

# SACC-SQ-M12FS-5CON-20-L180 - Device connector front mounting



1456446

<https://www.phoenixcontact.com/us/products/1456446>

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Device connector front mounting, Universal, 5-position, Socket, straight, M12-SPEEDCON, A-coding, Wave soldering, 0.34 mm<sup>2</sup>, 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

- Easy PCB assembly: one-piece connectors for wave soldering
- Standard pin assignments for signal and power transmission with a uniform design-in design
- SPEEDCON fast locking system reduces cabling times

## Commercial data

Item number	1456446
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	AB26
Product key	ABQEHK
GTIN	4046356617055
Weight per piece (including packing)	13.13 g
Weight per piece (excluding packing)	9.879 g
Customs tariff number	85366990
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.
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### Mounting

Mounting type	Front mounting/square flange (20 mm side length)
Tightening torque	3 Nm ... 4 Nm (Installation-side)

### Product properties

Product type	Circular connectors (device side)
Sensor type	Universal
Number of positions	5
No. of cable outlets	1
Shielded	yes
Coding	A
Thread type	M12

### Insulation characteristics

Overvoltage category	III
Degree of pollution	3

### Material specifications

Material Housing	GD-Zn
Material Housing surface	Ni
Material Contact carrier	PA 6.6
Material Contact	CuZn
Material Contact surface	Au
Material Seal	FKM
Flammability rating according to UL 94	V0

### Electrical properties

Rated surge voltage	1.5 kV
Contact resistance	$\leq 3 \text{ m}\Omega$
Insulation resistance	$\geq 100 \text{ M}\Omega$
Nominal voltage $U_N$	60 V
Nominal current $I_N$	4 A
Max. conductor resistance	57.6 m $\Omega$ /m

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## Connection data

### Conductor connection

Connection method	Wave soldering
Contact connection type	Socket
Conductor cross-section	0.34 mm <sup>2</sup>
Tightening torque	3 Nm ... 4 Nm (Installation-side)

## Mechanical properties

### Mechanical data

Insertion/withdrawal cycles	> 100
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## Connector

### Connection 1

Head design	Socket
Head cable outlet	straight
Head thread type	M12
Head locking type	SPEEDCON
Coding	A

## Cable/line

Signal type/category	Universal
Wire diameter incl. insulation	1.2 mm ±0.07 mm
Cable cross section	0.34 mm <sup>2</sup>
Conductor structure signal line	7x 0.25 mm
Thickness, insulation	0.21 mm
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	IP20
Ambient temperature (operation) (male connector/female connector)	-25 °C ... 85 °C -40 °C ... 85 °C (without mechanical actuation)
UL Type Rating	Type 4 (indoor use only)

## Standards and regulations

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

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## Drawings

Schematic diagram



Pin assignment M12 socket, 5-pos., A-coded, socket side view

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## Approvals

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 <b>cUL Recognized</b> Approval ID: E118976-20100522				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine				
	60 V	4 A	22	-

 <b>UL Recognized</b> Approval ID: E118976-20100522				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine				
	60 V	4 A	22	-

 <b>cULus Recognized</b> Approval ID: E221474-20140616				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine				
	60 V	4 A	-	-

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## Classifications

### ECLASS

ECLASS-13.0	27440110
ECLASS-15.0	27440110

### ETIM

ETIM 10.0	EC003568
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### UNSPSC

UNSPSC 21.0	39121400
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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### China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

### EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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