

NBC-100,0-94S - Data cable

1423514

<https://www.phoenixcontact.com/us/products/1423514>



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By the meter, Data cable, Ethernet CAT7 (10 Gbps), shielded, PE-X halogen-free, black, 8-wire (4x2xAWG26/7; S/FTP), color single wire: white-blue, white-orange, white-green, white-brown, cable length: 100 m

Commercial data

| | |
|--------------------------------------|--------------------------------|
| Item number | 1423514 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Note | Made to order (non-returnable) |
| Sales key | BF11 |
| Product key | AF1LEA |
| GTIN | 4055626346007 |
| Weight per piece (including packing) | 5,773 g |
| Weight per piece (excluding packing) | 5,773 g |
| Customs tariff number | 85444995 |
| Country of origin | DE |

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Technical data

Product properties

| | |
|---------------------|-------------------------|
| Product type | Data cable by the meter |
| Application | Railway applications |
| Sensor type | Ethernet |
| Number of positions | 8 |

Electrical properties

| | |
|-----------------------|---------|
| Nominal voltage U_N | 30 V AC |
| | 30 V DC |
| Transmission medium | Copper |
| Transmission speed | 10 Gbps |

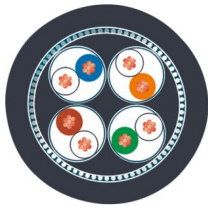
Interfaces

| | |
|----------------------|------------------------|
| Signal type/category | Ethernet CAT7, 10 Gbps |
|----------------------|------------------------|

Cable/line

| | |
|--------------|-------|
| Cable length | 100 m |
|--------------|-------|

Ethernet BETAtrans® railway application CAT7 [94S]

| | |
|---------------------------------|--|
| Dimensional drawing |  |
| Cable weight | 59 kg/km |
| Copper weight | 28 kg/km |
| Number of positions | 8 |
| Shielded | yes |
| Cable type | Ethernet BETAtrans® railway application CAT7 [94S] |
| Conductor structure | 4x2xAWG26/7; S/FTP |
| Signal runtime | 4.4 ns/m |
| Signal speed | 0.78 c |
| Conductor structure signal line | 7x 0.16 mm |
| AWG signal line | 26 |
| Conductor cross section | 4x 2x 0.14 mm ² |
| Wire diameter incl. insulation | 1.05 mm ±0.1 mm |
| External cable diameter | 6.60 mm ±0.2 mm |
| Outer sheath, material | PE-X |
| External sheath, color | black |

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| | |
|--|--|
| Conductor material | Tin-plated Cu litz wires |
| Material wire insulation | Cell PE |
| Single wire, color | white-blue, white-orange, white-green, white-brown |
| Twisted pairs | 2 cores to the pair |
| Type of pair shielding | Aluminum-lined polyester foil |
| Overall twist | 4 pairs, twisted |
| Max. conductor resistance | $\leq 145 \Omega/\text{km}$ |
| Insulation resistance | $\geq 5 \text{ G}\Omega \cdot \text{km}$ |
| Coupling resistance | 5.00 m Ω/m (at 10 MHz) |
| Wave impedance | 100 $\Omega \pm 5 \Omega$ (at 100 MHz) |
| Working capacitance | 44 nF (per kilometer) |
| Nominal voltage, cable | 125 V AC (U ₀) |
| Test voltage Core/Core | 1000 V AC (50 Hz, 1 min.) |
| Test voltage Core/Shield | 1000.00 V AC (50 Hz, 1 min.) |
| Minimum bending radius, fixed installation | 6 x D |
| Smallest bending radius, fixed installation | 40 mm |
| Tensile strength | $\leq 60 \text{ N}$ (temporary) $\leq 15 \text{ N}$ (Permanent) |
| Near end crosstalk attenuation (NEXT) | 100 dB (with 1 MHz) |
| | 99 dB (at 10 MHz) |
| | 95 dB (at 100 MHz) |
| | 92 dB (at 200 MHz) |
| | 90 dB (at 250 MHz) |
| | 83 dB (at 500 MHz) |
| | 81 dB (at 600 MHz) |
| | 80 dB (at 700 MHz) |
| | 77 dB (at 800 MHz) |
| | 75 dB (at 900 MHz) |
| | 74 dB (at 1000 MHz) |
| | 72 dB (at 1100 MHz) |
| | 70 dB (at 1200 MHz) |
| Power-summated near end crosstalk attenuation (PSNEXT) | 97 dB (with 1 MHz) |
| | 96 dB (at 10 MHz) |
| | 92 dB (at 100 MHz) |
| | 89 dB (at 200 MHz) |
| | 87 dB (at 250 MHz) |
| | 80 dB (at 500 MHz) |
| | 78 dB (at 600 MHz) |
| | 77 dB (at 700 MHz) |
| | 74 dB (at 800 MHz) |
| | 72 dB (at 900 MHz) |
| | 71 dB (at 1000 MHz) |
| | 69 dB (at 1100 MHz) |
| | 67 dB (at 1200 MHz) |

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| Return attenuation (RL) | 24 dB (with 1 MHz) |
| | 33.9 dB (at 10 MHz) |
| | 38.3 dB (at 100 MHz) |
| | 35.3 dB (at 200 MHz) |
| | 32.9 dB (at 250 MHz) |
| | 29.7 dB (at 500 MHz) |
| | 30.6 dB (at 600 MHz) |
| | 31 dB (at 700 MHz) |
| | 26.7 dB (at 800 MHz) |
| | 28.6 dB (at 900 MHz) |
| | 27.5 dB (at 1000 MHz) |
| | 26.9 dB (at 1100 MHz) |
| | 26.3 dB (at 1200 MHz) |
| Crosstalk attenuation (ACR) | 100 dB (with 1 MHz) |
| | 99 dB (at 10 MHz) |
| | 93 dB (at 100 MHz) |
| | 88 dB (at 200 MHz) |
| | 86 dB (at 250 MHz) |
| | 78 dB (at 500 MHz) |
| | 74 dB (at 600 MHz) |
| | 72 dB (at 700 MHz) |
| | 69 dB (at 800 MHz) |
| | 67 dB (at 900 MHz) |
| | 65 dB (at 1000 MHz) |
| | 63 dB (at 1100 MHz) |
| Power-summated crosstalk attenuation (PS-ACR) | 61 dB (at 1200 MHz) |
| | 97 dB (with 1 MHz) |
| | 96 dB (at 10 MHz) |
| | 90 dB (at 100 MHz) |
| | 85 dB (at 200 MHz) |
| | 83 dB (at 250 MHz) |
| | 75 dB (at 500 MHz) |
| | 71 dB (at 600 MHz) |
| | 69 dB (at 700 MHz) |
| | 66 dB (at 800 MHz) |
| | 64 dB (at 900 MHz) |
| | 62 dB (at 1000 MHz) |
| Shield attenuation | 60 dB (at 1100 MHz) |
| | 58 dB (at 1200 MHz) |
| | 0.25 dB (with 1 MHz) |
| | 0.76 dB (at 10 MHz) |
| | 2.49 dB (at 100 MHz) |
| | 3.69 dB (at 200 MHz) |
| | 4.18 dB (at 100 MHz) |

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| | |
|----------------------------------|---|
| | 5.6 dB (at 500 MHz) |
| | 6.74 dB (at 600 MHz) |
| | 7.32 dB (at 700 MHz) |
| | 7.89 dB (at 800 MHz) |
| | 8.5 dB (at 900 MHz) |
| | 9.11 dB (at 1000 MHz) |
| | 9.5 dB (at 1100 MHz) |
| | 9.9 dB (at 1200 MHz) |
| | 60.00 dB (up to 1000 MHz) |
| Halogen-free | in accordance with EN 50267-2-1 |
| | in accordance with EN 60684-2 |
| Flame resistance | in accordance with EN 60332-1-2 |
| | EN 60332-3-25 |
| | in accordance with ISO 14572 5.21 (UN ECE-R 118.01) |
| Concentration of fumes | EN 61034-2 |
| Resistance to oil | in accordance with EN 50306-4, 72 hours at 100°C, IRM 902 |
| Fire protection in rail vehicles | BS 6853 (Internal cable Ia, Ib, II/external cable Ia, Ib, II) |
| | DIN 5510-2 (Fire protection level 1, 2, 3, 4) |
| | EN 45545-2 (Risk level HL1 - HL3) |
| | EN 50306-4 |
| | NF F16-101 (Classification C/F1) |
| | NF F16-101 (Internal cable A1, A2, B/external cable A1, A2, B) |
| | NFPA 130 |
| | PN-K-02511 (Class A) |
| | UIC 564-2 (Class A) |
| Other resistance | Resistant to fuel (in accordance with EN 50306-4, 168 hours at 70°C, IRM 903) |
| | Resistant to ozone (in accordance with EN 50306-4, 72 hours at 40°C, method B, volumetric concentration of 200×10^{-6}) |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation) |

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Approvals

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EAC-RoHS

Approval ID: RU D-DE.HB35.B.00371

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27061801 |
| ECLASS-15.0 | 27061801 |

ETIM

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|----------|----------|
| ETIM 9.0 | EC003249 |
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UNSPSC

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| 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.) | No substance above 0.1 wt% |
| EF3.0 Climate Change | |
| CO2e kg | 215.185 kg CO2e |

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