

## Bus system cable - SAC-4P-M12MS/ 0,5-960/M12FS VA - 1431267


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, FOUNDATION Fieldbus (31.25 kbps), 3-position, PVC, orange RAL 2003, shielded, Plug straight M12, A-coded, on Socket straight M12, A-coded, cable length: 0.5 m



### Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 431743
GTIN	4046356431743

### 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
	IP68
	IP69K

#### General

Note	Further products with variable cable type and variable cable length can be found in the accessories section
Rated current at 40 °C	4 A
Rated voltage	48 V AC
	60 V DC
Number of positions	3
Color handle area	black
Insulation resistance	≥ 100 MΩ
Coding	A - standard

# Bus system cable - SAC-4P-M12MS/ 0,5-960/M12FS VA - 1431267

## Technical data

### General

Signal type/category	FOUNDATION Fieldbus, 31.25 kbps
Status display	No
Overvoltage category	II
Degree of pollution	3
Insertion/withdrawal cycles	≥ 100
Torque	0.4 Nm (M12 connector)

### Material

Flammability rating 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	Stainless steel
Sealing material	NBR

### Standards and Regulations

Flammability rating according to UL 94	HB
--	----

### Cable

Cable type	FOUNDATION Fieldbus orange
Cable type (abbreviation)	960
Cable structure	2xAWG18/7 + 1xAWG20/7
Conductor cross section	2x 0.75 mm <sup>2</sup> (Signal line) 1x 0.5 mm <sup>2</sup> (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
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 %
External sheath, color	orange RAL 2003
Outer sheath thickness	1 mm
External cable diameter D	7.5 mm ±0.25 mm
Smallest bending radius, fixed installation	75 mm
Cable weight	56.552 kg/km
Tensile strength GRP	260 N
Outer sheath, material	PVC
Material conductor insulation	PO (Signal line)

# Bus system cable - SAC-4P-M12MS/ 0,5-960/M12FS VA - 1431267

## Technical data

### Cable

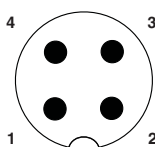
Conductor material	Tin-plated Cu litz wires
Conductor resistance	≤ 19.35 Ω/km (Signal line)
	26 Ω/km (shield)
Working capacitance	78 nF (at 1 kHz)
Cable capacity	147 pF/m (at 1 kHz, core/shield)
	≤ 3.94 pF/m (capacitance unbalance)
Signal speed	0.66 c
Shield attenuation	3 dB/km (at 39 kHz)
Cable impedance	100 Ω ±20 % (At 31.25 kHz)
Inductance	0.6233 μH (per meter)
Nominal voltage, cable	300 V
Special properties	UL standards PLTC-ER and ITC
Flame resistance	UL 1685 (CSA FT 4)
	UL 1685 (vertical tray)
	UL 1666 (riser)
Ambient temperature (operation)	-40 °C ... 105 °C (cable, fixed installation)

### Environmental Product Compliance

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

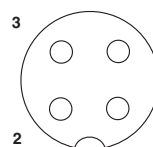
## Drawings

Schematic diagram



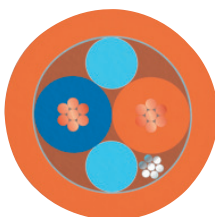
Pin assignment M12 plug, 4-pos., A-coded, view plug side

Schematic diagram



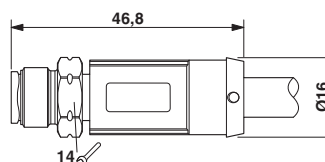
Pin assignment M12 socket, 4-pos., A-coded, view female side

Cable cross section



FOUNDATION Fieldbus orange [960]

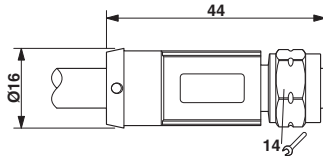
Dimensional drawing



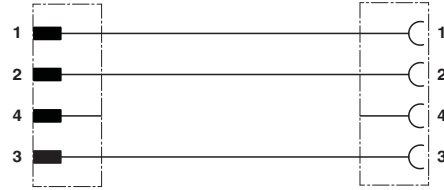
Plug, M12 x 1, straight, shielded

# Bus system cable - SAC-4P-M12MS/ 0,5-960/M12FS VA - 1431267

Dimensional drawing



Circuit diagram



M12 x 1 socket, straight

Contact assignment of the M12 connector and the M12 socket

## Approvals

Approvals

---

Approvals

EAC

---

Ex Approvals

---

Approval details

EAC		EAC-Zulassung
-----	--	---------------

Phoenix Contact 2018 © - all rights reserved  
<http://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG  
Flachsmarktstr. 8  
32825 Blomberg  
Germany  
Tel. +49 5235 300  
Fax +49 5235 3 41200  
<http://www.phoenixcontact.com>