

1418109

https://www.phoenixcontact.com/us/products/1418109

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Patch cable, degree of protection: IP20, cable length: 2 m, number of positions: 8, 1 Gbps, CAT5, Ethernet

### Commercial data

Item number	1418109
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	NULL
Product key	ABNABM
Catalog page	Page 374 (C-4-2015)
GTIN	4046356534345
Weight per piece (including packing)	123.8 g
Weight per piece (excluding packing)	108.8 g
Customs tariff number	85444210
Country of origin	CN



1418109

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## Technical data

### Product properties

Product type	Data cable preassembled
Product family	RJ45 BASIC IE8 CAT5
Sensor type	Ethernet
Number of positions	8
Shielded	yes

### Electrical properties

Nominal voltage U <sub>N</sub>	48 V
Transmission medium	Copper
Transmission characteristics (category)	CAT5 (IEC 11801:2002)
Wave impedance	100 Ω
Max. conductor resistance	150 mΩ/m

### Material specifications

Outer sheath, material	PUR
Conductor material	Bare Cu litz wires

### Connector

### Connection 1

Туре	Plug straight RJ45
Shielded	yes
Handle color	black
Material	CuSn (Contact)
	Ni/Au (Contact surface)
	PC (Contact carriers)
	TPU (Grip body)
Degree of protection	IP20

### Connection 2

Туре	Plug straight RJ45
Shielded	yes
Handle color	black
Material	CuSn (Contact)
	Ni/Au (Contact surface)
	PC (Contact carriers)
	TPU (Grip body)
Degree of protection	IP20

#### Cable/line

Cable length	2.00 m



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#### Ethernet flexible CAT5. 4-pair [94B]

Cable weight         47 kg/km           LL AWM Style         20683 (80°C30 V)           Number of positions         8           Shielded         yes           Cable type         Ethernet flexible CAT5, 4-pair [94B]           Conductor structure         4x2xAWC2677, SF/UTP           Signal runtime         5.3 ns/m           Conductor structure signal line         7x 0.16 mm           AWC3 signal line         28           Conductor ross section         4x 2x 0.14 mm²           Wire diameter incl. insulation         0.96 mm           Vire diameter incl. insulation         0.96 mm           Cuter sheath, material         PUR           External sheath, color         water blue RAL 5021           Conductor material         Bare Cu litz wires           Material wire insulation         Foramed PE           Single wire, color         white/blue-blue, white/orange-orange, white/green-green, white/g	Ethernet flexible CAT5, 4-pair [94B]	
UL AWM Style         20963 (80°C/30 V)           Number of positions         8           Shielded         yes           Cable type         Ethernet flexible CAT5, 4-pair [94B]           Conductor structure         4x2xAWG26/7, SF/UTP           Signal runtime         5.3 ns/m           Conductor structure signal line         7x 0.16 mm           AWG signal line         26           Conductor cross section         4x 2x 0.14 mm²           Wire diameter incl. insulation         0.96 mm           External cable diameter         6.40 mm ±0.2 mm           Outer sheath, material         PUR           External sheath, color         water blue RAL 5021           Conductor material         Bare Cu litz wires           Material wire insulation         Foamed PE           Single wire, color         white/blue-blue, white/orange-orange, white/green-green, white/green-green, white/green-green, white/green-green, white/blue-blue, white/orange-orange, white/green-green, white/brown-brown           Thickness, outer sheath         1.05 mm           Twisted pairs         2 cores to the pair           Overall twist         4 pairs for core           Optical shield covering         70 %           Insulation resistance         ≤ 5 GΩ*km           Coupling resistance         ≤ 10	Dimensional drawing	
Number of positions         8           Shielded         yes           Cable type         Ethernet flexible CAT5, 4-pair [94B]           Conductor structure         4x2xAWG26/7, SF/UTP           Signal runtime         5.3 ns/m           Conductor structure signal line         7x 0.16 mm           AWG signal line         26           Conductor cross section         4x 2x 0.14 mm²           Wire diameter incl. insulation         0.96 mm           External cable diameter         6.40 mm ±0.2 mm           Outer sheath, material         PUR           External sheath, color         water blue RAL 5021           Conductor material         Bare Cu litz wires           Material wire insulation         Foamed PE           Single wire, color         white/blue-blue, white/orange-orange, white/green-green, white/green-green, white/brown-brown           Thickness, outer sheath         1.05 mm           Twisted pairs         2 cores to the pair           Overall twist         4 pairs for core           Optical shield covering         70 %           Insulation resistance         ≤ 100.00 mC/m (at 10 MHz)           Loop resistance         ≤ 290.00 Ω/km           Vave impedance         100 Ω ±5 Ω (at 100 MHz)           Cable capacity <t< td=""><td>Cable weight</td><td>47 kg/km</td></t<>	Cable weight	47 kg/km
Shielded         yes           Cable type         Ethernet flexible CAT5, 4-pair [94B]           Conductor structure         4x2xAWG26/7, SF/UTP           Signal runtime         5.3 ns/m           Conductor structure signal line         7x 0.16 mm           AWG signal line         26           Conductor cross section         4x 2x 0.14 mm²           Wire diameter incl. insulation         0.96 mm           External cable diameter         6.40 mm ±0.2 mm           Outer sheath, material         PUR           External sheath, color         water blue RAL 5021           Conductor material         Bare Cu litz wires           Material wire insulation         Foamed PE           Single wire, color         white/blue-blue, white/orange-orange, white/green-green, white/green-green, white/orange-orange, white/green-green, white/green	UL AWM Style	20963 (80°C/30 V)
Cable type       Ethernet flexible CAT5, 4-pair [948]         Conductor structure $4x2xAWG2677$ , SF/UTP         Signal runtime $5.3 \text{ ns/m}$ Conductor structure signal line $7x 0.16 \text{ mm}$ AWG signal line $26$ Conductor cross section $4x 2x 0.14 \text{ mm}^2$ Wire diameter incl. insulation $0.96 \text{ mm}$ External cable diameter $6.40 \text{ mm} \pm 0.2 \text{ mm}$ Outer sheath, material       PUR         External sheath, color       water blue RAL 5021         Conductor material       Bare Cu litz wires         Material wire insulation       Foamed PE         Single wire, color       white/blue-blue, white/orange-orange, white/green-green, white	Number of positions	8
Conductor structure         4x2xAWG26/7, SF/UTP           Signal runtime         5.3 ns/m           Conductor structure signal line         7x 0.16 mm           AWG signal line         26           Conductor cross section         4x 2x 0.14 mm²           Wire diameter incl. insulation         0.96 mm           External cable diameter         6.40 mm ±0.2 mm           Outer sheath, material         PUR           External sheath, color         water blue RAL 5021           Conductor material         Bare Cu litz wires           Material wire insulation         Foarned PE           Single wire, color         white/blue-blue, white/orange-orange, white/green-green, white/green-green, white/green-green, white/brown-brown           Thickness, outer sheath         1.05 mm           Twisted pairs         2 cores to the pair           Overall twist         4 pairs for core           Optical shield covering         70 %           Insulation resistance         ≥ 5 GΩ*km           Coupling resistance         ≥ 100.00 mΩ/m (at 10 MHz)           Loop resistance         ≥ 290.00 Ω/km           Wave impedance         100 Ω ± 5 Ω (at 1000 MHz)           Cable capacity         48 nF/km (at 1 kHz)           Nominal voltage, cable         ≤ 100 V	Shielded	yes
Signal runtime $5.3 \text{ ns/m}$ Conductor structure signal line $7x 0.16 \text{ mm}$ AWG signal line $26$ Conductor cross section $4x 2x 0.14 \text{ mm}^2$ Wire diameter incl. insulation $0.96 \text{ mm}$ External cable diameter $6.40 \text{ mm} \pm 0.2 \text{ mm}$ Outer sheath, material       PUR         External sheath, color       water blue RAL 5021         Conductor material       Bare Cu litz wires         Material wire insulation       Foamed PE         Single wire, color       white/blue-blue, white/orange-orange, white/green-green, whi	Cable type	Ethernet flexible CAT5, 4-pair [94B]
Conductor structure signal line       7x 0.16 mm         AWG signal line       26         Conductor cross section $4x 2x 0.14 \text{ mm}^2$ Wire diameter incl. insulation $0.96 \text{ mm}$ External cable diameter $6.40 \text{ mm} \pm 0.2 \text{ mm}$ Outer sheath, material       PUR         External sheath, color       water blue RAL 5021         Conductor material       Bare Cu litz wires         Material wire insulation       Foamed PE         Single wire, color       white/blue-blue, white/orange-orange, white/green-green, white/green-green, white/green-green, white/prown-brown         Thickness, outer sheath $1.05 \text{ mm}$ Twisted pairs $2 \text{ cores to the pair}$ Overall twist $4 \text{ pairs for core}$ Optical shield covering $70 \%$ Insulation resistance $2 \text{ f GO'km}$ Coupling resistance $2 \text{ f OO m } \text{ m/m}$ (at $10 \text{ MHz}$ )         Coupling resistance $2 \text{ f OO m } \text{ m/m}$ (at $10 \text{ MHz}$ )         Wave impedance $100 \Omega \pm 5 \Omega$ (at $100 \text{ MHz}$ )         Cable capacity $4 \text{ R f /km}$ (at $1 \text{ k kz}$ )         Nominal voltage, cable $4 \text{ f OO m}$ (50 Hz, 1 min.)         Test voltage Core/Core $700 \text{ V (50 Hz, 1 min.)}$	Conductor structure	4x2xAWG26/7, SF/UTP
AWG signal line26Conductor cross section $4x \times 2 \cdot 0.14 \text{ mm}^2$ Wire diameter incl. insulation $0.96 \text{ mm}$ External cable diameter $6.40 \text{ mm} \pm 0.2 \text{ mm}$ Outer sheath, materialPURExternal sheath, colorwater blue RAL 5021Conductor materialBare Cu litz wiresMaterial wire insulationFoamed PESingle wire, colorwhite/blue-blue, white/orange-orange, white/green-green, white/green-green, white/green-green, white/green-green white/green-gr	Signal runtime	5.3 ns/m
Conductor cross section         4x 2x 0.14 mm²           Wire diameter incl. insulation         0.96 mm           External cable diameter         6.40 mm ±0.2 mm           Outer sheath, material         PUR           External sheath, color         water blue RAL 5021           Conductor material         Bare Cu litz wires           Material wire insulation         Foamed PE           Single wire, color         white/blue-blue, white/orange-orange, white/green-green, white/brown-brown           Thickness, outer sheath         1.05 mm           Twisted pairs         2 cores to the pair           Overall twist         4 pairs for core           Optical shield covering         70 %           Insulation resistance         ≥ 5 GΩ*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         48 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, fixed installation         26 mm <td>Conductor structure signal line</td> <td>7x 0.16 mm</td>	Conductor structure signal line	7x 0.16 mm
Wire diameter incl. insulation $0.96 \text{ mm}$ External cable diameter $6.40 \text{ mm} \pm 0.2 \text{ mm}$ Outer sheath, material       PUR         External sheath, color       water blue RAL 5021         Conductor material       Bare Cu litz wires         Material wire insulation       Foamed PE         Single wire, color       white/blue-blue, white/orange-orange, white/green-green, white/green-green, white/green-brown         Thickness, outer sheath $1.05 \text{ mm}$ Twisted pairs $2 \text{ cores to the pair}$ Overall twist $4 \text{ pairs for core}$ Optical shield covering $70 \%$ Insulation resistance $5 \text{ GD*km}$ Coupling resistance $5 \text{ GO*km}$ Loop resistance $5 \text{ GO*km}$ Wave impedance $100 \Omega \pm 5 \Omega$ (at $100 \text{ MHz}$ )         Vave impedance $100 \Omega \pm 5 \Omega$ (at $100 \text{ MHz}$ )         Cable capacity $48 \text{ nF/km}$ (at $1 \text{ kHz}$ )         Nominal voltage, cable $5 \text{ GO*km}$ Test voltage Core/Core $700 \text{ V } (50 \text{ Hz}, 1 \text{ min.})$ Test voltage Core/Shield $700.00 \text{ V } (50 \text{ Hz}, 1 \text{ min.})$ Minimum bending radius, fixed installation $8 \times D$ Smallest bending radius, fixed	AWG signal line	26
External cable diameter 6.40 mm $\pm$ 0.2 mm  Outer sheath, material PUR  External sheath, color water blue RAL 5021  Conductor material Bare Cu litz wires  Material wire insulation Foamed PE  Single wire, color white/blue-blue, white/orange-orange, white/green-green, white/brown-brown  Thickness, outer sheath 1.05 mm  Twisted pairs 2 cores to the pair  Overall twist 4 pairs for core  Optical shield covering 70 %  Insulation resistance $\pm$ 5 G $\Omega$ *km  Coupling resistance $\pm$ 100.00 m $\Omega$ /m (at 10 MHz)  Loop resistance $\pm$ 290.00 $\Omega$ /km  Wave impedance 100 $\Omega$ $\pm$ 5 $\Omega$ (at 100 MHz)  Cable capacity 48 nF/km (at 1 kHz)  Nominal voltage, cable $\pm$ 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 $\pm$ x D  Minimum bending radius, fixed installation 26 mm	Conductor cross section	4x 2x 0.14 mm²
Outer sheath, material       PUR         External sheath, color       water blue RAL 5021         Conductor material       Bare Cu litz wires         Material wire insulation       Foamed PE         Single wire, color       white/blue-blue, white/orange-orange, white/green-green, white/brown-brown         Thickness, outer sheath $1.05 \text{ mm}$ Twisted pairs $2 \text{ cores to the pair}$ Overall twist $4 \text{ pairs for core}$ Optical shield covering $70 \%$ Insulation resistance $2 \text{ GO}^*\text{km}$ Coupling resistance $2 \text{ 100.00 mO/m} \text{ (at 10 MHz)}$ Loop resistance $2 \text{ 290.00 } \Omega/\text{km}$ Wave impedance $100 \Omega \pm 5 \Omega \text{ (at 100 MHz)}$ Cable capacity $48 \text{ nF/km} \text{ (at 1 kHz)}$ Nominal voltage, cable $\leq 100 \text{ V}$ Test voltage Core/Core $700 \text{ V} \text{ (50 Hz, 1 min.)}$ Test voltage Core/Shield $700.00 \text{ V} \text{ (50 Hz, 1 min.)}$ Minimum bending radius, fixed installation $4 \times D$ Minimum bending radius, fexible installation $8 \times D$ Smallest bending radius, fixed installation $26 \text{ mm}$	Wire diameter incl. insulation	0.96 mm
External sheath, color  Conductor material  Bare Cu litz wires  Material wire insulation  Foamed PE  Single wire, color  white/blue-blue, white/orange-orange, white/green-green, white/brown-brown  Thickness, outer sheath  1.05 mm  Twisted pairs  2 cores to the pair  Overall twist  4 pairs for core  Optical shield covering  70 %  Insulation resistance $\geq 5 \text{ G}\Omega^*\text{km}$ Coupling resistance $\leq 100.00 \text{ m}\Omega/\text{m} \text{ (at } 10 \text{ MHz)}$ Loop resistance $\leq 290.00 \Omega/\text{km}$ Wave impedance  100 $\Omega \pm 5 \Omega \text{ (at } 100 \text{ MHz)}$ Cable capacity  As $nF/\text{km} \text{ (at } 1 \text{ kHz)}$ Nominal voltage, cable $\leq 100 \text{ V}$ 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, fixed installation  8 x D  Smallest bending radius, fixed installation  26 mm	External cable diameter	6.40 mm ±0.2 mm
Conductor material       Bare Cu litz wires         Material wire insulation       Foamed PE         Single wire, color       white/blue-blue, white/orange-orange, white/green-green, white/brown-brown         Thickness, outer sheath       1.05 mm         Twisted pairs       2 cores to the pair         Overall twist       4 pairs for core         Optical shield covering       70 %         Insulation resistance       ≥ 5 GΩ*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       48 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, fixed installation       8 x D         Smallest bending radius, fixed installation       26 mm	Outer sheath, material	PUR
Material wire insulationFoamed PESingle wire, colorwhite/blue-blue, white/orange-orange, white/green-green, white/brown-brownThickness, outer sheath $1.05 \text{ mm}$ Twisted pairs $2 \text{ cores to the pair}$ Overall twist $4 \text{ pairs for core}$ Optical shield covering $70 \%$ Insulation resistance $\geq 5 \text{ G}\Omega^*\text{km}$ Coupling resistance $\leq 100.00 \text{ m}\Omega/\text{m} \text{ (at } 10 \text{ MHz})$ Loop resistance $\leq 290.00 \Omega/\text{km}$ Wave impedance $100 \Omega \pm 5 \Omega \text{ (at } 100 \text{ MHz})$ Cable capacity $48 \text{ nF/km} \text{ (at } 1 \text{ kHz})$ Nominal voltage, cable $\leq 100 \text{ V}$ Test voltage Core/Core $700 \text{ V } (50 \text{ Hz}, 1 \text{ min.})$ Test voltage Core/Shield $700.00 \text{ V } (50 \text{ Hz}, 1 \text{ min.})$ Minimum bending radius, fixed installation $4 \times D$ Minimum bending radius, flexible installation $8 \times D$ Smallest bending radius, fixed installation $26 \text{ mm}$	External sheath, color	water blue RAL 5021
Single wire, color white/blue-blue, white/orange-orange, white/green-green, white/brown-brown  Thickness, outer sheath 1.05 mm  Twisted pairs 2 cores to the pair  Overall twist 4 pairs for core  Optical shield covering 70 %  Insulation resistance $\geq 5 \text{ G}\Omega^{\circ}\text{km}$ Coupling resistance $\leq 100.00 \text{ m}\Omega/\text{m}$ (at $10 \text{ MHz}$ )  Loop resistance $\leq 290.00 \Omega/\text{km}$ Wave impedance $100 \Omega \pm 5 \Omega$ (at $100 \text{ MHz}$ )  Cable capacity $48 \text{ nF/km}$ (at $1 \text{ kHz}$ )  Nominal voltage, cable $\leq 100 \text{ V}$ Test voltage Core/Core $700 \text{ V}$ (50 Hz, 1 min.)  Test voltage Core/Shield $700.00 \text{ V}$ (50 Hz, 1 min.)  Minimum bending radius, fixed installation $4 \times D$ Smallest bending radius, fixed installation $26 \text{ mm}$	Conductor material	Bare Cu litz wires
Thickness, outer sheath  1.05 mm  Twisted pairs  2 cores to the pair  Overall twist  4 pairs for core  Optical shield covering  70 %  Insulation resistance $\geq 5 \text{ G}\Omega^*\text{km}$ Coupling resistance $\leq 100.00 \text{ m}\Omega/\text{m} \text{ (at } 10 \text{ MHz})$ Loop resistance $\leq 290.00 \Omega/\text{km}$ Wave impedance $\leq 290.00 \Omega/\text{km}$ Wave impedance $\leq 100 \text{ V}$ Test voltage, cable $\leq 100 \text{ V}$ Test voltage Core/Core $\leq 100 \text{ V} \text{ (50 Hz, 1 min.)}$ Test voltage Core/Shield  700.00 V (50 Hz, 1 min.)  Minimum bending radius, fixed installation $\leq 20 \text{ mm}$	Material wire insulation	Foamed PE
Twisted pairs 2 cores to the pair  Overall twist 4 pairs for core  Optical shield covering 70 %  Insulation resistance $\geq 5 \text{ G}\Omega^*\text{km}$ Coupling resistance $\leq 100.00 \text{ m}\Omega/\text{m} \text{ (at } 10 \text{ MHz)}$ Loop resistance $\leq 290.00 \Omega/\text{km}$ Wave impedance $100 \Omega \pm 5 \Omega \text{ (at } 100 \text{ MHz)}$ Cable capacity $48 \text{ nF/km} \text{ (at } 1 \text{ kHz)}$ Nominal voltage, cable $\leq 100 \text{ V}$ Test voltage Core/Core $700 \text{ V (50 Hz, 1 min.)}$ Test voltage Core/Shield $700.00 \text{ V (50 Hz, 1 min.)}$ Minimum bending radius, fixed installation $4 \times D$ Minimum bending radius, fixed installation $8 \times D$ Smallest bending radius, fixed installation $26 \text{ mm}$	Single wire, color	
Overall twist 4 pairs for core  Optical shield covering 70 %  Insulation resistance ≥ 5 $G\Omega^*km$ Coupling resistance ≤ 100.00 $m\Omega/m$ (at 10 MHz)  Loop resistance ≤ 290.00 $\Omega/km$ Wave impedance 100 $\Omega \pm 5 \Omega$ (at 100 MHz)  Cable capacity 48 $nF/km$ (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 $\times D$ Minimum bending radius, flexible installation 8 $\times D$ Smallest bending radius, fixed installation 26 $\times D$	Thickness, outer sheath	1.05 mm
Optical shield covering       70 %         Insulation resistance       ≥ 5 GΩ*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       48 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       26 mm	Twisted pairs	2 cores to the pair
Insulation resistance       ≥ 5 GΩ*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       48 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       26 mm	Overall twist	4 pairs for core
Coupling resistance≤ 100.00 mΩ/m (at 10 MHz)Loop resistance≤ 290.00 Ω/kmWave impedance $100 Ω ±5 Ω (at 100 MHz)$ Cable capacity $48 nF/km (at 1 kHz)$ Nominal voltage, cable≤ 100 VTest 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 $4 × D$ Minimum bending radius, flexible installation $8 × D$ Smallest bending radius, fixed installation $26 mm$	Optical shield covering	70 %
Loop resistance≤ 290.00 Ω/kmWave impedance $100 Ω ±5 Ω (at 100 MHz)$ Cable capacity $48 nF/km (at 1 kHz)$ Nominal voltage, cable≤ $100 ∨$ Test voltage Core/Core $700 ∨ (50 Hz, 1 min.)$ Test voltage Core/Shield $700.00 ∨ (50 Hz, 1 min.)$ Minimum bending radius, fixed installation $4 × D$ Minimum bending radius, flexible installation $8 × D$ Smallest bending radius, fixed installation $26 mm$	Insulation resistance	≥ 5 GΩ*km
Wave impedance $100 Ω ±5 Ω (at 100 MHz)$ Cable capacity $48 nF/km (at 1 kHz)$ 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 $4 × D$ Minimum bending radius, flexible installation $8 × D$ Smallest bending radius, fixed installation $26 mm$	Coupling resistance	≤ 100.00 mΩ/m (at 10 MHz)
Cable capacity       48 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       26 mm	Loop resistance	≤ 290.00 Ω/km
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       26 mm	Wave impedance	100 $\Omega$ ±5 $\Omega$ (at 100 MHz)
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  26 mm	Cable capacity	48 nF/km (at 1 kHz)
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 26 mm	Nominal voltage, cable	≤ 100 V
Minimum bending radius, fixed installation4 x DMinimum bending radius, flexible installation8 x DSmallest bending radius, fixed installation26 mm	Test voltage Core/Core	700 V (50 Hz, 1 min.)
Minimum bending radius, flexible installation 8 x D  Smallest bending radius, fixed installation 26 mm	Test voltage Core/Shield	700.00 V (50 Hz, 1 min.)
Smallest bending radius, fixed installation 26 mm	Minimum bending radius, fixed installation	4 x D
	Minimum bending radius, flexible installation	8 x D
Smallest bending radius, movable installation 52 mm	Smallest bending radius, fixed installation	26 mm
	Smallest bending radius, movable installation	52 mm



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Tensile strength	≤ 100 N
Near end crosstalk attenuation (NEXT)	71.3 dB (with 1 MHz)
	62.3 dB (at 4 MHz)
	56.3 dB (at 10 MHz)
	53.2 dB (at 16 MHz)
	51.8 dB (at 20 MHz)
	48.9 dB (at 31.25 MHz)
	44.4 dB (at 62.5 MHz)
	41.3 dB (at 100 MHz)
Power-summated near end crosstalk attenuation (PSNEXT)	62.3 dB (with 1 MHz)
	53.3 dB (at 4 MHz)
	47.3 dB (at 10 MHz)
	44.2 dB (at 16 MHz)
	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
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#### Environmental and real-life conditions

#### Ambient conditions

Degree of protection	IP20



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	IP20
Ambient temperature (operation)	-10 °C 50 °C (Flexibly installed)
	-25 °C 60 °C (fixed routing)
Resistance to oil	in accordance with DIN EN 60811-2-1

## Standards and regulations

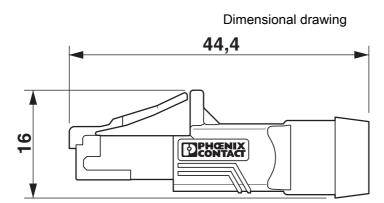
Flame resistance	complying with IEC 60332-2-2
Resistance to oil	in accordance with DIN EN 60811-2-1
Concentration of fumes	in accordance with IEC 61034-1/2
Other resistance	Resistant to ozone
	hydrolysis and microbe resistant

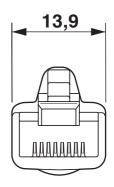


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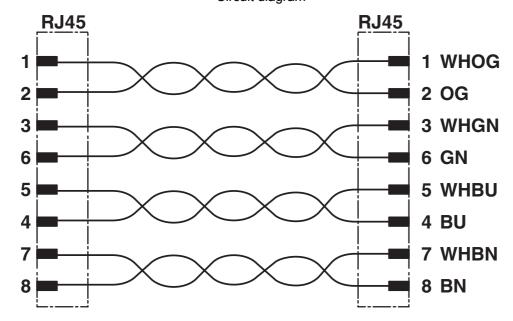
# Drawings





RJ45 connector, IP20

### Circuit diagram





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## Classifications

#### **ECLASS**

ECLASS-13.0 27060307



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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-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.)	No substance above 0.1 wt%

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