

SAC-5P-M12MR/ 2,0-542 SH BK - Sensor/actuator cable



1406146

<https://www.phoenixcontact.com/us/products/1406146>

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, 5-position, PVC, yellow, shielded, Plug angled M12, coding: A, on free cable end, cable length: 2 m

Commercial data

Item number	1406146
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF13
Product key	AF1IDC
GTIN	4046356799041
Weight per piece (including packing)	133 g
Weight per piece (excluding packing)	133 g
Customs tariff number	85444290
Country of origin	US

SAC-5P-M12MR/ 2,0-542 SH BK - Sensor/actuator cable



1406146

<https://www.phoenixcontact.com/us/products/1406146>

Technical data

Product properties

Product type	Sensor/actuator cable
Application	Standard, U.S. cables
Number of positions	5
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
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

Insulation resistance	$\geq 100 \text{ M}\Omega$
Nominal voltage U_N	48 V AC
	60 V DC
Nominal current I_N	4 A

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)
-------------------	------------------------

Connector

Connection 1

SAC-5P-M12MR/ 2,0-542 SH BK - Sensor/actuator cable



1406146

<https://www.phoenixcontact.com/us/products/1406146>

Type	Plug angled M12
Coding type	A

Connection 2

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

Cable/line

Cable length	2 m
--------------	-----

PVC yellow 105 °C [542]

Dimensional drawing	
Cable weight	57 kg/km
UL AWM Style	2517 (105 °C / 300 V)
Number of positions	5
Shielded	yes
Cable type	PVC yellow 105 °C [542]
Conductor structure signal line	7x 0.25 mm
AWG signal line	22
Wire diameter incl. insulation	1.27 mm ±0.03 mm
External cable diameter	5.90 mm ±0.2 mm
Outer sheath, material	PVC
External sheath, color	yellow
Conductor material	Tin-plated Cu litz wires
Material, filler	PP
Material wire insulation	PVC
Single wire, color	brown, blue, black, white, gray
Overall twist	5 wires around filler to the core
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
Smallest bending radius, movable installation	71 mm
Flame resistance	FT4
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)

SAC-5P-M12MR/ 2,0-542 SH BK - Sensor/actuator cable



1406146

<https://www.phoenixcontact.com/us/products/1406146>

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP65
	IP67
Ambient temperature (operation) (male connector/female connector)	-25 °C ... 90 °C (Plug / socket)
Ambient temperature (operation) (Cable, fixed installation)	-25 °C ... 80 °C (cable, fixed installation)
Ambient temperature (operation) (Cable, flexible installation)	-5 °C ... 80 °C (Cable, flexible installation)

Standards and regulations

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

SAC-5P-M12MR/ 2,0-542 SH BK - Sensor/actuator cable

1406146

<https://www.phoenixcontact.com/us/products/1406146>

Drawings

Dimensional drawing



M12 x 1 male plug, angled, shielded

Schematic diagram



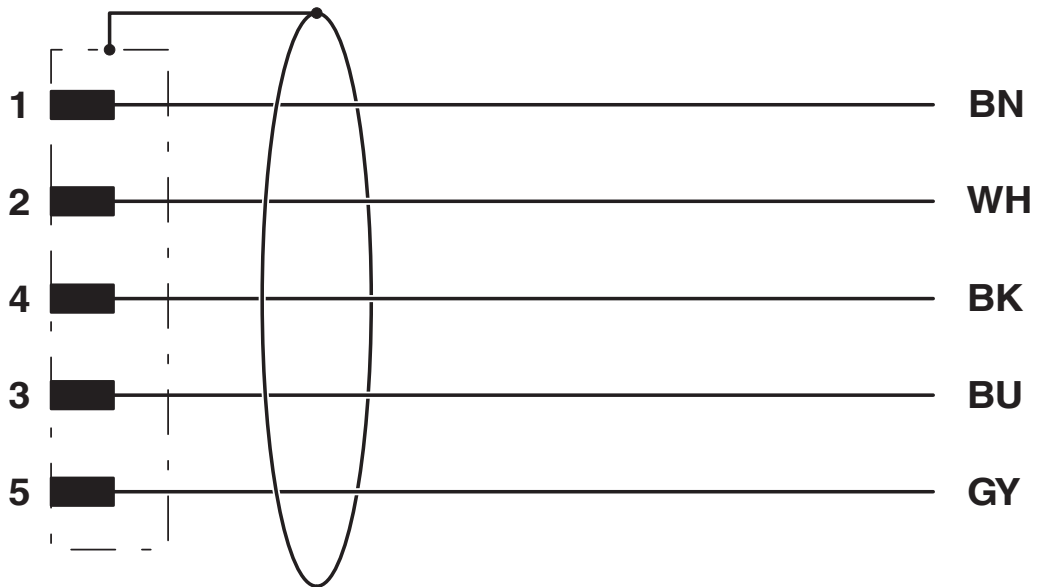
Pin assignment M12 male connector, 5-pos., A-coded, male side

SAC-5P-M12MR/ 2,0-542 SH BK - Sensor/actuator cable

1406146

<https://www.phoenixcontact.com/us/products/1406146>

Circuit diagram



Contact assignment of the M12 plug

SAC-5P-M12MR/ 2,0-542 SH BK - Sensor/actuator cable



1406146

<https://www.phoenixcontact.com/us/products/1406146>

Classifications

ECLASS

ECLASS-13.0	27060311
ECLASS-15.0	27060311

ETIM

ETIM 10.0	EC001855
-----------	----------

UNSPSC

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

SAC-5P-M12MR/ 2,0-542 SH BK - Sensor/actuator cable



1406146

<https://www.phoenixcontact.com/us/products/1406146>

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%
-------------------------------------	----------------------------

EF3.1 Climate Change

CO2e kg	1.533 kg CO2e
---------	---------------

Phoenix Contact 2026 © - 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