

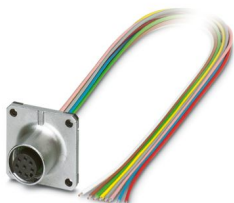
# SACC-SQ-M12FS-8CON-25F/0,5 - Device connector front mounting



1441574

<https://www.phoenixcontact.com/us/products/1441574>

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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 mm<sup>2</sup>, TPE litz wire, potted, this item is expected to be lead-free from Q4 2025 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                          | 1441574       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | AB24          |
| Product key                          | ABQCFD        |
| GTIN                                 | 4046356533881 |
| Weight per piece (including packing) | 30.8 g        |
| Weight per piece (excluding packing) | 28.912 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 (25 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 <sub>N</sub> | 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 mm²                          |
| 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  | 1.2 mm ±0.07 mm                                                                                 |
| Single wire, color              | brown, blue, white, gray, pink, green, yellow, red                                              |
| Cable cross section             | 0.25 mm²                                                                                        |
| 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)<br>-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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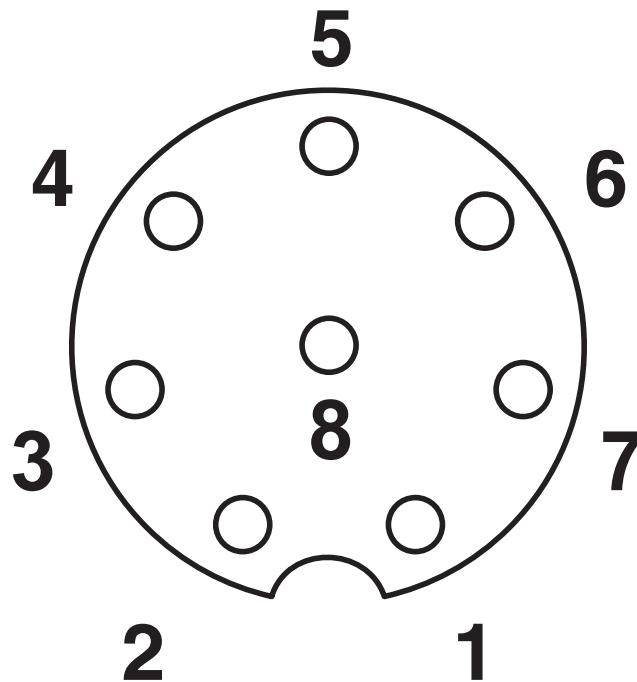


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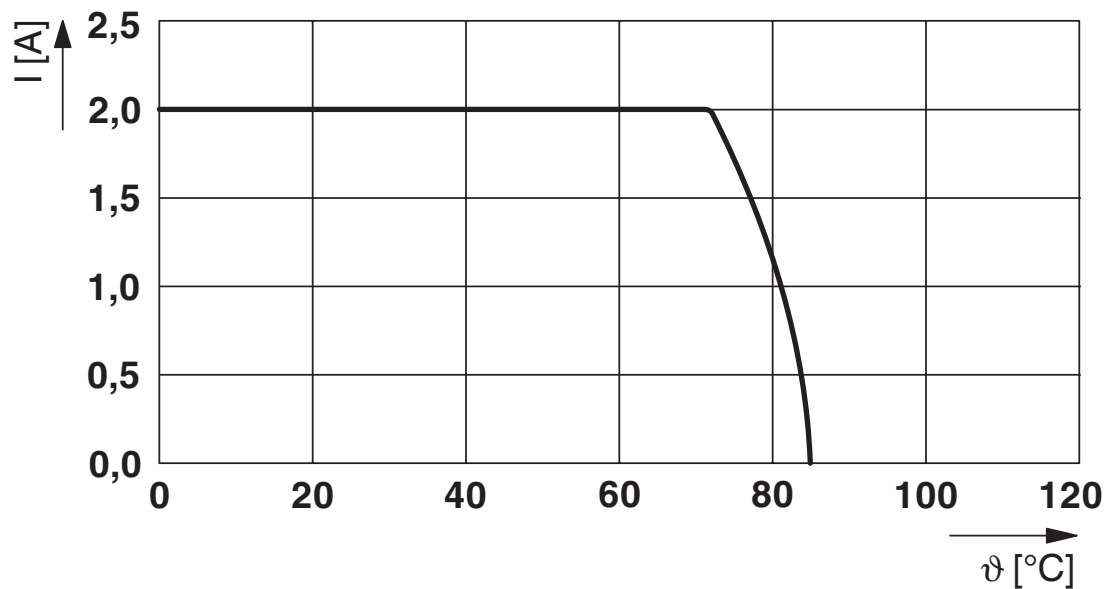
## Drawings

Schematic diagram



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

Diagram



$I$  = current strength,  $T$  = ambient temperature

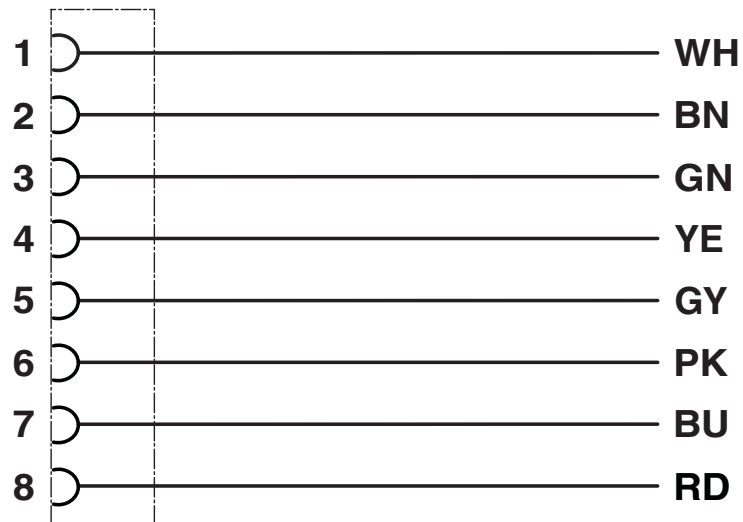
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Circuit diagram



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/1441574>

|  <b>UL Recognized</b><br>Approval ID: E118976-20100522 |                                |                                |                   |                               |
|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------------------------------|-------------------|-------------------------------|
|                                                                                                                                         | Nominal voltage U <sub>N</sub> | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
| keine                                                                                                                                   |                                |                                |                   |                               |
|                                                                                                                                         | 30 V                           | 2 A                            | 24                | -                             |

|  <b>cULus Recognized</b><br>Approval ID: E221474-20140616 |                                |                                |                   |                               |
|--------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------------------------------|-------------------|-------------------------------|
|                                                                                                                                            | Nominal voltage U <sub>N</sub> | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
| keine                                                                                                                                      |                                |                                |                   |                               |
|                                                                                                                                            | 30 V                           | 2 A                            | 24 - 22           | -                             |

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## Classifications

### ECLASS

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

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC003570 |
|----------|----------|

### UNSPSC

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

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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                                | 9cc56db6-2050-4ba1-a406-2e5cded932fe |

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