# Bus system cable - SAC-4P-M12MSD/ 0,5-931/M12MSD - 1569443

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (http://phoenixcontact.com/download)

Bus system cable, Ethernet CAT5 (100 Mbps), 4-position, PUR halogen-free, water blue RAL 5021, shielded, Plug straight M12, coding: D, on Plug straight M12, coding: D, cable length: 0.5 m

RoHS

Ethernet

## Key Commercial Data

| | |
|---|---|
| Packing unit | 1 pc |
| GTIN | 4 046356 336253 |
| GTIN | 4046356336253 |
| Weight per Piece (excluding packing) | 63.000 g |
| Custom tariff number | 85444290 |
| Country of origin | Poland |

## Technical data

### Dimensions

| | |
|---|---|
| Length of cable | 0.5 m |

### Ambient conditions

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

### General

| | |
|---|---|
| Rated current at 40°C | 4 A (Plug/socket in accordance with IEC 61076-2-101, cable technical data is to be observed) |
| Rated voltage | 48 V AC |
| | 60 V DC |
| Number of positions | 4 |

# Bus system cable - SAC-4P-M12MSD/ 0,5-931/M12MSD - 1569443

## Technical data

### General

| | |
|---|---|
| Color handle area | black |
| Insulation resistance | ≥ 100 MΩ |
| Coding | D - data |
| Signal type/category | Ethernet CAT5 (IEC 11801), 100 Mbps |
| Status display | No |
| Overvoltage category | II |
| Degree of pollution | 3 |
| Insertion/withdrawal cycles | ≥ 100 |
| Transmission characteristics (category) | CAT5 |

### Material

| | |
|---|---|
| Flammability rating according to UL 94 | V0 |
| Contact material | CuSn |
| Contact surface material | Ni/Au |
| Contact carrier material | PA 6.6 |
| Material of grip body | TPU, hardly inflammable, self-extinguishing |
| Material, knurls | Zinc die-cast, nickel-plated |

### Standards and Regulations

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

### Cable

| | |
|---|---|
| Cable abbreviation | 02YS(ST)C11Y |
| UL AWM style | 20963 (80°C/30 V) |
| Cable structure | 2x2xAWG26/7; SF/UTP |
| Conductor cross section | 2x 2x 0.14 mm² |
| AWG signal line | 26 |
| Conductor structure signal line | 7x 0.16 mm |
| Core diameter including insulation | 0.98 mm |
| Wire colors | white/orange-orange, white/green-green |
| Twisted pairs | 2 cores to the pair |
| Overall twist | Two pairs with two fillers to the core |
| Shielding | Aluminum-coated foil, tinned copper braided shield |
| Optical shield covering | 70 % |
| External sheath, color | water blue RAL 5021 |
| Outer sheath thickness | 1.2 mm |
| External cable diameter D | 6.4 mm ±0.2 mm |
| Minimum bending radius, fixed installation | 4 x D |
| Minimum bending radius, flexible installation | 8 x D |

# Bus system cable - SAC-4P-M12MSD/ 0,5-931/M12MSD - 1569443

## Technical data

### Cable

| | |
|---|---|
| Cable weight | 42 kg/km |
| Tensile strength GRP | ≤ 80 N |
| Outer sheath, material | PUR |
| Material conductor insulation | Foamed PE |
| Conductor material | Bare Cu litz wires |
| Standards/specifications | Electrical requirements EN 50288-2-2 |
| Insulation resistance | ≥ 500 MΩ*km |
| Loop resistance | ≤ 290.00 Ω/km |
| Cable capacity | approx. 45 nF/km (at 1 kHz) |
| Wave impedance | 100 Ω ±5 Ω (at 100 MHz) |
| Near end crosstalk attenuation (NEXT) | 65.3 dB (with 1 MHz) |
| | 56.3 dB (at 4 MHz) |
| | 50.3 dB (at 10 MHz) |
| | 47.2 dB (at 16 MHz) |
| | 45.8 dB (at 20 MHz) |
| | 42.9 dB (at 31.25 MHz) |
| | 38.4 dB (at 62.5 MHz) |
| | 35.3 dB (at 100 MHz) |
| Attenuation | 3.2 dB (with 1 MHz) |
| | 6 dB (at 4 MHz) |
| | 9.5 dB (at 10 MHz) |
| | 12.1 dB (at 16 MHz) |
| | 13.6 dB (at 20 MHz) |
| | 17.1 dB (at 31.25 MHz) |
| | 24.8 dB (at 62.5 MHz) |
| | 32 dB (at 100 MHz) |
| Return Loss | 23 dB (at 4 MHz) |
| | 24.1 dB (at 8 MHz) |
| | 25 dB (at 10 MHz) |
| | 25 dB (at 16 MHz) |
| | 25 dB (at 20 MHz) |
| | 23.6 dB (at 31.25 MHz) |
| | 21.5 dB (at 62.5 MHz) |
| | 20.1 dB (at 100 MHz) |
| Signal runtime | 5.3 ns/m |
| Coupling resistance | ≤ 100.00 mΩ/m (at 10 MHz) |
| Nominal voltage, cable | ≤ 100 V (Peak value, not for high-power applications) |

# Bus system cable - SAC-4P-M12MSD/ 0,5-931/M12MSD - 1569443

## Technical data

### Cable

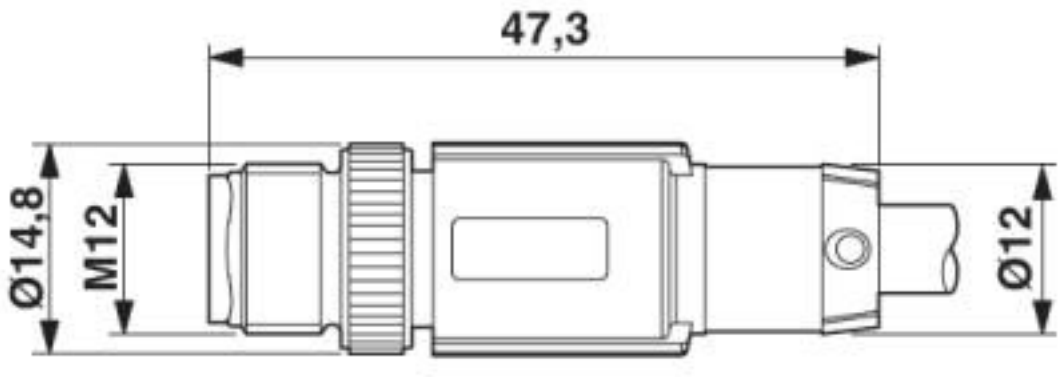
| | |
|---|---|
| Test voltage Core/Core | 700 V (50 Hz, 1 min.) |
| Test voltage Core/Shield | 700 V (50 Hz, 1 min.) |
| Current carrying capacity of cable | 2 A (according to DIN VDE 0891-1) |
| Flame resistance | according to IEC 60332-1-2 |
| | in acc. to UL VW1 |
| Halogen-free | according to IEC 60754-1 |
| Resistance to oil | according to EN 60811-2-1 |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation) |
| | -20 °C ... 80 °C (cable, flexible installation) |

### Environmental Product Compliance

| | |
|---|---|
| REACh SVHC | Lead 7439-92-1 |
| China RoHS | Environmentally Friendly Use Period = 50 years |
| | For details about hazardous substances go to tab “Downloads”, Category “Manufacturer's declaration” |

## Drawings

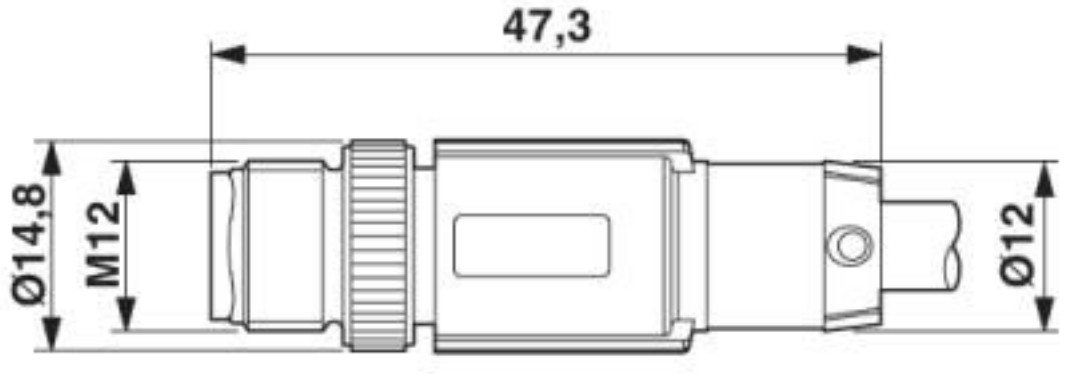
Dimensional drawing




Plug, M12 x 1, straight, shielded

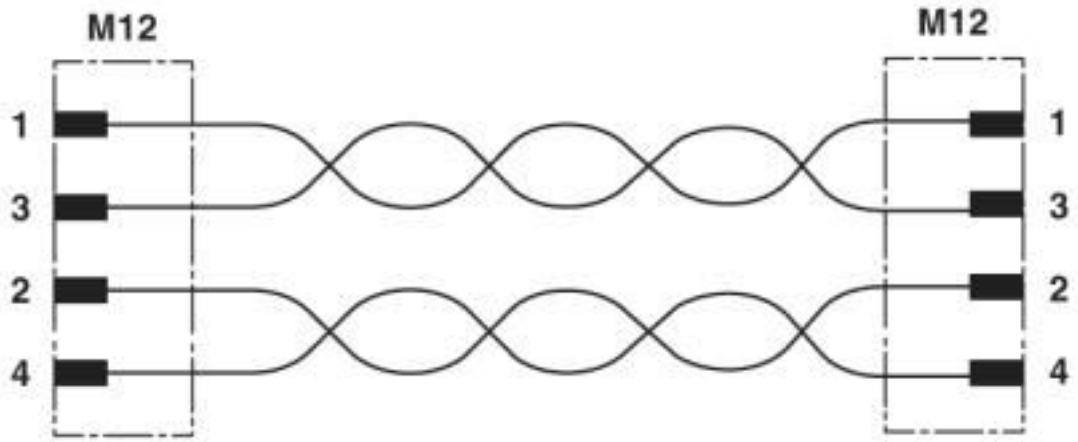
# Bus system cable - SAC-4P-M12MSD/ 0,5-931/M12MSD - 1569443

Dimensional drawing




Plug, M12 x 1, straight, shielded

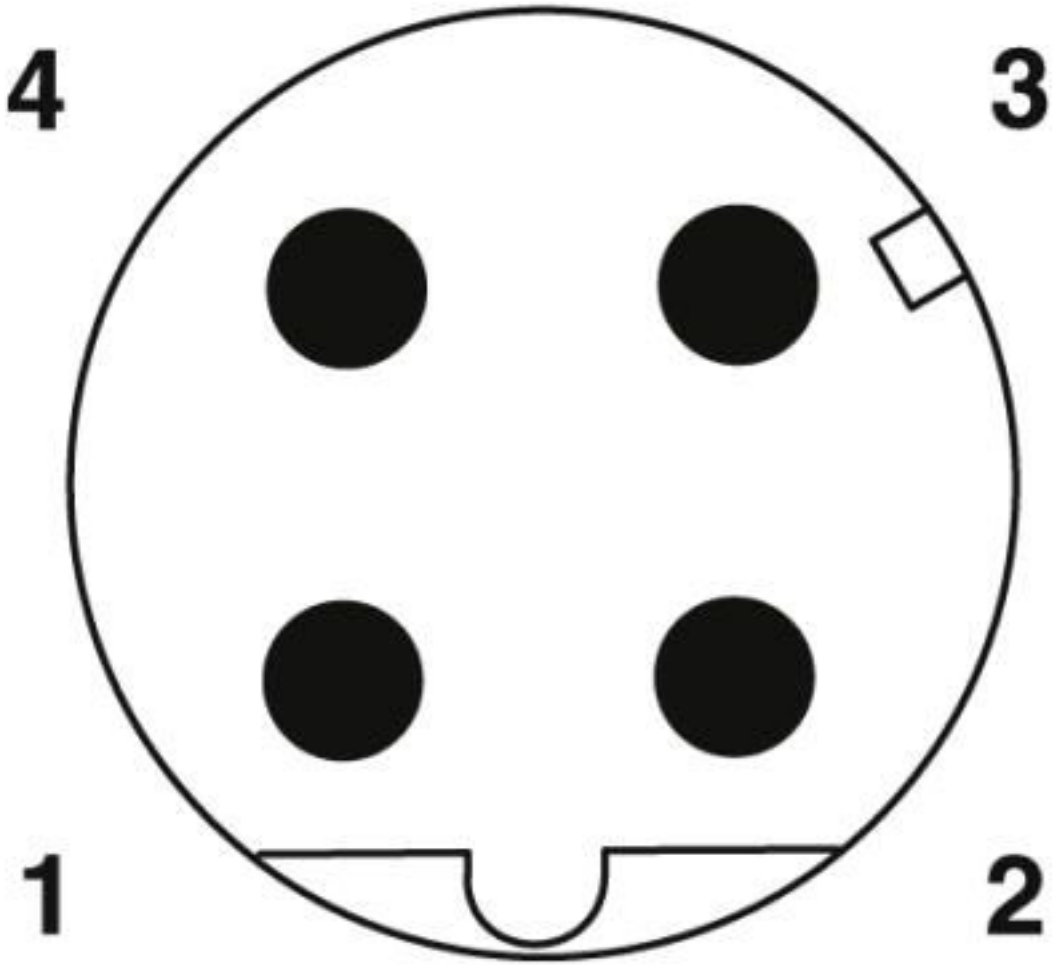
Circuit diagram




Contact assignment of M12 connector/socket

# Bus system cable - SAC-4P-M12MSD/ 0,5-931/M12MSD - 1569443

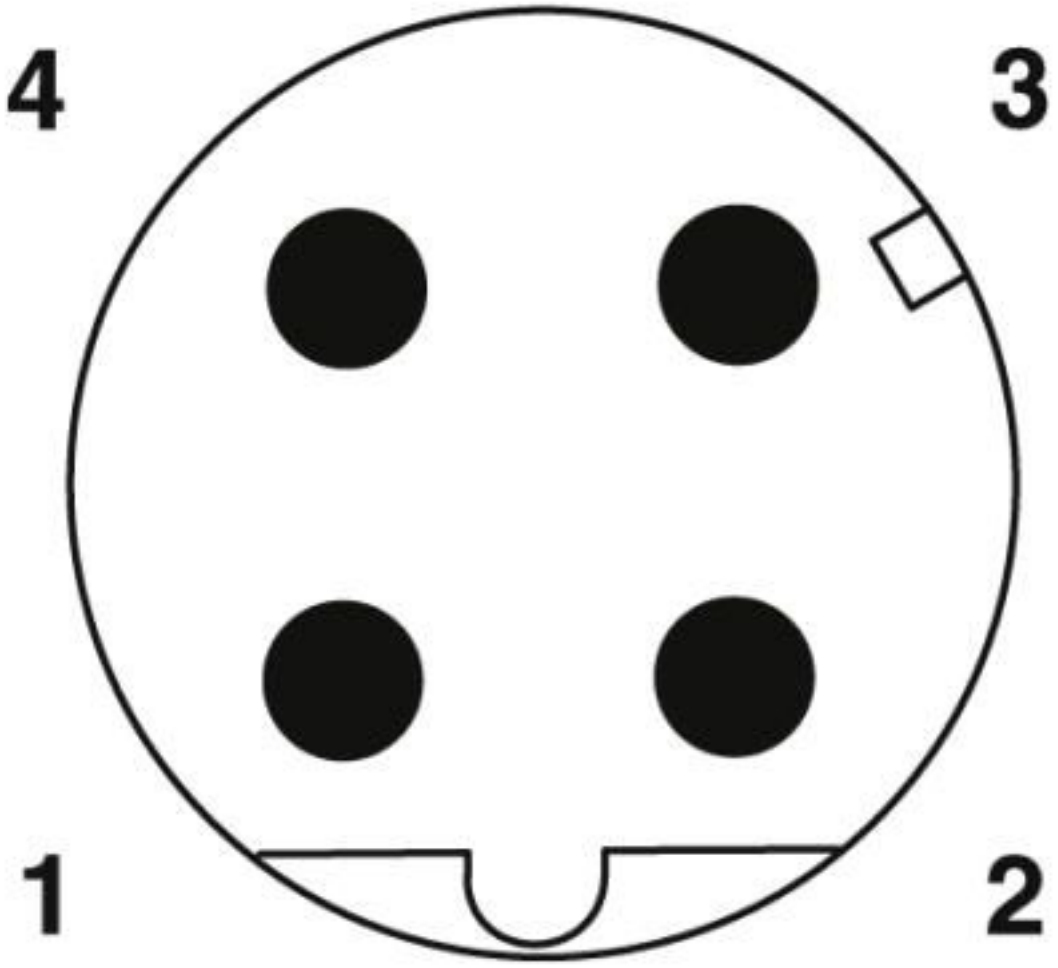
Schematic diagram




Pin assignment M12 male connector, 4-pos., D-coded, male side

# Bus system cable - SAC-4P-M12MSD/ 0,5-931/M12MSD - 1569443

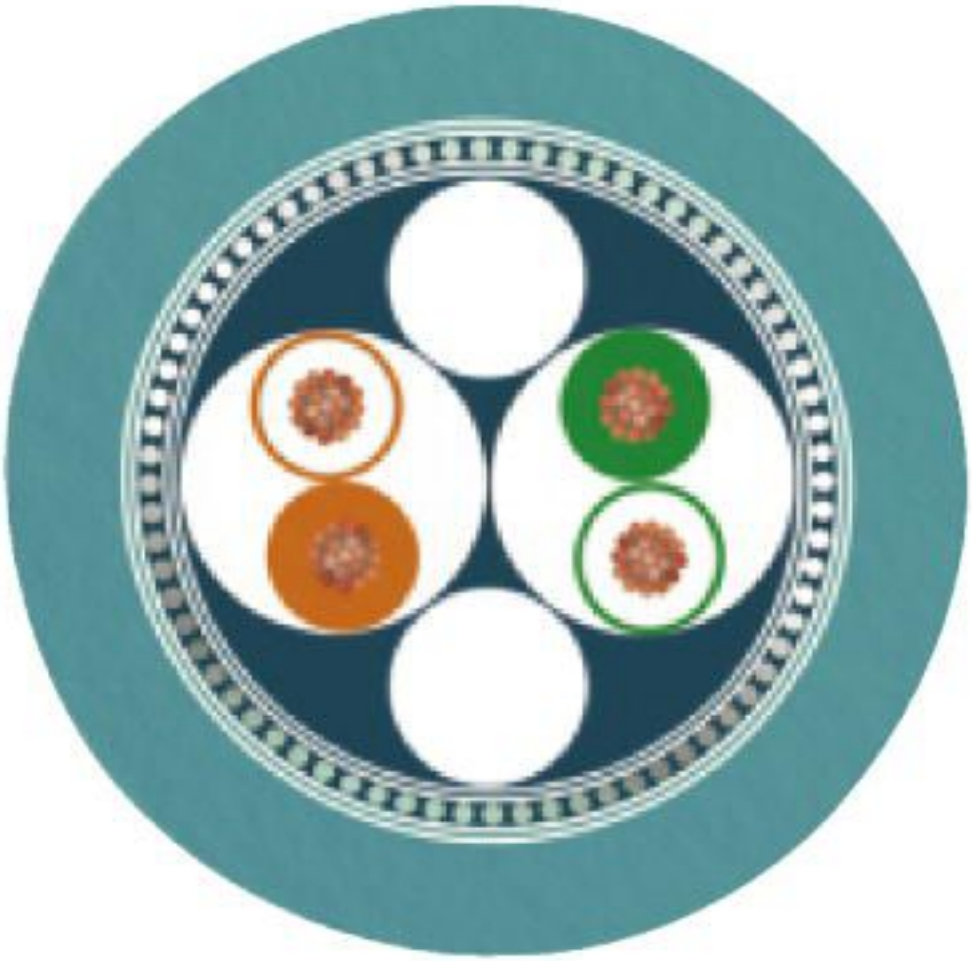
Schematic diagram




Pin assignment M12 male connector, 4-pos., D-coded, male side

# Bus system cable - SAC-4P-M12MSD/ 0,5-931/M12MSD - 1569443

Cable cross section



Ethernet flexible CAT5, 2-pair [93E]

## Classifications

### eCl@ss

| | |
|---|---|
| eCl@ss 10.0.1 | 27060308 |
| eCl@ss 4.0 | 27060300 |
| eCl@ss 4.1 | 27060300 |
| eCl@ss 5.0 | 27061800 |
| eCl@ss 5.1 | 27061800 |
| eCl@ss 6.0 | 27279200 |
| eCl@ss 7.0 | 27279218 |

# Bus system cable - SAC-4P-M12MSD/ 0,5-931/M12MSD - 1569443

## Classifications

### eCl@ss

| | |
|---|---|
| eCl@ss 8.0 | 27279218 |
| eCl@ss 9.0 | 27060308 |

### ETIM

| | |
|---|---|
| ETIM 3.0 | EC001855 |
| ETIM 4.0 | EC001855 |
| ETIM 5.0 | EC002599 |
| ETIM 6.0 | EC001262 |
| ETIM 7.0 | EC001262 |

### UNSPSC

| | |
|---|---|
| UNSPSC 6.01 | 31251501 |
| UNSPSC 7.0901 | 31251501 |
| UNSPSC 11 | 31251501 |
| UNSPSC 12.01 | 31251501 |
| UNSPSC 13.2 | 31251501 |
| UNSPSC 18.0 | 26121604 |
| UNSPSC 19.0 | 26121604 |
| UNSPSC 20.0 | 26121604 |
| UNSPSC 21.0 | 26121604 |

## Approvals

### Approvals

Approvals

EAC-RoHS / EAC

Ex Approvals

### Approval details

| | | |
|---|---|---|
| EAC-RoHS | EAC | RU D-DE.HB35.B.00387 |

# Bus system cable - SAC-4P-M12MSD/ 0,5-931/M12MSD - 1569443

## Approvals

| | | |
|---|---|---|
| EAC | EAC | RU C-DE.BL08.B.00286 |