

## Bus system cable - SAC-4P-M12MSD/ 1,0-931/M12MSD - 1569456


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Bus system cable, Ethernet CAT5 (100 Mbps), 4-position, PUR halogen-free, water blue RAL 5021, shielded, Plug straight M12, D-coded, on Plug straight M12, D-coded, cable length: 1 m



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 336260
GTIN	4046356336260

### Technical data

#### Dimensions

Length of cable	1 m
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#### Ambient conditions

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

#### 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
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

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## Technical data

### General

Insertion/withdrawal cycles	≥ 100
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### 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
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### Cable

Cable type	PUR ETHERNET 2x2 FLEX
Cable type (abbreviation)	93E
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 mm <sup>2</sup>
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
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)

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### Technical data

#### Cable

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)
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

	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50

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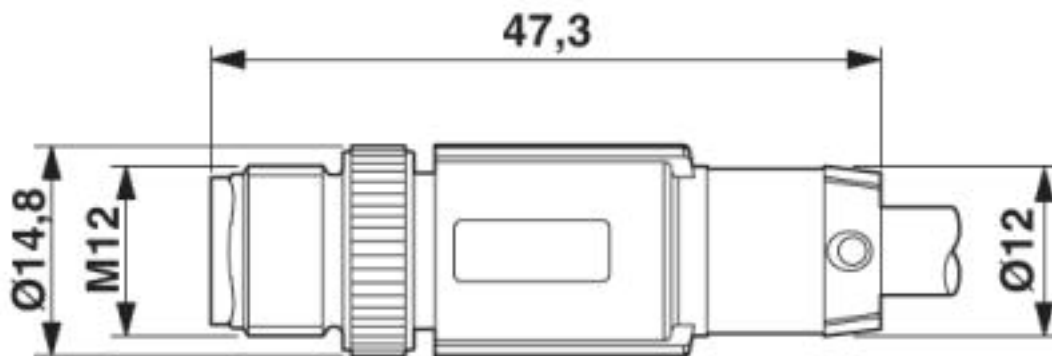
## Technical data

### Environmental Product Compliance

	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"
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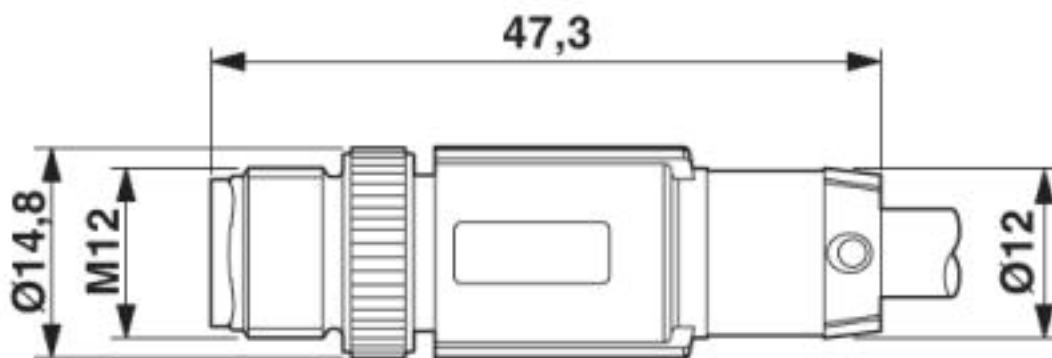
## Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

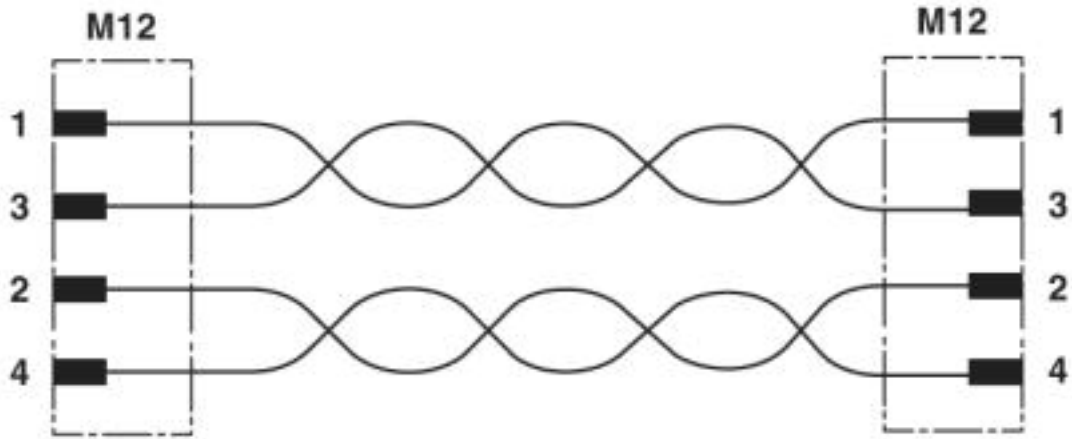
Dimensional drawing



Plug, M12 x 1, straight, shielded

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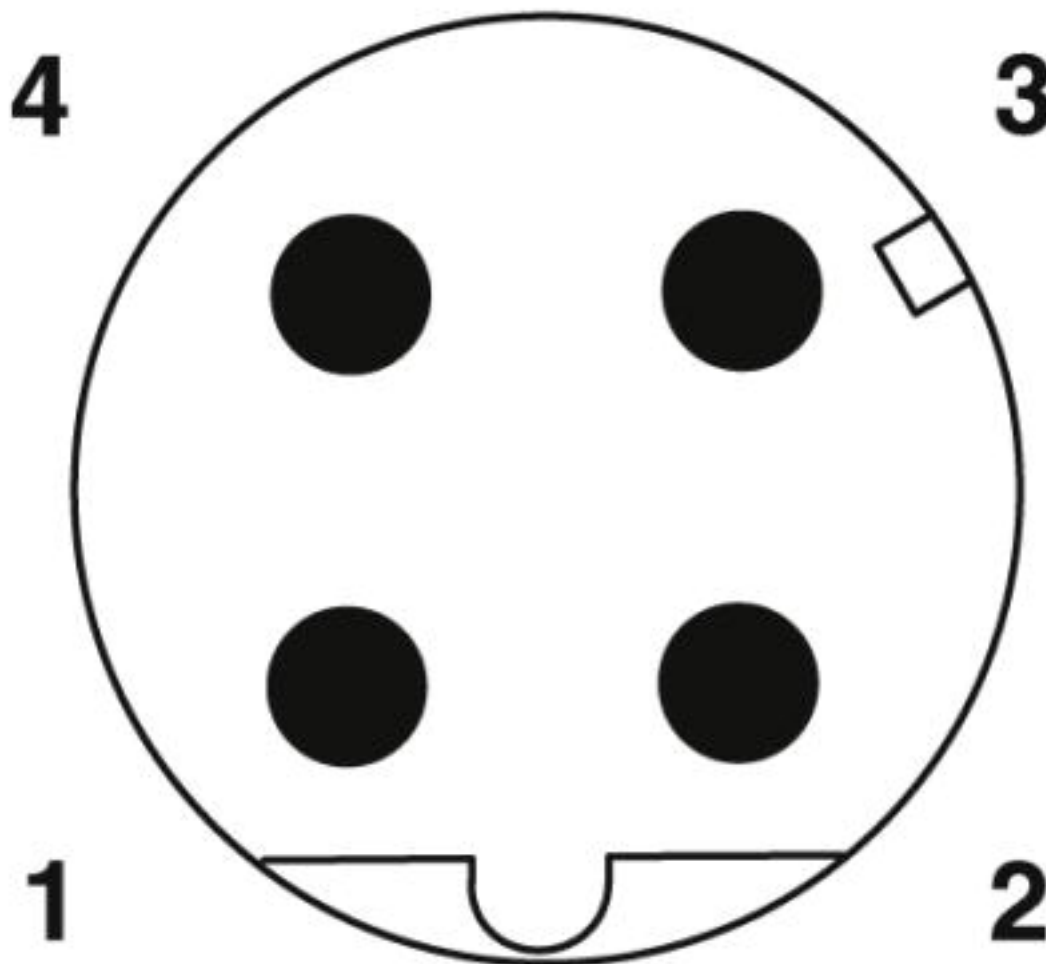
Circuit diagram



Contact assignment of M12 connector/socket

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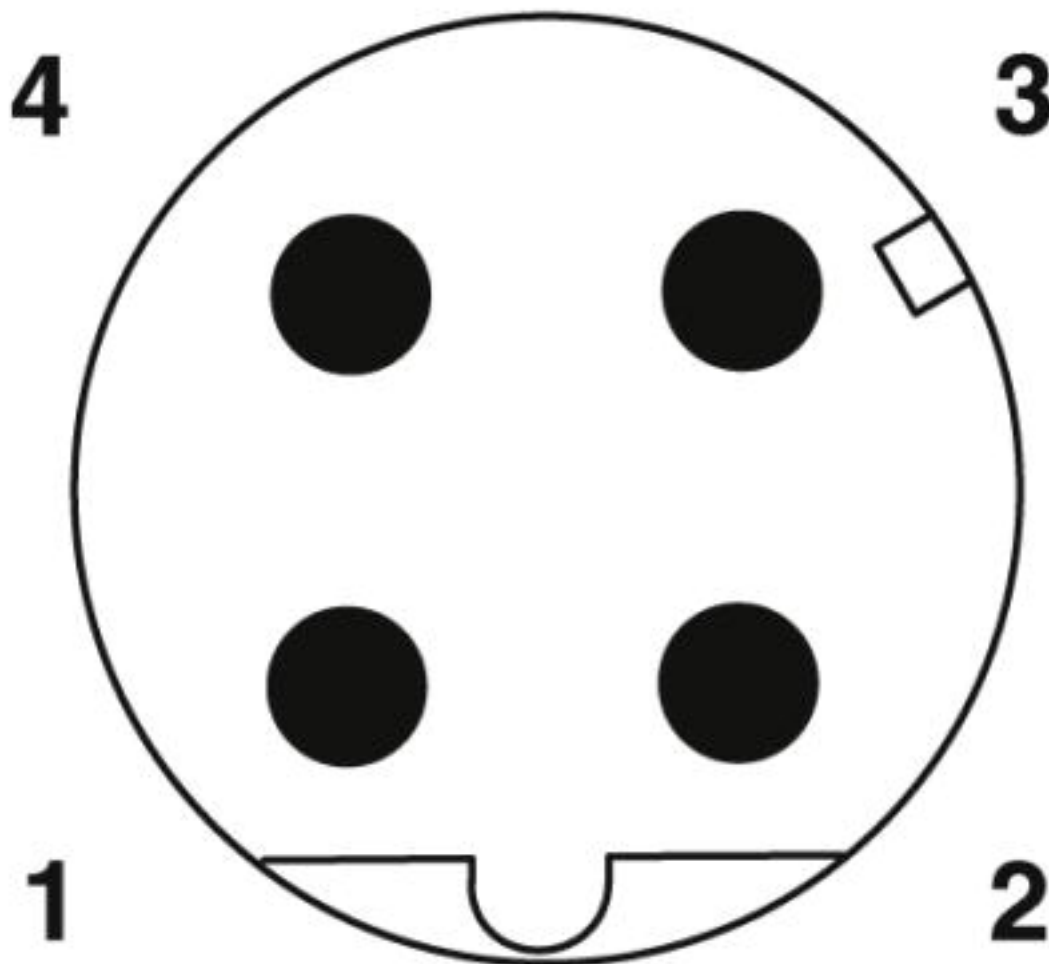
Schematic diagram



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

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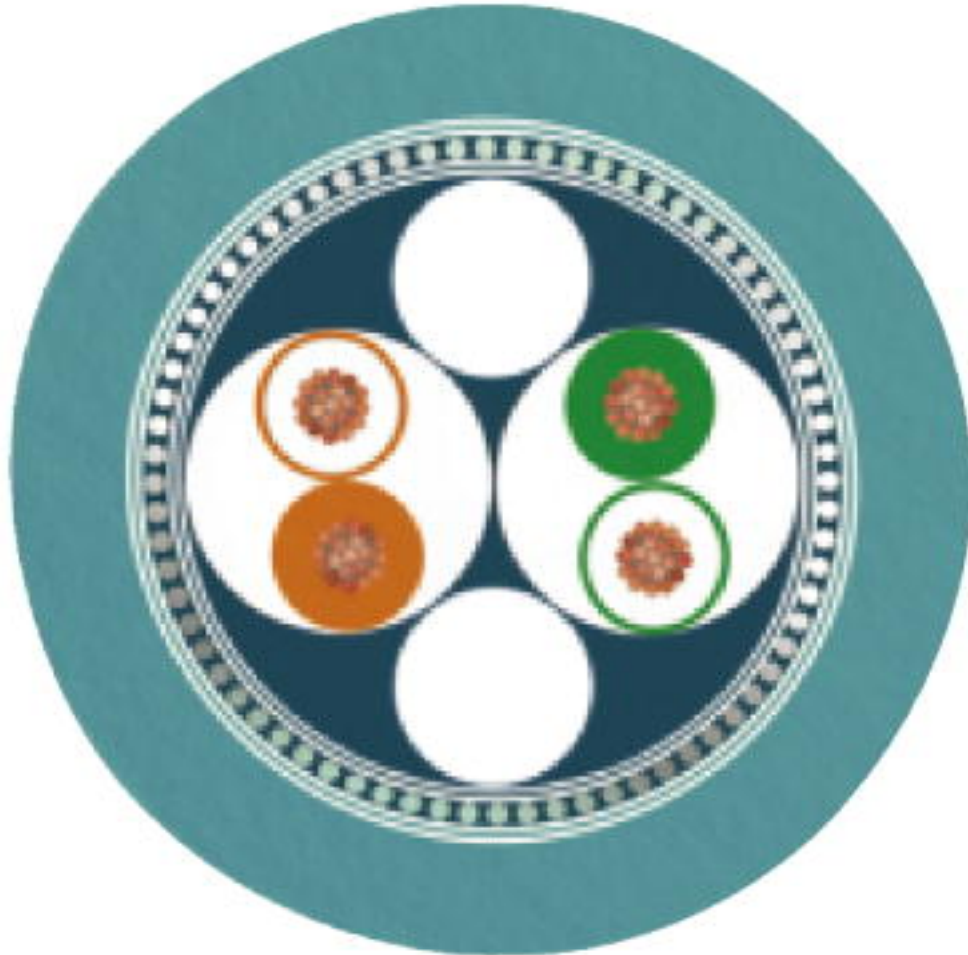
Schematic diagram



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

# Bus system cable - SAC-4P-M12MSD/ 1,0-931/M12MSD - 1569456

Cable cross section



PUR ETHERNET 2x2 FLEX [93E]

## Approvals

Approvals

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Approvals

EAC

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Ex Approvals

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Approval details



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### Approvals

EAC



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