

# SACC-MCI-M12MSB-5CON/0,5 - Contact carrier



1440759

<https://www.phoenixcontact.com/us/products/1440759>

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The figure shows the 5-position version of the product

Contact carrier, 5-position, Pin, straight, M12, B-coding, on free cable end, Individual wires, cable length: 0.5 m, 0.34 mm<sup>2</sup>, TPE litz wire, this item is expected to be lead-free from Q2 2026 in accordance with RoHS II without exception 6c (Pb < 0.1%), a lead-free alternative is possible on request in advance

## Your advantages

- Convenient field assembly: device connectors for fast on-site mounting
- Contact carriers that are designed for assembly or available with preassembled litz wires
- Customer-specific assemblies and litz wire lengths available
- Standard pin assignments for signal and power transmission with a uniform design-in design

## Commercial data

Item number	1440759
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	AB24
Product key	ABQCED
GTIN	4046356533591
Weight per piece (including packing)	13.9 g
Weight per piece (excluding packing)	12.181 g
Customs tariff number	85444290
Country of origin	DE

## Technical data

### Notes

Notes on operation	<p>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 &gt; IP54. Influences arising from litz wires, cables or PCB assembly must also be taken into consideration.</p>
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### 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. The suitable accessories are available online in the accessory section of the product at <a href="https://www.phoenixcontact.com/products">phoenixcontact.com/products</a></li> <li>• Ensure that the protective or functional ground has been properly connected.</li> </ul>
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	<ul style="list-style-type: none"><li>• 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</li><li>• 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).</li></ul>
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## Product properties

Product type	Contact insert
Application	Signal
Number of positions	5
No. of cable outlets	1
No. of control contacts	5
Shielded	no
Coding	B
Thread type	M12

## Insulation characteristics

Overvoltage category	II
Degree of pollution	3

## Electrical properties

Rated surge voltage	2.5 kV
Contact resistance	$\leq 3 \text{ m}\Omega$
Insulation resistance	$\geq 100 \text{ M}\Omega$
Nominal voltage $U_N$	60 V AC 60 V DC
Nominal current $I_N$	4 A
Transmission medium	Copper
Max. conductor resistance	57.6 m $\Omega$ /m

## Connection data

Connection method	Individual wires
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## Signaling

Status display	no
Status display present	no

## Material specifications

Material Contact carrier	PA 6.6
Material Contact	CuZn
Material Contact surface	Au
Flammability rating according to UL 94	V0
Conductor material	Tin-plated Cu litz wires

## Connector

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## Connection 1

Head design	Pin
Head cable outlet	straight
Head thread type	M12
Coding	B

## Connection 2

Head design	free cable end
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## Cable/line

Cable length	0.5 m
Cable type	TPE litz wire
Wire diameter incl. insulation	1.2 mm $\pm$ 0.07 mm
Single wire, color	black, brown, blue, white, gray
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	3000 V AC
Cable resistance	$\leq$ 57.6 m $\Omega$ /m
Cable insulation resistance	$\geq$ 20 M $\Omega$ *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
Ambient temperature (operation) (male connector/female connector)	-25 °C ... 85 °C
Ambient temperature (operation) (fixed installation)	-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

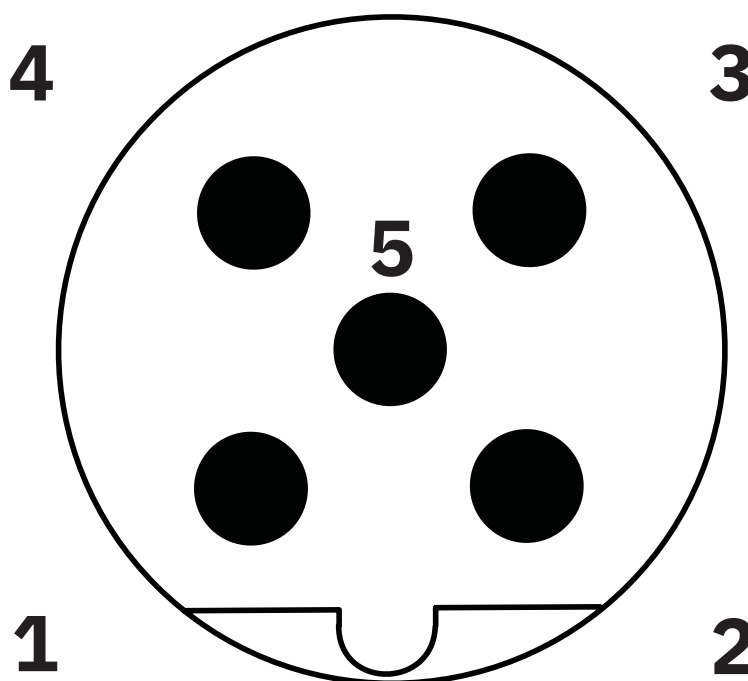
Standard designation	M12 circular connector
Standards/specifications	according to IEC 61076-2-101

## Mounting

Mounting type	Front/square flange mounting (25 mm side length)
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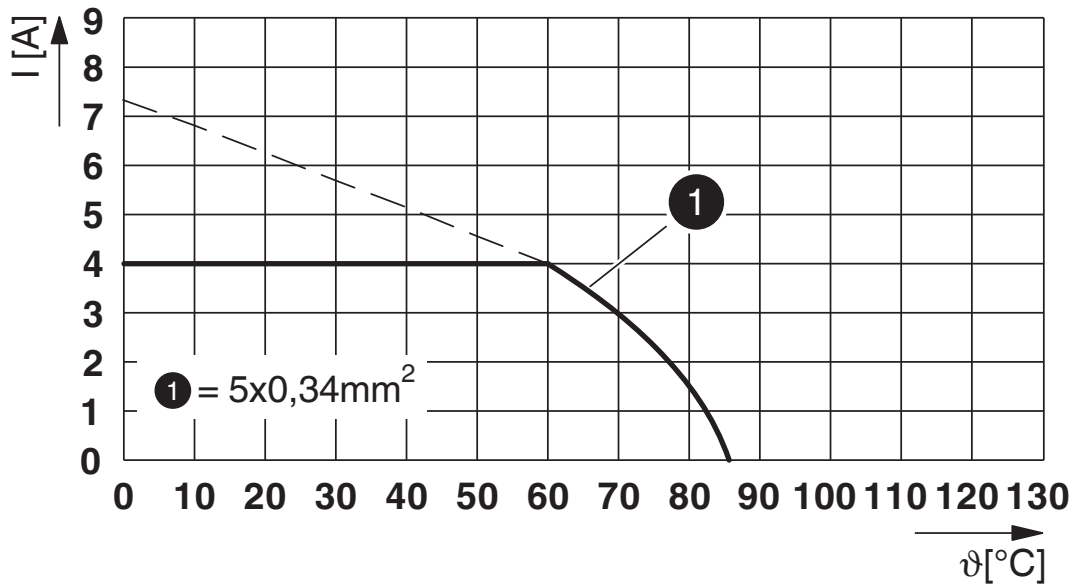
## Drawings

Schematic diagram



Pin assignment M12 male connector, 5-pos., B-coded, male side

Diagram



I = current strength, T = ambient temperature

Circuit diagram



Contact assignment of the M12 plug

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## Classifications

### ECLASS

ECLASS-13.0	27440223
ECLASS-15.0	27440223

### ETIM

ETIM 10.0	EC003557
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### 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	cb2558f4-568c-4cb3-98ab-599b1c4c957e

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