

## Sensor/actuator cable - SAC-12P-MS/ 1,5-35T SH SCO - 1430048

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Sensor/actuator cable, 12-position, PUR/PVC, black RAL 9005, shielded, Plug straight M12 SPEEDCON, coding: A, on free cable end, cable length: 1.5 m

### Your advantages

- ✓ Easy and safe: 100% electrically tested plug-in components
- ✓ Save time, thanks to installation with SPEEDCON fast locking system
- ✓ Save space – with high-pos. connectors
- ✓ Reliable signal transmission – 360° shielding in environments with electromagnetic interference



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 323130
GTIN	4046356323130
Weight per Piece (excluding packing)	160.000 g
Custom tariff number	85444290
Country of origin	Germany

### Technical data

#### Dimensions

Length of cable	1.5 m
Stripping length of the free conductor end	50 mm (Partial stripping)

#### Ambient conditions

Ambient temperature (operation)	-25 °C ... 85 °C (Plug / socket)
	-25 °C ... 85 °C (Plug / socket)

# Sensor/actuator cable - SAC-12P-MS/ 1,5-35T SH SCO - 1430048

## Technical data

### Ambient conditions

Degree of protection	IP65
	IP67

### General

Rated current at 40°C	1.5 A
Rated voltage	30 V AC
	30 V DC
Number of positions	12
Insulation resistance	≥ 100 MΩ
Coding	A - standard
Standards/regulations	M12 connector IEC 61076-2-101
Status display	No
Protective circuit/component	unwired
Overvoltage category	II
Degree of pollution	3
Torque	0.4 Nm (M12 connector)
Resistance to oil	DIN VDE 0472 Part 803, test type B
Flame resistance	DIN VDE 0472 part 804, test type B

### Material

Flammability rating according to UL 94	V0
Contact material	CuZn
Contact surface material	Ni/Au
Contact carrier material	PA 6.6
Material of grip body	TPU, hardly inflammable, self-extinguishing
Material, knurls	Zinc die-cast, nickel-plated

### Standards and Regulations

Standards/specifications	M12 connector IEC 61076-2-101
Flame resistance	DIN VDE 0472 part 804, test type B
Resistance to oil	DIN VDE 0472 Part 803, test type B
Other resistance	Hydrolysis and microbe resistant as per VDE 0282 section 10
Flammability rating according to UL 94	V0

### Cable

Cable type	Black PUR/PVC twisted pair
Cable type (abbreviation)	35T
Cable abbreviation	LSPYwC11Y
UL AWM style	20233 / 1061 (80°C/300 V)

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### Technical data

#### Cable

Conductor cross section	12x 0.14 mm <sup>2</sup> (Signal line)
AWG signal line	26
Conductor structure signal line	18x 0.10 mm
Core diameter including insulation	1 mm ±0.05 mm (Signal line)
Wire colors	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
Shielding	Tinned copper braided shield
Optical shield covering	85 %
External sheath, color	black RAL 9005
External cable diameter D	8.5 mm ±0.2 mm
Minimum bending radius, fixed installation	5 x D
Minimum bending radius, flexible installation	10 x D
Number of bending cycles	2000000
Bending radius	85 mm
Traversing path	10 m
Traversing rate	3 m/s
Acceleration	10 m/s <sup>2</sup>
Cable weight	87 kg/km
Outer sheath, material	PUR
Material, inner sheath	PVC
Material conductor insulation	PVC
Conductor material	Tin-plated Cu litz wires
Insulation resistance	≥ 10 MΩ*km (at 20 °C)
Conductor resistance	≤ 142 Ω/km (at 20 °C)
Nominal voltage, cable	42 V AC
Test voltage, cable	1500 V AC
Special properties	Flexible cable conduit capable
Other resistance	hydrolysis and microbe resistant according to EN 50396
Flame resistance	According to DIN EN 60332-1-2
	According to VW-1
Resistance to oil	in accordance with DIN EN 60811-2-1
Ambient temperature (operation)	-30 °C ... 80 °C (cable, fixed installation)
	-5 °C ... 80 °C (cable, flexible installation)

#### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
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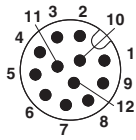
## Technical data

### Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

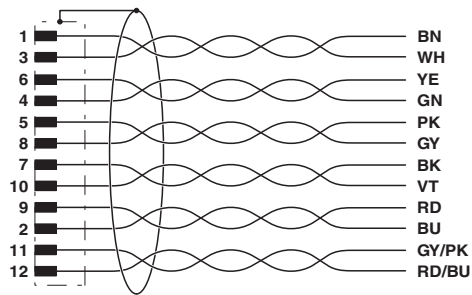
## Drawings

Schematic diagram



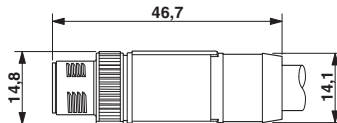
Pin assignment M12 male connector, 12-pos., male side view

Circuit diagram



Contact assignment of the M12 plug

Dimensional drawing



M12 SPEEDCON plug, straight, shielded

# Sensor/actuator cable - SAC-12P-MS/ 1,5-35T SH SCO - 1430048

Cable cross section



Black PUR/PVC twisted pair [35T]

## Classifications

eCl@ss

eCl@ss 10.0.1	27060311
eCl@ss 11.0	27060311
eCl@ss 4.0	27060300
eCl@ss 4.1	27060300
eCl@ss 5.0	27061800
eCl@ss 5.1	27061800
eCl@ss 6.0	27279200
eCl@ss 7.0	27279218
eCl@ss 9.0	27060311

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## Classifications

### ETIM

ETIM 3.0	EC001855
ETIM 4.0	EC001855
ETIM 6.0	EC001855
ETIM 7.0	EC001855

### UNSPSC

UNSPSC 6.01	31251501
UNSPSC 7.0901	31251501
UNSPSC 11	31251501
UNSPSC 12.01	31251501
UNSPSC 13.2	31251501
UNSPSC 19.0	31251501
UNSPSC 20.0	31251501
UNSPSC 21.0	31251501

## Approvals

### Approvals

Approvals

UL Listed / EAC-RoHS / EAC

Ex Approvals

### Approval details

UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 221474
Nominal voltage UN	30 V		
Nominal current IN	1 A		

EAC-RoHS		RU D- DE.HB35.B.00387
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## Sensor/actuator cable - SAC-12P-MS/ 1,5-35T SH SCO - 1430048

### Approvals

EAC



RU C-  
DE.BL08.B.00286

### Accessories

#### Accessories

#### Conductor marking

Insert label - PABA WH/23 - 1013779



Insert label, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, mounting type: thread on, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 20

Insert label - PABA YE/23 - 1013782



Insert label, Strip, yellow, unlabeled, can be labeled with: CMS-P1-PLOTTER, mounting type: thread on, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 20

#### Corrugated pipe

Protective hose - WP-PA HF 13,0 BK - 3240681



Polyamide protective hose, inflammability class V0, UV resistant

Protective hose - WP-PA HF-HB 13,0 BK - 3240839



Polyamide protective hose, inflammability class HB, UV resistant

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### Accessories

#### Cutting tools

Diagonal cutter - CUTFOX-S VDE - 1212207



Diagonal cutter for hard (piano wire) and soft wires, VDE 1000 V AC/1500 V DC tested

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#### Marker pen

Marker pen - B-STIFT - 1051993



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

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#### Protective cap

Sealing cap - PROT-M12 FS-PA-CHAIN - 1430873



M12 sealing cap made of plastic with fixing band, for sensor cables, for free M12 plugs

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#### Safety locking

Locking clip - SAC-M12-EXCLIP-M - 1558988



Locking clip for the pin 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

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#### Screwdriver tools

## Sensor/actuator cable - SAC-12P-MS/ 1,5-35T SH SCO - 1430048

### Accessories

Adapter insert - TSD-M SAC-BIT ADAPTER - 1212600



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

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Tool - SAC BIT M12-D15 - 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

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### Stripping tool

Stripping tool - WIREFOX SAC-1 - 1212757



Stripping pliers, for halogen-free sensor/actuator cables (SAC cables), with PUR and PVC insulation, from  $\varnothing$  of 3.2 to 4.4 mm, any stripping length

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Stripping tool - WIREFOX SAC - 1212623



Stripping pliers, for halogen-free sensor/actuator cables (SAC cables), with PUR and PVC insulation, from  $\varnothing$  of 4.4 to 7 mm, any stripping length

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Stripping tool - WIREFOX 10 - 1212150



Stripping tool, for cables and conductors from 0.02 - 10 mm<sup>2</sup>, self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm<sup>2</sup> stranded/1.5 mm<sup>2</sup> solid, replaceable stripping blade

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### Accessories

#### Torque tool

Torque screwdriver - TSD 04 SAC - 1208429



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

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Torque screwdriver - TSD-M 1,2NM - 1212224



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

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Protective hose adapter - WP-CTA POM 13,0 BK - 1422884



Protective hose adapter, for corrugated hoses with a nominal size of 13 (10 x 13), corrugated in parallel

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