

# Sensor/Actuator cable - SAC-4P- 3,0-PUR/M12FS - 1668111

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Sensor/Actuator cable, 4-position, PUR halogen-free, Black-gray RAL 7021, Free cable end, on Socket straight M12, A-coded, Cable length: 3 m

## Product Features

- Easy and safe: 100% electrically tested plug-in components
- Our standard: robust halogen-free PUR cable

## Key commercial data

<b>package_quantity</b>	1
<b>GTIN</b>	4017918136871

## Technical data

### Dimensions

<b>Length of cable</b>	3 m
<b>Stripping length of the free conductor end</b>	50 mm

### Ambient conditions

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

### General

<b>Rated current at 40°C</b>	4 A
<b>Rated voltage</b>	250 V
<b>Number of positions</b>	4
<b>Contact resistance</b>	≤ 5 mΩ
<b>Insulation resistance</b>	≥ 100 MΩ
<b>Coding</b>	A - standard
<b>Standards/regulations</b>	M12 connector IEC 61076-2-101
<b>Status display</b>	No
<b>Protective circuit/component</b>	Unwired
<b>Surge voltage category</b>	II
<b>Pollution degree</b>	3
<b>Insertion/withdrawal cycles</b>	≥ 100

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## Technical data

### General

<b>Torque</b>	0.4 Nm (M12 connector)
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### Material

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

### Cable

<b>Cable type</b>	PUR halogen-free black
<b>Cable type (abbreviation)</b>	PUR
<b>Cable abbreviation</b>	Li9Y11Y-HF
<b>UL AWM style</b>	20549 / 10493 (80°C/300 V)
<b>Conductor cross section</b>	4x 0.34 mm <sup>2</sup>
<b>AWG signal line</b>	22
<b>Conductor structure signal line</b>	42x 0.10 mm
<b>Core diameter including insulation</b>	1.27 mm ±0.02 mm
<b>Thickness, insulation</b>	≥ 0.21 mm
<b>Wire colors</b>	brown, white, blue, black
<b>Overall twist</b>	4 wires, twisted
<b>External sheath, color</b>	Black-gray RAL 7021
<b>Outer sheath thickness</b>	approx. 0.8 mm
<b>External cable diameter D</b>	4.7 mm ±0.15 mm
<b>Minimum bending radius, fixed installation</b>	5 x D
<b>Minimum bending radius, flexible installation</b>	10 x D
<b>Number of bending cycles</b>	4000000
<b>Minimum bending radius, drag chain applications</b>	10 x D
<b>Traversing path</b>	10 m
<b>Traversing rate</b>	3 m/s
<b>Acceleration</b>	10 m/s <sup>2</sup>
<b>Cable weight</b>	30 kg/km
<b>Outer sheath, material</b>	PUR
<b>Material conductor insulation</b>	PP
<b>Conductor material</b>	Bare Cu litz wires
<b>Insulation resistance</b>	≥ 1 GΩ*km
<b>Conductor resistance</b>	≤ 58 Ω/km
<b>Nominal voltage, cable</b>	≤ 300 V
<b>Test voltage, cable</b>	≥ 3000 V
<b>Special properties</b>	Flexible cable conduit capable

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## Technical data

### Cable

<b>Special properties</b>	Silicone-free
<b>Special properties</b>	Free of substances which would hinder coating with paint or varnish
<b>Special properties</b>	Flexible
<b>Flame resistance</b>	in accordance with DIN UL-Style 20549
<b>Flame resistance</b>	in accordance with FT1 as per UL 758
<b>Halogen-free</b>	in accordance with DIN VDE 0472 part 815
<b>Halogen-free</b>	in accordance with DIN EN 50267-2-1
<b>Resistance to oil</b>	in accordance with DIN EN 60811-2-1
<b>Other resistance</b>	Highly resistant to acids, alkaline solutions and solvents
<b>Other resistance</b>	hydrolysis and microbe resistant
<b>Other resistance</b>	partly UV-resistant in accordance with DIN EN ISO 4892-2-A
<b>Other resistance</b>	Low adhesion
<b>Other resistance</b>	abrasion-resistant
<b>Ambient temperature (operation)</b>	-40 °C ... 80 °C (cable, fixed installation)
<b>Ambient temperature (operation)</b>	-25 °C ... 80 °C (cable, flexible installation)

## classifications

### eCl@ss

<b>eCl@ss 4.0</b>	27060306
<b>eCl@ss 4.1</b>	27060306
<b>eCl@ss 5.0</b>	27061801
<b>eCl@ss 5.1</b>	27061801
<b>eCl@ss 6.0</b>	27061801
<b>eCl@ss 7.0</b>	27061801
<b>eCl@ss 8.0</b>	27061801

### ETIM

<b>ETIM 2.0</b>	EC000830
<b>ETIM 3.0</b>	EC001855
<b>ETIM 4.0</b>	EC001855
<b>ETIM 5.0</b>	EC001855

### UNSPSC

<b>UNSPSC 6.01</b>	31251501
<b>UNSPSC 7.0901</b>	31251501
<b>UNSPSC 11</b>	31251501
<b>UNSPSC 12.01</b>	31251501
<b>UNSPSC 13.2</b>	31251501

# Sensor/Actuator cable - SAC-4P- 3,0-PUR/M12FS - 1668111

## approvals

UL Listed / cUL Listed / GOST / cULus Listed /

### Approval details

<b>UL Listed</b>	
Nominal voltage UN	300 V
Nominal current IN	4 A
mm <sup>2</sup> /AWG/kcmil	

<b>cUL Listed</b>	
Nominal voltage UN	300 V
Nominal current IN	4 A
mm <sup>2</sup> /AWG/kcmil	

<b>GOST</b>	
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<b>cULus Listed</b>	
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## accessories

### Conductor marking

PABA WH/15 - 1013151



## Sensor/Actuator cable - SAC-4P- 3,0-PUR/M12FS - 1668111

### accessories

PABA YE/15 - 1013698



PABA RD/15 - 1013944



### Marker carrier cable

PATG 2/15 - 1013038



PATG 3/15 - 1013041



PATG 4/15 - 1013054



### Marker pen

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accessories

B-STIFT - 1051993



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### Cutting tools

CUTFOX-S VDE - 1212207



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### Stripping tool

WIREFOX SAC - 1212623



WIREFOX 10 - 1212150



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### Protective cap

PROT-M12 MS-PA-CHAIN - 1430899



## Sensor/Actuator cable - SAC-4P- 3,0-PUR/M12FS - 1668111

accessories

### Safety locking

SAC-M12-EXCLIP-F - 1558991



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### Torque tool

TSD 04 SAC - 1208429



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TSD-M 1,2NM - 1212224



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### Screwdriver tools

TSD-M SAC-BIT ADAPTER - 1212600



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SAC BIT M12-D15 - 1208432



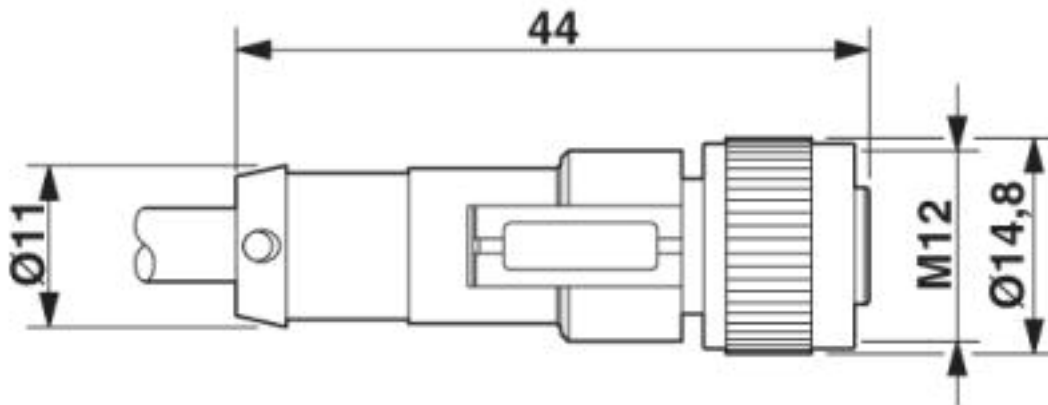
# Sensor/Actuator cable - SAC-4P- 3,0-PUR/M12FS - 1668111

accessories

WIREFOX SAC-1 - 1212757

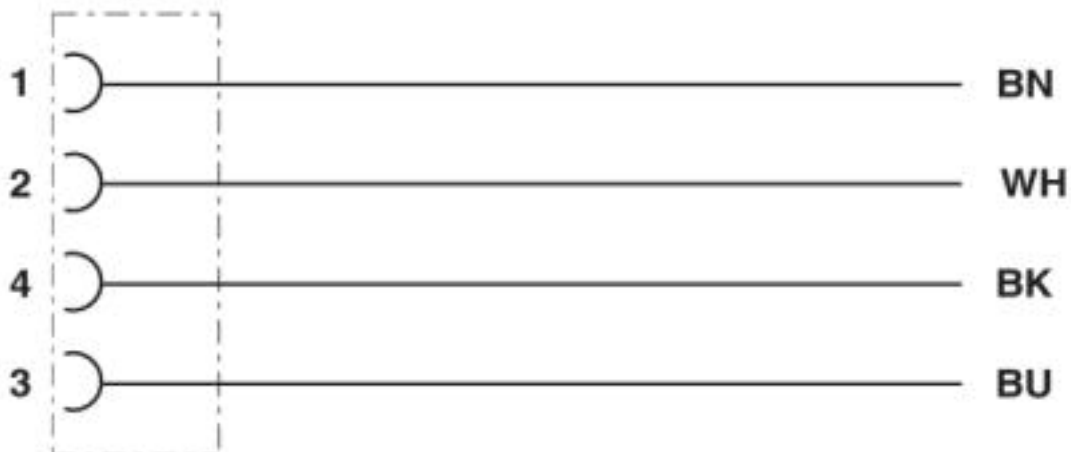
## Drawings

Dimensioned drawing



M12 x 1 socket, straight

Circuit diagram

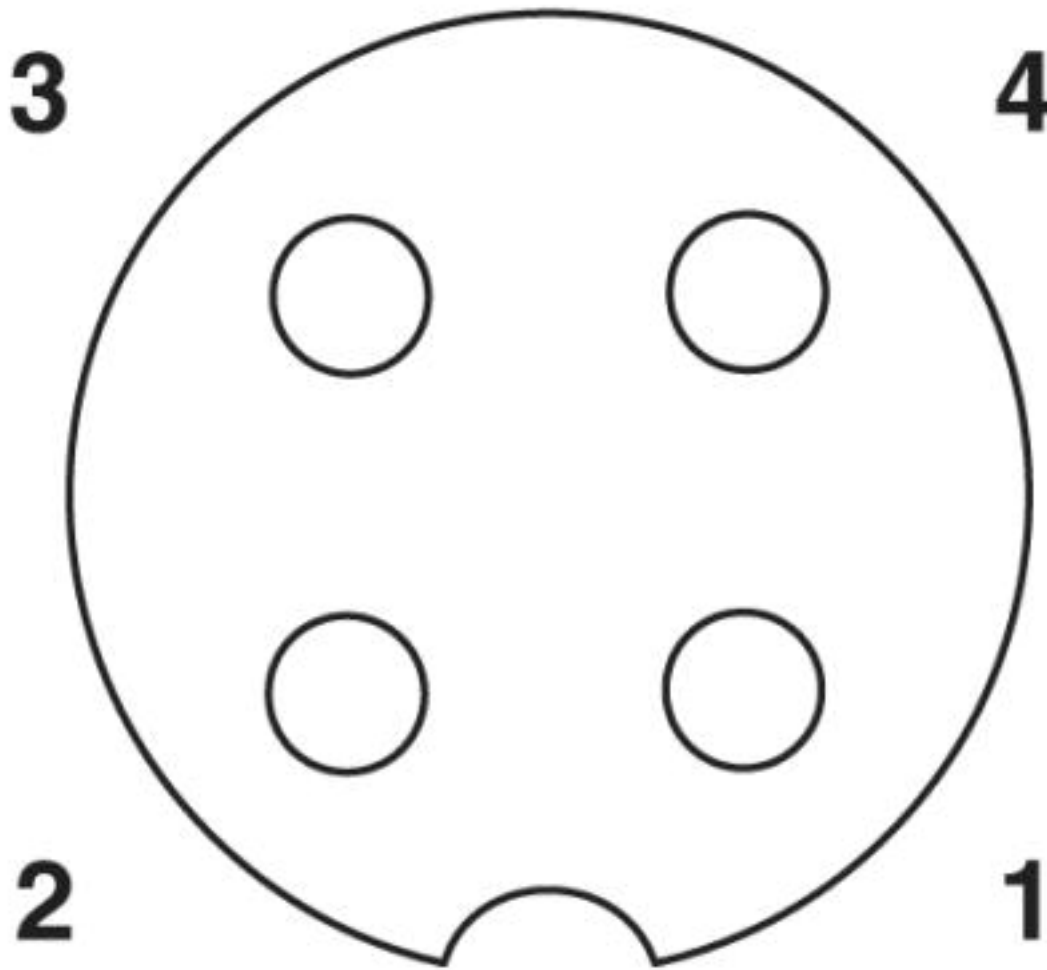


Contact assignment of the M12 plug and the M12 socket



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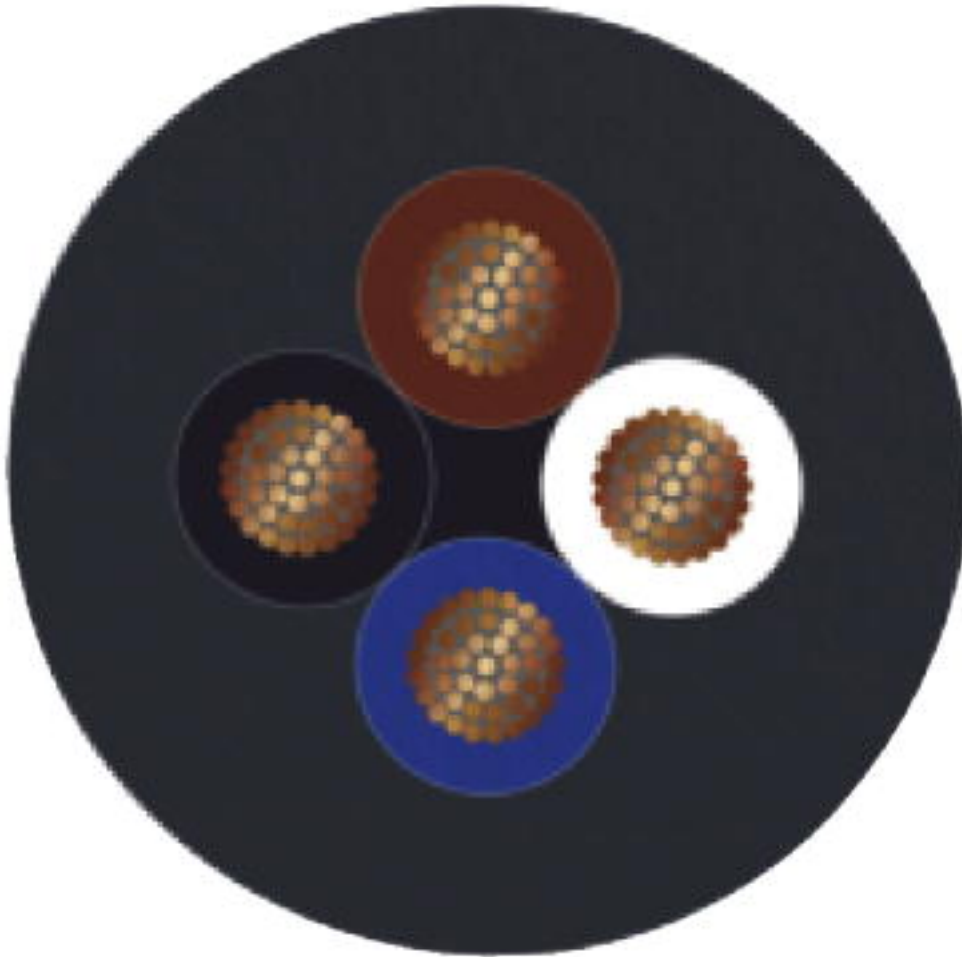
Schematic diagram



Pin assignment M12 socket, 4-pos., A-coded, view female side

## Sensor/Actuator cable - SAC-4P- 3,0-PUR/M12FS - 1668111

Cable cross section



PUR halogen-free black [PUR]

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