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Bus system flush-type socket, PROFINET, 4-pos., M12, shielded, D-coded, SPEEDCON, rear/screw mounting with Pg9 thread, with 2.0 m bus cable, $2 \times 2 \times 0.34$ mm²







Key commercial data

| Packing unit | 1 pc | | |
|--------------------------------------|-----------------|--|--|
| GTIN | 4 046356 458528 | | |
| Weight per Piece (excluding packing) | 158.1 g | | |
| Custom tariff number | 85444290 | | |
| Country of origin | Germany | | |

Technical data

Dimensions

| Length of cable | 2 m |
|-----------------|-----|

Ambient conditions

| Ambient temperature (operation) | -20 °C 60 °C (cable, fixed installation) | | |
|---------------------------------|--|--|--|
| 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 |
| Number of positions | 4 |
| Coding | D - data |
| Signal type/category | PROFINET CAT5 (IEC 11801:2002), 100 Mbps |



Technical data

General

| Surge voltage category | II | |
|-----------------------------|-------------------------------|--|
| Pollution degree | 3 | |
| Insertion/withdrawal cycles | ≥ 100 | |
| Torque | 2 Nm 3 Nm (Installation-side) | |

Material

| Inflammability class according to UL 94 | V0 |
|---|---------------------|
| Contact material | CuZn |
| Contact surface material | Ni/Au |
| Contact carrier material | PA 66 |
| Material, knurls | Nickel-plated brass |
| Sealing material | FKM |

Cable

| Cable type PROFINET PVC stranded CAT5 Cable type (abbreviation) 93B Cable abbreviation 2YY(ST)CY UL AWM style 21694 Cable structure 1x4xAWG22/7; SF/TQ Conductor cross section 4x 0.34 mm² 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 ±0.2 mm Minimum bending radius, fixed installation 7 x D Cable weight 67 kg/km | | | | |
|---|---|--|--|--|
| Cable abbreviation 2YY(ST)CY UL AWM style 21694 Cable structure 1x4xAWG22/7; SF/TQ Conductor cross section 4x 0.34 mm² 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 ±0.2 mm Minimum bending radius, fixed installation 7 x D Cable weight 67 kg/km | Cable type | PROFINET PVC stranded CAT5 | | |
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| AWG signal line 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 External sheath, color Outer sheath thickness approx. 0.9 mm External cable diameter D Minimum bending radius, fixed installation 7 x D Cable weight | Cable structure | 1x4xAWG22/7; SF/TQ | | |
| Conductor structure signal line Core diameter including insulation Wire colors White, yellow, blue, orange Overall twist Star quad Shielding Aluminum-coated foil, tinned copper braided shield Optical shield covering External sheath, color Outer sheath thickness approx. 0.9 mm External cable diameter D Minimum bending radius, fixed installation 7 x D Cable weight 7x 0.25 mm 7x 0.25 mm 6.5 mm 6.5 mm 7 x D Cable weight | Conductor cross section | 4x 0.34 mm² | | |
| Core diameter including insulation 1.55 mm Wire colors White, yellow, blue, orange Overall twist Star quad 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 ±0.2 mm Minimum bending radius, fixed installation 7 x D Cable weight | AWG signal line | 22 | | |
| Wire colors 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 ±0.2 mm Minimum bending radius, fixed installation 7 x D Cable weight White, yellow, blue, orange White, yellow, blue, orange Star quad Aluminum-coated foil, tinned copper braided shield 6.5 mm 6.7 kg/km | Conductor structure signal line | 7x 0.25 mm | | |
| Overall twist 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 ±0.2 mm Minimum bending radius, fixed installation 7 x D Cable weight Star quad Aluminum-coated foil, tinned copper braided shield 85 % External capper Shield Shield Shield 85 % Green RAL 6018 Approx. 0.9 mm 6.5 mm ±0.2 mm 6.5 mm ±0.2 mm 6.5 mm ±0.2 mm 6.5 mm ±0.2 mm | Core diameter including insulation | 1.55 mm | | |
| 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 ±0.2 mm Minimum bending radius, fixed installation 3 x D Minimum bending radius, flexible installation 7 x D Cable weight 67 kg/km | Wire colors | White, yellow, blue, orange | | |
| Optical shield covering 85 % External sheath, color Green RAL 6018 Outer sheath thickness approx. 0.9 mm External cable diameter D 6.5 mm ±0.2 mm Minimum bending radius, fixed installation 3 x D Minimum bending radius, flexible installation 7 x D Cable weight 67 kg/km | Overall twist | Star quad | | |
| External sheath, color Green RAL 6018 Outer sheath thickness approx. 0.9 mm External cable diameter D 6.5 mm ±0.2 mm Minimum bending radius, fixed installation 3 x D Minimum bending radius, flexible installation 7 x D Cable weight 67 kg/km | Shielding | Aluminum-coated foil, tinned copper braided shield | | |
| Outer sheath thickness approx. 0.9 mm External cable diameter D 6.5 mm ±0.2 mm Minimum bending radius, fixed installation 3 x D Minimum bending radius, flexible installation 7 x D Cable weight 67 kg/km | Optical shield covering | 85 % | | |
| External cable diameter D 6.5 mm ±0.2 mm Minimum bending radius, fixed installation 3 x D Minimum bending radius, flexible installation 7 x D Cable weight 67 kg/km | External sheath, color | Green RAL 6018 | | |
| Minimum bending radius, fixed installation 3 x D Minimum bending radius, flexible installation 7 x D Cable weight 67 kg/km | Outer sheath thickness | approx. 0.9 mm | | |
| Minimum bending radius, flexible installation 7 x D Cable weight 67 kg/km | External cable diameter D | 6.5 mm ±0.2 mm | | |
| Cable weight 67 kg/km | 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 | Outer sheath, material | PVC | | |
| Material, inner sheath PVC | Material, inner sheath | PVC | | |
| Material conductor insulation PE | Material conductor insulation | PE | | |
| Conductor material Tin-plated Cu litz wires | Conductor material | Tin-plated Cu litz wires | | |
| Insulation resistance ≥ 500 MΩ*km | Insulation resistance | $\geq 500 \text{ M}\Omega^*\text{km}$ | | |
| Conductor resistance ≤ 120 Ω/km | Conductor resistance | ≤ 120 Ω/km | | |
| Wave impedance $100~\Omega~\pm15~\Omega~(at~100~MHz)$ | Wave impedance | 100 Ω ±15 Ω (at 100 MHz) | | |



Technical data

Cable

| Signal runtime | 5.3 ns/m | | | |
|---------------------------------|---|--|--|--|
| Coupling resistance | \leq 20.00 m Ω /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) | | | |

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 |

ETIM

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

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



| Α | D | b | ro | V | al | S |
|---|---|----|----|---|----|---|
| • | ~ | Μ. | _ | • | ч. | • |

Ex Approvals

Approvals submitted

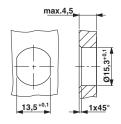
Approval details

| UL Recognized \$1 | |
|--------------------------|-------|
| | |
| mm²/AWG/kcmil | 26-20 |
| Nominal current IN | 4 A |
| Nominal voltage UN | 250 V |

EAC

Drawings

Dimensioned drawing



Schematic diagram



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

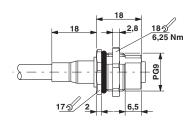
Housing cutout for Pg9 fastening thread, mounting panel with feed-through hole (alternatively with surface as protection against rotation)

Cable cross section



PROFINET PVC stranded CAT5 [93B]

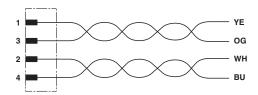
Dimensioned drawing



M12 panel feed-through



Circuit diagram



Contact assignment of the M12 socket

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