

1401057

https://www.phoenixcontact.com/us/products/1401057

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Device connector rear mounting, Ethernet CAT5 (1 Gbps), 8-position, PUR, water blue RAL 5021, Socket, straight, M12-SPEEDCON, A-coding, on free cable end, Cable connection, cable length: $0.5 \, \text{m}$, $0.14 \, \text{mm}^2$, Ethernet, this item is expected to be lead-free from Q1 2027 in accordance with RoHS II without exception 6c (Pb < 0.1%), a lead-free alternative is possible on request in advance

Your advantages

- · Preassembled with cables in various standard lengths for immediate use
- · Customer-specific assemblies and cable lengths can be supplied
- · Sealed on the cable side for optimum tightness of seal
- · Cable designs for all common networks and fieldbuses
- · For high transmission safety: shield connection to the housing with optional EMC nut

Commercial data

| Item number | 1401057 |
|--------------------------------------|---------------|
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | AB25 |
| Product key | ABQDGI |
| GTIN | 4046356520942 |
| Weight per piece (including packing) | 49.7 g |
| Weight per piece (excluding packing) | 42.801 g |
| Customs tariff number | 85444290 |
| Country of origin | DE |



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Technical data

Notes

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

Product properties

| Product type | Data cable preassembled |
|----------------------------|-------------------------|
| Application | Data |
| | On the device side |
| Sensor type | Ethernet |
| Number of positions | 8 |
| No. of cable outlets | 1 |
| Shielded | yes |
| Coding | A |
| Thread type | M12 |
| Insulation characteristics | |
| Overvoltage category | II |
| Degree of pollution | 3 |

Interfaces

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

Electrical properties

| Rated surge voltage | 0.8 kV |
|--------------------------------|----------|
| Contact resistance | ≤ 3 mΩ |
| Insulation resistance | ≥ 100 MΩ |
| Nominal voltage U _N | 48 V AC |
| | 60 V DC |
| Nominal current I _N | 2 A |
| Transmission medium | Copper |
| Transmission speed | 1 Gbps |
| Wave impedance | 100 Ω |

Mechanical properties

| Insertion/withdrawal cycles | ≥ 100 |
|-----------------------------|-------|

Material specifications



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| Flammability rating according to UL 94 | V0 |
|--|--------------------|
| Seal material | FKM |
| Contact material | CuZn |
| Contact surface material | Ni/Au |
| Outer sheath, material | PUR |
| Conductor material | Bare Cu litz wires |

Connection data

Connection technology

| Connection method | Cable connection |
|-------------------------|-------------------------------|
| Conductor connection | |
| Contact connection type | Socket |
| Connection method | Cable connection |
| Tightening torque | 2 Nm 3 Nm (Installation-side) |

Connector

Connection 1

| Head design | Socket |
|-------------------|----------|
| Head cable outlet | straight |
| Head thread type | M12 |
| Head locking type | SPEEDCON |
| Coding | A |
| | |

Connection 2

| Head design | free cable end |
|--------------|----------------|
| riead design | nee cable end |

Cable/line

| Cable langth | 0.5 m |
|--------------|---------|
| Cable length | 0.5 111 |

Ethernet flexible CAT5, 4-pair [94B]

Dimensional drawing



| UL AWM Style | 21238 (80 °C / 600 V) |
|---------------------|--------------------------------------|
| Number of positions | 8 |
| Shielded | yes |
| Cable type | Ethernet flexible CAT5, 4-pair [94B] |



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| Conductor structure | 4x2xAWG26/7, SF/UTP |
|---|--|
| AWG signal line | 26 |
| Conductor cross section | 4x 2x 0.14 mm² |
| Wire diameter incl. insulation | 0.96 mm ±0.05 mm |
| External cable diameter | 6.40 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 |
| Twisted pairs | 2 cores to the pair |
| Overall twist | 4 pairs for core |
| Optical shield covering | 70 % |
| Insulation resistance | ≥ 500 MΩ*km |
| Loop resistance | ≤ 290.00 Ω/km |
| Wave impedance | 100 Ω ±5 Ω (at 100 MHz) |
| Nominal voltage, cable | ≤ 100 V |
| Test voltage Core/Core | 2000 V (50 Hz, 1 min.) |
| Test voltage Core/Shield | 2000.00 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 | 51 mm |
| Halogen-free | according to IEC 60754-1 |
| Flame resistance | according to IEC 60332-1-2 |
| | according to CSA C 22.2 No. 210-FT1 |
| 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) |

Environmental and real-life conditions

Ambient conditions

| Degree of protection | IP67 (When plugged in) |
|---|---|
| | IP65 (When plugged in) |
| | IP65/IP67 |
| Ambient temperature (operation) (male connector/female connector) | -25 °C 85 °C (Plug / socket) |
| | -40 °C 85 °C (without mechanical actuation) |
| Ambient temperature (operation) (Cable, flexible installation) | -25 °C 85 °C (Cable, flexible installation) |
| Ambient temperature (operation) (Cable, fixed installation) | -40 °C 85 °C (cable, fixed installation) |
| UL Type Rating | Type 4 (indoor use only) |

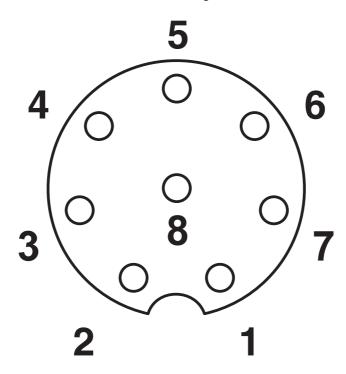


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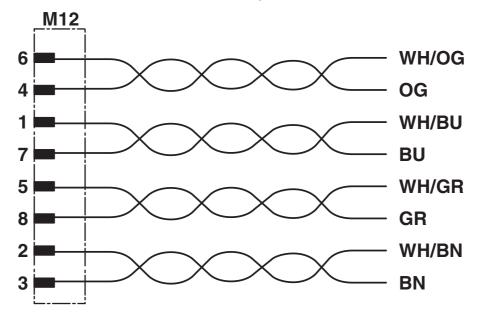
Drawings

Schematic diagram



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

Circuit diagram



Contact assignment of the M12 plug and the M12 socket



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Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1401057



EAC

Approval ID: 19060508



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Classifications

ECLASS

| | ECLASS-13.0 | 27440103 | |
|--------|-------------|----------|--|
| | ECLASS-15.0 | 27440103 | |
| | | | |
| ETIM | | | |
| | ETIM 9.0 | EC003570 | |
| | | | |
| UNSPSC | | | |
| | UNSPSC 21.0 | 26121600 | |



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Environmental product compliance

EU RoHS

| Fulfills EU RoHS substance requirements | Yes |
|---|---|
| Exemption | 6(c) |
| China RoHS | |
| Environment friendly use period (EFUP) | EFUP-50 |
| | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |
| EU REACH SVHC | |
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1) |
| SCIP | 6e2d94ad-3196-4f37-8a3c-afca2a389b0d |

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