

# SACC-E-M12MS-8CON-M16/0,5 VA - Device connector front mounting



1405221

<https://www.phoenixcontact.com/us/products/1405221>

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Device connector front mounting, Universal, 8-position, Pin, straight, M12-Standard, coding: A, on free cable end, Front mounting, M16 x 1.5, Individual wires, cable length: 0.5 m, 0.25 mm<sup>2</sup>, TPE litz wire, Alternative product in accordance with RoHS II without Exemption 6c (Pb < 0.1 %) item no.: 1238711

## 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

## Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 1405221             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 1 pc                |
| Sales key                            | AB24                |
| Product key                          | ABQCUB              |
| Catalog page                         | Page 268 (C-2-2013) |
| GTIN                                 | 4046356748117       |
| Weight per piece (including packing) | 25.9 g              |
| Weight per piece (excluding packing) | 26.16 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 |
|---------------|--------------------------|

### Product properties

|                      |                                   |
|----------------------|-----------------------------------|
| Product type         | Circular connectors (device side) |
| Application          | Signal                            |
| Sensor type          | Universal                         |
| 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

|  |                          |
|--|--------------------------|
| Flammability rating according to UL 94 | V0                       |
| Seal material                          | FKM                      |
| Contact material                       | CuZn                     |
| Contact surface material               | Au                       |
| Contact carrier material               | PA 66 GF                 |
| Material for screw connection          | Stainless steel          |
| 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 (AC) |
|                       | 30 V (DC) |
| Nominal current $I_N$ | 2 A       |

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|                           |         |
|---------------------------|---------|
| Max. conductor resistance | 80 Ω/km |
|---------------------------|---------|

## Connection data

### Conductor connection

|                         |                                   |
|-------------------------|-----------------------------------|
| Connection method       | Individual wires                  |
| Contact connection type | Pin                               |
| Conductor cross section | 0.25 mm <sup>2</sup>              |
| Tightening torque       | 3 Nm ... 4 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  | 1.15 mm ±0.07 mm  |
| Single wire, color              | brown, blue, white, gray, pink, green, yellow, red  |
| Cable cross section             | 0.25 mm <sup>2</sup>  |
| 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                | ≤ 80 Ω/km   |
| 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            | IP65/IP67/IP69/IP69K                            |
|                                 | IP65/IP67/IP69K                                 |
| 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

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

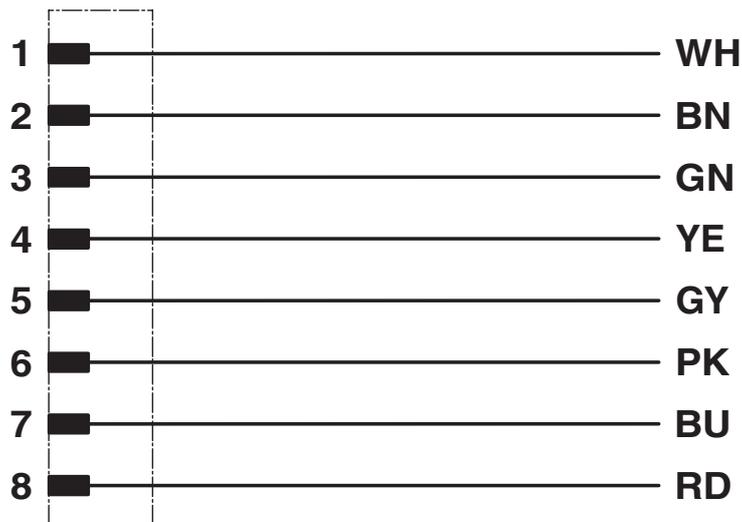
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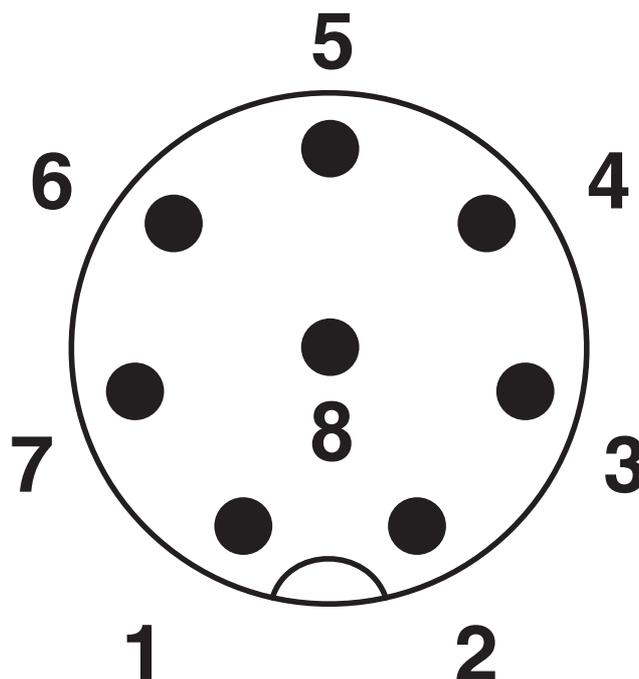
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## Drawings

Circuit diagram



Schematic diagram



Pin assignment M12 plug, 8-pos., view plug side

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1405221>

|  <b>UL Recognized</b><br>Approval ID: E118976-20100522 |                       |                       |                   |                             |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
|   | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|   | 30 V                  | 2 A                   | 24 - 24           | -                           |

|  <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                  | 2 A                   | 24 - 22           | -                           |

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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                                | 006b9cb7-9fc2-4622-85cb-a0330fb19f42 |

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## Accessories

### SACC-M16-SEAL CLM - Flat gasket

1430394

<https://www.phoenixcontact.com/us/products/1430394>

M16 flat gasket for M12 flush-type connectors with M16 fastening thread



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### PROT-M12 FS - Sealing cap

1560251

<https://www.phoenixcontact.com/us/products/1560251>

M12 sealing cap for unoccupied M12 plugs of the sensor/actuator cable, flush-type plugs and I/O devices in the field



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## PROT-M12 FS-M - Sealing cap

1430488

<https://www.phoenixcontact.com/us/products/1430488>



M12 metal sealing cap for unoccupied M12 plugs of the sensor/actuator cable, flush-type plugs and I/O devices in the field

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## SACC-M16-NUT-VA - Flat nut

1404983

<https://www.phoenixcontact.com/us/products/1404983>

Flat nut with M16 thread



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