

Bus system cable - SAC-3P-M12MR/ 2,0-961/M12FS VA - 1419113

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Bus system cable, PROFIBUS PA, PROFIBUS PA, 3-position, PVC, blue RAL 5015, shielded, Plug angled M12, A-coded, on Socket straight M12, A-coded, Cable length: 2 m, For Ex area with high-grade steel knurl



Key commercial data

| | |
|----------------------|----------|
| Packing unit | 1 1 |
| Custom tariff number | 85444290 |
| Country of origin | Germany |

Technical data

Dimensions

| | |
|--|-------|
| Length of cable | 2 m |
| Stripping length of the free conductor end | 50 mm |

Ambient conditions

| | |
|---------------------------------|----------------------------------|
| Ambient temperature (operation) | -25 °C ... 90 °C (Plug / socket) |
| Degree of protection | IP65 |
| | IP67 |
| | IP68 |
| | IP69K |

General

| | |
|------------------------|--|
| Note | For applications in circuits of intrinsic safety protection type "i". Electrical values following EN 60079-14. |
| Rated current at 40 °C | 4 A |
| Rated voltage | 60 V |
| Number of positions | 3 |

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Technical data

General

| | |
|-----------------------------|------------------------|
| Contact resistance | ≤ 5 mΩ |
| Coding | B - inverse |
| Signal type/category | PROFIBUS PA |
| Status display | No |
| Surge voltage category | II |
| Pollution degree | 3 |
| Insertion/withdrawal cycles | ≥ 100 |
| Torque | 0.4 Nm (M12 connector) |

Material

| | |
|---|---|
| Inflammability class according to UL 94 | HB |
| Contact material | CuSn |
| Contact surface material | Ni/Au |
| Contact carrier material | TPU GF |
| Material of grip body | TPU, hardly inflammable, self-extinguishing |
| Material, knurls | High-grade steel |
| Sealing material | NBR |

Pin assignment

| | |
|--|-------------------------------------|
| Position = wire color (signal) = position (optional) | 1 (Plug) = OG (DATA+) = 1 (Socket) |
| | 3 (Plug) = BU (DATA-) = 3 (Socket) |
| | 4 (Plug) = SR (shield) = 4 (Socket) |

Cable

| | |
|------------------------------------|---|
| Cable type | Fieldbus FOUNDATION/PROFIBUS PA, blue |
| Cable type (abbreviation) | 961 |
| Cable structure | 2xAWG18/7 + 1xAWG20/7 |
| Conductor cross section | 2x 0.75 mm ² (signal line) |
| | 1x 0.5 mm ² (Drain wire) |
| AWG signal line | 18 |
| Conductor structure signal line | 7x 0.40 mm |
| Core diameter including insulation | 2.24 mm ±0.05 mm |
| Thickness, insulation | 0.5 mm (Core insulation) |
| | 1 mm (Outer cable sheath) |
| Wire colors | Blue, orange |
| Twisted pairs | 2 cores to the pair |
| Overall twist | One pair with one drain wire and fillers for core |
| Shielding | Plastic-coated aluminum foil with a drain wire |
| Optical shield covering | 100 % |

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Cable

| | |
|---|------------------------------|
| External sheath, color | blue RAL 5015 |
| External cable diameter | 7.42 mm |
| External cable diameter D | 7.5 mm ±0.25 mm |
| Smallest bending radius, fixed installation | 75 mm |
| Cable weight | 56.552 kg/km |
| Outer sheath, material | PVC |
| Material conductor insulation | PO (signal line) |
| Conductor material | Tin-plated Cu litz wires |
| Conductor resistance | 19.2 Ω/km (signal line) |
| | 26 Ω/km (shield) |
| Working capacitance | 148 nF (core-shield) |
| | 78 nF (core-core) |
| Wave impedance | 100 Ω (At 31.25 kHz) |
| Signal speed | 0.66 c |
| Nominal voltage, cable | 300 V |
| Special properties | UL standards PLTC-ER and ITC |
| Flame resistance | UL 1685 (CSA FT 4) |
| Ambient temperature (operation) | -30 °C ... 105 °C (Cable) |

Classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 4.0 | 27060307 |
| eCl@ss 4.1 | 27060307 |
| eCl@ss 5.0 | 27061801 |
| eCl@ss 5.1 | 27060307 |
| eCl@ss 6.0 | 27279218 |
| eCl@ss 7.0 | 27279218 |
| eCl@ss 8.0 | 27279218 |

ETIM

| | |
|----------|----------|
| ETIM 2.0 | EC000830 |
| ETIM 3.0 | EC000830 |
| ETIM 4.0 | EC001855 |
| ETIM 5.0 | EC001855 |

UNSPSC

| | |
|-------------|----------|
| UNSPSC 6.01 | 26121616 |
|-------------|----------|

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Classifications

UNSPSC

| | |
|---------------|----------|
| UNSPSC 7.0901 | 26121616 |
| UNSPSC 11 | 26121604 |
| UNSPSC 12.01 | 26121616 |
| UNSPSC 13.2 | 26121616 |

Approvals

Approvals

Approvals

GOST

Ex Approvals

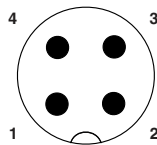
Approvals submitted

Approval details



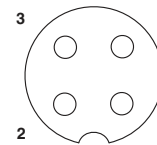
Drawings

Schematic diagram



Pin assignment M12 plug, 3-pos., A-coded, view male side

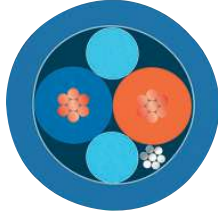
Schematic diagram



Pin assignment M12 socket, 3-pos., A-coded, view female side

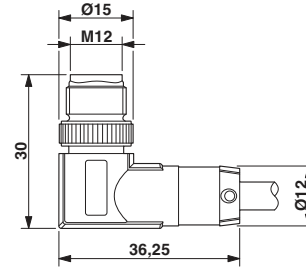
Bus system cable - SAC-3P-M12MR/ 2,0-961/M12FS VA - 1419113

Cable cross section



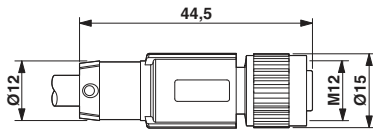
Fieldbus FOUNDATION/PROFIBUS PA, blue [961]

Dimensioned drawing



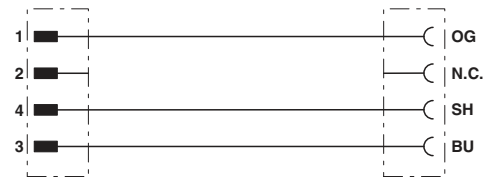
M12 x 1 male plug, angled

Dimensioned drawing



M12 x 1 socket, straight

Circuit diagram



Contact assignment of the M12 connector and the M12 socket