

# SACC-E-M12MS-17P-M16XL/0,5 - Device connector front mounting



1411583

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Device connector front mounting, Universal, 17-position, Pin, straight, M12-Standard, coding: A, on free cable end, Front mounting, M16 x 1.5, 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.: 1238882

## Your advantages

- Easy-to-install, optimized XL housing contour with wrench size 19
- Mechanical tightening limitation for long-term-stable gasket
- 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

## Commercial data

|                                      |                    |
|--------------------------------------|--------------------|
| Item number                          | 1411583            |
| Packing unit                         | 1 pc               |
| Minimum order quantity               | 1 pc               |
| Sales key                            | AB24               |
| Product key                          | ABQCEB             |
| Catalog page                         | Page 39 (C-2-2019) |
| GTIN                                 | 4046356935425      |
| Weight per piece (including packing) | 34.2 g             |
| Weight per piece (excluding packing) | 34.2 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 M16 x 1.5 XL version, tightening limitation |
| Assembly note | XL version, tightening limitation                          |

### Product properties

|                      |                                   |
|----------------------|-----------------------------------|
| Product type         | Circular connectors (device side) |
| Application          | Signal                            |
| Sensor type          | Universal                         |
| Number of positions  | 17                                |
| No. of cable outlets | 1                                 |
| Shielded             | no                                |
| Coding               | A                                 |
| Thread type          | M12                               |

### Data management status

|                  |    |
|------------------|----|
| Article revision | 06 |
|------------------|----|

### Insulation characteristics

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

### Material specifications

|                                        |                              |
|----------------------------------------|------------------------------|
| Flammability rating according to UL 94 | V0                           |
| Seal material                          | FKM                          |
| Contact material                       | CuZn                         |
| Contact surface material               | 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 |

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|                           |           |
|---------------------------|-----------|
| Nominal voltage $U_N$     | 30 V (AC) |
|                           | 30 V (DC) |
| Nominal current $I_N$     | 1.5 A     |
| Max. conductor resistance | 57.6 mΩ/m |

## Connection data

### Conductor connection

|                         |                                       |
|-------------------------|---------------------------------------|
| Connection method       | Individual wires                      |
| Contact connection type | Pin                                   |
| Conductor cross section | 0.14 mm <sup>2</sup>                  |
| Tightening torque       | 0.8 Nm ... 1.3 Nm (Installation-side) |

## Mechanical properties

### Mechanical data

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

## Connector

### Connection 1

|                   |          |
|-------------------|----------|
| Head design       | Pin      |
| Head cable outlet | straight |
| Head thread type  | M12      |
| Head locking type | Standard |
| Coding            | A        |

### Connection 2

|             |                |
|-------------|----------------|
| Head design | free cable end |
|-------------|----------------|

## Cable/line

|                                 |                                                                                                                                                          |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cable length                    | 0.5 m                                                                                                                                                    |
| Cable type                      | TPE litz wire                                                                                                                                            |
| Signal type/category            | Universal                                                                                                                                                |
| 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 mm <sup>2</sup>                                                                                                                                     |
| 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                                                                                                                                                |

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|                                 |                                                 |
|---------------------------------|-------------------------------------------------|
| 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) |

## Environmental and real-life conditions

### Ambient conditions

|                                 |                                                 |
|---------------------------------|-------------------------------------------------|
| Degree of protection            | IP67                                            |
|                                 | IP65/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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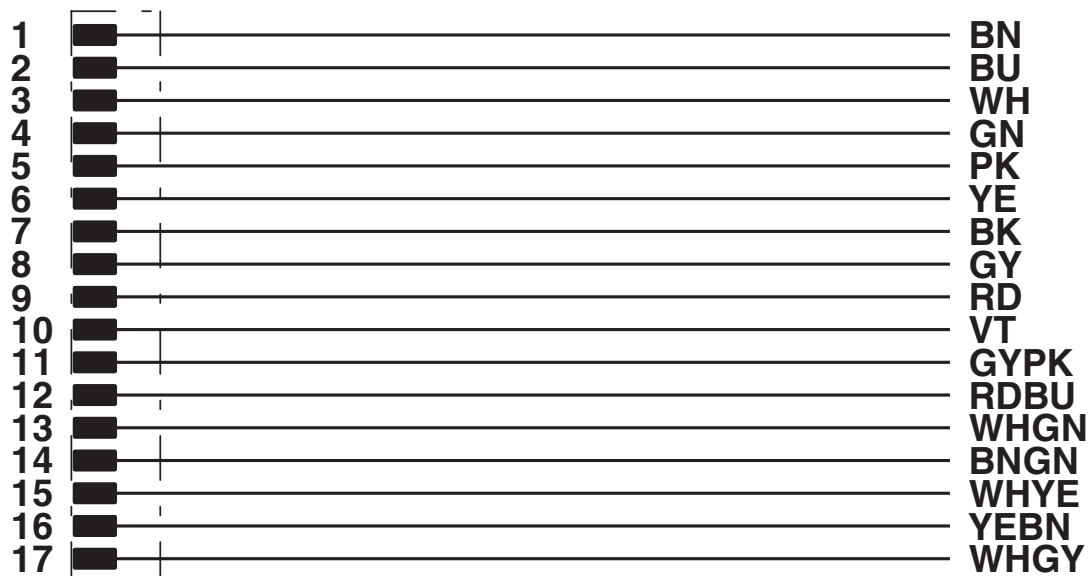


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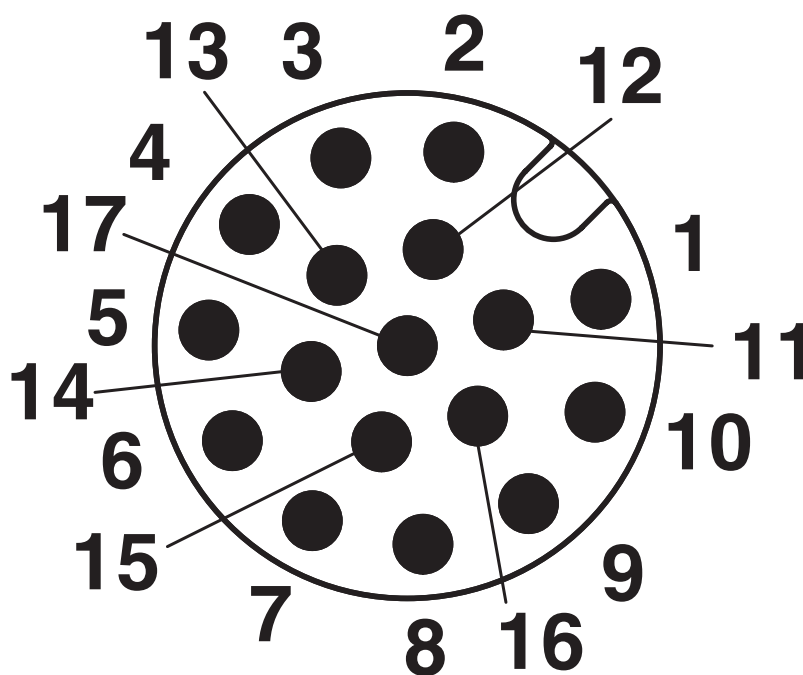
## Drawings

Circuit diagram



Contact assignment of the M12 plug

Schematic diagram



Pin assignment M12 male connector, 17-pos., male side view

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Approvals

 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1411583>

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

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27440102 |
| ECLASS-12.0 | 27440116 |
| ECLASS-13.0 | 27440116 |

### 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                                | 3182bfaa-512f-43da-9ac2-4ac143883cb2 |

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