

# SAC-12P-20,0-35T/FS SH SCO - Sensor/actuator cable



1406416

<https://www.phoenixcontact.com/us/products/1406416>

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, 12-position, PUR/PVC, black RAL 9005, shielded, free cable end, on Socket straight M12 SPEEDCON, coding: A, cable length: 20 m

## Commercial data

Item number	1406416
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF03
Product key	AF1CNA
GTIN	4046356767293
Weight per piece (including packing)	1,815.8 g
Weight per piece (excluding packing)	1,784.4 g
Customs tariff number	85444290
Country of origin	DE

# SAC-12P-20,0-35T/FS SH SCO - Sensor/actuator cable



1406416

<https://www.phoenixcontact.com/us/products/1406416>

## Technical data

### Product properties

Product type	Sensor/actuator cable
Number of positions	12
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	V0
Seal material	NBR
Material of grip body	TPU, hardly inflammable, self-extinguishing
Contact material	CuZn
Contact surface material	Ni/Au
Contact carrier material	PA 6.6
Material for screw connection	Zinc die-cast, nickel-plated

### Electrical properties

Insulation resistance	$\geq 100 \text{ M}\Omega$
Nominal voltage $U_N$	30 V AC
	30 V DC
Nominal current $I_N$	1.5 A

### Signaling

Status display	no
Status display present	no

### Connector

#### Connection 1

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

#### Connection 2

Type	Socket straight M12 SPEEDCON
Number of positions	12
Locking type	SPEEDCON
Coding type	A

### Cable/line


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

# SAC-12P-20,0-35T/FS SH SCO - Sensor/actuator cable

1406416

<https://www.phoenixcontact.com/us/products/1406416>

Black PUR/PVC twisted pair [35T]

Dimensional drawing	
Cable weight	87 kg/km
UL AWM Style	20233 / 1061 (80°C/300 V)
Number of positions	12
Shielded	yes
Cable type	Black PUR/PVC twisted pair [35T]
Conductor structure signal line	18x 0.10 mm
AWG signal line	26
Conductor cross-section	12x 0.14 mm <sup>2</sup> (Signal line)
Wire diameter incl. insulation	1 mm ±0.05 mm (Signal line)
External cable diameter	8.50 mm ±0.2 mm
Outer sheath, material	PUR
External sheath, color	black RAL 9005
Conductor material	Tin-plated Cu litz wires
Material wire insulation	PVC
Single wire, color	white-brown, green-yellow, gray-pink, blue-red, black-violet, gray/pink-red/blue
Twisted pairs	2 cores to the pair
Overall twist	Six pairs around the filler to the core
Optical shield covering	85 %
Max. conductor resistance	≤ 142 Ω/km (at 20 °C)
Insulation resistance	≥ 10 MΩ*km (at 20 °C)
Nominal voltage, cable	42 V AC
Test voltage	1500 V AC
Minimum bending radius, fixed installation	5 x D
Minimum bending radius, flexible installation	10 x D
Smallest bending radius, fixed installation	43 mm
Smallest bending radius, movable installation	85 mm
Dynamic load capacity (bending)	Max. bending cycles: 2000000, Bending radius: 85 mm, Traversing path: 10 m, Traversing rate: 3 m/s, Acceleration: 10 m/s <sup>2</sup>
Flame resistance	According to DIN EN 60332-1-2 According to VW-1
Resistance to oil	in accordance with DIN EN 60811-2-1
Other resistance	hydrolysis and microbe resistant (in accordance with EN 50396)
Special properties	Flexible cable conduit capable

# SAC-12P-20,0-35T/FS SH SCO - Sensor/actuator cable



1406416

<https://www.phoenixcontact.com/us/products/1406416>

Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)
	-5 °C ... 80 °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)
	-40 °C ... 80 °C (cable, fixed installation)
	-5 °C ... 80 °C (Cable, flexible installation)

## Standards and regulations

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

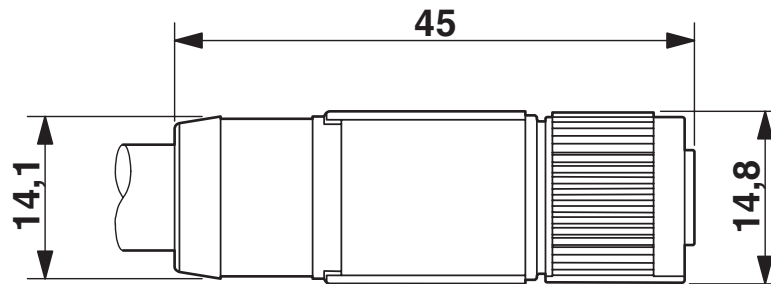
# SAC-12P-20,0-35T/FS SH SCO - Sensor/actuator cable

1406416

<https://www.phoenixcontact.com/us/products/1406416>

## Drawings

Dimensional drawing



Socket M12-SPEEDCON, straight, shielded

Schematic diagram



Pin assignment M12, 12-pos., female side view

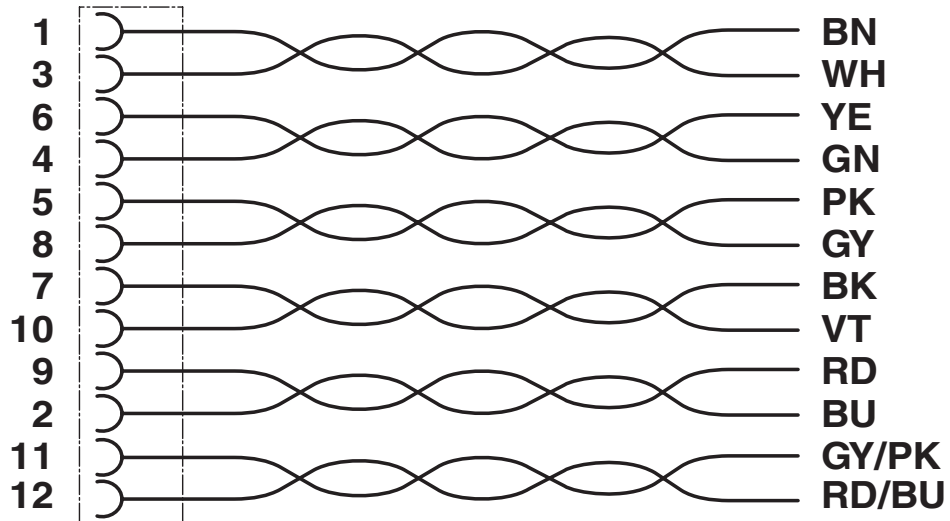
# SAC-12P-20,0-35T/FS SH SCO - Sensor/actuator cable



1406416

<https://www.phoenixcontact.com/us/products/1406416>

Circuit diagram



Contact assignment of the M12 socket

# SAC-12P-20,0-35T/FS SH SCO - Sensor/actuator cable



1406416

<https://www.phoenixcontact.com/us/products/1406416>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1406416>

 <b>UL Listed</b> Approval ID: E221474				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine				
	30 V	1 A	-	-

# SAC-12P-20,0-35T/FS SH SCO - Sensor/actuator cable



1406416

<https://www.phoenixcontact.com/us/products/1406416>

## Classifications

### ECLASS

ECLASS-13.0	27060311
ECLASS-15.0	27060311

### ETIM

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

### UNSPSC

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

# SAC-12P-20,0-35T/FS SH SCO - Sensor/actuator cable



1406416

<https://www.phoenixcontact.com/us/products/1406416>

## 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 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](mailto:info@phoenixcon.com)