

## Sensor/actuator cable - SAC-5P- 1,5-PVC/M12FR - 1415686

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Sensor/actuator cable, 5-position, PVC, black RAL 9005, free cable end, on Socket angled M12, A-coded, cable length: 1.5 m

### Your advantages

- ✔ Easy and safe: 100% electrically tested plug-in components



### Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4055626050478
Weight per Piece (excluding packing)	71.700 g
Custom tariff number	85444290
Country of origin	Germany

### Technical data

#### Dimensions

Length of cable	1.5 m
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#### Ambient conditions

Ambient temperature (operation)	-25 °C ... 90 °C (Plug / socket)
Degree of protection	IP65
	IP67
	IP68

#### General

Rated current at 40°C	4 A
Rated voltage	48 V AC
	60 V DC
Number of positions	5

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## Technical data

### General

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
Insertion/withdrawal cycles	≥ 100

### Material

Flammability rating according to UL 94	HB
Contact material	CuSn
Contact surface material	Ni/Au
Contact carrier material	TPU GF
Material of grip body	TPU, hardly inflammable, self-extinguishing
Material, knurls	Zinc die-cast, nickel-plated
Sealing material	NBR

### Standards and Regulations

Standard designation	M12 connector
Standards/regulations	IEC 61076-2-101
Flammability rating according to UL 94	HB

### Cable

Cable type	PVC black
Cable type (abbreviation)	PVC
Cable abbreviation	LiYY
UL AWM style	2464 / 1729 (80°C/300 V)
Conductor cross section	5x 0.34 mm <sup>2</sup> (Signal line)
AWG signal line	22
Conductor structure signal line	19x 0.15 mm
Core diameter including insulation	1.26 mm ±0.05 mm
Thickness, insulation	≥ 0.23 mm (Core insulation)
Wire colors	brown, white, blue, black, green-yellow
Overall twist	5 wires around filler to the core
External sheath, color	black RAL 9005
Outer sheath thickness	≥ 0.76 mm
External cable diameter D	5 mm ±0.15 mm
Minimum bending radius, fixed installation	5 x D
Minimum bending radius, flexible installation	10 x D
Cable weight	51 kg/km
Outer sheath, material	PVC

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## Technical data

### Cable

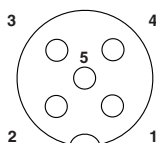
Material conductor insulation	PVC
Conductor material	Bare Cu litz wires
Insulation resistance	≥ 200 MΩ*km (at 20 °C)
Conductor resistance	max. 57 Ω/km (at 20 °C)
Nominal voltage, cable	≤ 300 V
Test voltage, cable	≥ 3000 V
Flame resistance	As per UL-Style 2464
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)
	-25 °C ... 80 °C (cable, flexible installation)

### Environmental Product Compliance

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

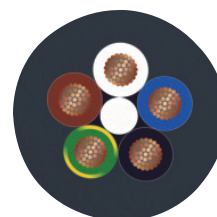
## Drawings

Schematic diagram



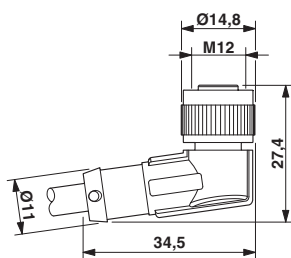
Pin assignment M12 socket, 5-pos., A-coded, socket side view

Cable cross section



PVC black [PVC]

Dimensional drawing



M12 x 1 socket, angled

Circuit diagram



Contact assignment of the M12 sockets

## Classifications

eCl@ss

eCl@ss 5.1	27061800
eCl@ss 6.0	27279200

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## Classifications

### eCl@ss

eCl@ss 7.0	27279218
eCl@ss 8.0	27279218
eCl@ss 9.0	27060311

### ETIM

ETIM 5.0	EC001855
ETIM 6.0	EC001855

### UNSPSC

UNSPSC 13.2	31251501
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## Approvals

### Approvals

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### Approvals


UL Listed / cUL Listed / EAC / cULus Listed


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### Ex Approvals

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## 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		125 V	
Nominal current IN		4 A	

cUL 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		125 V	
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EAC		RU C- DE.AI30.B.00767
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### Approvals

cULus Listed



### 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

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

Insert label - PABA WH/15 - 1013151



Insert label, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, mounting type: thread on, cable diameter range: 0.6 - 50 mm, lettering field size: 15 x 4 mm

Insert label - PABA YE/15 - 1013698



Insert label, Strip, yellow, unlabeled, can be labeled with: CMS-P1-PLOTTER, mounting type: thread on, cable diameter range: 0.6 - 50 mm, lettering field size: 15 x 4 mm

## Sensor/actuator cable - SAC-5P- 1,5-PVC/M12FR - 1415686

### Accessories

Insert label - PABA RD/15 - 1013944



Insert label, Strip, red, unlabeled, can be labeled with: CMS-P1-PLOTTER, mounting type: thread on, cable diameter range: 0.6 - 50 mm, lettering field size: 15 x 4 mm

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### Corrugated pipe

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



Polyamide protective hose, inflammability class V0, UV resistant

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



Polyamide protective hose, inflammability class HB, UV resistant

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### 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 carrier cable

Conductor marker carrier - PATG 2/15 - 1013038



Conductor marker carrier, transparent, unlabeled, mounting type: slide on, cable diameter range: 2 - 4 mm, lettering field size: 15 x 4 mm

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### Accessories

Conductor marker carrier - PATG 3/15 - 1013041



Conductor marker carrier, transparent, unlabeled, mounting type: slide on, cable diameter range: 4 - 7 mm, lettering field size: 15 x 4 mm

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Conductor marker carrier - PATG 4/15 - 1013054



Conductor marker carrier, transparent, unlabeled, mounting type: slide on, cable diameter range: 6 - 10 mm, lettering field size: 15 x 4 mm

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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

Screw plug - PROT-M12 MS-PA-CHAIN - 1430899

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



### Safety locking

Locking clip - SAC-M12-EXCLIP-F - 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

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### Screwdriver tools

## Sensor/actuator cable - SAC-5P- 1,5-PVC/M12FR - 1415686

### 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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### Torque tool



## Sensor/actuator cable - SAC-5P- 1,5-PVC/M12FR - 1415686

### Accessories

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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