

SAC-3P-M12MR/20,0-961/M12FS VA - Bus system cable

1419117
<https://www.phoenixcontact.com/pc/products/1419117>

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 documentation. Our general terms of use for downloads are valid.



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

Commercial data

Item number	1419117
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	BF1CCG
Catalog page	Page 430 (C-2-2019)
GTIN	4046356541848
Weight per piece (including packing)	1,319.3 g
Weight per piece (excluding packing)	1,319 g
Customs tariff number	85444290
Country of origin	PL

SAC-3P-M12MR/20,0-961/M12FS VA - Bus system cable



1419117

<https://www.phoenixcontact.com/pc/products/1419117>

Technical data

Notes

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

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	A

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
-----------------------------	------------

Material specifications

Flammability rating according to UL 94	HB
Seal material	NBR

Connection data

Pin assignment

1 (Plug) | OG (DATA+) | 1 (Socket)

SAC-3P-M12MR/20,0-961/M12FS VA - Bus system cable



1419117

<https://www.phoenixcontact.com/pc/products/1419117>

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

3 (Plug) | BU (DATA-) | 3 (Socket)

4 (Plug) | SR (shield) | 4 (Socket)

Connector

Connection 1

Type	Plug angled M12
Number of positions	3
Coding type	A (Standard)
Material	CuSn (Contact) Ni/Au (Contact surface) TPU GF (Contact carriers) TPU, hardly inflammable, self-extinguishing (Grip body) Stainless steel (Screw connection)
Ambient temperature (operation)	-25 °C ... 90 °C

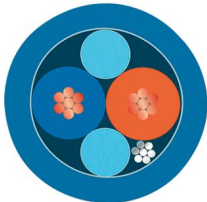
Connection 2

Type	Socket straight M12
Number of positions	3
Coding type	A (Standard)
Material	CuSn (Contact) Ni/Au (Contact surface) TPU GF (Contact carriers) TPU, hardly inflammable, self-extinguishing (Grip body) Stainless steel (Screw connection)
Ambient temperature (operation)	-25 °C ... 90 °C

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

SAC-3P-M12MR/20,0-961/M12FS VA - Bus system cable



1419117

<https://www.phoenixcontact.com/pc/products/1419117>

Conductor structure signal line	7x 0.40 mm
AWG signal line	18
Conductor cross section	2x 0.75 mm ² (Signal line)
	1x 0.5 mm ² (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 %
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

SAC-3P-M12MR/20,0-961/M12FS VA - Bus system cable

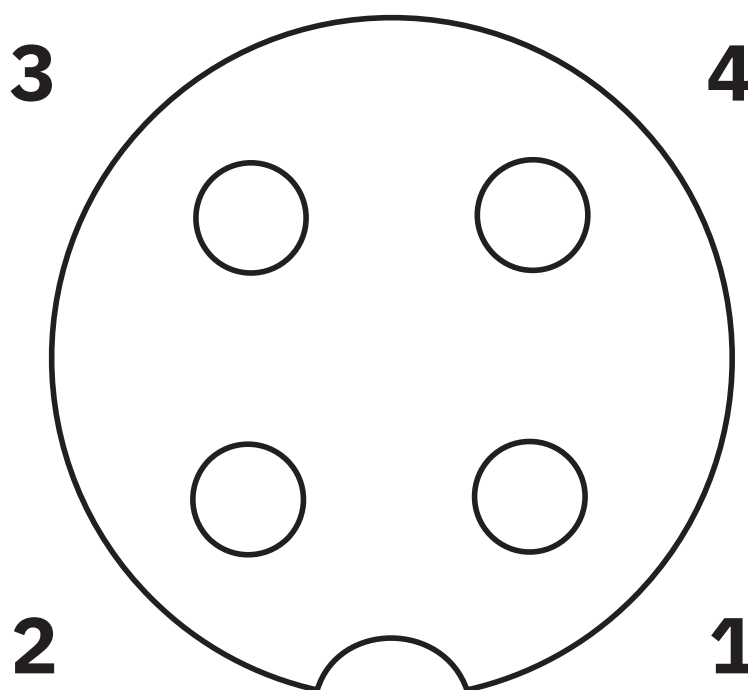


1419117

<https://www.phoenixcontact.com/pc/products/1419117>

Drawings

Schematic diagram



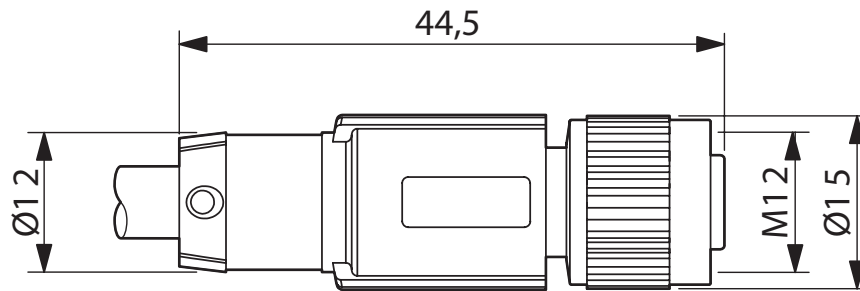
Pin assignment M12 socket, 3-pos., A-coded, view female side

SAC-3P-M12MR/20,0-961/M12FS VA - Bus system cable

1419117

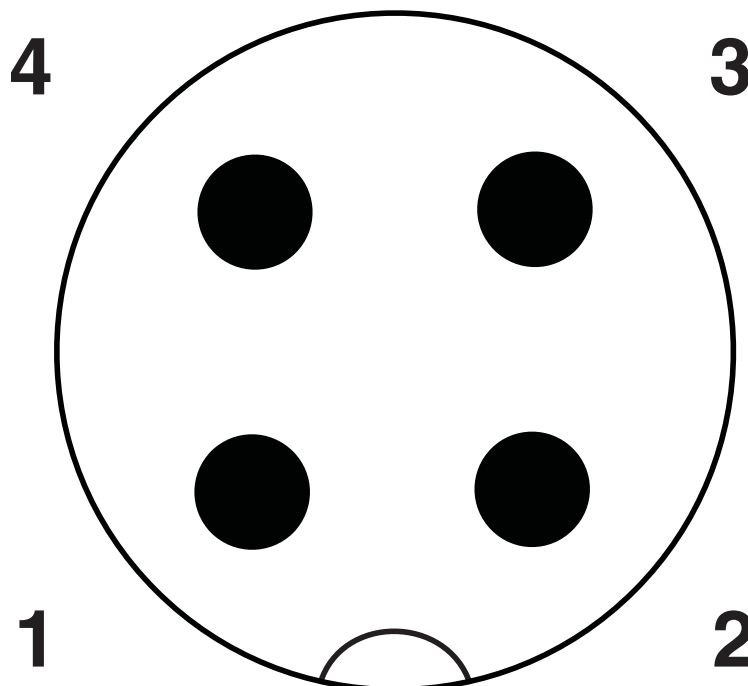
<https://www.phoenixcontact.com/pc/products/1419117>

Dimensional drawing



M12 x 1 socket, straight

Schematic diagram



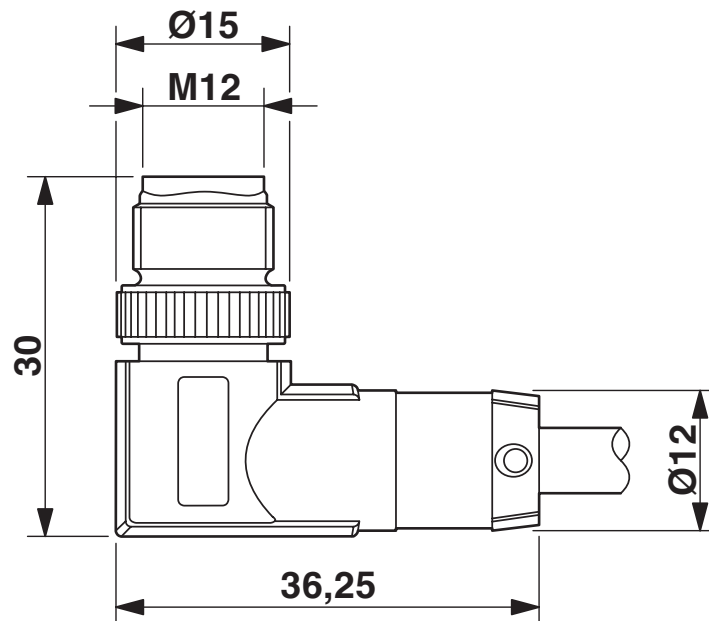
Pin assignment M12 plug, 3-pos., A-coded, view male side

SAC-3P-M12MR/20,0-961/M12FS VA - Bus system cable

1419117

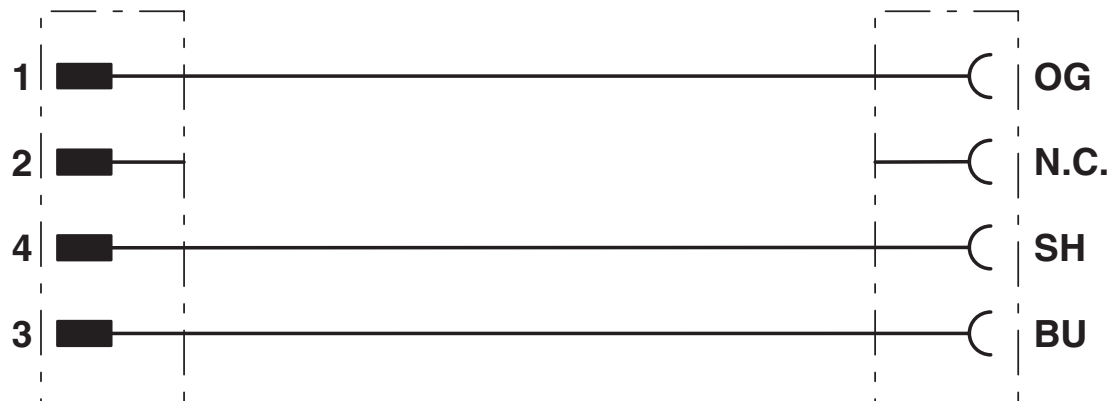
<https://www.phoenixcontact.com/pc/products/1419117>

Dimensional drawing



M12 x 1 male plug, angled

Circuit diagram



SAC-3P-M12MR/20,0-961/M12FS VA - Bus system cable



1419117

<https://www.phoenixcontact.com/pc/products/1419117>

Classifications

ECLASS

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

ETIM

ETIM 9.0	EC001855
----------	----------

UNSPSC

UNSPSC 21.0	26121600
-------------	----------

SAC-3P-M12MR/20,0-961/M12FS VA - Bus system cable



1419117
<https://www.phoenixcontact.com/pc/products/1419117>

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%

Phoenix Contact 2024 © - all rights reserved
<https://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG
Flachsmarktstraße 8
D-32825 Blomberg
+49 (0) 5235-3 00
info@phoenixcontact.com