

## Bus system flush-type socket - SACCBP-FSD-4CON-PG9/1,0-933SCO - 1437779

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Bus system flush-type socket, PROFINET, 4-pos., M12, shielded, D-coded, SPEEDCON, rear/screw mounting with Pg9 thread, with 1.0 m bus cable, 2 x 2 x 0.34 mm²

### Why buy this product

- ✓ Pre-assembled with cables in various standard lengths for immediate use
- ✓ Customer-specific assemblies and cable lengths can be supplied
- ✓ Sealed on the cable side for optimum tightness of seal
- ✓ Cable designs for all common networks and fieldbuses
- ✓ For high transmission safety: shield connection to the housing with optional EMC nut



### Key Commercial Data

|                                      |                                                                                      |
|--------------------------------------|--------------------------------------------------------------------------------------|
| Packing unit                         | 1 STK                                                                                |
| GTIN                                 |  |
| GTIN                                 | 4046356458511                                                                        |
| Weight per Piece (excluding packing) | 100.000 g                                                                            |
| Custom tariff number                 | 85444290                                                                             |
| Country of origin                    | Germany                                                                              |

### Technical data

#### Dimensions

|                 |     |
|-----------------|-----|
| Length of cable | 1 m |
|-----------------|-----|

#### Ambient conditions

|                                 |                                              |
|---------------------------------|----------------------------------------------|
| Ambient temperature (operation) | -20 °C ... 60 °C (cable, fixed installation) |
|---------------------------------|----------------------------------------------|

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## Technical data

### Ambient conditions

|                      |      |
|----------------------|------|
| Degree of protection | IP67 |
|----------------------|------|

### General

|                             |                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Note                        | 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. |
| Rated current at 40°C       | 4 A                                                                                                                                                                                                                                                                                                                                                |
| Rated voltage               | 250 V                                                                                                                                                                                                                                                                                                                                              |
| Rated surge voltage         | 2.5 kV                                                                                                                                                                                                                                                                                                                                             |
| Number of positions         | 4                                                                                                                                                                                                                                                                                                                                                  |
| Coding                      | D - data                                                                                                                                                                                                                                                                                                                                           |
| Signal type/category        | PROFINET CAT5 (IEC 11801), 100 Mbps                                                                                                                                                                                                                                                                                                                |
|                             | EtherCAT® CAT5 (IEC 11801), 100 Mbps                                                                                                                                                                                                                                                                                                               |
| Overvoltage category        | II                                                                                                                                                                                                                                                                                                                                                 |
| Degree of pollution         | 3                                                                                                                                                                                                                                                                                                                                                  |
| Insertion/withdrawal cycles | ≥ 100                                                                                                                                                                                                                                                                                                                                              |
| Torque                      | 2 Nm ... 3 Nm (Installation-side)                                                                                                                                                                                                                                                                                                                  |

### Material

|                                        |                     |
|----------------------------------------|---------------------|
| Flammability rating according to UL 94 | V0                  |
| Contact material                       | CuZn                |
| Contact surface material               | Ni/Au               |
| Contact carrier material               | PA 6.6              |
| Material, knurls                       | Nickel-plated brass |
| Sealing material                       | FKM                 |

### Standards and Regulations

|                                        |    |
|----------------------------------------|----|
| Flammability rating according to UL 94 | V0 |
|----------------------------------------|----|

### Cable

|                           |                                      |
|---------------------------|--------------------------------------|
| Cable type                | PROFINET PVC stranded CAT5           |
| Cable type (abbreviation) | 93B                                  |
| UL AWM style              | 21694                                |
| Signal type/category      | PROFINET CAT5 (IEC 11801), 100 Mbps  |
|                           | EtherCAT® CAT5 (IEC 11801), 100 Mbps |
| Cable structure           | 1x4xAWG22/7; SF/TQ                   |
| Conductor cross section   | 4x 0.34 mm²                          |

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## Technical data

### Cable

|                                               |                                                    |
|-----------------------------------------------|----------------------------------------------------|
| AWG signal line                               | 22                                                 |
| Conductor structure signal line               | 7x 0.25 mm                                         |
| Core diameter including insulation            | 1.55 mm                                            |
| Wire colors                                   | White, yellow, blue, orange                        |
| Overall twist                                 | Star quad                                          |
| Shielding                                     | Aluminum-coated foil, tinned copper braided shield |
| Optical shield covering                       | 85 %                                               |
| External sheath, color                        | green RAL 6018                                     |
| Outer sheath thickness                        | approx. 0.9 mm                                     |
| External cable diameter D                     | 6.5 mm $\pm$ 0.2 mm                                |
| Minimum bending radius, fixed installation    | 3 x D                                              |
| Minimum bending radius, flexible installation | 7 x D                                              |
| Cable weight                                  | 67 kg/km                                           |
| Outer sheath, material                        | PVC                                                |
| Material, inner sheath                        | PVC                                                |
| Material conductor insulation                 | PE                                                 |
| Conductor material                            | Tin-plated Cu litz wires                           |
| Insulation resistance                         | $\geq 500 \text{ M}\Omega \cdot \text{km}$         |
| Loop resistance                               | $\leq$ (per km)                                    |
| Wave impedance                                | 100 $\Omega \pm 15 \Omega$ (at 100 MHz)            |
| Near end crosstalk attenuation (NEXT)         | 80 dB (with 1 MHz)                                 |
|                                               | 76 dB (at 4 MHz)                                   |
|                                               | 70 dB (at 10 MHz)                                  |
|                                               | 65 dB (at 16 MHz)                                  |
|                                               | 63 dB (at 20 MHz)                                  |
|                                               | 60 dB (at 31.25 MHz)                               |
|                                               | 55 dB (at 62.5 MHz)                                |
|                                               | 50 dB (at 100 MHz)                                 |
| Attenuation                                   | 2.1 dB (with 1 MHz)                                |
|                                               | 4 dB (at 4 MHz)                                    |
|                                               | 6.3 dB (at 10 MHz)                                 |
|                                               | 8 dB (at 16 MHz)                                   |
|                                               | 9 dB (at 20 MHz)                                   |
|                                               | 11.4 dB (at 31.25 MHz)                             |
|                                               | 16.5 dB (at 62.5 MHz)                              |
|                                               | 21.3 dB (at 100 MHz)                               |

## Bus system flush-type socket - SACCBP-FSD-4CON-PG9/1,0-933SCO - 1437779

### Technical data

#### Cable

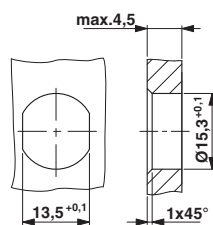
|                                         |                                                 |
|-----------------------------------------|-------------------------------------------------|
| Signal speed                            | 0.66 c                                          |
| Signal runtime                          | 5.3 ns/m                                        |
| Coupling resistance                     | ≤ 20.00 mΩ/m (at 10 MHz)                        |
| Nominal voltage, cable                  | 600 V                                           |
| Test voltage Core/Core                  | 2000 V (50 Hz, 1 min.)                          |
| Test voltage Core/Shield                | 2000 V (50 Hz, 1 min.)                          |
| Flame resistance                        | According to UL 1685 (CSA FT 4)                 |
| Resistance to oil                       | Resistant to oil to a limited extent            |
| Other resistance                        | UV resistant According to UL 1581, Section 1200 |
| Ambient temperature (operation)         | -40 °C ... 70 °C (cable, fixed installation)    |
|                                         | -40 °C ... 70 °C (cable, flexible installation) |
| Ambient temperature (installation)      | -20 °C ... 60 °C                                |
| Ambient temperature (storage/transport) | -50 °C ... 70 °C                                |

#### Environmental Product Compliance

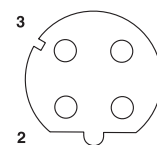
|            |                                                                                                     |
|------------|-----------------------------------------------------------------------------------------------------|
| China RoHS | Environmentally Friendly Use Period = 50                                                            |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

### Drawings

Dimensional drawing



Schematic diagram

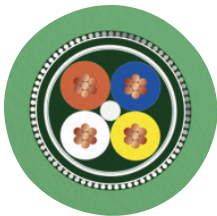


Pin assignment M12 socket, 4-pos., D-coded, female side

Housing cutout for Pg9 fastening thread, mounting panel with feed-through hole (alternatively with surface as protection against rotation)

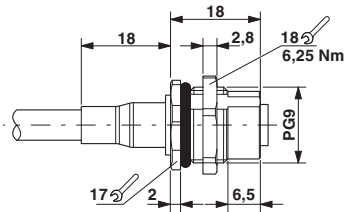
Bus system flush-type socket - SACCBP-FSD-4CON-  
PG9/1,0-933SCO - 1437779

Cable cross section



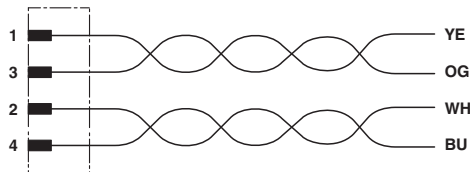
PROFINET PVC stranded CAT5 [93B]

Dimensional drawing



M12 panel feed-through

Circuit diagram



Contact assignment of the M12 socket

Classifications

eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27250313 |
| eCl@ss 4.1 | 27250313 |
| eCl@ss 5.0 | 27143423 |
| eCl@ss 5.1 | 27143423 |
| eCl@ss 6.0 | 27143423 |
| eCl@ss 7.0 | 27449001 |
| eCl@ss 8.0 | 27440103 |
| eCl@ss 9.0 | 27440102 |

ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC002061 |
| ETIM 4.0 | EC000830 |
| ETIM 5.0 | EC002061 |
| ETIM 6.0 | EC002061 |

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### Classifications

#### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 31251501 |
| UNSPSC 7.0901 | 31251501 |
| UNSPSC 11     | 31251501 |
| UNSPSC 12.01  | 31251501 |
| UNSPSC 13.2   | 39121413 |

### Approvals

#### Approvals

#### Approvals

UL Recognized / EAC

#### Ex Approvals

#### Approval details

|                                |       |                                                                                     |                                                                                                                                                       |               |
|--------------------------------|-------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| UL Recognized                  |       |  | <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> | FILE E 118976 |
|                                |       |                                                                                     |                                                                                                                                                       |               |
| mm²/AWG/kcmil                  | 22    |                                                                                     |                                                                                                                                                       |               |
| Nominal current I <sub>N</sub> | 4 A   |                                                                                     |                                                                                                                                                       |               |
| Nominal voltage U <sub>N</sub> | 250 V |                                                                                     |                                                                                                                                                       |               |

|     |                                                                                     |         |
|-----|-------------------------------------------------------------------------------------|---------|
| EAC |  | B.00767 |
|-----|-------------------------------------------------------------------------------------|---------|

### Accessories

#### Accessories

Cable connector

## Bus system flush-type socket - SACCBP-FSD-4CON-PG9/1,0-933SCO - 1437779

### Accessories

Conductor connectors - SACC-CC-4QO SH PN - 1414416



Cable connector, PROFINET CAT5 (100 Mbps), 4-pos., halogen-free, shielded, insulation displacement connection, housing material: zinc die-cast, nickel-plated, outer cable diameter of 5 mm ... 9.7 mm

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### Circular connector (cable-side)

Connector - SACC-MSD-4QO SH PN SCO - 1411068



Connector, PROFINET CAT5 (100 Mbps), 4-position, halogen-free, shielded, Plug straight M12 SPEEDCON, D-coded, Insulation displacement connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 5 mm ... 9.7 mm

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Bus system connector - SACC-M12MRD-4Q SH PN - 1554539



Bus system connector, PROFINET CAT5 (100 Mbps), 4-position, shielded, Plug angled M12, D-coded, Insulation displacement connection, knurl material: Nickel-plated brass, external cable diameter 4 mm ... 8 mm

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Connector - SACC-FSD-4QO SH PN SCO - 1411071



Connector, PROFINET CAT5 (100 Mbps), 4-position, halogen-free, shielded, Socket straight M12 SPEEDCON, D-coded, Insulation displacement connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 5 mm ... 9.7 mm

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Bus system connector - SACC-M12FRD-4Q SH PN - 1554542



Bus system connector, PROFINET CAT5 (100 Mbps), 4-position, shielded, Socket angled M12, D-coded, Insulation displacement connection, knurl material: Nickel-plated brass, external cable diameter 4 mm ... 8 mm

## Bus system flush-type socket - SACCBP-FSD-4CON-PG9/1,0-933SCO - 1437779

### Accessories

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#### Connector - SACC-M12MSD-4PL SH PN - 1424682



Connector, PROFINET CAT5 (100 Mbps), 4-position, shielded, Plug straight M12, D-coded, Push-in connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

#### Connector - SACC-M12MRD-4PL SH PN - 1424684



Connector, PROFINET CAT5 (100 Mbps), 4-position, shielded, Plug angled M12, D-coded, Push-in connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

#### Connector - SACC-M12FSD-4PL SH PN - 1424683



Connector, PROFINET CAT5 (100 Mbps), 4-position, shielded, Socket straight M12, D-coded, Push-in connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

#### Connector - SACC-M12FRD-4PL SH PN - 1424685



Connector, PROFINET CAT5 (100 Mbps), 4-position, shielded, Socket angled M12, D-coded, Push-in connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

#### Connector - SACC-M12MSD-4CT-CM SH PN - 1422846



Connector, PROFINET CAT5 (100 Mbps), 4-position, shielded, Plug straight M12, D-coded, Crimp connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4.5 mm ... 7.5 mm, without crimp contacts

## Bus system flush-type socket - SACCBP-FSD-4CON-PG9/1,0-933SCO - 1437779

### Accessories

Connector - SACC-M12MRD-4CT-CM SH PN - 1422847



Connector, PROFINET CAT5 (100 Mbps), 4-position, shielded, Plug angled M12, D-coded, Crimp connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4.5 mm ... 7.5 mm, without crimp contacts

Connector - SACC-M12FSD-4CT-CM SH PN - 1422848



Connector, PROFINET CAT5 (100 Mbps), 4-position, shielded, Socket straight M12, D-coded, Crimp connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4.5 mm ... 7.5 mm, without crimp contacts

Connector - SACC-M12FRD-4CT-CM SH PN - 1422849



Connector, PROFINET CAT5 (100 Mbps), 4-position, shielded, Socket angled M12, D-coded, Crimp connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4.5 mm ... 7.5 mm, without crimp contacts

### Corrugated pipe

Protective hose - WP-PA HF 13,0 BK - 3240681



Polyamide protective hose, inflammability class V0, UV resistant

Protective hose - WP-PA HF-HB 13,0 BK - 3240839



Polyamide protective hose, inflammability class HB, UV resistant

## Bus system flush-type socket - SACCBP-FSD-4CON-PG9/1,0-933SCO - 1437779

### Accessories

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#### Cutting tools

Cable-cutting tool - CUTFOX 12 - 1212128



Cable cutter, for copper and aluminum up to 12 mm diameter (up to 35 mm<sup>2</sup>)

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Diagonal cutter - CUTFOX-S VDE - 1212207



Diagonal cutter for hard (piano wire) and soft wires, VDE 1000 V AC/1500 V DC tested

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#### Data plug

RJ45 connector - VS-PN-RJ45-5-Q/IP20 - 1658435



RJ45 connector, degree of protection: IP20, number of positions: 4, 100 Mbps, CAT5 (IEC 11801:2002), material: PA, connection method: IDC fast connection, connection cross section: AWG 22- 22, cable outlet: straight, color: traffic grey A RAL 7042

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RJ45 connector - CUC-IND-C1ZNI-S/R4IP8 - 1421126



RJ45 connector, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5 (IEC 11801:2002), material: Zinc die-cast, connection method: IDC fast connection, connection cross section: AWG 23- 22, cable outlet: straight

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## Bus system flush-type socket - SACCBP-FSD-4CON-PG9/1,0-933SCO - 1437779

### Accessories

RJ45 connector - CUC-IND-C1ZNI-T/R4IP8 - 1421128



RJ45 connector, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5 (IEC 11801:2002), material: Zinc die-cast, connection method: IDC fast connection, connection cross section: AWG 23- 22, cable outlet: angled

RJ45 connector - CUC-IND-C1ZNI-B/R4IP8 - 1421127



RJ45 connector, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5 (IEC 11801:2002), material: Zinc die-cast, connection method: IDC fast connection, connection cross section: AWG 23- 22, cable outlet: angled

RJ45 connector - CUC-V14-C1ZNI-S/R4P8 - 1422664



Push-pull connector (version 14), die-cast zinc, with RJ45 connector insert, 8-pos., with IDC fast connection technology, for 1 and 7-wire cores, 23 ... 22 AWG, for cable diameter of 5.5 mm ... 10 mm

RJ45 connector - CUC-V14-C1ZNI-T/R4P8 - 1422667



Push-pull connector (version 14), die-cast zinc, with RJ45 connector insert, 8-pos., with IDC fast connection technology, for 1 and 7-wire cores, 23 ... 22 AWG, for cable diameter of 5.5 mm ... 10 mm

RJ45 connector - CUC-V14-C1ZNI-B/R4P8 - 1422665



Push-pull connector (version 14), die-cast zinc, with RJ45 connector insert, 8-pos., with IDC fast connection technology, for 1 and 7-wire cores, 23 ... 22 AWG, for cable diameter of 5.5 mm ... 10 mm

## Bus system flush-type socket - SACCBP-FSD-4CON-PG9/1,0-933SCO - 1437779

### Accessories

#### Electronics pliers

Diagonal cutter - MICROFOX-SP-1 - 1212487



Electronic diagonal cutter, tapered head, without chamfer, with opening spring, non-reflective phosphate-treated surface, punched version

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#### Stripping tool

Stripping tool - WIREFOX 4 - 1212156



Stripping tool, for cables and conductors (especially for rubber and silicone insulations) from 0.1 - 4 mm<sup>2</sup>, self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm<sup>2</sup> stranded/1.5 mm<sup>2</sup> solid, replaceable stripping blade

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Stripping tool - WIREFOX-E 4 - 1212704



Stripping tool, for cables and conductors (especially for rubber and silicone insulations) from 0.1 - 4 mm<sup>2</sup>, self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm<sup>2</sup> stranded/1.5 mm<sup>2</sup> solid, replaceable stripping blade

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Stripping tool - WIREFOX 10 - 1212150



Stripping tool, for cables and conductors from 0.02 - 10 mm<sup>2</sup>, self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm<sup>2</sup> stranded/1.5 mm<sup>2</sup> solid, replaceable stripping blade

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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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Protective hose adapter - WP-CTA POM 13,0 BK - 1422884



Protective hose adapter, for corrugated hoses with a nominal size of 13 (10 x 13), corrugated in parallel