

NBC-MS/ 2,0-94B SCO - Network cable



1407405

<https://www.phoenixcontact.com/in/products/1407405>

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Network cable, Ethernet CAT5 (1 Gbps), 8-position, shielded, Plug straight M12 SPEEDCON, coding: A / IP67, on free cable end, cable length: 2 m

Commercial data

| | |
|--------------------------------------|---------------------|
| Item number | 1407405 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | BF1 |
| Product key | BF1CMI |
| Catalog page | Page 401 (C-2-2019) |
| GTIN | 4046356775335 |
| Weight per piece (including packing) | 122 g |
| Weight per piece (excluding packing) | 89.98 g |
| Customs tariff number | 85444210 |
| Country of origin | PL |

1407405

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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 |
| Sensor type | Ethernet |
| Number of positions | 8 |
| Application | Standard |
| No. of cable outlets | 1 |
| Shielded | yes |
| Coding | A |

Interfaces

| | |
|----------------------|--|
| Bus system | Ethernet |
| Signal type/category | Ethernet CAT5 (based on IEC 11801), 1 Gbps |

Signaling

| | |
|------------------------|----|
| Status display | No |
| Status display present | No |

Electrical properties

| | |
|---|-----------------------|
| Nominal voltage U_N | 48 V AC |
| | 60 V DC |
| Nominal current I_N | 2 A |
| Transmission medium | Copper |
| Transmission characteristics (category) | CAT5 (IEC 11801:2002) |

Connector

Connection 1

| | |
|-----------------------------|--|
| Type | Plug straight M12 SPEEDCON / IP67 |
| Number of positions | 8 |
| Locking type | SPEEDCON |
| Coding type | A (Standard) |
| Handle color | black |
| Material | CuZn (Contact) |
| | Ni/Au (Contact surface) |
| | TPU GF (Contact carriers) |
| | TPU, hardly inflammable, self-extinguishing (Grip) |
| | Zinc die-cast, nickel-plated (Screw connection) |
| Insertion/withdrawal cycles | ≥ 100 |
| Contact resistance | ≤ 5 mΩ |

NBC-MS/ 2,0-94B SCO - Network cable

1407405

<https://www.phoenixcontact.com/in/products/1407405>

| | |
|---------------------------------|------------------|
| Insulation resistance | ≥ 100 MΩ |
| Tightening torque | 0.4 Nm |
| Degree of protection | IP67 |
| Ambient temperature (operation) | -25 °C ... 90 °C |


Connection 2

| | |
|------|----------------|
| Type | free cable end |
|------|----------------|

Cable/line

| | |
|--------------|-----|
| Cable length | 2 m |
|--------------|-----|

Ethernet flexible CAT5, 4-pair [94B]

| | |
|---------------------------------|---|
| Dimensional drawing |  |
| Cable weight | 47 kg/km |
| 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 mm ² |
| Wire diameter incl. insulation | 0.96 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/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 |

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1407405

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| | |
|--|--|
| Wave impedance | 100 Ω \pm 5 Ω (at 100 MHz) |
| Cable capacity | 48 nF/km (at 1 kHz) |
| Nominal voltage, cable | \leq 100 V |
| Test voltage Core/Core | 700 V (50 Hz, 1 min.) |
| Test voltage Core/Shield | 700 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 |
| Smallest bending radius, movable installation | 52 mm |
| Tensile strength | \leq 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 |

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| | |
|------------------------------------|---|
| 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 |

Environmental and real-life conditions

Ambient conditions

| | |
|----------------------|-----------|
| Degree of protection | IP65 |
| | IP67 |
| | IP65/IP67 |

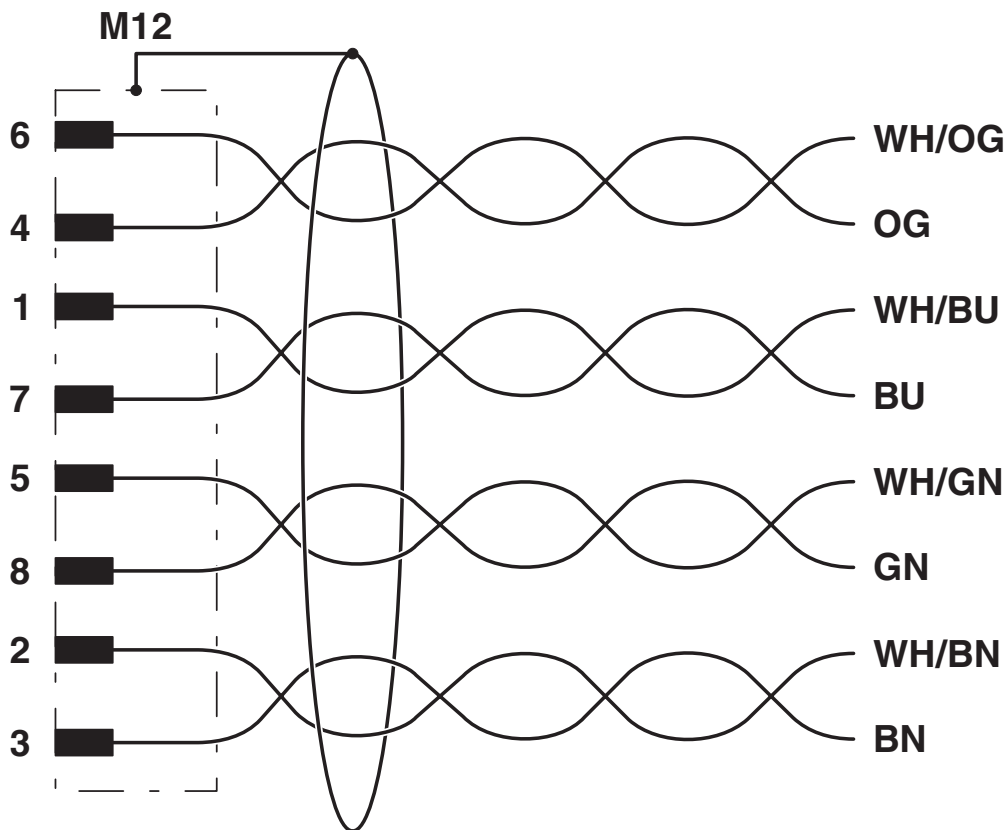
Standards and regulations

M12

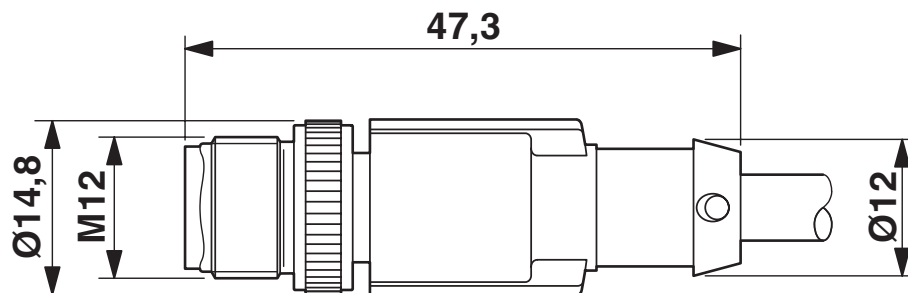
| | |
|--------------------------|-----------------|
| Standard designation | M12 connector |
| Standards/specifications | IEC 61076-2-101 |

Drawings

Circuit diagram



Dimensional drawing



Plug, M12 x 1, straight, shielded

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Schematic diagram



Pin assignment M12 plug, 8-pos., A-coded, view plug side

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/in/products/1407405>

| | | | | |
|---|-----------------------|-----------------------|-------------------|----------------------|
|  cUL Recognized Approval ID: FILE E 335024 | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| | 30 V | 1.5 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 | 1.5 A | - | - |

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

| |
|-------------------------|
| cULus Recognized |
|-------------------------|

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-11.0 | 27060307 |
| ECLASS-12.0 | 27060307 |
| ECLASS-13.0 | 27060307 |

ETIM

| | |
|----------|----------|
| ETIM 9.0 | EC001855 |
|----------|----------|

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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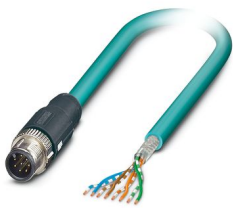
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Accessories

NBC-MS SCO-IE/.../... - Network cable

1408682

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Network cable, Ethernet CAT5 (1 Gbps), 8-position, Variable cable type, shielded, Plug straight M12 SPEEDCON, coding: A / IP67, on free cable end, cable length: Free input (0.2 ... 40.0 m)

NBC-MR SCO-IE/.../... - Network cable

1408675

<https://www.phoenixcontact.com/in/products/1408675>



Network cable, Ethernet CAT5 (1 Gbps), 8-position, Variable cable type, shielded, Plug angled M12 SPEEDCON, coding: A / IP67, on free cable end, cable length: Free input (0.2 ... 40.0 m)

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NBC-FS SCO-IE/.../... - Network cable

1408665

<https://www.phoenixcontact.com/in/products/1408665>



Network cable, Ethernet CAT5 (1 Gbps), 8-position, Variable cable type, shielded, free cable end, on Socket straight M12 SPEEDCON, coding: A / IP67, cable length: Free input (0.2 ... 40.0 m)

NBC-FR SCO-IE/.../... - Network cable

1408657

<https://www.phoenixcontact.com/in/products/1408657>



Network cable, Ethernet CAT5 (1 Gbps), 8-position, Variable cable type, shielded, free cable end, on Socket angled M12 SPEEDCON, coding: A / IP67, cable length: Free input (0.2 ... 40.0 m)

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PROT-M12 FS-PA-CHAIN - Sealing cap

1430873

<https://www.phoenixcontact.com/in/products/1430873>

M12 sealing cap made of plastic with fixing band, for sensor cables, for free M12 plugs



SAC-M12-EXCLIP-M - Locking clip

1558988

<https://www.phoenixcontact.com/in/products/1558988>

Locking clip for the pin 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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WP-CTA POM 13,0 BK - Protective hose adapter

1422884

<https://www.phoenixcontact.com/in/products/1422884>



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

WP-PA HF 13,0 BK - Protective hose

3240681

<https://www.phoenixcontact.com/in/products/3240681>



Protective hose, material: PA 6, UV-resistant: yes, flexible, degree of protection: IP68, color: black, flammability rating in acc. with UL 94: V0, inner diameter: 10 mm, Total length: 50 m

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

3240839

<https://www.phoenixcontact.com/in/products/3240839>



Protective hose, material: PA 6, UV-resistant: yes, flexible, degree of protection: IP68, color: black, flammability rating in acc. with UL 94: HB, inner diameter: 10 mm, Total length: 50 m

SACC-M12MS-8QO SH ETH - Data connector

1421679

<https://www.phoenixcontact.com/in/products/1421679>



Data connector, Ethernet CAT5 (1 Gbps), 8-position, halogen-free, shielded, Plug straight M12, coding: A, Insulation displacement connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 5 mm ... 9.7 mm

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SACC-M12MR-8Q SH - Data connector

1553653

<https://www.phoenixcontact.com/in/products/1553653>



Data connector, Ethernet CAT5 (1 Gbps), 8-position, shielded, Plug angled M12, coding: A, Insulation displacement connection, knurl material: Brass, nickel-plated, external cable diameter 4 mm ... 8 mm

SACC-M12FS-8QO SH ETH - Data connector

1421680

<https://www.phoenixcontact.com/in/products/1421680>



Data connector, Ethernet CAT5 (1 Gbps), 8-position, halogen-free, shielded, Socket straight M12, coding: A, Insulation displacement connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 5 mm ... 9.7 mm

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SACC-M12FR-8Q SH - Data connector

1553666

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Data connector, Ethernet CAT5 (1 Gbps), 8-position, shielded, Socket angled M12, coding: A, Insulation displacement connection, knurl material: Brass, nickel-plated, external cable diameter 4 mm ... 8 mm

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

1656725

<https://www.phoenixcontact.com/in/products/1656725>



RJ45 connector, design: RJ45, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5, material: Plastic, connection method: Insulation displacement connection, connection cross section: AWG 26- 23, cable outlet: straight, color: traffic grey A RAL 7042, Ethernet

NBC-MS/ 2,0-94B SCO - Network cable

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

1658008

<https://www.phoenixcontact.com/in/products/1658008>



RJ45 connector, design: RJ45, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5, material: Plastic, connection method: Insulation displacement connection, connection cross section: AWG 26- 23, cable outlet: straight, color: black, Ethernet

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

1421607

<https://www.phoenixcontact.com/in/products/1421607>



RJ45 connector, design: RJ45, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5, material: Metal, connection method: Insulation displacement connection, connection cross section: AWG 26- 24, cable outlet: straight, color: green, Ethernet

NBC-MS/ 2,0-94B SCO - Network cable

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

1421877

<https://www.phoenixcontact.com/in/products/1421877>



RJ45 connector, design: RJ45, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5, material: Metal, connection method: Insulation displacement connection, connection cross section: AWG 26- 24, cable outlet: angled, Ethernet

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

1421876

<https://www.phoenixcontact.com/in/products/1421876>



RJ45 connector, design: RJ45, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5, material: Metal, connection method: Insulation displacement connection, connection cross section: AWG 26- 24, cable outlet: angled, Ethernet

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

1414383

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

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

1414408

<https://www.phoenixcontact.com/in/products/1414408>



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

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

1422661

<https://www.phoenixcontact.com/in/products/1422661>



RJ45 connector, degree of protection: IP65/IP67, number of positions: 8, 1 Gbps, CAT5, material: Metal, connection method: IDC fast connection, connection cross section: AWG 26- 24, cable outlet: straight, Ethernet

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

1422663

<https://www.phoenixcontact.com/in/products/1422663>



RJ45 connector, degree of protection: IP65/IP67, number of positions: 8, 1 Gbps, CAT5, material: Metal, connection method: IDC fast connection, connection cross section: AWG 26- 24, cable outlet: angled, Ethernet

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

1422662

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RJ45 connector, degree of protection: IP65/IP67, number of positions: 8, 1 Gbps, CAT5, material: Metal, connection method: IDC fast connection, connection cross section: AWG 26- 24, cable outlet: angled, Ethernet

VS-PPC-C1-RJ45-POBK-PG9-8Q5 - RJ45 connector

1657834

<https://www.phoenixcontact.com/in/products/1657834>



RJ45 connector, degree of protection: IP65/IP67, number of positions: 8, 1 Gbps, CAT5 (IEC 11801:2002), material: Plastic, connection method: IDC fast connection, connection cross section: AWG 26- 22, cable outlet: straight, color: black, Ethernet

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TSD 04 SAC - Torque screwdriver

1208429

<https://www.phoenixcontact.com/in/products/1208429>



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

TSD-M 1,2NM - Torque screwdriver

1212224

<https://www.phoenixcontact.com/in/products/1212224>



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

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TSD-M SAC-BIT ADAPTER - Adapter insert

1212600

<https://www.phoenixcontact.com/in/products/1212600>



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

SAC BIT M12-D15 - Tool

1208432

<https://www.phoenixcontact.com/in/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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CUTFOX 12 - Cable-cutting tool

1212128

<https://www.phoenixcontact.com/in/products/1212128>



Cable cutter, for copper and aluminum up to 12 mm diameter (up to 35 mm²)

CUTFOX-S VDE - Diagonal cutter

1212207

<https://www.phoenixcontact.com/in/products/1212207>



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

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VS-CABLE-STRIP-VARIO - Stripping tool

1657407

<https://www.phoenixcontact.com/in/products/1657407>

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



MICROFOX-SP-1 - Diagonal cutter

1212487

<https://www.phoenixcontact.com/in/products/1212487>

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



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WIREFOX 4 - Stripping tool

1212156

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Stripping tool, for cables and conductors (especially for rubber and silicone insulations) from 0.1 - 4 mm², self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm² stranded/1.5 mm² solid, replaceable stripping blade

WIREFOX-E 4 - Stripping tool

1212704

<https://www.phoenixcontact.com/in/products/1212704>



Stripping tool, for cables and conductors (especially for rubber and silicone insulations) from 0.1 - 4 mm², self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm² stranded/1.5 mm² solid, replaceable stripping blade

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WIREFOX 10 - Stripping tool

1212150

<https://www.phoenixcontact.com/in/products/1212150>



Stripping tool, for cables and conductors from 0.02 - 10 mm², self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm² stranded/1.5 mm² solid, replaceable stripping blade

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