

# VS-IP20-IP20-94C-LI/2,0 - Network cable



1412859

<https://www.phoenixcontact.com/us/products/1412859>

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Assembled Ethernet cable, shielded, 4-pair, AWG 26 flexible cable conduit capable (19-wire), RAL 5021 (sea blue), RJ45 connector/IP20 to RJ45 connector/IP20, line, length 2 m

## Commercial data

Item number	1412859
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	AB11
Product key	ABNABE
GTIN	4046356475693
Weight per piece (including packing)	144 g
Weight per piece (excluding packing)	134.744 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 IE8 CAT5
Sensor type	Ethernet
Number of positions	8
Shielded	yes

### Electrical properties

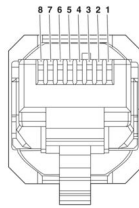
Transmission speed	1 Gbps
Transmission speed	1 Gbps
Wave impedance	100 Ω

### Material specifications

Outer sheath, material	PUR
Conductor material	Bare Cu litz wires

## Connector

### Connection 1

Dimensional drawing	 Connector pin assignment
Type	RJ45 Plug, straight, 8-position
Number of positions	8
Signal type/category	Ethernet CAT5 (IEC 11801:2002), 1 Gbps
Insertion/withdrawal cycles	≥ 1000
Insertion force	< 20 N (per signal contact)
Withdrawal force	< 20 N (per signal contact)
Insulation resistance	> 500 MΩ
Overvoltage category	I
Degree of pollution	2
Material Contact	CuSn
Material Contact surface	Ni/Au
Material Contact carrier	PC
Color (Housing)	gray
Flammability rating according to UL 94	V0
Degree of protection	IP20

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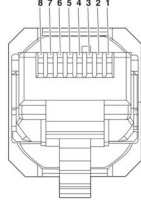


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Ambient temperature (operation)	-20 °C ... 70 °C
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## Connection 2

Dimensional drawing	 <p>Connector pin assignment</p>
Type	RJ45 Plug, straight, 8-position
Number of positions	8
Signal type/category	Ethernet CAT5 (IEC 11801:2002), 1 Gbps
Insertion/withdrawal cycles	≥ 1000
Insertion force	< 20 N (per signal contact)
Withdrawal force	< 20 N (per signal contact)
Insulation resistance	> 500 MΩ
Overvoltage category	I
Degree of pollution	2
Material Contact	CuSn
Material Contact surface	Ni/Au
Material Contact carrier	PC
Color (Housing)	gray
Flammability rating according to UL 94	V0
Degree of protection	IP20
Ambient temperature (operation)	-20 °C ... 70 °C

## Cable/line

Cable length	2.00 m
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## Ethernet drag chain CAT5, 4-pair [94C]

Dimensional drawing	
Cable weight	57 kg/km
UL AWM Style	20963 (80°C/30 V)
Number of positions	8
Shielded	yes
Cable type	Ethernet drag chain CAT5, 4-pair [94C]

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Conductor structure	4x2xAWG26/19, S/UTP
Signal runtime	5.3 ns/m
Conductor structure signal line	19x 0.10 mm
AWG signal line	26
Conductor cross-section	4x 2x 0.14 mm <sup>2</sup>
Wire diameter incl. insulation	1 mm
External cable diameter	6.90 mm +0.1 mm ... 0.2 mm
Outer sheath, material	PUR
External sheath, color	water blue RAL 5021
Conductor material	Bare Cu litz wires
Material wire insulation	PP
Single wire, color	white/blue-blue, white/orange-orange, white/green-green, white/brown-brown
Thickness, outer sheath	0.85 mm
Twisted pairs	2 cores to the pair
Overall twist	Four pairs and four fillers to the core
Optical shield covering	90 %
Insulation resistance	≥ 500 MΩ*km
Coupling resistance	≤ 100.00 mΩ/m (at 10 MHz)
Loop resistance	≤ 290.00 Ω/km
Wave impedance	100 Ω ±5 Ω (at 100 MHz)
Cable capacity	approx. 50 nF/km (at 1 kHz)
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.)
Minimum bending radius, fixed installation	4 x D
Minimum bending radius, flexible installation	8 x D
Smallest bending radius, fixed installation	28 mm
Smallest bending radius, movable installation	56 mm
Dynamic load capacity (bending)	Max. bending cycles: 5000000, Bending radius: 7,5 x D, Traversing rate: 3 m/s, Acceleration: 5 m/s <sup>2</sup>
Tensile strength	≤ 100 N
Near end crosstalk attenuation (NEXT)	65.3 dB (with 1 MHz)
	56.3 dB (at 4 MHz)
	50.3 dB (at 10 MHz)
	47.2 dB (at 16 MHz)
	45.8 dB (at 20 MHz)
	42.9 dB (at 31.25 MHz)
	38.4 dB (at 62.5 MHz)
Power-summated near end crosstalk attenuation (PSNEXT)	35.3 dB (at 100 MHz)
	62.3 dB (with 1 MHz)
	53.3 dB (at 4 MHz)
	47.3 dB (at 10 MHz)
	44.2 dB (at 16 MHz)

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	42.8 dB (at 20 MHz)
	39.9 dB (at 31.25 MHz)
	35.4 dB (at 62.5 MHz)
	32.3 dB (at 100 MHz)
Return attenuation (RL)	23 dB (at 4 MHz)
	24.1 dB (at 8 MHz)
	25 dB (at 10 MHz)
	25 dB (at 16 MHz)
	25 dB (at 20 MHz)
	23.6 dB (at 31.25 MHz)
	21.5 dB (at 62.5 MHz)
	20.1 dB (at 100 MHz)
Shield attenuation	3.2 dB (with 1 MHz)
	6 dB (at 4 MHz)
	9.5 dB (at 10 MHz)
	12.1 dB (at 16 MHz)
	13.6 dB (at 20 MHz)
	17.1 dB (at 31.25 MHz)
	24.8 dB (at 62.5 MHz)
	32 dB (at 100 MHz)
Halogen-free	according to IEC 60754-1
Flame resistance	according to IEC 60332-1-2
Resistance to oil	in accordance with EN 60811-2-1
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)
	-20 °C ... 80 °C (Cable, flexible installation)
Ambient temperature (installation)	-20 °C ... 80 °C

Drawings

Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1412859>



**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
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### China RoHS

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

### EU REACH SVHC

REACH candidate substance (CAS No.)	2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol (UV-329)(CAS: 3147-75-9)
SCIP	46e86f7f-284c-490f-ab59-23068d5b7160

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Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)