

NBC-100,0-94S - Data cable



1423514

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

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Data cable, Ethernet CAT7 (10 Gbps), 8-position, PE-X halogen-free, black, shielded (Tinned copper braided shield), 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	BF1LEA
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
Sensor type	Ethernet
Number of positions	8
Application	Railway applications

Electrical properties

Nominal voltage U_N	30 V AC
	30 V DC
Transmission medium	Copper

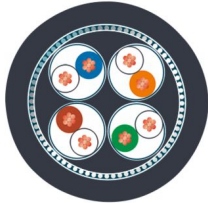
Interfaces

Signal type/category	Ethernet CAT7, 10 Gbps
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Cable/line

Cable length	100 m
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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
Conductor material	Tin-plated Cu litz wires

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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	≤ 145 Ω/km
Insulation resistance	≥ 5 GΩ*km
Coupling resistance	5.00 mΩ/m (at 10 MHz)
Wave impedance	100 Ω ±5 Ω (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	≤ 60 N (temporary) ≤ 15 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)
Power-summated near end crosstalk attenuation (PSNEXT)	70 dB (at 1200 MHz)
	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)	
24 dB (with 1 MHz)	

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Return attenuation (RL)	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)
99.00 dB (at 10 MHz)	
93.00 dB (at 100 MHz)	
88.00 dB (at 200 MHz)	
86.00 dB (at 250 MHz)	
78.00 dB (at 500 MHz)	
74.00 dB (at 600 MHz)	
72.00 dB (at 700 MHz)	
69.00 dB (at 800 MHz)	
67.00 dB (at 900 MHz)	
65.00 dB (at 1000 MHz)	
63.00 dB (at 1100 MHz)	
61.00 dB (at 1200 MHz)	
Power-summated crosstalk attenuation (PS-ACR)	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)
	60 dB (at 1100 MHz)
	58 dB (at 1200 MHz)
Shield attenuation	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 250 MHz)
	5.6 dB (at 500 MHz)

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	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
	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})
Special properties	HL1-HL3
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)

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Classifications

ECLASS

ECLASS-11.0	27061801
ECLASS-13.0	27061801

ETIM

ETIM 9.0	EC003249
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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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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com