

# SAC-4PY-MS- 1,5-PUR/2XF - Sensor/actuator cable



1436220

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Sensor/actuator cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12 SPEEDCON, coding: A, on Socket straight M12 SPEEDCON, coding: A and Socket straight M12 SPEEDCON, coding: A, cable length: 1.5 m

## Commercial data

Item number	1436220
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF10
Product key	AF1GAD
GTIN	4046356432474
Weight per piece (including packing)	83.5 g
Weight per piece (excluding packing)	83.5 g
Customs tariff number	85444290
Country of origin	PL

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## Technical data

### Product properties

Product type	Distributor with cable
Application	Standard
Number of positions	4
No. of cable outlets	1
Shielded	no
Coding	A

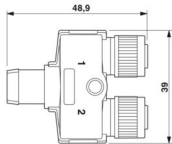
### Insulation characteristics

Overvoltage category	II
Degree of pollution	3

### Connection data

Tightening torque	0.4 Nm (M12 connector)
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### Dimensions

Dimensional drawing	
Center distance	21 mm

### Material specifications

Flammability rating according to UL 94	HB
Seal material	NBR
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	PUR
Conductor material	Bare Cu litz wires

### 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
Max. conductor resistance	58 $\Omega$ /m

### Mechanical properties

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## Mechanical data

Insertion/withdrawal cycles	≥ 100
Max. bending cycles	4000000

## Signaling

Status display	no
Status display present	no

## Connector

### Connection 1

Type	Plug straight M12 SPEEDCON
Locking type	SPEEDCON
Coding type	A

### Connection 2

Type	Socket straight M12 SPEEDCON
Locking type	SPEEDCON
Coding type	A

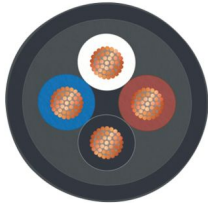
### Connection 3

Type	Socket straight M12 SPEEDCON
Locking type	SPEEDCON
Coding type	A

## Cable/line

Cable length	1.5 m
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### PUR halogen-free black [PUR]

Dimensional drawing	
Cable weight	30 kg/km
UL AWM Style	20549 / 10493 (80°C/300 V)
Number of positions	4
Shielded	no
Cable type	PUR halogen-free black [PUR]
Conductor structure signal line	42x 0.10 mm
AWG signal line	22
Conductor cross-section	4x 0.34 mm <sup>2</sup> (Signal line)

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Wire diameter incl. insulation	1.27 mm ±0.02 mm
External cable diameter	4.20 mm ±0.15 mm
Outer sheath, material	PUR
External sheath, color	black-gray RAL 7021
Conductor material	Bare Cu litz wires
Material wire insulation	PP
Single wire, color	brown, white, blue, black
Thickness, insulation	≥ 0.21 mm
Thickness, outer sheath	approx. 0.50 mm
Overall twist	4 wires, twisted
Max. conductor resistance	≤ 58 Ω/km
Insulation resistance	≥ 1 GΩ*km
Nominal voltage, cable	≤ 300 V
Test voltage	≥ 3000 V
Minimum bending radius, fixed installation	5 x D
Minimum bending radius, flexible installation	10 x D
Smallest bending radius, fixed installation	21 mm
Smallest bending radius, movable installation	42 mm
Dynamic load capacity (bending)	Max. bending cycles: 10000000, Bending radius: 42 mm, Bending radius: 10 x D, Traversing path: 10 m, Traversing rate: 3 m/s, Acceleration: 10 m/s <sup>2</sup>
Dynamic load capacity (torsion)	Torsion: ±180 °/m, Torsion cycles: ≥5000000, Torsional frequency: 35 cycles/min.
Halogen-free	in accordance with DIN VDE 0472 part 815 in accordance with DIN EN 50267-2-1
Flame resistance	in accordance with UL 758/1581 FT2 DIN EN 60332-2-2 (20 s)
Resistance to oil	in accordance with DIN EN 60811-2-1
Other resistance	Highly resistant to acids, alkaline solutions and solvents hydrolysis and microbe resistant partly UV-resistant (in accordance with DIN EN ISO 4892-2-A) Low adhesion abrasion-resistant
Special properties	Flexible cable conduit capable Silicone-free Free of substances which would hinder coating with paint or varnish flexible
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation) -25 °C ... 80 °C (Cable, flexible installation)

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP65
	IP67

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Ambient temperature (operation) (male connector/female connector)	-25 °C ... 90 °C (Plug / socket)
Ambient temperature (operation) (fixed installation)	-40 °C ... 80 °C (cable, fixed installation)
Ambient temperature (operation) (flexible installation)	-5 °C ... 80 °C (Cable, flexible installation)

## Standards and regulations

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

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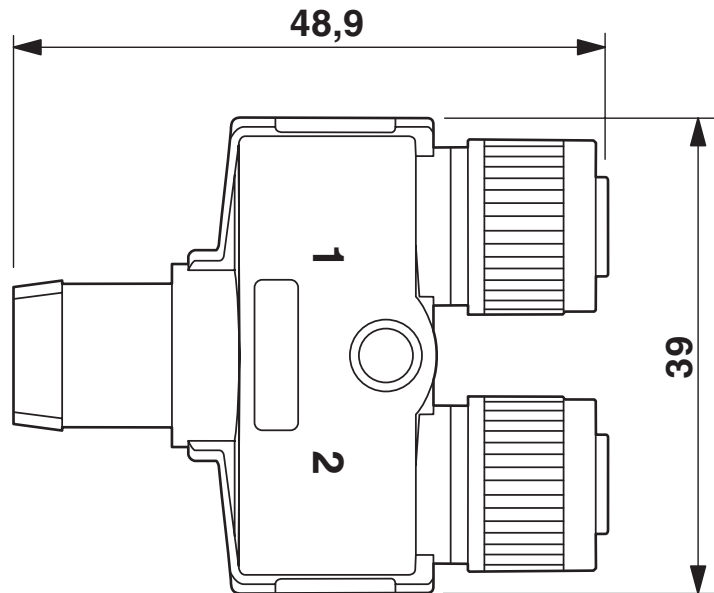


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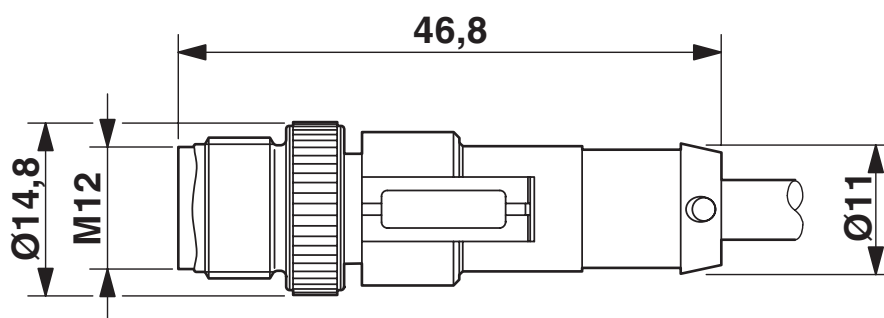
## Drawings

Dimensional drawing



Y distributor, 2 x socket M12 x 1

Dimensional drawing



Plug, M12 x 1, straight, shielded

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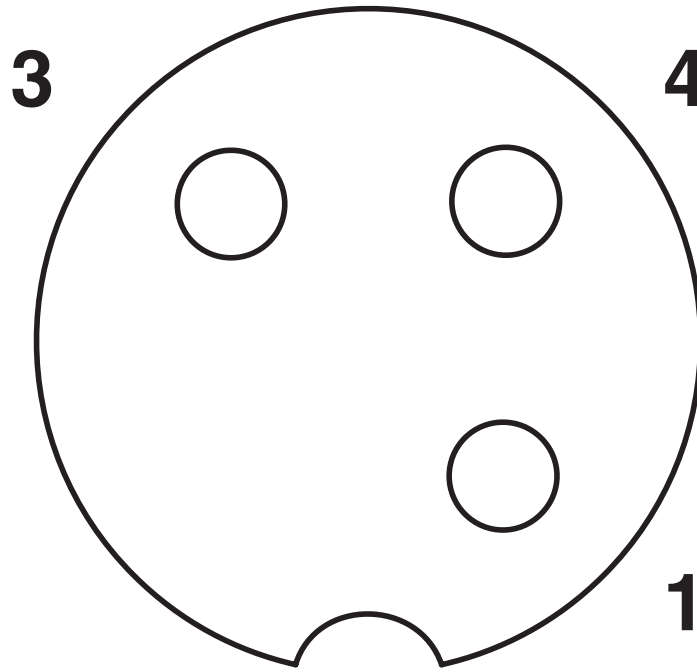
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Schematic diagram



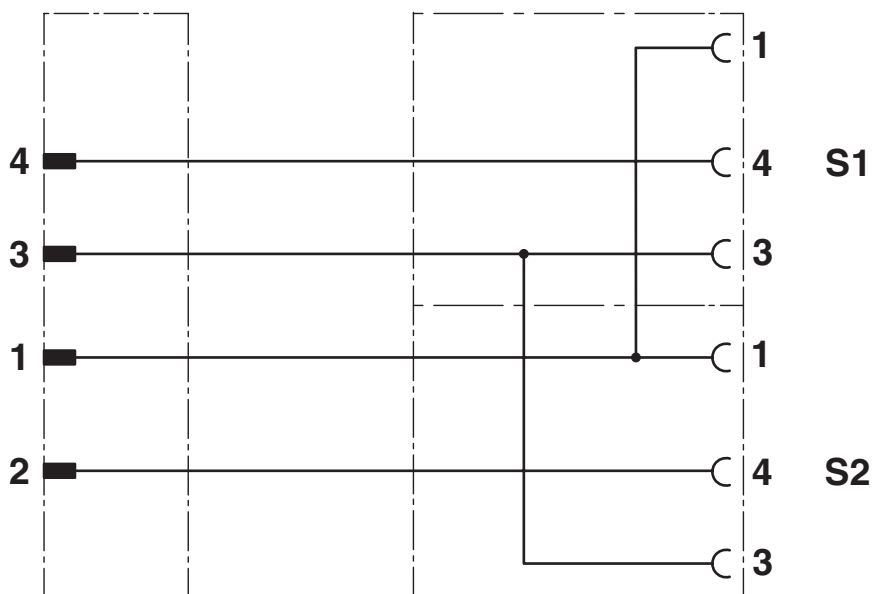
Pin assignment M12 plug, 4-pos., A-coded, view plug side

Schematic diagram



Pin assignment M12 socket, 3-pos., A-coded, view female side

Circuit diagram



Contact assignment of the M12 Y distributor

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## Classifications

### ECLASS

ECLASS-13.0	27060311
ECLASS-15.0	27060311

### ETIM

ETIM 10.0	EC001855
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### UNSPSC

UNSPSC 21.0	26121600
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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### 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%
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### EF3.1 Climate Change

CO2e kg	1.546 kg CO2e
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