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Assembled Ethernet cable, shielded, 4-pair, AWG 26 stranded (7-wire), RAL 5021 (sea blue), M12 flush-type socket, rear/screw mounting with M16 thread to free cable end, line, length 5 m

### Your advantages

- Pre-assembled with cables in various standard lengths for immediate use
- Sealed on the cable side for optimum tightness of seal
- For high transmission safety: shield connection to the housing with optional EMC nut



Ethernet

## **Key Commercial Data**

| Packing unit | 1 pc            |
|--------------|-----------------|
| GTIN         | 4 046356 475402 |
| GTIN         | 4046356475402   |

### Technical data

#### **Dimensions**

| Length of cable | 5 m |
|-----------------|-----|
|                 |     |

#### Ambient conditions

| Degree of protection            | IP67 (When plugged in)                      |
|---------------------------------|---|
|                                 | IP65 (When plugged in)                      |
| Ambient temperature (operation) | -25 °C 85 °C (Plug / socket)                |
|                                 | -40 °C 85 °C (without mechanical actuation) |
|                                 | -25 °C 85 °C (cable, flexible installation) |
|                                 | -40 °C 85 °C (cable, fixed installation)    |

### General data

| Note | The electrical and mechanical data specified assume that the connector    |
|------|---|
| Note | pair is correctly locked and mounted. If the connector is unlocked and if |



## Technical data

### General data

|   | there is a danger of contamination, the connector must be sealed using a protective cap > IP54. Influences arising from litz wires, cables or PCB assembly must also be taken into consideration. |
|---|---|
| Rated current at 40°C                   | 2 A   |
| Rated voltage                           | 30 V  |
| Rated surge voltage                     | 0.8 kV  |
| Number of positions                     | 8   |
| Signal type/category                    | Ethernet CAT5 (on the basis of IEC 11801), 1 Gbps   |
| Overvoltage category                    | II  |
| Degree of pollution                     | 3   |
| Alternative short product description   | Ethernet cable  |
| Contact material                        | CuZn  |
| Contact surface material                | Ni/Au   |
| Degree of protection                    | IP65/IP67   |
| Transmission characteristics (category) | CAT5  |

### Characteristics head 1

| Head type                                | Flush-type socket straight M12 SPEEDCON / IP67 |
|--|--|
| No. of positions (pin connector pattern) | 8  |
| Coding                                   | A (Standard)                                   |
| Shielded                                 | yes  |
| Outer sheath, material                   | PUR  |
| External sheath, color                   | water blue RAL 5021                            |
| Type type, plug side                     | Flush-type socket, straight                    |
| Type type, socket side                   | free cable end                                 |

### Characteristics head 2

| Head type                                | free cable end |
|--|----------------|
| No. of positions (pin connector pattern) | 8              |

## Standards and Regulations

| Flammability rating according to UL 94 | V0 |
|--|----|
|--|----|

### Cable

| Cable type                         | Ethernet flexible CAT5, 4-pair    |
|------------------------------------|-----------------------------------|
| Cable type (abbreviation)          | 94B                               |
| UL AWM style                       | 20963 (80°C/30 V)                 |
| Signal type/category               | Ethernet CAT5 (IEC 11801), 1 Gbps |
| Cable structure                    | 4x2xAWG26/7; SF/UTP               |
| Conductor cross section            | 4x 2x 0.14 mm²                    |
| AWG signal line                    | 26                                |
| Conductor structure signal line    | 7x 0.16 mm                        |
| Core diameter including insulation | 0.96 mm                           |



## Technical data

### Cable

| Wire colors  | white/blue-blue, white/orange-orange, white/green-green, white/brown-brown |
|--|--|
| Twisted pairs  | 2 cores to the pair  |
| Overall twist  | 4 pairs for core   |
| Shielding  | Aluminum-coated foil, tinned copper braided shield                         |
| Optical shield covering                                | 70 %   |
| External sheath, color                                 | water blue RAL 5021  |
| Outer sheath thickness                                 | 1.05 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   | 47 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   | 48 nF/km (at 1 kHz)  |
| Wave impedance   | 100 Ω ±5 Ω (at 100 MHz)  |
| 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)   |
| 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)  |



## Technical data

### Cable

|   | 17.1 dB (at 31.25 MHz)                      |
|---|---|
|   | 24.8 dB (at 62.5 MHz)                       |
|   | 32 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)                        |
| Signal runtime                          | 5.3 ns/m                                    |
| Coupling resistance                     | ≤ 100.00 mΩ/m (at 10 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                       | 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                                |
| Ambient temperature (storage/transport) | -20 °C 80 °C                                |
|   |   |

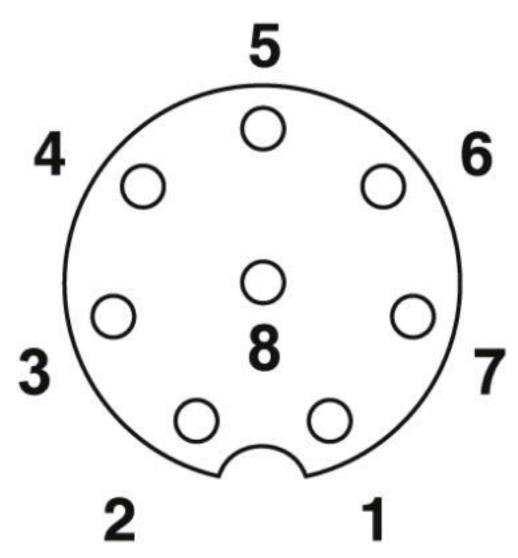
## **Environmental Product Compliance**

| REACh SVHC | Lead 7439-92-1  |
|------------|---|
| China RoHS | Environmentally Friendly Use Period = 50 years  |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

## Drawings

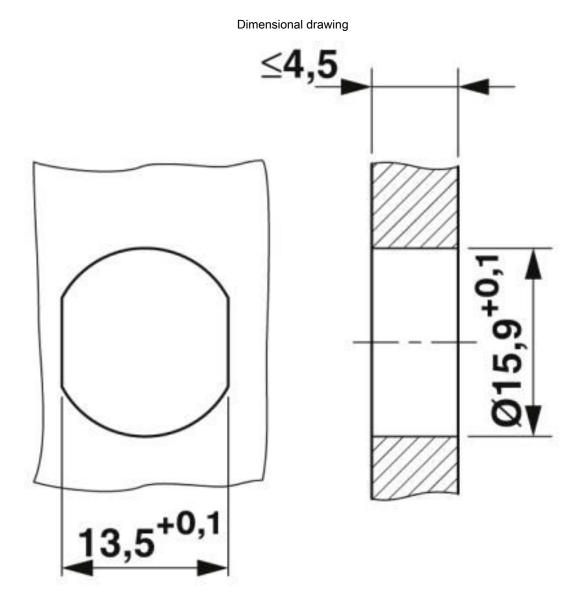


Schematic diagram



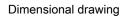
Pin assignment M12 socket, 8-pos., A-coded, view female side

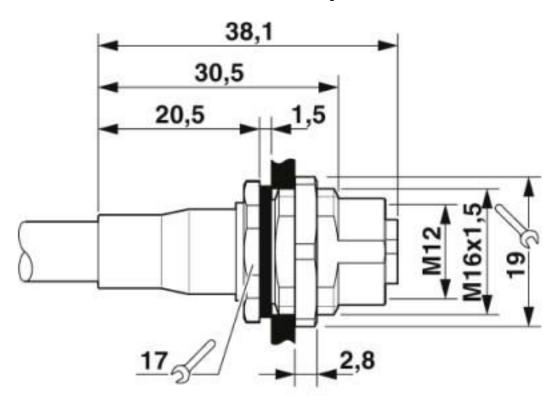




Housing cutout for M16 fastening thread, mounting panel with feed-through hole (alternatively with surface as protection against rotation)



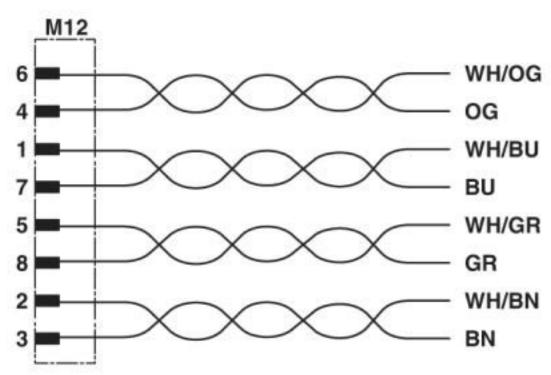




M12 flush-type connector



Circuit diagram



Contact assignment of the M12 plug and the M12 socket



Cable cross section



Ethernet flexible CAT5, 4-pair [94B]

## Classifications

## eCl@ss

| eCl@ss 10.0.1 | 27060308 |
|---------------|----------|
| eCl@ss 4.0    | 24010400 |
| eCl@ss 4.1    | 24010400 |
| eCl@ss 5.0    | 19030300 |
| eCl@ss 5.1    | 19030300 |
| eCl@ss 6.0    | 27061800 |
| eCl@ss 7.0    | 27060308 |
| eCl@ss 8.0    | 27060308 |
| eCl@ss 9.0    | 27060308 |



## Classifications

### **ETIM**

| ETIM 3.0 | EC000830 |
|----------|----------|
| ETIM 4.0 | EC002599 |
| ETIM 5.0 | EC002599 |
| ETIM 6.0 | EC001262 |
| ETIM 7.0 | EC001262 |

### **UNSPSC**

| UNSPSC 6.01   | 26121616 |
|---------------|----------|
| UNSPSC 7.0901 | 26121616 |
| UNSPSC 11     | 26121604 |
| UNSPSC 12.01  | 31261501 |
| UNSPSC 13.2   | 26121604 |
| UNSPSC 18.0   | 26121604 |
| UNSPSC 19.0   | 26121604 |
| UNSPSC 20.0   | 26121604 |
| UNSPSC 21.0   | 26121604 |

## **Approvals**

Approvals

Approvals

EAC

Ex Approvals

Approval details

EAC [H]

### Accessories

Accessories

Circular connector (cable-side)



### Accessories

Data connector - SACC-MS-8QO SH ETH SCO - 1421679



Data connector, Ethernet CAT5 (1 Gbps), 8-position, halogen-free, shielded, Plug straight M12 SPEEDCON, Coding: A, Insulation displacement connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 5 mm ... 9 7 mm

Data connector - SACC-M12MR-8Q SH - 1553653



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

Data connector - SACC-FS-8QO SH ETH SCO - 1421680



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

Data connector - SACC-M12FR-8Q SH - 1553666



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

### Corrugated pipe

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



Polyamide protective hose, inflammability class V0, UV resistant



### Accessories

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



Polyamide protective hose, inflammability class HB, UV resistant

### **Cutting tools**

Cable-cutting tool - CUTFOX 12 - 1212128



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

Diagonal cutter - CUTFOX-S VDE - 1212207



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

### Data plug

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

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



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: black



### Accessories

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

#### 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

#### 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

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



RJ45 connector, 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

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



RJ45 connector, 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



### Accessories

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

RJ45 connector - CUC-V14-C1ZNI-B/R4E8 - 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 - VS-PPC-C1-RJ45-POBK-PG9-8Q5 - 1657834



RJ45 connector, IP67, with push/pull interlocking, plastic housing, 1 Gbps, 8-pos., QUICKON fast connection technology, for 26  $\dots$  24 AWG 1-wire and 7-wire 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

Stripping tool



### 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

Stripping tool - WIREFOX-E 4 - 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

Stripping tool - WIREFOX 10 - 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

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



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

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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NK5EPC1GRY NK5EPC4Y NK5EPC6YLY NK5EPC8BLY NK5EPC9YLY 1969343-6 C501100010 C501106002 C501106007

C501106015 C501106025 C601102010 C601104010 C601106007 C601106015 2142758-2 2168427-2 CAT1106007 21949-1 2J1866A

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