

## Network cable - NBC-M12MSX/2,0-94F/M12MRX - 1080725

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Network cable, Ethernet CAT6<sub>A</sub> (10 Gbps) CAT6<sub>A</sub> (10 Gbps), 8-position, PUR halogen-free, water blue RAL 5021, shielded (Advanced Shielding Technology), Plug straight M12 / IP67, coding: X, on Plug angled M12 / IP67, coding: X, cable length: 2 m



### Key Commercial Data

|                                      |   |
|--------------------------------------|---|
| Packing unit                         | 1 pc  |
| GTIN                                 | <br>4 055626 806303 |
| GTIN                                 | 4055626806303   |
| Weight per Piece (excluding packing) | 140.000 g   |
| Custom tariff number                 | 85444290  |
| Country of origin                    | Poland  |

### Technical data

#### Dimensions

|                 |     |
|-----------------|-----|
| Length of cable | 2 m |
|-----------------|-----|

#### Ambient conditions

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

#### General data

|                       |                                      |
|-----------------------|--------------------------------------|
| Rated current at 40°C | 0.5 A                                |
| Rated voltage         | 48 V AC                              |
|                       | 60 V DC                              |
| Number of positions   | 8                                    |
| Signal type/category  | Ethernet CAT6 <sub>A</sub> , 10 Gbps |

# Network cable - NBC-M12MSX/2,0-94F/M12MRX - 1080725

## Technical data

### General data

|   |                               |
|---|-------------------------------|
| Standards/regulations                   | M12 connector IEC 61076-2-109 |
| Transmission characteristics (category) | CAT6 <sub>A</sub>             |
| Transmission speed                      | 10 Gbps                       |

### Characteristics head 1

|  |  |
|--|--|
| Head type                                | Plug straight M12 / IP67                           |
| No. of positions (pin connector pattern) | 8  |
| Coding                                   | X (Data)   |
| Color                                    | black  |
| Material (component)                     | CuZn (Contact)                                     |
|  | Ni/Au (Contact surface)                            |
|  | PA 6.6 (Contact carriers)                          |
|  | TPU, hardly inflammable, self-extinguishing (Grip) |
|  | Zinc die-cast, nickel-plated (Screw connection)    |
| Insulation resistance                    | ≥ 100 MΩ   |
| Insertion/withdrawal cycles              | ≥ 100  |
| Torque                                   | 0.4 Nm   |
| Ambient temperature (operation)          | -25 °C ... 90 °C                                   |

### Characteristics head 2

|  |  |
|--|--|
| Head type                                | Plug angled M12 / IP67                             |
| No. of positions (pin connector pattern) | 8  |
| Coding                                   | X (Data)   |
| Color                                    | black  |
| Material (component)                     | CuZn (Contact)                                     |
|  | Ni/Au (Contact surface)                            |
|  | PA 6.6 (Contact carriers)                          |
|  | TPU, hardly inflammable, self-extinguishing (Grip) |
|  | Zinc die-cast, nickel-plated (Screw connection)    |
| Insulation resistance                    | ≥ 100 MΩ   |
| Insertion/withdrawal cycles              | ≥ 100  |
| Torque                                   | 0.4 Nm   |
| Ambient temperature (operation)          | -25 °C ... 90 °C                                   |

### Standards and Regulations

|                          |                               |
|--------------------------|-------------------------------|
| Standards/specifications | M12 connector IEC 61076-2-109 |
|--------------------------|-------------------------------|

### Cable

|            |                  |
|------------|------------------|
| Cable type | Ethernet 10 Gbit |
|------------|------------------|

## Network cable - NBC-M12MSX/2,0-94F/M12MRX - 1080725

### Technical data

#### Cable

|   |  |
|---|--|
| Cable type (abbreviation)                     | 94F  |
| UL AWM style                                  | 20963 (80°C/30 V)  |
| Signal type/category                          | Ethernet CAT6 <sub>A</sub> , 10 Gbps                                       |
| Cable structure                               | 4x2xAWG26/7; S/FTP   |
| Conductor cross section                       | 4x 2x 0.14 mm <sup>2</sup>   |
| AWG signal line                               | 26   |
| Conductor structure signal line               | 7x 0.16 mm   |
| Core diameter including insulation            | 1.04 mm  |
| Wire colors                                   | white/blue-blue, white/orange-orange, white/green-green, white/brown-brown |
| Twisted pairs                                 | 2 cores to the pair  |
| Type of pair shielding                        | Aluminum-lined foil  |
| Overall twist                                 | 4 pairs for core   |
| Shielding                                     | Tinned copper braided shield   |
| Optical shield covering                       | 70 %   |
| External sheath, color                        | water blue RAL 5021  |
| Outer sheath thickness                        | 0.65 mm  |
| External cable diameter D                     | 6.4 mm ±0.2 mm   |
| Minimum bending radius, fixed installation    | 4 x D  |
| Minimum bending radius, flexible installation | 8 x D  |
| Tensile strength GRP                          | ≤ 100 N  |
| Cable weight                                  | 42 kg/km   |
| Outer sheath, material                        | PUR  |
| Material conductor insulation                 | Foamed PE  |
| Conductor material                            | Bare Cu litz wires   |
| Insulation resistance                         | ≥ 500 MΩ*km  |
| Loop resistance                               | ≤ 290.00 Ω/km  |
| Cable capacity                                | 47 nF/km   |
| Wave impedance                                | 100 Ω ±5 Ω (at 100 MHz)  |
| Near end crosstalk attenuation (NEXT)         | 75.3 dB (with 1 MHz)   |
|   | 66.3 dB (at 4 MHz)   |
|   | 61.8 dB (at 8 MHz)   |
|   | 60.3 dB (at 10 MHz)  |
|   | 57.2 dB (at 16 MHz)  |
|   | 55.8 dB (at 20 MHz)  |
|   | 54.3 dB (at 25 MHz)  |
|   | 52.8 dB (at 31.25 MHz)   |

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### Technical data

#### Cable

|  |                        |
|--|------------------------|
|  | 48.4 dB (at 62.5 MHz)  |
|  | 45.3 dB (at 100 MHz)   |
|  | 40.8 dB (at 200 MHz)   |
|  | 39.3 dB (at 250 MHz)   |
|  | 38.1 dB (at 300 MHz)   |
|  | 36.3 dB (at 400 MHz)   |
|  | 34.8 dB (at 500 MHz)   |
| Power-summated near end crosstalk attenuation (PSNEXT) | 72.3 dB (with 1 MHz)   |
|  | 63.3 dB (at 4 MHz)     |
|  | 58.8 dB (at 8 MHz)     |
|  | 57.3 dB (at 10 MHz)    |
|  | 54.2 dB (at 16 MHz)    |
|  | 52.8 dB (at 20 MHz)    |
|  | 51.3 dB (at 25 MHz)    |
|  | 49.9 dB (at 31.25 MHz) |
|  | 45.4 dB (at 62.5 MHz)  |
|  | 42.3 dB (at 100 MHz)   |
|  | 37.8 dB (at 200 MHz)   |
|  | 36.3 dB (at 250 MHz)   |
|  | 35.1 dB (at 300 MHz)   |
|  | 33.3 dB (at 400 MHz)   |
|  | 31.8 dB (at 500 MHz)   |
| Attenuation  | 3.1 dB (with 1 MHz)    |
|  | 5.7 dB (at 4 MHz)      |
|  | 8 dB (at 8 MHz)        |
|  | 8.9 dB (at 10 MHz)     |
|  | 11.2 dB (at 16 MHz)    |
|  | 12.6 dB (at 20 MHz)    |
|  | 14.1 dB (at 25 MHz)    |
|  | 15.8 dB (at 31.25 MHz) |
|  | 22.5 dB (at 62.5 MHz)  |
|  | 28.7 dB (at 100 MHz)   |
|  | 41.4 dB (at 200 MHz)   |
|  | 46.6 dB (at 250 MHz)   |
|  | 51.4 dB (at 300 MHz)   |
|  | 60.1 dB (at 400 MHz)   |
|  | 67.9 dB (at 500 MHz)   |

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### Technical data

#### Cable

|   |   |
|---|---|
| Return loss (RL)                        | 20 dB (with 1 MHz)                              |
|   | 23 dB (at 4 MHz)                                |
|   | 24.5 dB (at 8 MHz)                              |
|   | 25 dB (at 10 MHz)                               |
|   | 25 dB (at 16 MHz)                               |
|   | 25 dB (at 20 MHz)                               |
|   | 24.2 dB (at 25 MHz)                             |
|   | 23.3 dB (at 31.25 MHz)                          |
|   | 20.7 dB (at 62.5 MHz)                           |
|   | 19 dB (at 100 MHz)                              |
|   | 16.4 dB (at 200 MHz)                            |
|   | 15.6 dB (at 250 MHz)                            |
|   | 15.6 dB (at 300 MHz)                            |
|   | 15.6 dB (at 400 MHz)                            |
|   | 15.6 dB (at 500 MHz)                            |
| Signal runtime                          | 5.13 ns/m                                       |
| Shield attenuation                      | ≥ 80 dB (at 30 ... 100 MHz)                     |
| Nominal voltage, cable                  | ≤ 100 V   |
| Test voltage Core/Core                  | 700 V (50 Hz, 1 min.)                           |
| Test voltage Core/Shield                | 700 V (50 Hz, 1 min.)                           |
| Flame resistance                        | according to IEC 60332-1-2                      |
| Halogen-free                            | according to IEC 60754-1                        |
| Resistance to oil                       | in accordance with DIN 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                                |
| Ambient temperature (storage/transport) | -20 °C ... 80 °C                                |
| Shielded                                | yes   |

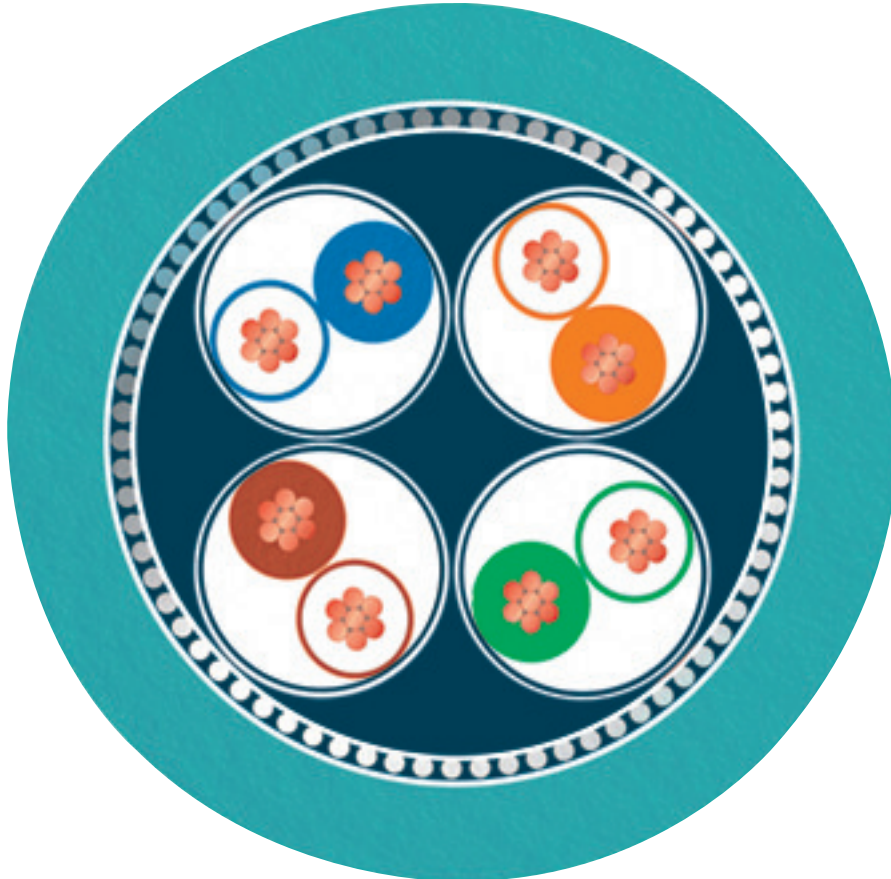
#### Environmental Product Compliance

|            |   |
|------------|---|
| China RoHS | Environmentally Friendly Use Period = 50 years  |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

### Drawings

# Network cable - NBC-M12MSX/2,0-94F/M12MRX - 1080725

Cable cross section



Ethernet 10 Gbit [94F]

## Classifications

### eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27060308 |
| eCl@ss 11.0   | 27060307 |
| eCl@ss 9.0    | 27060308 |

### ETIM

|          |          |
|----------|----------|
| ETIM 6.0 | EC001262 |
| ETIM 7.0 | EC001855 |

# Network cable - NBC-M12MSX/2,0-94F/M12MRX - 1080725

## Classifications

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 18.0 | 26121604 |
| UNSPSC 19.0 | 26121604 |
| UNSPSC 20.0 | 26121604 |
| UNSPSC 21.0 | 26121604 |

## Approvals


### Approvals


#### Approvals

UL Listed / cUL Listed / cULus Listed

#### Ex Approvals

### Approval details

|                    |   |   |               |
|--------------------|---|---|---------------|
| UL Listed          |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 335024 |
| Nominal voltage UN |   | 30 V  |               |
| Nominal current IN |   | 0.5 A   |               |

|                    |   |   |               |
|--------------------|---|---|---------------|
| cUL Listed         |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 335024 |
| Nominal voltage UN |   | 30 V  |               |
| Nominal current IN |   | 0.5 A   |               |

|              |   |
|--------------|---|
| cULus Listed |  |
|--------------|---|

## Accessories

### Accessories

## Network cable - NBC-M12MSX/2,0-94F/M12MRX - 1080725

### Accessories

#### Cable connector

Conductor connectors - SACC-CC-8QO SH ETH - 1414412



Cable connector, Ethernet CAT6<sub>A</sub> (10 Gbps), 8-pos., halogen-free, shielded, insulation displacement connection, housing material: zinc die-cast, nickel-plated, outer cable diameter of 5 mm ... 9.7 mm

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#### Circular connector (cable-side)

Data connector - SACC-MSX-8QO SH ETH SCO - 1411043



Data connector, Ethernet CAT6<sub>A</sub> (10 Gbps), 8-position, halogen-free, shielded, Plug straight M12 SPEEDCON, Coding: X, Insulation displacement connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 5 mm ... 9.7 mm

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Data connector - SACC-FSX-8QO SH ETH SCO - 1414586



Data connector, Ethernet CAT6<sub>A</sub> (10 Gbps), 8-position, halogen-free, shielded, Socket straight M12 SPEEDCON, Coding: X, Insulation displacement connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 5 mm ... 9.7 mm

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Data connector - VS-08-M12MS-10G-P SCO - 1417430



Data connector, Ethernet CAT6<sub>A</sub> (10 Gbps), 8-position, shielded, Plug straight M12 SPEEDCON, Coding: X, Piercecon<sup>®</sup>, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

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Data connector - VS-08-M12MR-10G-P SCO - 1417443



Data connector, Ethernet CAT6<sub>A</sub> (10 Gbps), 8-position, shielded, Plug angled M12 SPEEDCON, Coding: X, Piercecon<sup>®</sup>, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm



## Network cable - NBC-M12MSX/2,0-94F/M12MRX - 1080725

### Accessories

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#### Data connector - SACC-M12MSX-8CT-CL SH - 1422844



Data connector, Ethernet CAT6<sub>A</sub> (10 Gbps), PROFINET CAT6<sub>A</sub> (10 Gbps), 8-position, shielded, Plug straight M12, Coding: X, Crimp connection, knurl material: Zinc die-cast, tin-plated, external cable diameter 6.5 mm ... 10 mm, without crimp contacts

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#### Data connector - SACC-M12MRX-8CT-CL SH - 1422845



Data connector, Ethernet CAT6<sub>A</sub> (10 Gbps), PROFINET CAT6<sub>A</sub> (10 Gbps), 8-position, shielded, Plug angled M12, Coding: X, Crimp connection, knurl material: Zinc die-cast, tin-plated, external cable diameter 6.5 mm ... 10 mm, without crimp contacts

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### Corrugated pipe

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



Polyamide protective hose, inflammability class V0, UV resistant

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



Polyamide protective hose, inflammability class HB, UV resistant

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### Cutting tools

## Network cable - NBC-M12MSX/2,0-94F/M12MRX - 1080725

### Accessories

Cable-cutting tool - CUTFOX 12 - 1212128



Cable cutter, for copper and aluminum up to 12 mm diameter (up to 35 mm<sup>2</sup>)

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Diagonal cutter - CUTFOX-S VDE - 1212207



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

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### Data plug

RJ45 connector - VS-08-RJ45-10G/Q - 1419001



RJ45 connector, IP20, CAT6<sub>A</sub>, 8-pos., with QUICKON fast connection technology, for 26 ... 24 AWG 1-wire and 7-wire conductors, color: black

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



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



RJ45 connector, 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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## Network cable - NBC-M12MSX/2,0-94F/M12MRX - 1080725

### Accessories

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



RJ45 connector, 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 - CUC-V06-C1PGY-S/R4CEA:1 - 1414406



RJ45 connector, degree of protection: IP67, 10 Gbps, CAT6<sub>A</sub>, material: PA, connection method: Crimp connection, connection cross section: AWG 24- 27, cable outlet: straight, color: gray, Ethernet/PROFINET

RJ45 connector - CUC-V06-C1PBK-S/R4CEA:1 - 1414410



RJ45 connector, degree of protection: IP67, number of positions: 8, 10 Gbps, CAT6<sub>A</sub>, material: PA, connection method: Crimp connection, connection cross section: AWG 24- 27, cable outlet: straight, color: black, Ethernet/PROFINET

RJ45 connector - VS-PPC-C1-RJ45-POBK-8I10G - 1422205



RJ45 connector, IP67, with push/pull interlocking (Version 14), plastic housing, for 10 Gbps, for 24 ... 27 AWG stranded conductors

### Electronics pliers

Diagonal cutter - MICROFOX-SP-1 - 1212487



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

## Network cable - NBC-M12MSX/2,0-94F/M12MRX - 1080725

### Accessories

#### Protective cap

Sealing cap - PROT-M12 FS-PA-CHAIN - 1430873

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



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#### Safety locking

Locking clip - SAC-M12-EXCLIP-M - 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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#### Screwdriver tools

Adapter insert - TSD-M SAC-BIT ADAPTER - 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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Tool - SAC BIT M12-D15 - 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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#### Stripping tool

## Network cable - NBC-M12MSX/2,0-94F/M12MRX - 1080725

### Accessories

Stripping tool - WIREFOX 4 - 1212156



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

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Stripping tool - WIREFOX-E 4 - 1212704



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

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Stripping tool - WIREFOX 10 - 1212150



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

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### Torque tool

Torque screwdriver - TSD 04 SAC - 1208429



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

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Torque screwdriver - TSD-M 1,2NM - 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-M12MSX/2,0-94F/M12MRX - 1080725

### Accessories

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



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

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



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

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单击下面可查看定价，库存，交付和生命周期等信息

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