

SACC-EC-FS-3CON-M16/0,23AESCO - Device  
connector front mounting



1403549  
<https://www.phoenixcontact.com/us/products/1403549>

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Device connector front mounting, 3-position, Socket, straight, M12-SPEEDCON, A-coding, on free cable end, Individual wires, cable length: 0.23 m, 0.34 mm<sup>2</sup>, TPE litz wire, potted, this item is expected to be lead-free from Q3 2025 in accordance with RoHS II without exception 6c (Pb < 0.1%), a lead-free alternative is possible on request in advance

Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1403549       |
| Packing unit                         | 50 pc         |
| Minimum order quantity               | 50 pc         |
| Product key                          | ABQCFB        |
| GTIN                                 | 4046356658317 |
| Weight per piece (including packing) | 19.156 g      |
| Weight per piece (excluding packing) | 18.004 g      |
| 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                                                                                                                                                                                                                                                                                                        |
| Order information: | Positioning nut is included in the scope of supply                                                                                                                                                                                                                                                                                                 |

### Safety note

|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Safety note | <p>WARNING: The connectors may not be plugged in or disconnected under load. Ignoring the warning or improper use may damage persons and/or property.</p> <ul style="list-style-type: none"><li>• WARNING: Commission properly functioning products only. The products must be regularly inspected for damage. Decommission defective products immediately. Replace damaged products. Repairs are not possible.</li><li>• WARNING: Only electrically qualified personnel may install and operate the product. They must observe the following safety notes. The qualified personnel must be familiar with the basics of electrical engineering. They must be able to recognize and prevent danger. The relevant symbol on the packaging indicates that only personnel familiar with electrical engineering are allowed to install and operate the product.</li><li>• The products are suitable for applications in plant, controller, and electrical device engineering.</li><li>• When operating the connectors in outdoor applications, they must be separately protected against environmental influences.</li><li>• Assembled products may not be manipulated or improperly opened.</li><li>• Only use mating connectors that are specified in the technical data of the standards listed (e.g. the ones listed in the product accessories online at <a href="https://www.phoenixcontact.com/products">phoenixcontact.com/products</a>).</li><li>• When using the product in direct connection with third-party manufacturers, the user is responsible.</li><li>• For operating voltages &gt; 50 V AC, conductive connector housings must be grounded</li><li>• Ensure that when laying the cable, the tensile load on the connectors does not exceed the upper limit specified in the standards.</li><li>• Observe the corresponding technical data. You will find information:<ul style="list-style-type: none"><li>o On the product</li><li>o On the packing label</li><li>o In the supplied documentation</li><li>o Online at <a href="https://www.phoenixcontact.com/products">phoenixcontact.com/products</a> under the product</li></ul></li><li>• Only use tools recommended by Phoenix Contact</li><li>• Use a protective cap to protect connectors that are not in use.</li></ul> |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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The suitable accessories are available online in the accessory section of the product at [phoenixcontact.com/products](https://www.phoenixcontact.com/products)

- Ensure that the protective or functional ground has been properly connected.

- VDE 0100/1.97 § 411.1.3.2 and DIN EN 60 204/11.98 § 14.1.3 are applicable when combining several circuits in a cable and/or connector

- The connector warms up in normal operation. Depending on the ambient conditions, the surface of the connector can continue to warm up. In this case, the user is responsible for posting warnings (e.g. DIN EN ISO 13732-1:2008-12).

## Mounting

Mounting type

Front mounting (M16 x 1,5)

## Product properties

Product type

Circular connectors (device side)

Application

Signal

Number of positions

3

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

NBR

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

2.5 kV AC

Contact resistance

≤ 3 mΩ

Insulation resistance

≥ 100 MΩ

Nominal voltage  $U_N$

250 V

Nominal current  $I_N$

4 A

Max. conductor resistance

57.6 mΩ/m

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## Connection data

### Conductor connection

|                         |                      |
|-------------------------|----------------------|
| Connection method       | Individual wires     |
| Contact connection type | Socket               |
| Conductor cross-section | 0.34 mm <sup>2</sup> |

## 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                    | 0.23 m                    |
| Cable type                      | TPE litz wire             |
| Wire diameter incl. insulation  | 1.2 mm ±0.07 mm           |
| Single wire, color              | brown, blue, black        |
| Cable cross section             | 0.34 mm <sup>2</sup>      |
| Conductor material              | Tin-plated Cu litz wires  |
| Conductor structure signal line | 7x 0.25 mm                |
| AWG signal line                 | 22                        |
| 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                |

## Environmental and real-life conditions

### Ambient conditions

|                                 |                                                                                  |
|---------------------------------|----------------------------------------------------------------------------------|
| Degree of protection            | IP67                                                                             |
| Ambient temperature (operation) | -25 °C ... 85 °C (Plug / socket)<br>-25 °C ... 90 °C (cable, fixed installation) |
| UL Type Rating                  | Type 4 (indoor use only)                                                         |

## Standards and regulations

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

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## Drawings

Schematic diagram



Pin assignment M12 socket, 4-pos., A-coded, view female side

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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: n/a)                       |
| SCIP                                | 2038b6ac-a978-40ac-8b42-9be87c62eb89 |

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