

SAC-3P-20,0-542/M12FR SH BK - Sensor/actuator cable



1417959

<https://www.phoenixcontact.com/us/products/1417959>

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.



Sensor/actuator cable, 3-position, PVC, yellow, shielded, free cable end, on Socket angled M12, coding: A, cable length: 20 m

Commercial data

Item number	1417959
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	BF13
Product key	BF1IDA
GTIN	4055626211466
Weight per piece (including packing)	22.22 g
Weight per piece (excluding packing)	22.22 g
Customs tariff number	85444290
Country of origin	US

SAC-3P-20,0-542/M12FR SH BK - Sensor/actuator cable



1417959

<https://www.phoenixcontact.com/us/products/1417959>

Technical data

Product properties

Product type	Sensor/actuator cable
Number of positions	3
Application	Standard, U.S. cables
No. of cable outlets	1
Shielded	yes
Coding	A

Insulation characteristics

Overvoltage category	II
Degree of pollution	3

Material specifications

Flammability rating according to UL 94	HB
Seal material	NBR
Material of grip body	TPU, hardly inflammable, self-extinguishing
Contact material	CuSn
Contact surface material	Ni/Au
Contact carrier material	TPU GF
Material for screw connection	Zinc die-cast, nickel-plated
Outer sheath, material	PVC

Electrical properties

Contact resistance	$\leq 5 \text{ m}\Omega$
Insulation resistance	$\geq 100 \text{ M}\Omega$
Nominal voltage U_N	48 V AC
	60 V DC
Nominal current I_N	4 A
Protective circuit	unwired

Mechanical properties

Mechanical data

Insertion/withdrawal cycles	≥ 100
-----------------------------	------------

Signaling

Status display	No
Status display present	No

Connection data

Conductor connection

Tightening torque	0.4 Nm (M12 connector)
-------------------	------------------------

SAC-3P-20,0-542/M12FR SH BK - Sensor/actuator cable



1417959

<https://www.phoenixcontact.com/us/products/1417959>

Connector

Connection 1

Type	free cable end
------	----------------

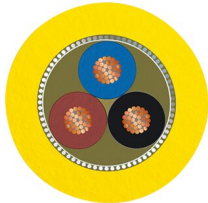
Connection 2

Type	Socket angled M12
Number of positions	3
Coding type	A
Number of positions	3

Cable/line

Cable length	20 m
--------------	------

PVC yellow 105 °C [542]

Dimensional drawing	
Cable weight	40 kg/km
UL AWM Style	2517 (105 °C / 300 V)
Number of positions	3
Shielded	yes
Cable type	PVC yellow 105 °C [542]
Conductor structure signal line	30x 1.30 mm
AWG signal line	22
Wire diameter incl. insulation	1.27 mm ± 0.03 mm
External cable diameter	5.2 mm ± 0.2 mm
Outer sheath, material	PVC
External sheath, color	yellow
Conductor material	Tin-plated Cu litz wires
Material wire insulation	PVC
Single wire, color	brown, blue, black
Overall twist	3 wires, twisted
Optical shield covering	85 %
Max. conductor resistance	max. 50.5 Ω/km (20 °C)
Insulation resistance	≥ (550 M Ohms/m @ 500V)
Nominal voltage, cable	300 V
Minimum bending radius, flexible installation	12 x D
Flame resistance	FT4

SAC-3P-20,0-542/M12FR SH BK - Sensor/actuator cable



1417959

<https://www.phoenixcontact.com/us/products/1417959>

Other resistance	UV resistant
Special properties	UL standards PLTC and ITC
Ambient temperature (operation)	-30 °C ... 105 °C (cable, fixed installation)
	-5 °C ... 105 °C (Cable, flexible installation)

Environmental and real-life conditions

Ambient conditions

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

Standards and regulations

Standard designation	M12 connector
Standards/specifications	IEC 61076-2-101

SAC-3P-20,0-542/M12FR SH BK - Sensor/actuator cable

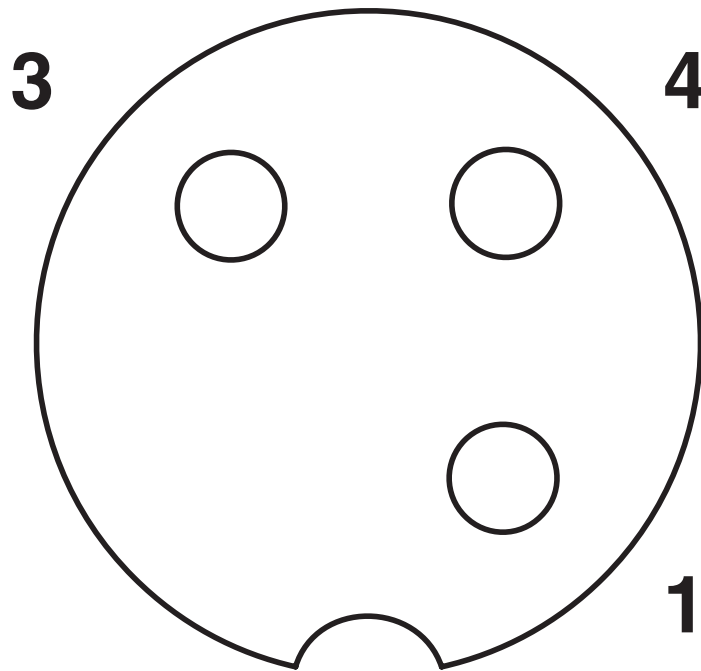


1417959

<https://www.phoenixcontact.com/us/products/1417959>

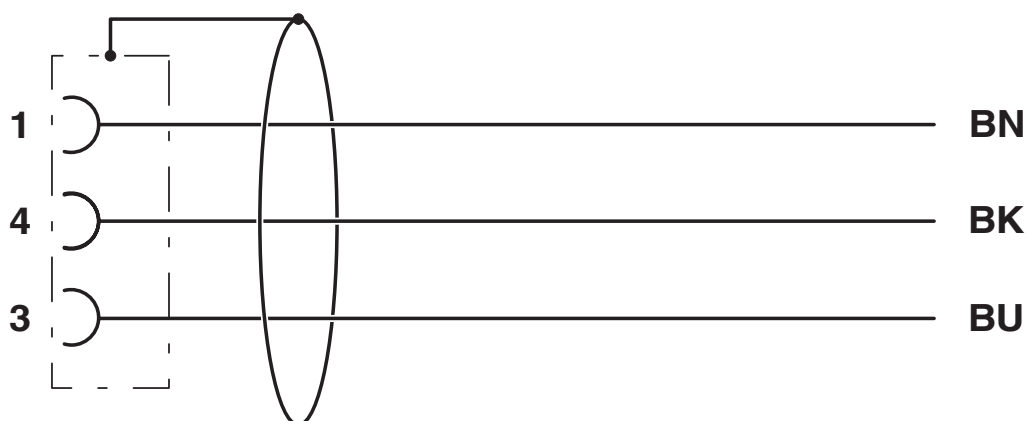
Drawings

Schematic diagram



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

Circuit diagram



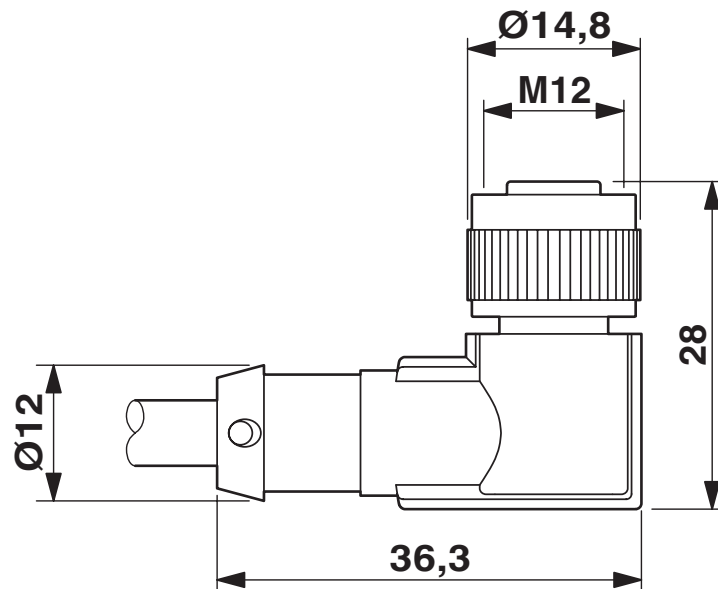
SAC-3P-20,0-542/M12FR SH BK - Sensor/actuator cable



1417959

<https://www.phoenixcontact.com/us/products/1417959>

Dimensional drawing



M12 x 1 socket, angled, shielded

SAC-3P-20,0-542/M12FR SH BK - Sensor/actuator cable



1417959

<https://www.phoenixcontact.com/us/products/1417959>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1417959>



EAC

Approval ID: RU C-DE.BL08.B.00286



UL Listed

Approval ID: FILE E 221474

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	300 V	4 A	-	-



cUL Listed

Approval ID: FILE E 221474

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	300 V	4 A	-	-

cULus Listed

SAC-3P-20,0-542/M12FR SH BK - Sensor/actuator cable



1417959

<https://www.phoenixcontact.com/us/products/1417959>

Classifications

ECLASS

ECLASS-11.0	27060311
ECLASS-12.0	27060311
ECLASS-13.0	27060311

ETIM

ETIM 7.0	EC001855
----------	----------

UNSPSC

UNSPSC 21.0	31251501
-------------	----------

SAC-3P-20,0-542/M12FR SH BK - Sensor/actuator cable



1417959
<https://www.phoenixcontact.com/us/products/1417959>

Environmental product compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

SAC-3P-20,0-542/M12FR SH BK - Sensor/actuator cable



1417959

<https://www.phoenixcontact.com/us/products/1417959>

Accessories

PROT-M12 MS-PA-CHAIN - Screw plug

1430899

<https://www.phoenixcontact.com/us/products/1430899>

M12 sealing cap with fixing band, for sensor cables, for free M12 sockets



SAC-M12-EXCLIP-F - Locking clip

1558991

<https://www.phoenixcontact.com/us/products/1558991>

Locking clip for the socket side of sensor/actuator cables with M12 connector and M12 connectors for assembly, for knurl diameter: 15 mm or for Allen key with a wrench size of 14 mm, prevents the disconnection of plug-in connections without tools



SAC-3P-20,0-542/M12FR SH BK - Sensor/actuator cable



1417959

<https://www.phoenixcontact.com/us/products/1417959>

TSD 04 SAC - Torque screwdriver

1208429

<https://www.phoenixcontact.com/us/products/1208429>



Torque screwdriver, with preset torque of 0.4 Nm and 4 mm hexagonal drive for M12 connectors

TSD-M 1,2NM - Torque screwdriver

1212224

<https://www.phoenixcontact.com/us/products/1212224>



Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 0.3 - 1.2 Nm

SAC-3P-20,0-542/M12FR SH BK - Sensor/actuator cable



1417959

<https://www.phoenixcontact.com/us/products/1417959>

TSD-M SAC-BIT ADAPTER - Adapter insert

1212600

<https://www.phoenixcontact.com/us/products/1212600>



Adapter bit for TSD-M...torque tools, E6.3-1/4" drive with 4 mm hexagon to accommodate SAC bits

SAC BIT M12-D15 - Tool

1208432

<https://www.phoenixcontact.com/us/products/1208432>



Nut for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a knurl diameter of 15 mm, for 4 mm hexagonal drive

Phoenix Contact 2023 © - all rights reserved
<https://www.phoenixcontact.com>

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com