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Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Network cable - NBC-MSD/ 2,0-93B/R4QC SCO - 1407521

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Network cable, PROFINET CAT5 (100 Mbps), PROFINET CAT5e (100 Mbps), 4-position, PVC/PVC, Green RAL 6018, shielded, Plug Straight M12 SPEEDCON / IP67, Coding: D, on Plug Straight RJ45 Push Pull / IP67, Cable length: 2 m



Key commercial data

| | |
|----------------------|----------|
| Packing unit | 1 pc |
| Custom tariff number | 85444210 |
| Country of origin | Poland |

Technical data

Dimensions

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

Ambient conditions

| | |
|----------------------|-----------------------|
| Degree of protection | IP65 (M12 connector) |
| | IP67 (M12 connector) |
| | IP67 (RJ45 connector) |

General data

| | |
|-----------------------|--|
| Note | This product corresponds to the PROFINET Cabling and Interconnection Technology Guideline for PROFINET regulations, version 2.00, order no: 2.252, Chapter 8.2 Connectors for Outside Environment (Balanced cabling) |
| Rated current at 40°C | 1 A |
| Rated voltage | 50 V |
| Number of positions | 4 |
| Signal type/category | PROFINET CAT5 (IEC 11801:2002), 100 Mbps |
| | PROFINET CAT5e (TIA 568B:2001), 100 Mbps |
| Standards/regulations | M12 connector IEC 61076-2-101 |

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Technical data

Characteristics head 1

| | |
|--|--|
| Head type | Plug Straight M12 SPEEDCON / IP67 |
| No. of positions (pin connector pattern) | 4 |
| Coding | D (Data) |
| Color | black |
| Material (component) | CuSn (Contact) |
| | Ni/Au (Contact surface) |
| | PA (Contact carriers) |
| | TPU, hardly inflammable, self-extinguishing (Grip) |
| | Zinc die-cast, nickel-plated (Screw connection) |
| Contact resistance | ≤ 5 mΩ |
| 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 Straight RJ45 Push Pull / IP67 |
| No. of positions (pin connector pattern) | 4 (8) |
| Color | black |
| Material (component) | CuSn (Contact) |
| | Ni/Au (Contact surface) |
| | PC (Contact carriers) |
| | PA GF (Housing) |
| Insertion/withdrawal cycles | ≥ 750 |
| Ambient temperature (operation) | -40 °C ... 70 °C |

Cable

| | |
|------------------------------------|--|
| Cable type | PROFINET PVC stranded CAT5e |
| Cable type (abbreviation) | 93B |
| UL AWM style | 21694 |
| Signal type/category | PROFINET CAT5 (IEC 11801:2002), 100 Mbps |
| | PROFINET CAT5e (TIA 568B:2001), 100 bps |
| Cable structure | 1x4xAWG22/7; SF/TQ |
| Conductor cross section | 4x 0.34 mm ² |
| AWG signal line | 22 |
| Conductor structure signal line | 7x 0.25 mm |
| Core diameter including insulation | approx. 1.5 mm |
| Wire colors | White, yellow, blue, orange |

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Technical data

Cable

| | |
|---|--|
| Overall twist | Star quad |
| Shielding | Aluminum-coated foil, tinned copper braided shield |
| Optical shield covering | 85 % |
| External sheath, color | Green RAL 6018 |
| Outer sheath thickness | approx. 0.9 mm |
| External cable diameter D | 6.5 mm ±0.2 mm |
| Minimum bending radius, fixed installation | 3 x D |
| Minimum bending radius, flexible installation | 7 x D |
| Torsion force | ± 180 °/m (30,000 torsion cycles) |
| Cable weight | 67 kg/km |
| Outer sheath, material | PVC |
| Material, inner sheath | PVC |
| Material conductor insulation | PE |
| Conductor material | Tin-plated Cu litz wires |
| Insulation resistance | ≥ 500 MΩ*km |
| Loop resistance | ≤ 120 Ω (per kilometer) |
| Working capacitance | 52 pF |
| Wave impedance | 100 Ω ±15 Ω (at 100 MHz) |
| Signal runtime | 5.3 ns/m |
| Coupling resistance | ≤ 20.00 mΩ/m |
| Nominal voltage, cable | 600 V |
| Test voltage Core/Core | 2000 V (50 Hz, 1 min.) |
| Test voltage Core/Shield | 2000 V (50 Hz, 1 min.) |
| Flame resistance | According to UL 1685 (CSA FT 4) |
| Resistance to oil | Resistant to oil to a limited extent |
| Other resistance | UV resistant According to UL 1581, Section 1200 |
| Ambient temperature (operation) | -40 °C ... 70 °C (cable, fixed installation) |
| | -40 °C ... 70 °C (cable, flexible installation) |
| Ambient temperature (installation) | -20 °C ... 60 °C |
| Ambient temperature (storage/transport) | -50 °C ... 70 °C |

Classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 4.0 | 27060307 |
| eCl@ss 4.1 | 27060307 |
| eCl@ss 5.0 | 27060307 |

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Classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 5.1 | 27060307 |
| eCl@ss 6.0 | 27060307 |
| eCl@ss 7.0 | 27060307 |
| eCl@ss 8.0 | 27060307 |

ETIM

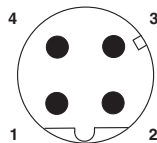
| | |
|----------|----------|
| ETIM 3.0 | EC000830 |
| ETIM 4.0 | EC001855 |
| ETIM 5.0 | EC001855 |

UNSPSC

| | |
|---------------|----------|
| UNSPSC 6.01 | 31261501 |
| UNSPSC 7.0901 | 31261501 |
| UNSPSC 11 | 31261501 |
| UNSPSC 12.01 | 31261501 |
| UNSPSC 13.2 | 31261501 |

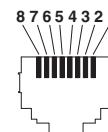
Drawings

Schematic diagram



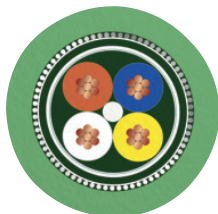
Pin assignment M12 male connector, 4-pos., D-coded, male side

Schematic diagram



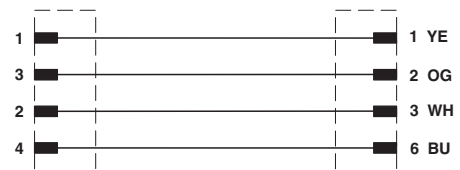
Connector pin assignment plug RJ45

Cable cross section



PROFINET PVC stranded CAT5e [93B]

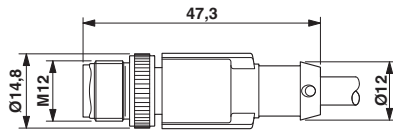
Circuit diagram



Contact assignment of the M12 and RJ45 plug

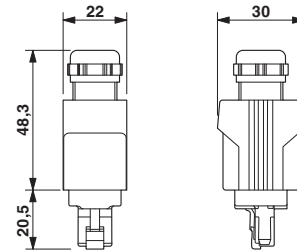
Network cable - NBC-MSD/ 2,0-93B/R4QC SCO - 1407521

Dimensioned drawing



Plug, M12 x 1, straight, shielded

Dimensioned drawing



RJ45 Push-Pull connector, IP67