

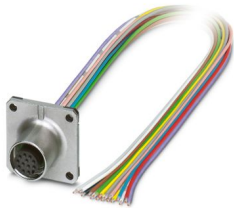
# SACC-SQ-M12FS-17CON-25F/0,5 - Device connector front mounting



1441613

<https://www.phoenixcontact.com/us/products/1441613>

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Device connector front mounting, 17-position, Socket, straight, M12, coding: A, on free cable end, Front mounting, Square flange, Individual wires, cable length: 0.5 m, 0.14 mm<sup>2</sup>, TPE litz wire, Alternative product in accordance with RoHS II without Exemption 6c (Pb < 0.1 %) item no.: 1239726

## 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                          | 1441613            |
| Packing unit                         | 1 pc               |
| Minimum order quantity               | 1 pc               |
| Sales key                            | AB24               |
| Product key                          | ABQCFD             |
| Catalog page                         | Page 43 (C-2-2019) |
| GTIN                                 | 4046356533928      |
| Weight per piece (including packing) | 38.8 g             |
| Weight per piece (excluding packing) | 37.6 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 |
|---------------|------------------------------|

### Product properties

|                      |                                   |
|----------------------|-----------------------------------|
| Product type         | Circular connectors (device side) |
| Application          | Signal                            |
| Number of positions  | 17                                |
| 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                          |
| 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    | $\leq 3 \text{ m}\Omega$   |
| Insulation resistance | $\geq 100 \text{ M}\Omega$ |
| Nominal voltage $U_N$ | 30 V                       |
| Nominal current $I_N$ | 1.5 A                      |

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|                           |           |
|---------------------------|-----------|
| Max. conductor resistance | 57.6 mΩ/m |
|---------------------------|-----------|

## Connection data

### Conductor connection

|                         |                                   |
|-------------------------|-----------------------------------|
| Connection method       | Individual wires                  |
| Contact connection type | Socket                            |
| Conductor cross section | 0.14 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      |
| 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  | 1.1 mm ±0.05 mm  |
| Single wire, color              | brown, blue, white, green, pink, yellow, black, gray, red, violet, gray/pink, red/blue, white/green, brown/green, white/yellow, yellow/brown, white/gray |
| Cable cross section             | 0.14 mm²   |
| Conductor material              | Tin-plated Cu litz wires   |
| Conductor structure signal line | 7x 0.16 mm   |
| AWG signal line                 | 26   |
| 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  |
|                                 | IP67  |
| 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)    |

## Standards and regulations

### M12

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

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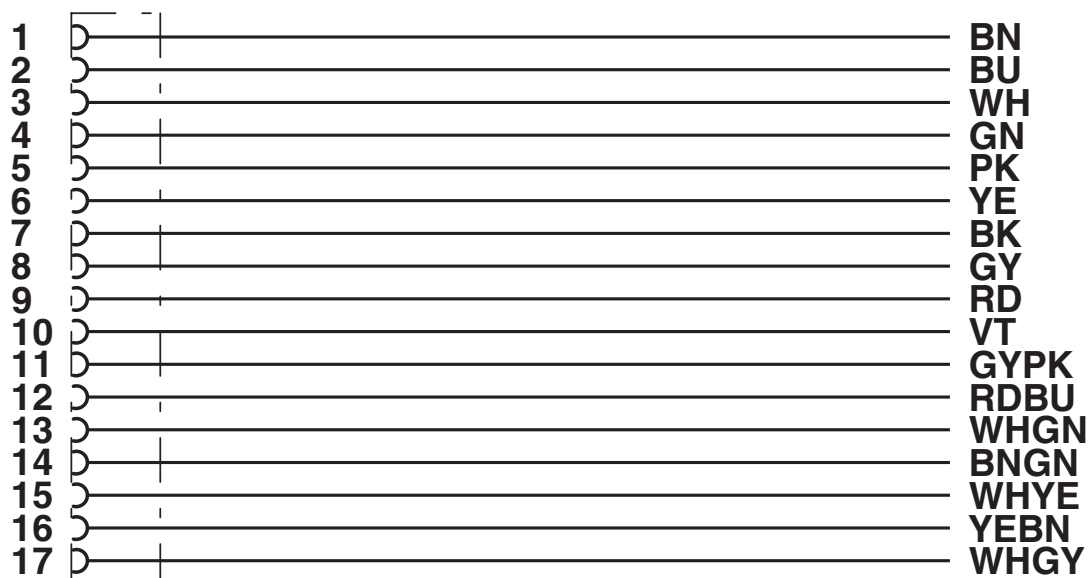


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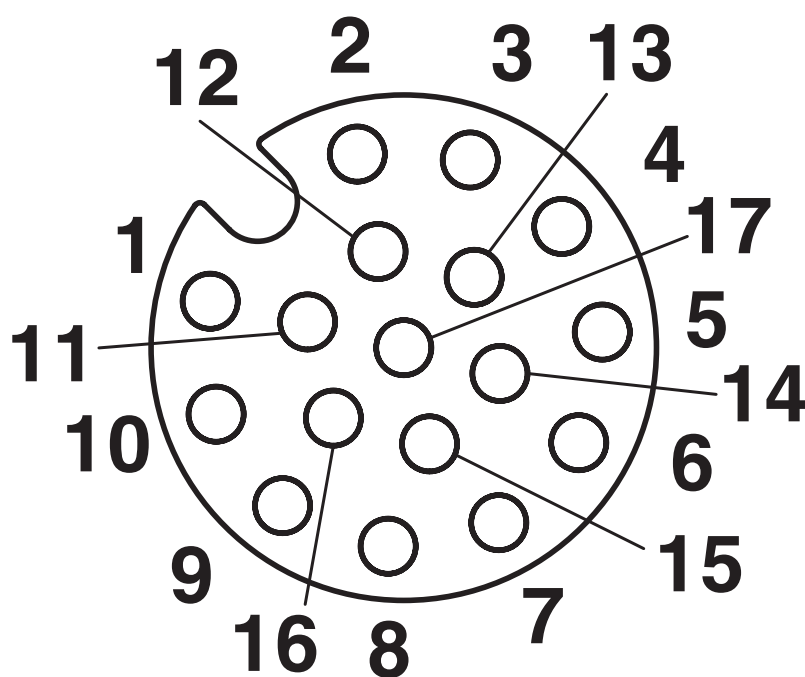
## Drawings

Circuit diagram



Contact assignment of the M12 socket

Schematic diagram



Pin assignment M12, 17-pos., socket side view

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1441613>

|  |                               |                       |                       |                               |
|--|-------------------------------|-----------------------|-----------------------|-------------------------------|
|  | <b>UL Recognized</b>          |                       |                       |                               |
|  | Approval ID: E118976-20100522 |                       |                       |                               |
|  |                               | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG             |
|  |                               | 30 V                  | 1.5 A                 | 26 - 26                       |
|  |                               |                       |                       | Cross section mm <sup>2</sup> |
|  |                               |                       |                       | -                             |

|  |                               |                       |                       |                               |
|--|-------------------------------|-----------------------|-----------------------|-------------------------------|
|  | <b>cULus Recognized</b>       |                       |                       |                               |
|  | Approval ID: E221474-20140616 |                       |                       |                               |
|  |                               | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG             |
|  |                               | 30 V                  | 1.5 A                 | 26 - 26                       |
|  |                               |                       |                       | Cross section mm <sup>2</sup> |
|  |                               |                       |                       | -                             |

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## Classifications

|             |          |
|-------------|----------|
| ECLASS      |          |
| ECLASS-13.0 | 27440103 |
| ETIM        |          |
| ETIM 9.0    | EC002635 |
| 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                                | 75c129e1-34cb-4154-9d0e-151ef15aeaac |

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