

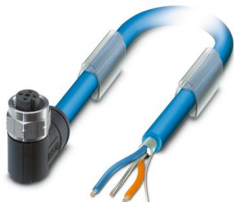
SAC-3P-20,0-961/M12FR VA - Bus system cable



1419091

<https://www.phoenixcontact.com/us/products/1419091>

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Bus system cable, PROFIBUS PA (31.25 kbps), 3-position, PVC, blue RAL 5015, shielded, free cable end, on Socket angled M12, coding: A, cable length: 20 m, For Ex area with high-grade steel knurl

Commercial data

Item number	1419091
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF04
Product key	BF1CCG
Catalog page	Page 430 (C-2-2019)
GTIN	4046356541589
Weight per piece (including packing)	1,291.3 g
Weight per piece (excluding packing)	1,291.3 g
Customs tariff number	85444290
Country of origin	PL

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Technical data

Notes

General	For applications in circuits of intrinsic safety protection type "i". Electrical values following EN 60079-14.
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Product properties

Product type	Data cable preassembled
Application	Process technology
Sensor type	PROFIBUS PA
Number of positions	3
No. of cable outlets	1
Shielded	yes
Coding	B

Insulation characteristics

Overvoltage category	II
Degree of pollution	3

Interfaces

Bus system	PROFIBUS PA
Signal type/category	PROFIBUS PA, 31.25 kbps

Signaling

Status display	no
Status display present	No

Electrical properties

Nominal voltage U_N	48 V AC
	60 V DC
Nominal current I_N	4 A
Transmission medium	Copper

Mechanical properties

Mechanical data

Insertion/withdrawal cycles	≥ 100
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Material specifications

Flammability rating according to UL 94	HB
Seal material	NBR

Connection data

Pin assignment

1 (Socket) | OG (DATA+)

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Contact | Color (signal designation) | Contact (optional)

3 (Socket) | BU (DATA-)

4 (Socket) | SR (shield)

Connector

Connection 1

Type

free cable end

Connection 2

Type

free cable end

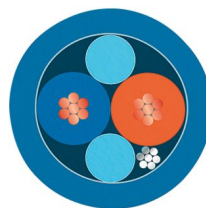
Cable/line

Cable length

20 m

Fieldbus FOUNDATION/PROFIBUS PA, blue [961]

Dimensional drawing



Cable weight

56.552 kg/km

Number of positions

2

Shielded

yes

Cable type

Fieldbus FOUNDATION/PROFIBUS PA, blue [961]

Conductor structure

2xAWG18/7 + 1xAWG20/7

Signal speed

0.66 c

Conductor structure signal line

7x 0.40 mm

AWG signal line

18

Conductor cross section

2x 0.75 mm² (Signal line)

1x 0.5 mm² (Drain wire)

Wire diameter incl. insulation

2.24 mm ±0.05 mm

External cable diameter

7.50 mm ±0.25 mm

Outer sheath, material

PVC

External sheath, color

blue RAL 5015

Conductor material

Tin-plated Cu litz wires

Material wire insulation

PO (Signal line)

Single wire, color

blue, orange

Thickness, insulation

0.50 mm

Thickness, outer sheath

1.00 mm

Twisted pairs

2 cores to the pair

Overall twist

One pair with one drain wire and fillers for core

Optical shield covering

100 %

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Max. conductor resistance	≤ 19.35 Ω/km (Signal line)
	26 Ω/km (shield)
Cable capacity	147 pF/m (at 1 kHz, core/shield)
	≤ 3.94 pF/m (capacitance unbalance)
Working capacitance	78 nF (at 1 kHz)
Cable impedance	100 Ω ±20 % (At 31.25 kHz)
Nominal voltage, cable	300 V
Smallest bending radius, fixed installation	75 mm
Tensile strength	260 N
Shield attenuation	3.00 dB/km (at 39 kHz)
Flame resistance	UL 1685 (CSA FT 4)
	UL 1685 (vertical tray)
	UL 1666 (riser)
Special properties	UL standards PLTC-ER and ITC
Ambient temperature (operation)	-40 °C ... 105 °C (cable, fixed installation)

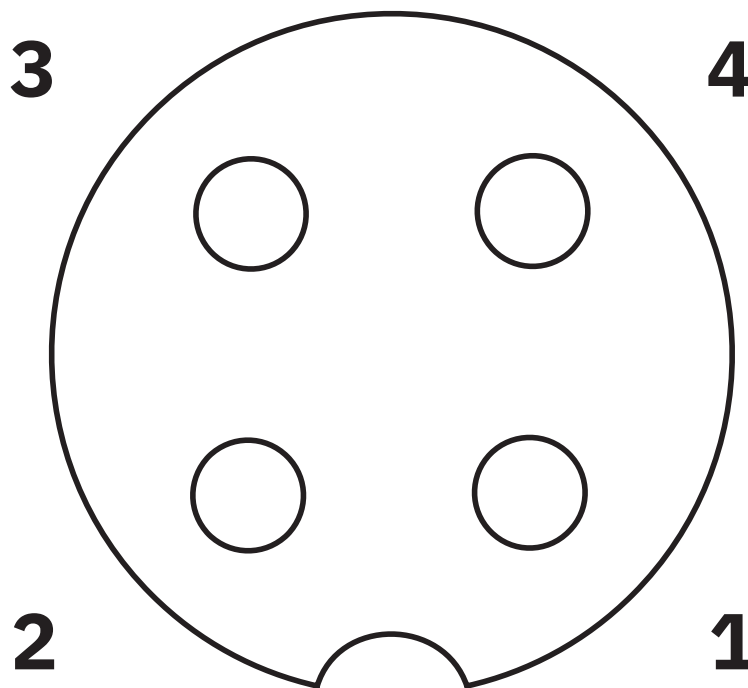
Environmental and real-life conditions

Ambient conditions

Degree of protection	IP65
	IP67
	IP68
	IP69K

Drawings

Schematic diagram



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

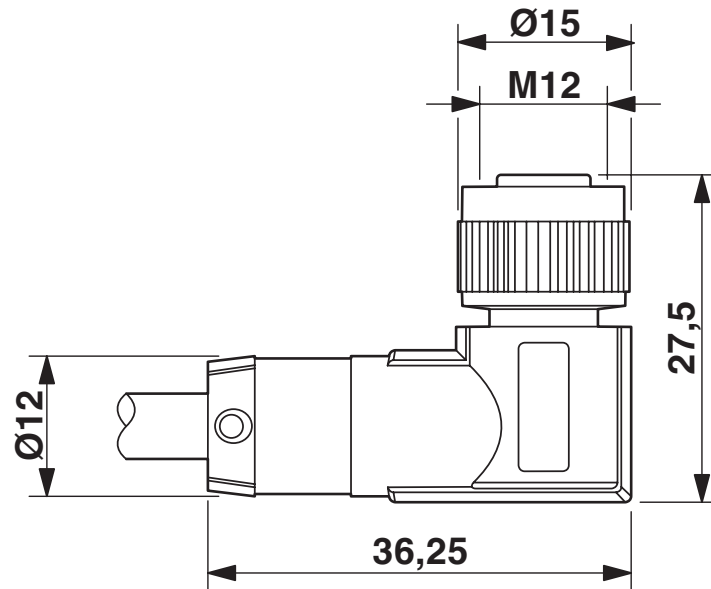
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Dimensional drawing



M12 x 1 socket, angled

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Classifications

ECLASS

ECLASS-11.0	27060307
ECLASS-12.0	27060307
ECLASS-13.0	27060307

ETIM

ETIM 9.0	EC001855
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UNSPSC

UNSPSC 21.0	26121600
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Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes, No exemptions
China RoHS	
Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits
EU REACH SVHC	
REACH candidate substance (CAS No.)	No substance above 0.1 wt%

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