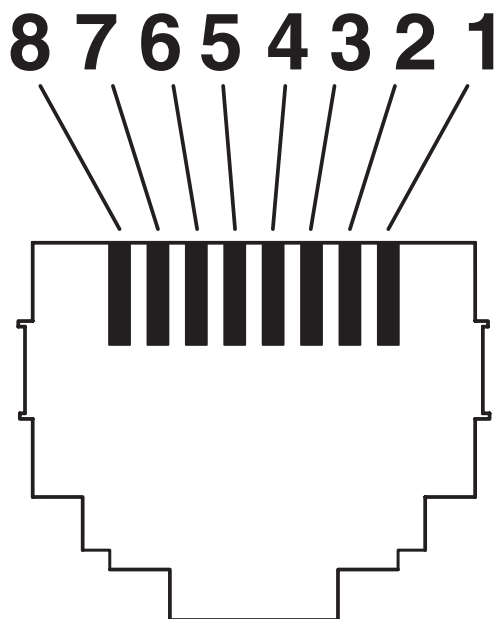
Environmental and real-life conditions

Ambient conditions

| | |
|---------------------------------|----------------------------------|
| Degree of protection | IP67/IP20 |
| Ambient temperature (operation) | -25 °C ... 60 °C (Plug / socket) |

Drawings

Schematic diagram

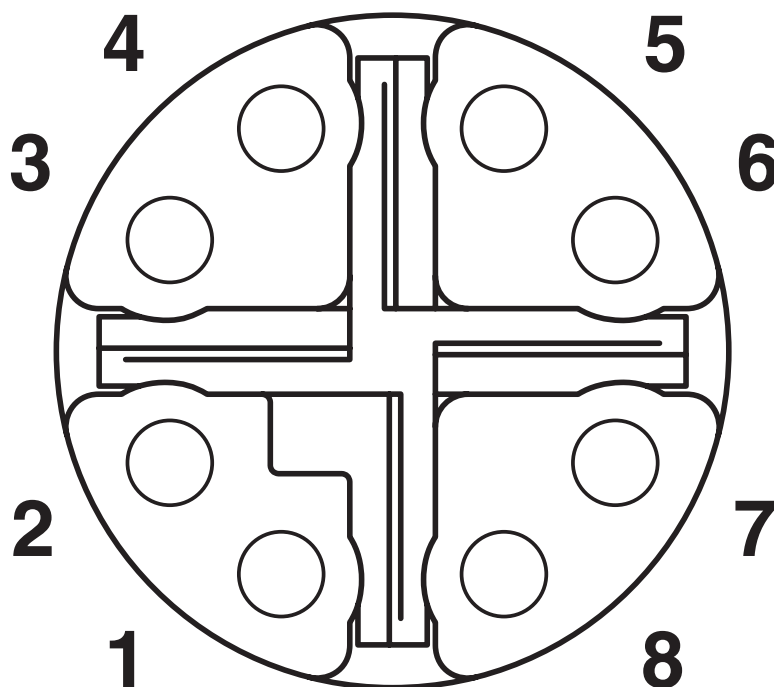


Connector pin assignment plug RJ45

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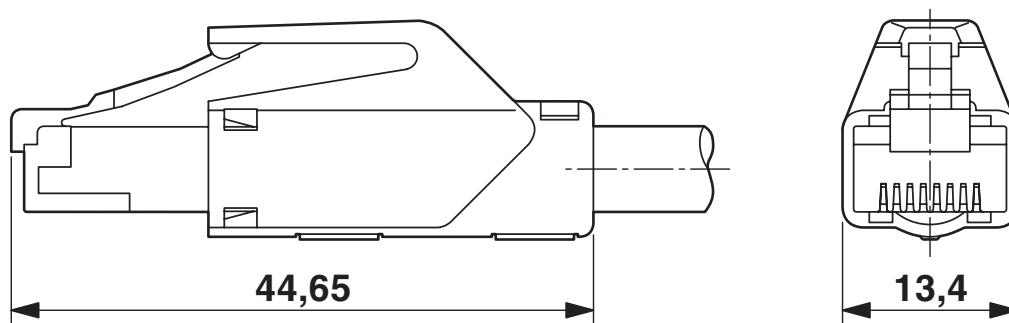
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Schematic diagram



M12 socket pin assignment, 8-pos, view of socket side

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 | 27060308 |
| ECLASS-12.0 | 27060308 |
| ECLASS-13.0 | 27060308 |

ETIM

| | |
|----------|----------|
| ETIM 9.0 | EC002599 |
|----------|----------|

UNSPSC

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

Environmental product compliance

| | |
|---|---|
| EU RoHS | |
| Fulfills EU RoHS substance requirements | Yes |
| Exemption | 6(c) |
| China RoHS | |
| Environment friendly use period (EFUP) | EFUP-50 |
| | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |
| EU REACH SVHC | |
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1) |
| SCIP | 78037b72-cb78-43da-a760-16c223bb3802 |