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Network cable - NBC- 1,0-93E/FSD SCO

1407380

https://www.phoenixcontact.com/gb/products/1407380

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Network cable, Ethernet CAT5 (100 Mbps), 4-position, shielded (Advanced Shielding Technology), free cable end, on Socket straight M12 / IP67, coding: D, cable length: 1 m

Commercial Data

Item number	1407380
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	BF1CJI
Product Key	BF1CJI
Catalog Page	Page 199 (C-6-2019)
GTIN	4046356775083
Weight per Piece (including packing)	65.7 g
Weight per Piece (excluding packing)	58.75 g
Customs tariff number	85444210
Country of origin	PL

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Technical Data

Notes

General	Further products with variable cable type and variable cable length can be found in the accessories section

Product properties

Product type	Data cable preassembled
Number of positions	4
Application	Standard
No. of cable outlets	1
Shielded	yes
Coding	D - data

Insulation characteristics

Overvoltage category	II
Degree of pollution	3

Interfaces

Bus system	Ethernet
Signal type/category	Ethernet CAT5 (IEC 11801), 100 Mbps

LED signaling

Status display	No
Status display present	No

Electrical properties

Nominal voltage U_N	48 V AC
	60 V DC
Nominal current I_N	4 A
Transmission medium	Copper

Material specifications

Color Handle area	black
Flammability rating according to UL 94	V0

Connector

Header 1

Type	free cable end

Head 2

Type	Socket straight M12 / IP67
Number of positions	4
Coding type	D (Data)
Handle color	black

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Material	CuSn (Contact)
	Ni/Au (Contact surface)
	PA (Contact carriers)
	TPU, hardly inflammable, self-extinguishing (Grip)
	Zinc die-cast, nickel-plated (Screw connection)
	FKM (Seal)
Insertion/withdrawal cycles	≥ 100
Contact resistance	≤ 5 mΩ
Insulation resistance	≥ 100 MΩ
Tightening torque	0.4 Nm
Ambient temperature (operation)	-25 °C ... 90 °C

Cable / line

Cable length	1 m
Cable weight	42 kg/km
UL AWM Style	20963 (80°C/30 V)
Number of positions	4
Shielded	yes
Cable type	Ethernet flexible CAT5, 2-pair [93E]
Signal runtime	5.3 ns/m
Conductor structure signal line	7x 0.16 mm
AWG signal line	26
Conductor cross section	2x 2x 0.14 mm²
Wire diameter incl. insulation	0.98 mm
External cable diameter	6.4 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/orange-orange, white/green-green
Thickness, outer sheath	1.2 mm
Twisted pairs	2 cores to the pair
Overall twist	Two pairs with two fillers to the core
Optical shield covering	70 %
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. 45 nF/km (at 1 kHz)
Nominal voltage, cable	≤ 100 V (Peak value, not for high-power applications)
Test voltage Core/Core	700 V (50 Hz, 1 min.)
Test voltage Core/Shield	700 V (50 Hz, 1 min.)
Current carrying capacity of cable	2 A (according to DIN VDE 0891-1)
Minimum bending radius, fixed installation	4 x D

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1407380

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Minimum bending radius, flexible installation	8 x D
Tensile strength	≤ 80 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)
	35.3 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 loss (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
	in acc. to UL VW1
Resistance to oil	according to 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

Cable structure

Signal type/category	Ethernet CAT5 (IEC 11801), 100 Mbps

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Ambient conditions

Degree of protection	IP65
	IP67

Standards and regulations

M12

Standards/specifications	IEC 61076-2-101

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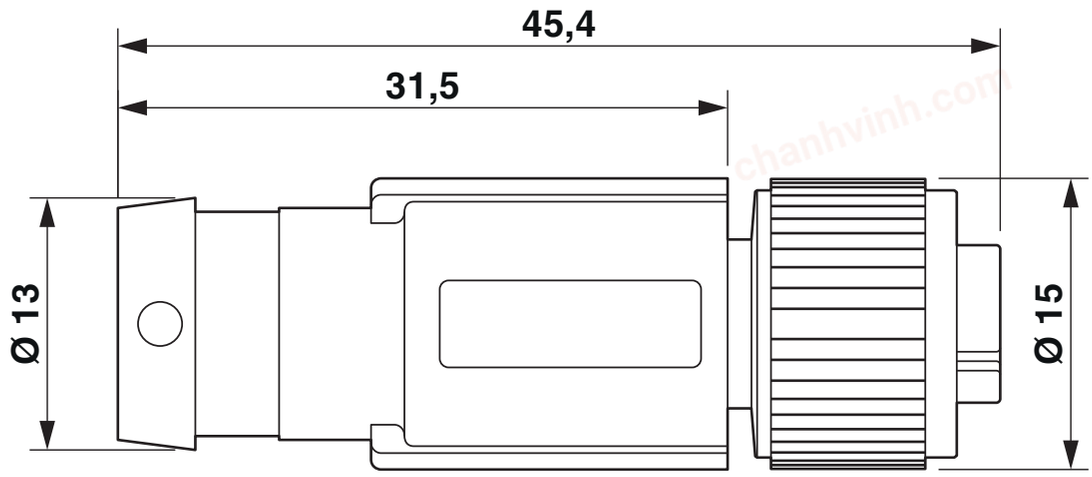
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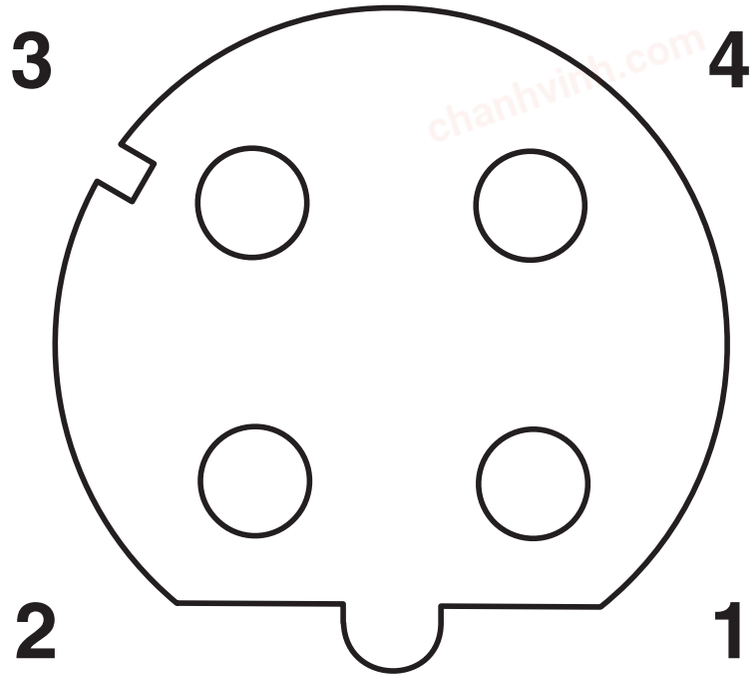
Drawings

Dimensional drawing



M12 x 1 socket, straight, shielded

Schematic diagram



Pin assignment M12 socket, 4-pos., D-coded, female side

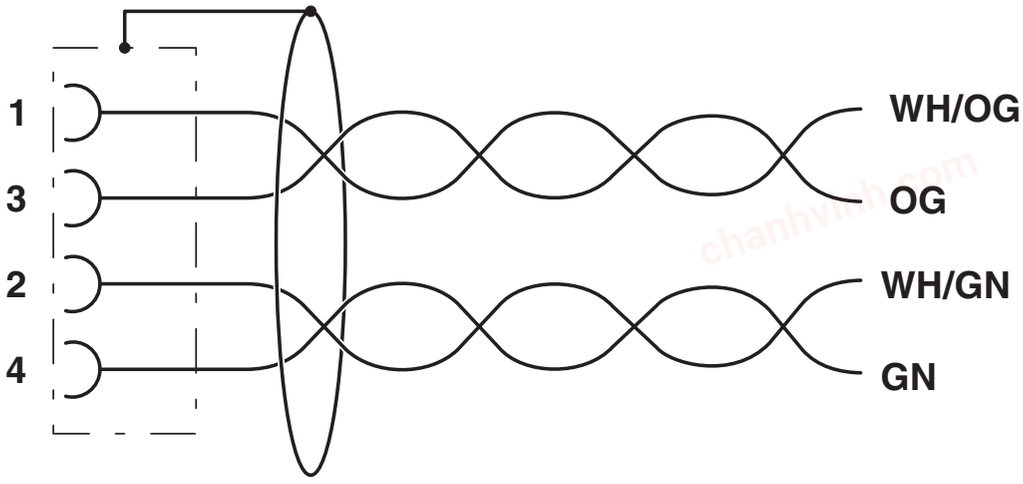
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Circuit diagram



Contact assignment of the M12 socket

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Approvals

cUL Recognized
Approval ID: FILE E 335024

	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	30 V	4 A	-	-

UL Recognized
Approval ID: FILE E 335024

	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	30 V	4 A	-	-

EAC
Approval ID: RU D-DE.HB35.B.00387

cULus Recognized

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Classifications

ECLASS

ECLASS-9.0	27060308
ECLASS-10.0.1	27060308
ECLASS-11.0	27060307

ETIM

ETIM 8.0	EC001855

UNSPSC

UNSPSC 21.0	26121600

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Environmental Product Compliance

REACh SVHC	Lead 7439-92-1

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

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Network cable - NBC- 1,0-93E/FSD SCO

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Accessories

Network cable

Network cable - NBC-MSD SCO/.../... - 1408713

https://www.phoenixcontact.com/gb/products/1408713



Network cable, Ethernet CAT5 (100 Mbps), 4-position, shielded, Plug straight M12 SPEEDCON / IP67, coding: D, on free cable end, cable length: Free input (0.2 ... 40.0 m)

Torque screwdriver

Torque screwdriver - TSD 04 SAC - 1208429

https://www.phoenixcontact.com/gb/products/1208429



Torque screwdriver, with preset torque of 0.4 Nm and 4 mm hexagonal drive for M12 connectors

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Network cable - NBC- 1,0-93E/FSD SCO

1407380

https://www.phoenixcontact.com/gb/products/1407380

Network cable

Network cable - NBC-MRD SCO/.../... - 1408705

https://www.phoenixcontact.com/gb/products/1408705



Network cable, Ethernet CAT5 (100 Mbps), 4-position, shielded, Plug angled M12 SPEEDCON / IP67, coding: D, on free cable end, cable length: Free input (0.2 ... 40.0 m)

Torque screwdriver

Torque screwdriver - TSD-M 1,2NM - 1212224

https://www.phoenixcontact.com/gb/products/1212224



Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 0.3 - 1.2 Nm

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Network cable - NBC- 1,0-93E/FSD SCO

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https://www.phoenixcontact.com/gb/products/1407380

Network cable

Network cable - NBC-FSD SCO/.../... - 1408697

https://www.phoenixcontact.com/gb/products/1408697



Network cable, Ethernet CAT5 (100 Mbps), 4-position, shielded, free cable end, on Socket straight M12 SPEEDCON / IP67, coding: D, cable length: Free input (0.2 ... 40.0 m)

Adapter insert

Adapter insert - TSD-M SAC-BIT ADAPTER - 1212600

https://www.phoenixcontact.com/gb/products/1212600



Adapter bit for TSD-M...torque tools, E6.3-1/4" drive with 4 mm hexagon to accommodate SAC bits

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Network cable - NBC- 1,0-93E/FSD SCO

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https://www.phoenixcontact.com/gb/products/1407380

Network cable

Network cable - NBC-FRD SCO/.../... - 1408690

https://www.phoenixcontact.com/gb/products/1408690



Network cable, Ethernet CAT5 (100 Mbps), 4-position, shielded, free cable end, on Socket angled M12 SPEEDCON / IP67, coding: D, cable length: Free input (0.2 ... 40.0 m)

Tool

Tool - SAC BIT M12-D15 - 1208432

https://www.phoenixcontact.com/gb/products/1208432



Nut for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a knurl diameter of 15 mm, for 4 mm hexagonal drive

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Network cable - NBC- 1,0-93E/FSD SCO

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https://www.phoenixcontact.com/gb/products/1407380

Screw plug

Screw plug - PROT-M12 MS-PA-CHAIN - 1430899

https://www.phoenixcontact.com/gb/products/1430899

M12 sealing cap with fixing band, for sensor cables, for free M12 sockets



Locking clip

Locking clip - SAC-M12-EXCLIP-F - 1558991

https://www.phoenixcontact.com/gb/products/1558991

Locking clip for the socket side of sensor/actuator cables with M12 connector and M12 connectors for assembly, for knurl diameter: 15 mm or for Allen key with a wrench size of 14 mm, prevents the disconnection of plug-in connections without tools



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Cable-cutting tool

Cable-cutting tool - CUTFOX 12 - 1212128

https://www.phoenixcontact.com/gb/products/1212128



Cable cutter, for copper and aluminum up to 12 mm diameter (up to 35 mm^2)

Diagonal cutter

Diagonal cutter - CUTFOX-S VDE - 1212207

https://www.phoenixcontact.com/gb/products/1212207



Diagonal cutter for hard (piano wire) and soft wires, VDE 1000 V AC/1500 V DC tested

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Network cable - NBC- 1,0-93E/FSD SCO

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Stripping tool

Stripping tool - VS-CABLE-STRIP-VARIO - 1657407

https://www.phoenixcontact.com/gb/products/1657407

Stripping tool, for the multi-level stripping of shielded cables



Diagonal cutter

Diagonal cutter - MICROFOX-SP-1 - 1212487

https://www.phoenixcontact.com/gb/products/1212487



Electronic diagonal cutter, tapered head, without chamfer, with opening spring, non-reflective phosphate-treated surface, punched version

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Network cable - NBC- 1,0-93E/FSD SCO

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Stripping tool

Stripping tool - WIREFOX 4 - 1212156

https://www.phoenixcontact.com/gb/products/1212156



Stripping tool, for cables and conductors (especially for rubber and silicone insulations) from 0.1 - 4 mm^2, self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm^2 stranded/1.5 mm^2 solid, replaceable stripping blade

Stripping tool

Stripping tool - WIREFOX-E 4 - 1212704

https://www.phoenixcontact.com/gb/products/1212704



Stripping tool, for cables and conductors (especially for rubber and silicone insulations) from 0.1 - 4 mm^2, self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm^2 stranded/1.5 mm^2 solid, replaceable stripping blade

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Network cable - NBC- 1,0-93E/FSD SCO

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Stripping tool

Stripping tool - WIREFOX 10 - 1212150

https://www.phoenixcontact.com/gb/products/1212150



Stripping tool, for cables and conductors from 0.02 - 10 mm^2, self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm^2 stranded/1.5 mm^2 solid, replaceable stripping blade

Protective hose adapter

Protective hose adapter - WP-CTA POM 13,0 BK - 1422884

https://www.phoenixcontact.com/gb/products/1422884



Protective hose adapter, for corrugated hoses with a nominal size of 13 (10 x 13), corrugated in parallel

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Network cable - NBC- 1,0-93E/FSD SCO

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https://www.phoenixcontact.com/gb/products/1407380

Protective hose

Protective hose - WP-PA HF 13,0 BK - 3240681

https://www.phoenixcontact.com/gb/products/3240681



Protective hose, material: PA 6, filament: without, UV-resistant: yes, flexible, degree of protection: IP68, color: black, inflammability class in acc. with UL 94: V0, inner diameter: 10 mm, Total length: 50 m

Protective hose

Protective hose - WP-PA HF-HB 13,0 BK - 3240839

https://www.phoenixcontact.com/gb/products/3240839



Protective hose, material: PA 6, filament: without, UV-resistant: yes, flexible, degree of protection: IP68, color: black, inflammability class in acc. with UL 94: HB, inner diameter: 10 mm, Total length: 50 m

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Network cable - NBC- 1,0-93E/FSD SCO

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Data connector

Data connector - SACC-M12MSD-4QO SH ETH - 1411066

https://www.phoenixcontact.com/gb/products/1411066



Data connector, Ethernet CAT5 (100 Mbps), 4-position, halogen-free, shielded, Plug straight M12 SPEEDCON, Coding: D, Insulation displacement connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 5 mm ... 9.7 mm

Data connector

Data connector - SACC-M12MRD-4Q SH - 1553624

https://www.phoenixcontact.com/gb/products/1553624



Data connector, Ethernet CAT5 (100 Mbps), 4-position, shielded, Plug angled M12, Coding: D, Insulation displacement connection, knurl material: Nickel-plated brass, external cable diameter 4 mm ... 8 mm

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Network cable - NBC- 1,0-93E/FSD SCO

1407380

https://www.phoenixcontact.com/gb/products/1407380

Data connector

Data connector - SACC-M12FSD-4QO SH ETH - 1411069

https://www.phoenixcontact.com/gb/products/1411069



Data connector, Ethernet CAT5 (100 Mbps), 4-position, halogen-free, shielded, Socket straight M12 SPEEDCON, Coding: D, Insulation displacement connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 5 mm ... 9.7 mm

Data connector

Data connector - SACC-M12FRD-4Q SH - 1553637

https://www.phoenixcontact.com/gb/products/1553637



Data connector, Ethernet CAT5 (100 Mbps), 4-position, shielded, Socket angled M12, Coding: D, Insulation displacement connection, knurl material: Nickel-plated brass, external cable diameter 4 mm ... 8 mm

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Network cable - NBC- 1,0-93E/FSD SCO

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Conductor connectors

Conductor connectors - SACC-CC-4QO SH ETH - 1414415

https://www.phoenixcontact.com/gb/products/1414415



Cable connector, Ethernet CAT5 (100 Mbps), 4-pos., halogen-free, shielded, insulation displacement connection, housing material: zinc die-cast, nickel-plated, outer cable diameter of 5 mm ... 9.7 mm

RJ45 connector

RJ45 connector - VS-08-RJ45-5-Q/IP20 - 1656725

https://www.phoenixcontact.com/gb/products/1656725



RJ45 connector, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5 (IEC 11801:2002), material: PA, connection method: IDC fast connection, connection cross section: AWG 26- 23, cable outlet: straight, color: traffic grey A RAL 7042, Ethernet

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RJ45 connector

RJ45 connector - VS-08-RJ45-5-Q/IP20 BK - 1658008

https://www.phoenixcontact.com/gb/products/1658008



RJ45 connector, type: RJ45, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5 (IEC 11801:2002), material: PA, connection method: IDC fast connection, connection cross section: AWG 26- 23, cable outlet: straight, color: black, Ethernet

RJ45 connector

RJ45 connector - CUC-IND-C1ZNI-S/R4IE8 - 1421607

https://www.phoenixcontact.com/gb/products/1421607



RJ45 connector, type: RJ45, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5 (IEC 11801:2002), material: Zinc die-cast, connection method: IDC fast connection, connection cross section: AWG 26- 24, cable outlet: straight, color: green, Ethernet

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RJ45 connector

RJ45 connector - CUC-IND-C1ZNI-T/R4IE8 - 1421877

https://www.phoenixcontact.com/gb/products/1421877



RJ45 connector, type: RJ45, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5 (IEC 11801:2002), material: Zinc die-cast, connection method: IDC fast connection, connection cross section: AWG 26- 24, cable outlet: angled, Ethernet

RJ45 connector

RJ45 connector - CUC-IND-C1ZNI-B/R4IE8 - 1421876

https://www.phoenixcontact.com/gb/products/1421876



RJ45 connector, type: RJ45, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5 (IEC 11801:2002), material: Zinc die-cast, connection method: IDC fast connection, connection cross section: AWG 26- 24, cable outlet: angled, Ethernet

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RJ45 connector

RJ45 connector - CUC-V06-C1PGY-S/R4CE8:1 - 1414383

https://www.phoenixcontact.com/gb/products/1414383



RJ45 connector, type: RJ45, degree of protection: IP67, number of positions: 8, 1 Gbps, CAT6, material: PA, connection method: Crimp connection, connection cross section: AWG 27- 24, cable outlet: straight, color: gray, Ethernet/PROFINET

RJ45 connector

RJ45 connector - CUC-V06-C1PBK-S/R4CE8:1 - 1414408

https://www.phoenixcontact.com/gb/products/1414408



RJ45 connector, type: RJ45, degree of protection: IP67, number of positions: 8, 1 Gbps, CAT6, material: PA, connection method: Crimp connection, connection cross section: AWG 24- 27, cable outlet: straight, color: black, Ethernet/PROFINET

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RJ45 connector

RJ45 connector - CUC-V14-C1ZNI-S/R4E8 - 1422661

https://www.phoenixcontact.com/gb/products/1422661



Push-pull connector (version 14), die-cast zinc, with RJ45 connector insert, 8-pos., with IDC fast connection technology, for 1 and 7-wire cores, 26 ... 24 AWG, for cable diameter of 5.5 mm ... 10 mm

RJ45 connector

RJ45 connector - CUC-V14-C1ZNI-T/R4E8 - 1422663

https://www.phoenixcontact.com/gb/products/1422663



Push-pull connector (version 14), die-cast zinc, with RJ45 connector insert, 8-pos., with IDC fast connection technology, for 1 and 7-wire cores, 26 ... 24 AWG, for cable diameter of 5.5 mm ... 10 mm

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RJ45 connector

RJ45 connector - CUC-V14-C1ZNI-B/R4E8 - 1422662

https://www.phoenixcontact.com/gb/products/1422662



Push-pull connector (version 14), die-cast zinc, with RJ45 connector insert, 8-pos., with IDC fast connection technology, for 1 and 7-wire cores, 26 ... 24 AWG, for cable diameter of 5.5 mm ... 10 mm

RJ45 connector

RJ45 connector - VS-PPC-C1-RJ45-POBK-PG9-4Q5 - 1608126

https://www.phoenixcontact.com/gb/products/1608126



RJ45 connector, IP67, with push-pull interlocking, plastic housing, CAT5e, 4-pos. , with QUICKON fast connection technology, for 1-wire and 7-wire conductors AWG 26 ... 22, for cable cross section 5.0 mm ... 8.0 mm

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