

## Bus system connector - SACC-M12FRB-2PL SH PB - 1424681

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Bus system connector, PROFIBUS DP (12 Mbps), 2-position, shielded, Socket angled M12, Coding: B, Push-in connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

### Your advantages

- ✓ Easy and tool-free connection by means of Push-in Technology
- ✓ Conveniently connect stranded conductors, thanks to lever
- ✓ Reliable and quick connection of electric cables
- ✓ Flexible signal and data cabling
- ✓ Flexible cable outlets with angled connectors
- ✓ Quick and easy installation, thanks to Push-in connection technology



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 055626 376080
GTIN	4055626376080
Weight per Piece (excluding packing)	40.000 g
Custom tariff number	85366990
Country of origin	Germany

### Technical data

#### Dimensions

Diameter housing	19 mm
Length	48 mm
External cable diameter	4 mm ... 8 mm
Stripping length of the sheath	31 mm

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## Technical data

### Dimensions

Stripping length of the individual wire	7 mm
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### Ambient conditions

Ambient temperature (operation)	-40 °C ... 85 °C (Plug / socket)
Degree of protection	IP65
	IP67

### General

Note	NOTE: Observe the permissible bending radii when laying conductors, since the degree of protection may be put in jeopardy if the bending forces are too high. Alleviate mechanical loads upstream of the connector, e.g. by using cable ties.
Rated current at 40°C	4 A (2 A when using 0.14 mm <sup>2</sup> conductors)
Rated voltage	48 V AC 60 V DC
Number of positions	2
Insulation resistance	≥ 100 MΩ
Coding	B - inverse
Standards/regulations	M12 connector IEC 61076-2-101 Shock, vibration EN 50155:2001
Signal type/category	PROFIBUS DP, 12 Mbps
Status display	No
Overvoltage category	II
Degree of pollution	3
Connection method	Push-in connection
Conductor cross section	0.14 mm <sup>2</sup> ... 0.75 mm <sup>2</sup> (without ferrule) 0.08 mm <sup>2</sup> ... 0.5 mm <sup>2</sup> (with ferrule) 0.14 mm <sup>2</sup> ... 0.75 mm <sup>2</sup> (solid)
Conductor cross section AWG	26 ... 18 (without ferrule) 28 ... 20 (with ferrule)
Insertion/withdrawal cycles	≥ 100
Torque	0.4 Nm (M12 knurl) 0.8 Nm (Connector with coupling sleeve) 3 Nm (Pressure nut with coupling sleeve)
Assembly instructions	The connector pin assignment can be rotated 45° to the cable outlet The wires can be connected both with ferrules and without ferrules

### Material

Flammability rating according to UL 94	V0
Contact material	CuSn

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### Technical data

#### Material

Contact surface material	Ni/Au
Contact carrier material	PA 6.6
Material of grip body	Zinc die-cast, nickel-plated
Material, knurls	Zinc die-cast, nickel-plated
Sealing material	NBR
Additional material specifications	TPE-U (Clamping cage, weight: 1.1 g)
	PA 6 (Actuation lever)
Standards/regulations	PA 6.6: Fire protection in rail vehicles - requirement sets R22, R23, R24, R25, and R26 acc. to DIN EN 45545-2 (Risk level HL1 - HL3)
	PA 6: Fire protection in rail vehicles - requirement sets R22, R23, and R24 acc. to DIN EN 45545-2 (Risk level HL1 - HL3)

#### Standards and Regulations

Standards/specifications	M12 connector IEC 61076-2-101
	Shock, vibration EN 50155:2001
Flammability rating according to UL 94	V0

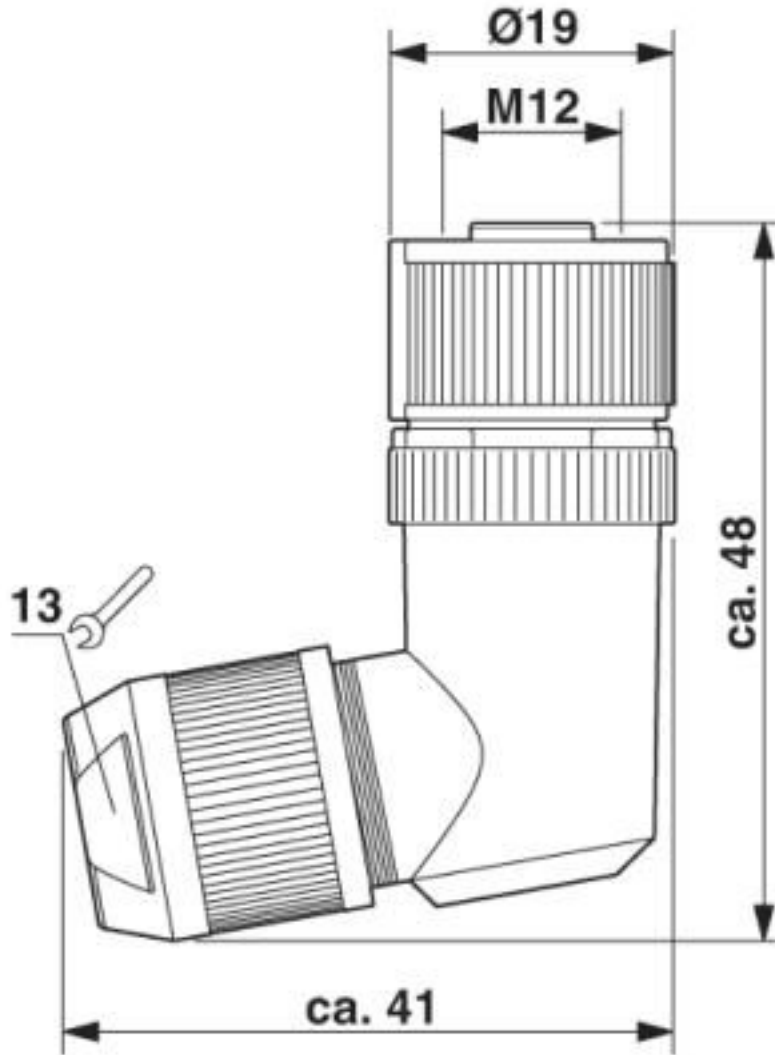
#### Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

### Drawings

# Bus system connector - SACC-M12FRB-2PL SH PB - 1424681

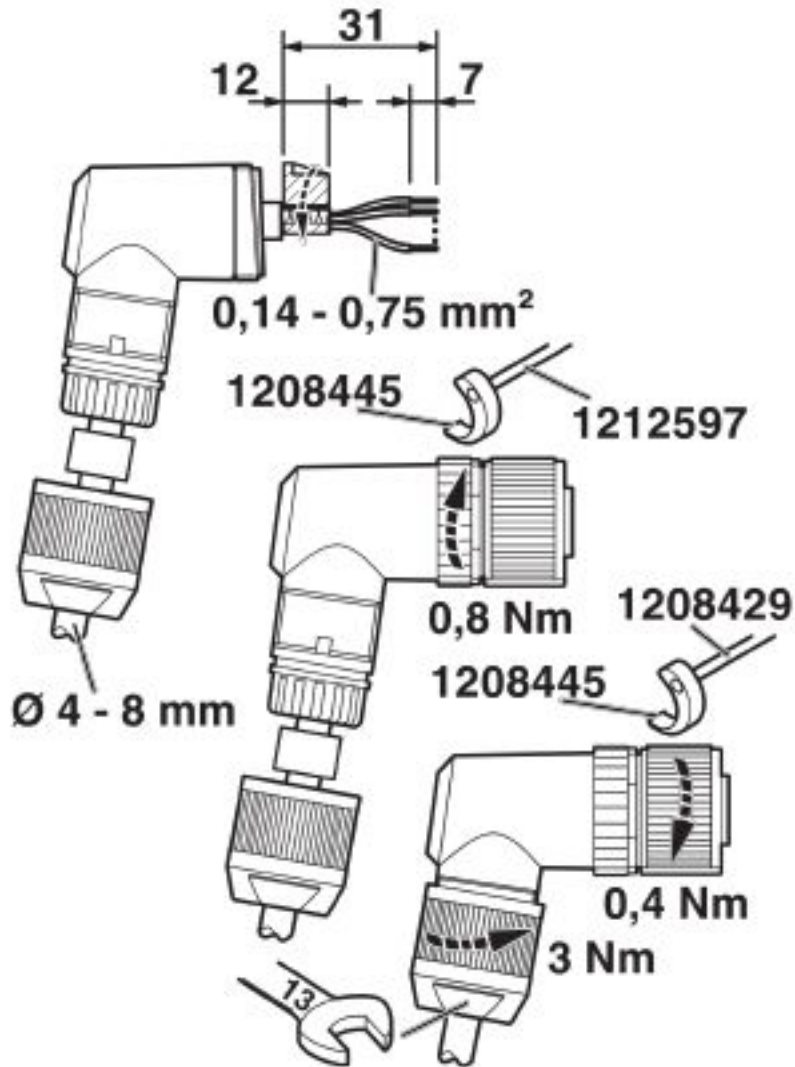
Dimensional drawing



Socket M12-SPEEDCON, angled, shielded

## Bus system connector - SACC-M12FRB-2PL SH PB - 1424681

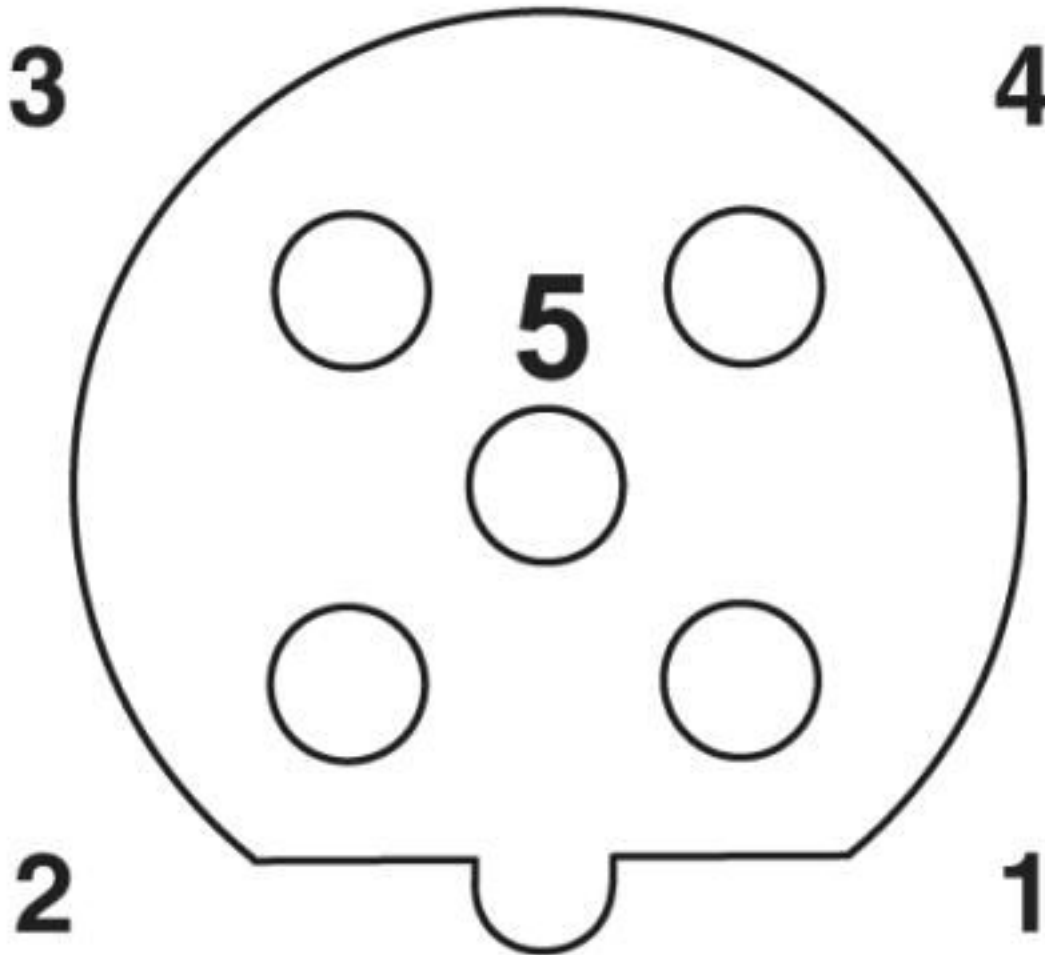
Functional drawing



Slide the pressure nut and sleeve housing along the cable, strip the cable, shorten the shield, strip the single wires, connect the wires, in the case of a straight sleeve housing gently twist the wires together, stick the shielding foil around the shortened shield, in the case of a cable outside diameter < 6 mm stick an additional shielding foil around the wire pack, screw the sleeve housing to the plug insert, screw the pressure nut tight.

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Schematic diagram



Pin assignment M12 socket, 5-pos., B-coded, female side

### Classifications

eCl@ss

eCl@ss 10.0.1	27440102
eCl@ss 5.1	27143423
eCl@ss 6.0	27279200
eCl@ss 7.0	27440104
eCl@ss 8.0	27440104
eCl@ss 9.0	27440102

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## Classifications

### ETIM

ETIM 5.0	EC002635
ETIM 6.0	EC002635
ETIM 7.0	EC002635

## Approvals

### Approvals


#### Approvals


EAC / UL Listed / cUL Listed / EAC / cULus Listed

#### Ex Approvals

### Approval details

EAC		RU C- DE.AI30.B.01102
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UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	E221474
Nominal voltage UN	60 V		
Nominal current IN	4 A		
mm <sup>2</sup> /AWG/kcmil	26-18		

cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	E221474
Nominal voltage UN	60 V		
Nominal current IN	4 A		
mm <sup>2</sup> /AWG/kcmil	26-18		

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### Approvals

EAC		RU C- DE.BL08.B.00511
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cULus Listed	
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### Accessories

#### Accessories

##### Cable end sleeve

Ferrule - AI 0,25- 6 YE - 3203024



Ferrule, sleeve length: 6 mm, length: 10.5 mm, color: yellow

Ferrule - A 0,25- 7 - 3202478



Ferrule, length: 7 mm, color: silver

Ferrule - A 0,34- 7 - 3009202



Ferrule, length: 7 mm, color: silver



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### Accessories

Ferrule - A 0,5 - 6 - 3200218



Ferrule, length: 6 mm, color: silver

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Ferrule - AI 0,5 - 6 WH - 3200687



Ferrule, sleeve length: 6 mm, length: 12 mm, color: white

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### Crimping tool

Crimping pliers - CRIMPFOX 6H - 1212046



Crimping pliers, for ferrules without insulating collar according to DIN 46228 Part 1 and ferrules with insulating collar according to DIN 46228 Part 4, 0.14 mm<sup>2</sup> ... 6 mm<sup>2</sup>, unlockable pressure lock, lateral entry

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### Data cable by the meter

Bus system cable - SAC-2P-910/... - 1511491



Bus system cable, PROFIBUS, 2-position, PUR halogen-free, violet RAL 4001, shielded, free cable end, on free cable end, cable length: Free entry (0.5 ... 400 m)

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### Plug for cable screw gland

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### Accessories

Screw plug - PROT-M12 MS-PA-CHAIN - 1430899

M12 sealing cap with fixing band, for sensor cables, for free M12 sockets



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### Screwdriver tools

Tool - SACC BIT M12-D20 - 1208445



Nut for assembling M12 connectors for assembly with a knurl diameter of 20 mm, for 4 mm hexagonal drive

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Adapter insert - TSD-M SAC-BIT ADAPTER - 1212600



Adapter bit for TSD-M...torque tools, E6.3-1/4" drive with 4 mm hexagon to accommodate SAC bits

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### Shield connection

Shielding foil - ALU-SB - 1404531

Shielding foil, for fixing the braided shield of shielded cables. Length: 4 cm, width: 1.2 cm



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### Stripping tool

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### Accessories

Stripping tool - WIREFOX 2,5 - 1212368



Stripping tool, for conductors and cables with a conductor cross section from 0.08 to 2.5 mm, self-adjusting, stripping length adjustable up to 15 mm, cutting capacity up to 6 mm<sup>2</sup> stranded/1.5 mm<sup>2</sup> solid

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### Torque tool

Torque screwdriver - TSD 04 SAC - 1208429



Torque screwdriver, with preset torque of 0.4 Nm and 4 mm hexagonal drive for M12 connectors

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Torque screwdriver - TSD 08 SAC - 1212597



Torque screw driver with preset torque of 0.8 Nm, with 4 mm hexagon for accommodating SAC bits, two-component handle with non-slip grip

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Torque screwdriver - TSD-M 1,2NM - 1212224



Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 0.3 - 1.2 Nm

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Torque screwdriver - TSD-M 3NM - 1212225



Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 1.2 - 3 Nm

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### Accessories

Stripping tool - VS-CABLE-STRIP-VARIO - 1657407



Stripping tool, for the multi-level stripping of shielded cables

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