

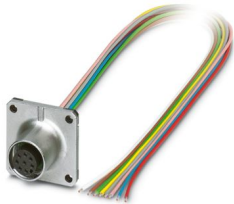
SACC-SQ-M12FS-8CON-20/0,5 - Device connector front mounting



1441697

<https://www.phoenixcontact.com/us/products/1441697>

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Device connector front mounting, 8-position, Socket, straight, M12-SPEEDCON, A-coding, on free cable end, Individual wires, cable length: 0.5 m, 0.25 mm², TPE litz wire, potted, this item is expected to be lead-free from Q2 2026 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 litz wires for immediate use
- Customer-specific assemblies and litz wire lengths available
- Sealed on the litz wire side for optimum leak-tightness
- All standard pin assignments and codings for signal, data, and power transmission with a uniform design-in design
- For high transmission safety: shield connection to the housing with optional EMC nut
- SPEEDCON fast locking system reduces cabling times

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 1441697 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | AB24 |
| Product key | ABQCFD |
| GTIN | 4046356533034 |
| Weight per piece (including packing) | 25.12 g |
| Weight per piece (excluding packing) | 23.352 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. |
| General | Contact connection method: Crimp connection |

Mounting

| | |
|-------------------|--|
| Mounting type | Front mounting/square flange (20 mm side length) |
| Tightening torque | 3 Nm ... 4 Nm (Installation-side) |

Product properties

| | |
|----------------------|-----------------------------------|
| Product type | Circular connectors (device side) |
| Application | Signal |
| Number of positions | 8 |
| No. of cable outlets | 1 |
| Shielded | no |
| Coding | A |
| Thread type | M12 |

Insulation characteristics

| | |
|----------------------|----|
| Overvoltage category | II |
| Degree of pollution | 3 |

Material specifications

| | |
|--|------------------------------|
| Material Molding compound | PUR (potted) |
| Flammability rating according to UL 94 | V0 |
| Seal material | FKM |
| Material of grip body | Zinc die-cast, nickel-plated |
| Contact material | CuZn |
| Contact surface material | Ni/Au |
| Contact carrier material | PA 6.6 |
| Material for screw connection | Zinc die-cast, nickel-plated |
| Conductor material | Tin-plated Cu litz wires |

Electrical properties

| | |
|--------------------------------|----------|
| Rated surge voltage | 0.8 kV |
| Contact resistance | ≤ 3 mΩ |
| Insulation resistance | ≥ 100 MΩ |
| Nominal voltage U _N | 30 V |

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| | |
|---------------------------|-----------|
| Nominal current I_N | 2 A |
| Max. conductor resistance | 57.6 mΩ/m |

Connection data

Conductor connection

| | |
|-------------------------|-----------------------------------|
| Connection method | Individual wires |
| Contact connection type | Socket |
| Conductor cross-section | 0.25 mm ² |
| Tightening torque | 3 Nm ... 4 Nm (Installation-side) |

Mechanical properties

Mechanical data

| | |
|-----------------------------|-------|
| Insertion/withdrawal cycles | > 100 |
|-----------------------------|-------|

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

Cable/line

| | |
|---------------------------------|---|
| Cable length | 0.5 m |
| Cable type | TPE litz wire |
| Wire diameter incl. insulation | 1.15 mm ±0.07 mm |
| Single wire, color | brown, blue, white, gray, pink, green, yellow, red |
| Cable cross section | 0.25 mm ² |
| Conductor material | Tin-plated Cu litz wires |
| Conductor structure signal line | 14x 0.15 mm |
| AWG signal line | 24 |
| Material wire insulation | TPE |
| Thickness, insulation | 0.21 mm (Core insulation) |
| Nominal voltage, cable | 300 V |
| Test voltage, cable | 2000 V AC |
| Cable resistance | ≤ 57.6 mΩ/m |
| Cable insulation resistance | ≥ 20 MΩ*km |
| Ambient temperature (operation) | -40 °C ... 85 °C (cable, fixed installation) -25 °C ... 85 °C (Cable, flexible installation) |

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Environmental and real-life conditions

Ambient conditions

| | |
|---|---|
| Degree of protection | 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) |

Standards and regulations

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

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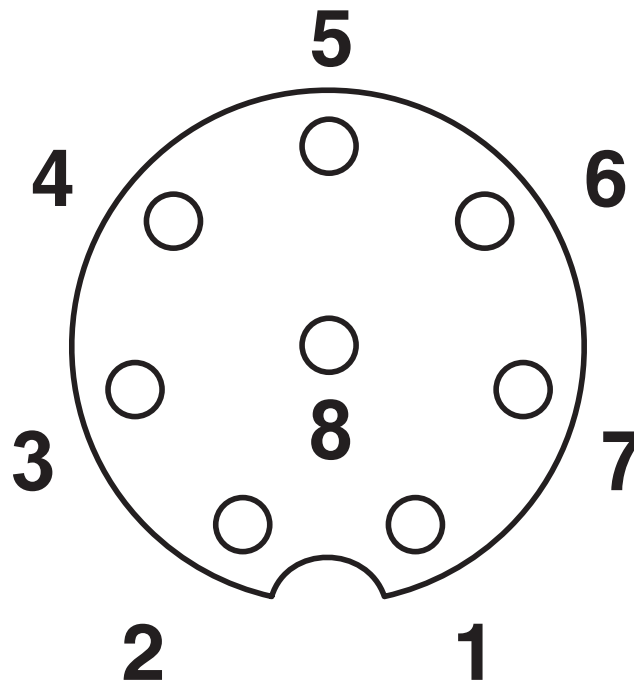


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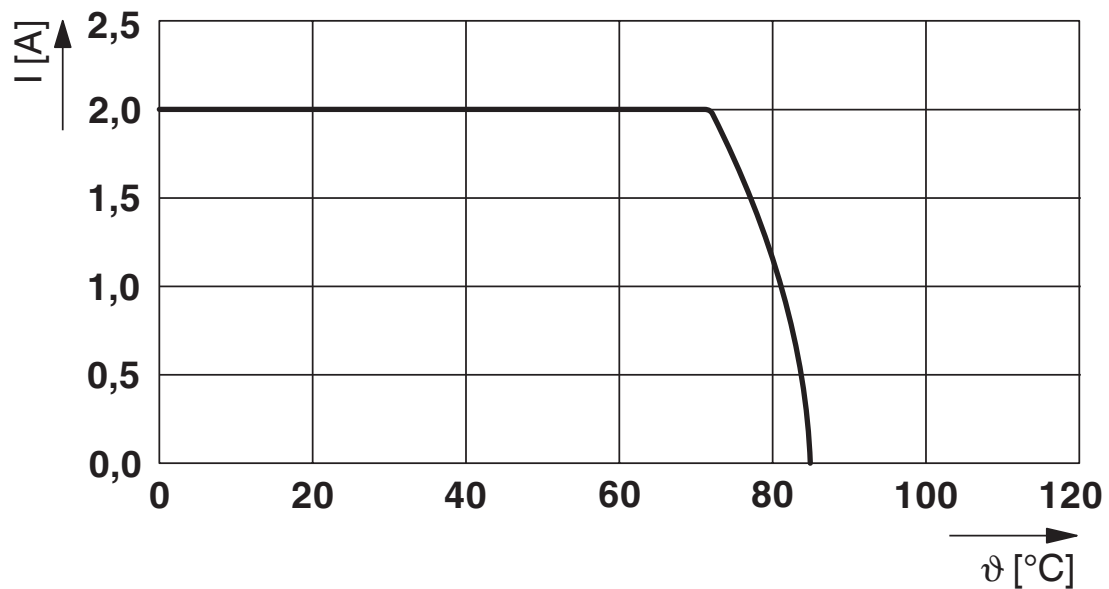
Drawings

Schematic diagram



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

Diagram



I = current strength, T = ambient temperature

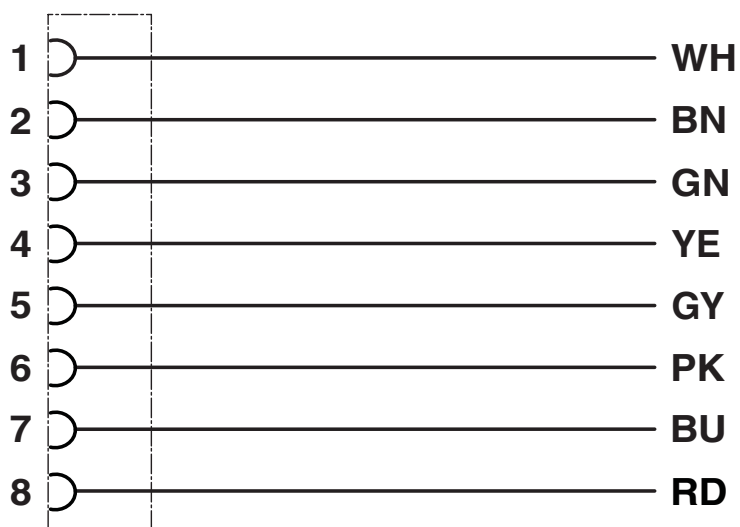
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Circuit diagram



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/1441697>

|  UL Recognized Approval ID: E118976-20100522 | | | | |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| keine | | | | |
| | 30 V | 2 A | 24 | - |

|  cULus Recognized Approval ID: E221474-20140616 | | | | |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| keine | | | | |
| | 30 V | 2 A | 24 - 22 | - |

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27440103 |
| ECLASS-15.0 | 27440103 |

ETIM

| | |
|-----------|----------|
| ETIM 10.0 | EC003570 |
|-----------|----------|

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 39121400 |
|-------------|----------|

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Environmental product compliance

EU RoHS

| | |
|---|--------------------|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |
|---|--------------------|

China RoHS

| | |
|--|--|
| Environment friendly use period (EFUP) | EFUP-E |
| | No hazardous substances above the limits |

EU REACH SVHC

| | |
|-------------------------------------|----------------------------|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com