

Sensor/actuator cable - SAC-4PY- 1,5-PUR/2XF - 1436165

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

RoHS

Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 432412
GTIN	4046356432412

Technical data

Dimensions

Length of cable	1.5 m
Center distance	21 mm

Ambient conditions

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

General

Rated current at 40°C	4 A
Rated voltage	48 V AC
	60 V DC
Number of positions	4
Insulation resistance	≥ 100 MΩ
Coding	A - standard
Standards/regulations	M12 connector IEC 61076-2-101
Status display	No
Overvoltage category	II
Degree of pollution	3

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Technical data

General

Insertion/withdrawal cycles	≥ 100
Torque	0.4 Nm (M12 connector)

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

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

Cable

Cable type	PUR halogen-free black
Cable type (abbreviation)	PUR
Cable abbreviation	Li9Y11Y-HF
UL AWM style	20549 / 10493 (80°C/300 V)
Conductor cross section	4x 0.34 mm ²
AWG signal line	22
Conductor structure signal line	42x 0.10 mm
Core diameter including insulation	1.27 mm ±0.02 mm
Thickness, insulation	≥ 0.21 mm
Wire colors	brown, white, blue, black
Overall twist	4 wires, twisted
External sheath, color	black-gray RAL 7021
Outer sheath thickness	approx. 0.5 mm
External cable diameter D	4.2 mm ±0.15 mm
Minimum bending radius, fixed installation	5 x D
Minimum bending radius, flexible installation	10 x D
Number of bending cycles	10000000
Minimum bending radius, drag chain applications	10 x D
Traversing path	10 m
Traversing rate	3 m/s
Acceleration	10 m/s ²
Cable weight	30 kg/km
Outer sheath, material	PUR
Material conductor insulation	PP
Conductor material	Bare Cu litz wires

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Technical data

Cable

Insulation resistance	$\geq 1 \text{ G}\Omega\cdot\text{km}$
Conductor resistance	$\leq 58 \text{ }\Omega/\text{km}$
Nominal voltage, cable	$\leq 300 \text{ V}$
Test voltage, cable	$\geq 3000 \text{ V}$
Special properties	Flexible cable conduit capable
	Silicone-free
	Free of substances which would hinder coating with paint or varnish
	flexible
Flame resistance	in accordance with UL 758/1581 FT2
	DIN EN 60332-2-2 (20 s)
Halogen-free	in accordance with DIN VDE 0472 part 815
	in accordance with DIN EN 50267-2-1
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
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)
	-25 °C ... 80 °C (cable, flexible installation)

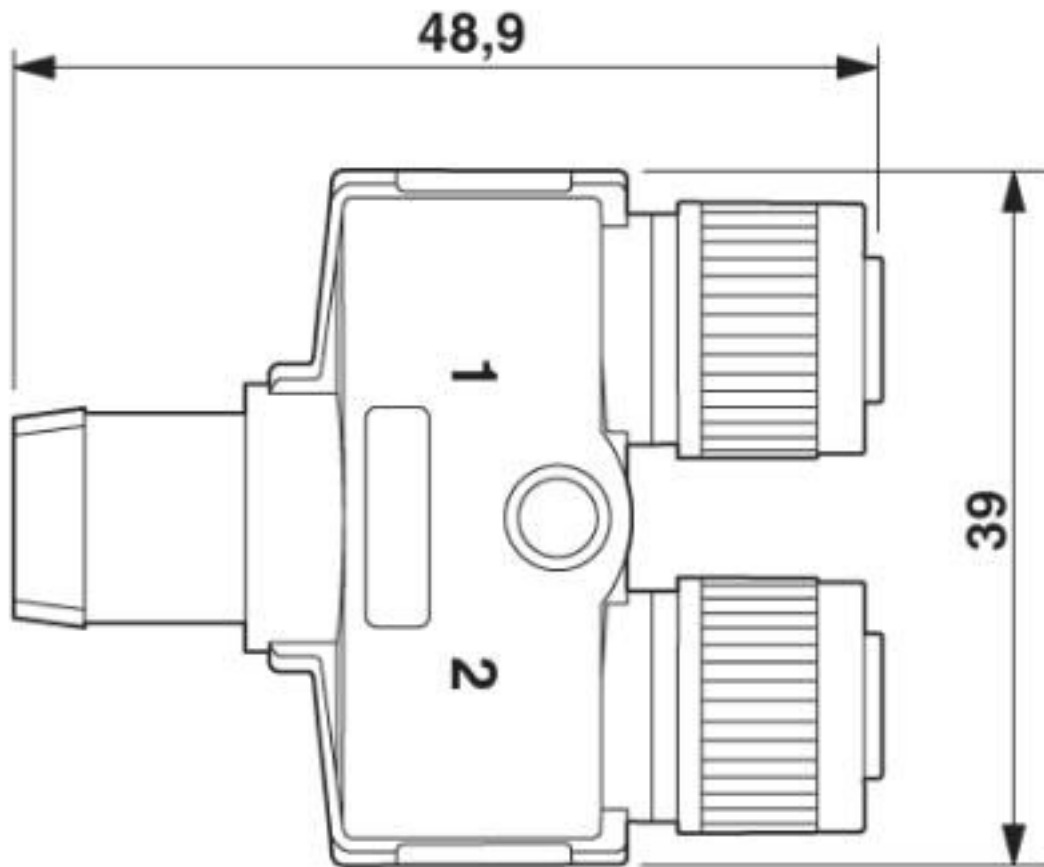
Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings

Sensor/actuator cable - SAC-4PY- 1,5-PUR/2XF - 1436165

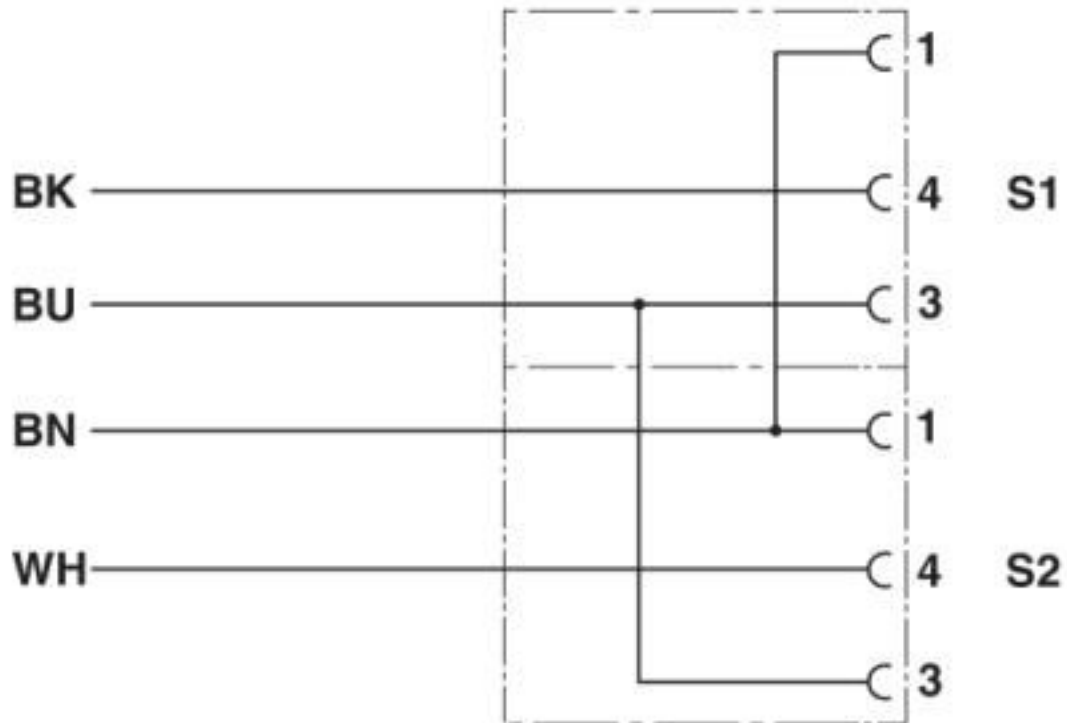
Dimensional drawing



Y distributor, 2 x socket M12 x 1

Sensor/actuator cable - SAC-4PY- 1,5-PUR/2XF - 1436165

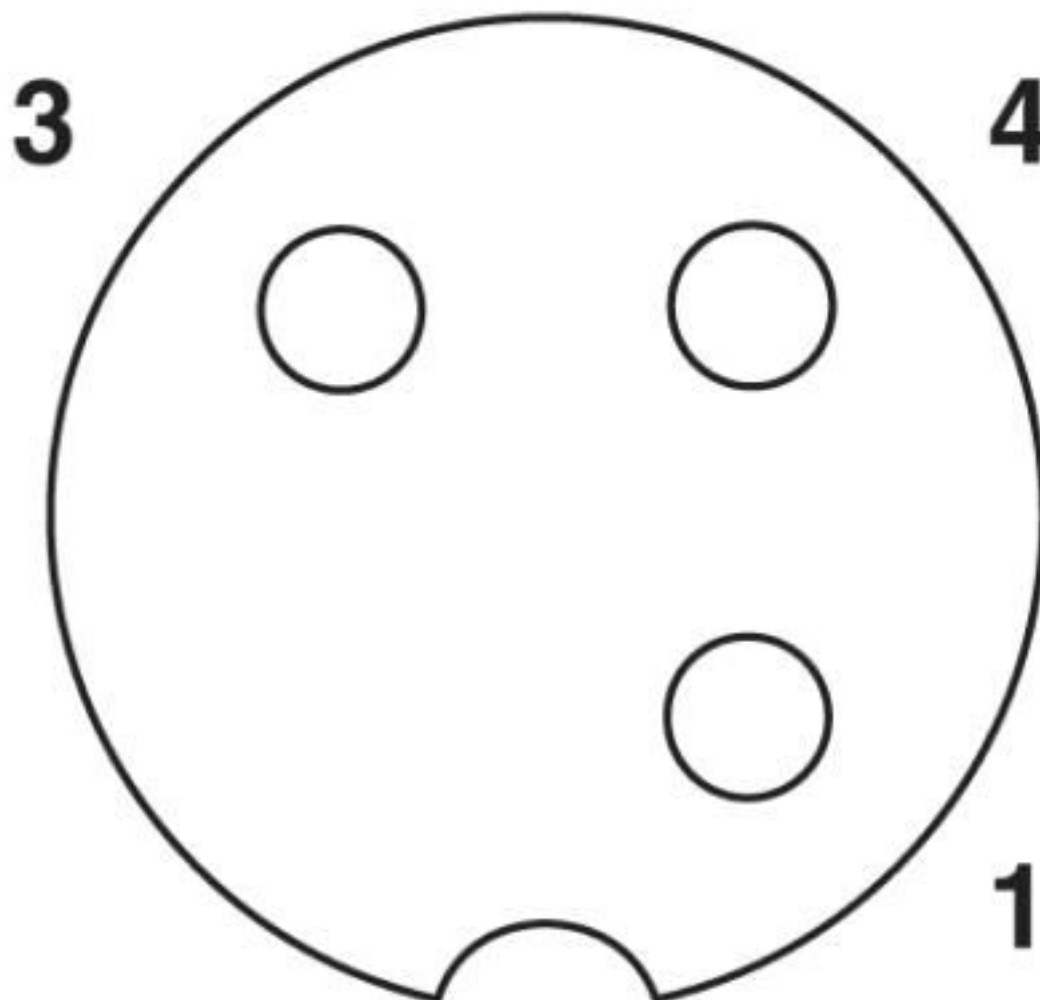
Circuit diagram



Contact assignment of the M12 Y distributor

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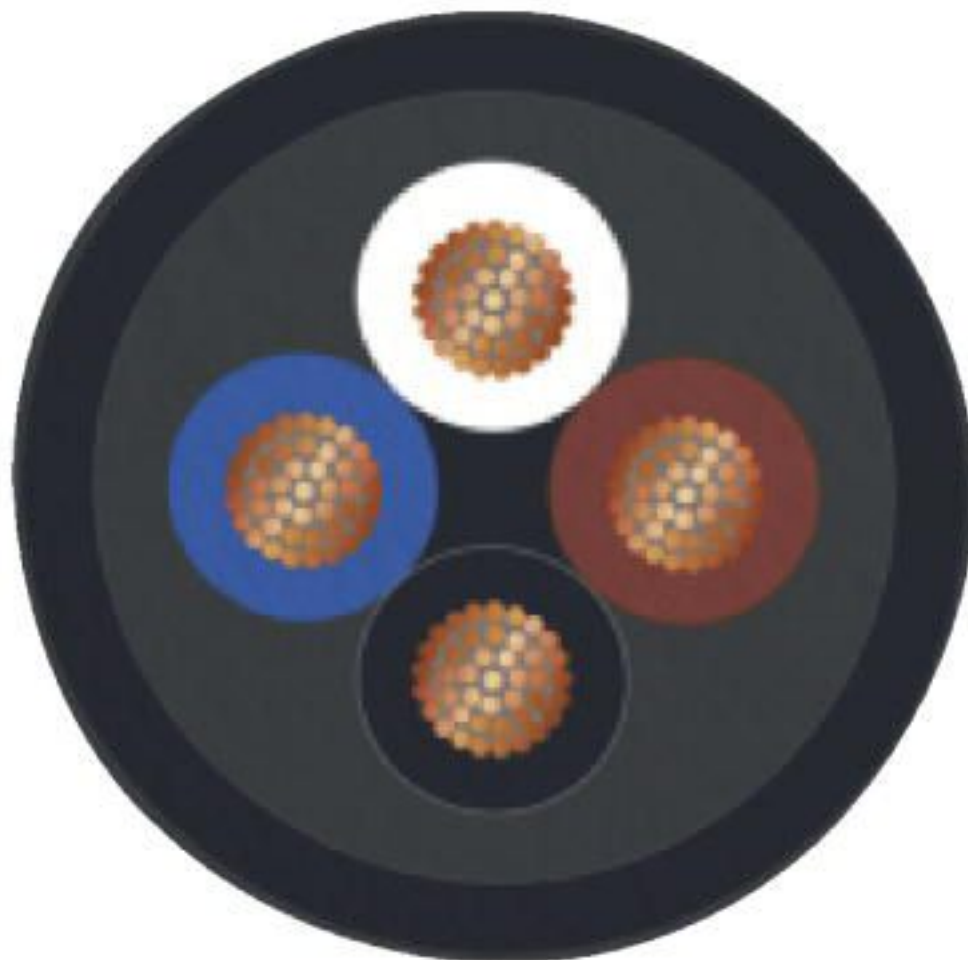
Schematic diagram



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

Sensor/actuator cable - SAC-4PY- 1,5-PUR/2XF - 1436165

Cable cross section



PUR halogen-free black [PUR]

Classifications

eCl@ss

eCl@ss 10.0.1	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 8.0	27279218
eCl@ss 9.0	27060311

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Classifications

ETIM

ETIM 3.0	EC001855
ETIM 4.0	EC001855
ETIM 5.0	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

EAC-RoHS / EAC

Ex Approvals

Approval details

EAC-RoHS		RU D- DE.HB35.B.00387
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EAC		RU C- DE.BL08.B.00286
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Accessories

Accessories

Circular connector (cable-side)

Sensor/actuator cable - SAC-4PY- 1,5-PUR/2XF - 1436165

Accessories

Connector - SACC-M12FR-4PL M - 1424656



Connector, Universal, 4-position, unshielded, Socket angled M12, Coding: A, Push-in connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

Connector - SACC-M12MR-4PL M - 1424654



Connector, Universal, 4-position, unshielded, Plug angled M12, Coding: A, Push-in connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

Connector - SACC-M12FS-4PL M - 1424655



Connector, Universal, 4-position, unshielded, Socket straight M12, Coding: A, Push-in connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

Connector - SACC-M12MS-4PL M - 1424657



Connector, Universal, 4-position, unshielded, Plug straight M12, Coding: A, Push-in connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

Connector - SACC-M12FS-4QO-0,34-M - 1641688



Connector, Universal, 4-position, Socket straight M12, Coding: A, Insulation displacement connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 3.5 mm ... 6 mm

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Accessories

Connector - SACC-M12MS-4QO-0,34-M - 1641691



Connector, Universal, 4-position, Plug straight M12, Coding: A, Insulation displacement connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 3.5 mm ... 6 mm

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

Cutting tools

Sensor/actuator cable - SAC-4PY- 1,5-PUR/2XF - 1436165

Accessories

Diagonal cutter - CUTFOX-S VDE - 1212207



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

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

Plug for cable screw gland

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

Screwdriver tools

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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Accessories

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

Stripping tool

Stripping tool - WIREFOX SAC-1 - 1212757



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

Stripping tool - WIREFOX SAC - 1212623



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

Stripping tool - WIREFOX 10 - 1212150



Stripping tool, for cables and conductors from 0.02 - 10 mm², self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm² stranded/1.5 mm² solid, replaceable stripping blade

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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Accessories

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



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

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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