

## Bus system cable - SAC-3P-M12MS/ 2,0-961/M12FR VA - 1419121

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://download.phoenixcontact.com>)



Bus system cable, PROFIBUS PA, PROFIBUS PA, 3-position, PVC, blue RAL 5015, shielded, Plug straight M12, A-coded, on Socket angled 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

## Bus system cable - SAC-3P-M12MS/ 2,0-961/M12FR VA - 1419121

### 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 <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 (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 %

## Bus system cable - SAC-3P-M12MS/ 2,0-961/M12FR VA - 1419121

### Technical data

#### 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
-------------	----------

# Bus system cable - SAC-3P-M12MS/ 2,0-961/M12FR VA - 1419121

## 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

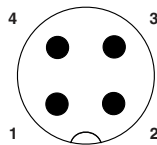
---

### Approval details



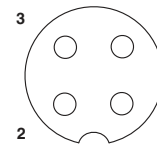
## Drawings

Schematic diagram



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

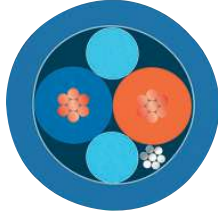
Schematic diagram



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

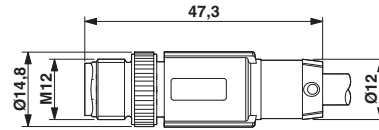
# Bus system cable - SAC-3P-M12MS/ 2,0-961/M12FR VA - 1419121

Cable cross section



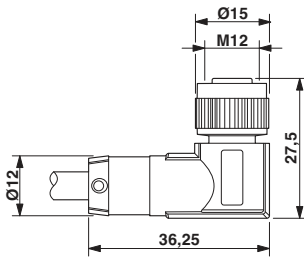
Fieldbus FOUNDATION/PROFIBUS PA, blue [961]

Dimensioned drawing



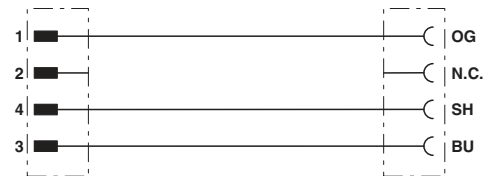
M12 x 1 plug, straight

Dimensioned drawing



M12 x 1 socket, angled

Circuit diagram



Contact assignment of the M12 connector and the M12 socket