

# SAC-4P-M12MS/ 1,0-652/M12FS - Sensor/actuator cable



1432048

<https://www.phoenixcontact.com/us/products/1432048>

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Sensor/actuator cable, 4-position, TPE, yellow, Plug straight M12, coding: A, on Socket straight M12, coding: A, cable length: 1 m

## Commercial data

Item number	1432048
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	BF13
Product key	BF1ICB
GTIN	4055626432298
Weight per piece (including packing)	22.22 g
Weight per piece (excluding packing)	22.22 g
Country of origin	US

# SAC-4P-M12MS/ 1,0-652/M12FS - Sensor/actuator cable



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## Technical data

### Notes

#### Trade restriction

CE note	The products are offered exclusively for export outside the EU and the European Economic Area.
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### Product properties

Product type	Sensor/actuator cable
Number of positions	4
Application	Standard, U.S. cables
No. of cable outlets	1
Shielded	no
Coding	A

#### Insulation characteristics

Overvoltage category	II
Degree of pollution	3

### 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, weld slag-resistant coating
Outer sheath, material	TPE

### Electrical properties

Contact resistance	$\leq 5 \text{ m}\Omega$
Insulation resistance	$\geq 10 \text{ M}\Omega$
Nominal voltage $U_N$	250 V AC
	250 V DC
Nominal current $I_N$	4 A
Protective circuit	unwired

### Mechanical properties

#### Mechanical data

Insertion/withdrawal cycles	$\geq 100$
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### Signaling

Status display	No
Status display present	No

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## Connection data

### Conductor connection

Tightening torque	0.4 Nm (M12 connector)
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## Connector


### Connection 1

Type	Plug straight M12
Number of positions	4
Coding type	A
Number of positions	4

### Connection 2

Type	Socket straight M12
Number of positions	4
Coding type	A
Number of positions	4

## Cable/line

Cable length	1 m
Dimensional drawing	
UL AWM Style	20327 (105 °C / 300 V)
Number of positions	4
Shielded	no
Conductor structure signal line	19x 0.03 in.
AWG signal line	22
Conductor cross section	4x 0.34 mm <sup>2</sup> (Signal line)
Wire diameter incl. insulation	0.05 in. ±0.02 mm
External cable diameter	5.33 mm ±0.13 mm
Outer sheath, material	TPE
External sheath, color	yellow
Conductor material	Bare Cu litz wires
Material wire insulation	SRPVC
Single wire, color	brown, white, blue, black
Overall twist	4 wires, twisted
Nominal voltage, cable	300 V
Test voltage	Spark test

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Minimum bending radius, flexible installation	8 x D
Smallest bending radius, fixed installation	10 x D
Max. bending cycles	10000000
Torsion force	± 360 °/m
Torsion cycles	10000000
Halogen-free	yes
Flame resistance	in acc. with UL FT4
Other resistance	to UL 2256
	welding sputter-resistant
	720 h test per UL 2256
Ambient temperature (operation)	-5 °C ... 105 °C (Cable, flexible installation)
	-30 °C ... 105 °C (cable, fixed installation)

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP65
	IP67
	IP68
Ambient temperature (operation)	-25 °C ... 90 °C (Plug / socket)
	-30 °C ... 105 °C (cable, fixed installation)
	-5 °C ... 105 °C (Cable, flexible installation)

## Standards and regulations

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

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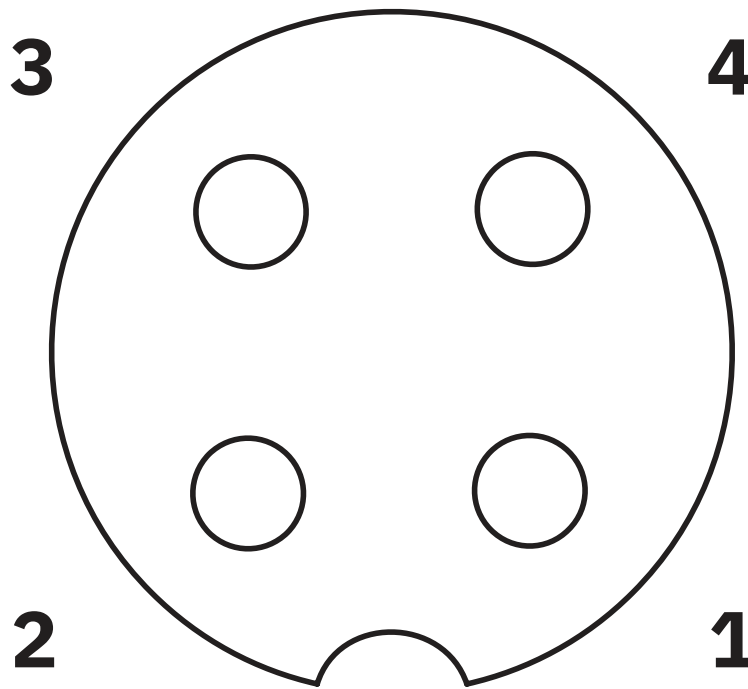


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## Drawings

Schematic diagram



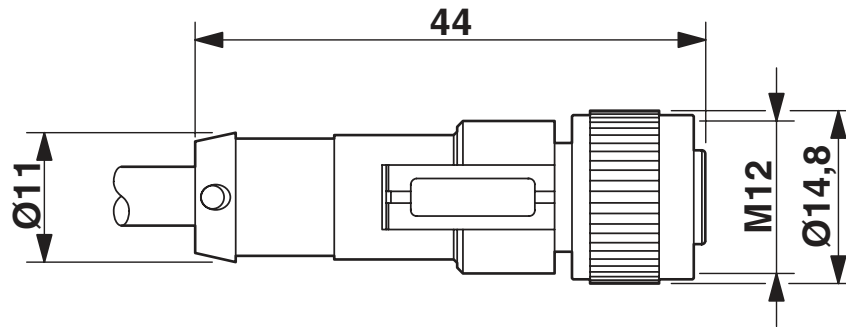
Pin assignment M12 socket, 4-pos., A-coded, view female side

# SAC-4P-M12MS/ 1,0-652/M12FS - Sensor/actuator cable

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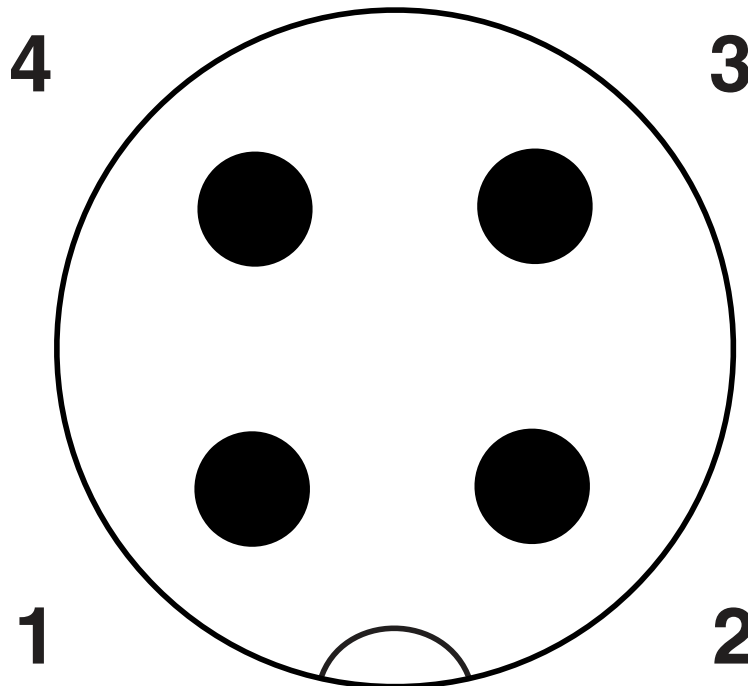
<https://www.phoenixcontact.com/us/products/1432048>

Dimensional drawing



M12 x 1 socket, straight

Schematic diagram



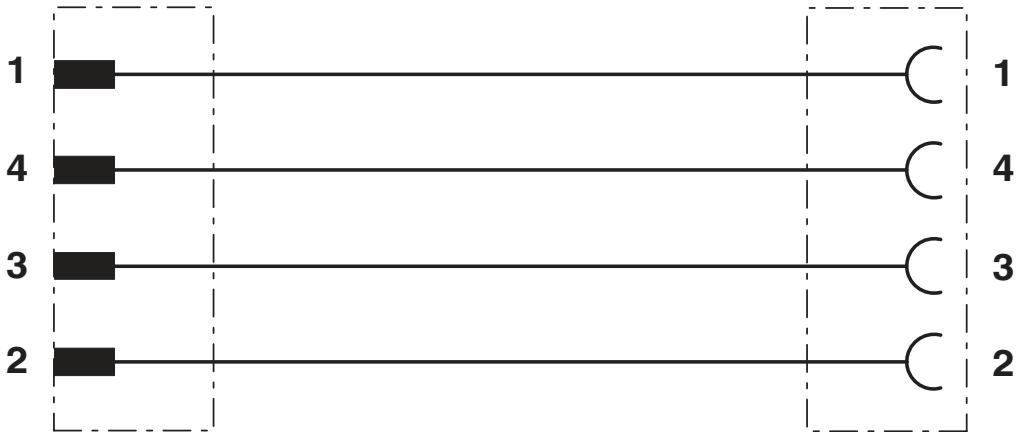
Pin assignment M12 plug, 4-pos., A-coded, view plug side

# SAC-4P-M12MS/ 1,0-652/M12FS - Sensor/actuator cable

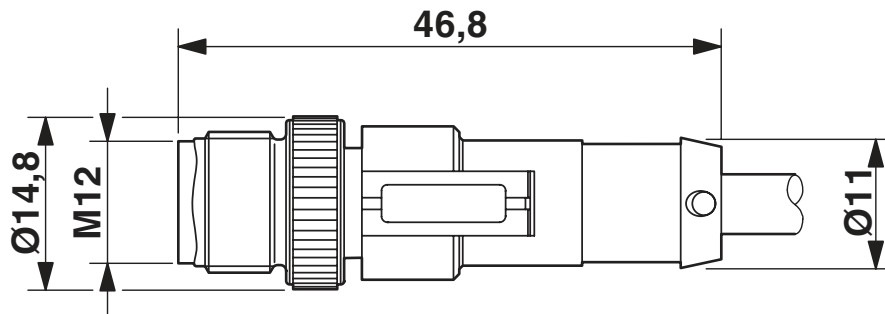
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Circuit diagram



Dimensional drawing



Plug, M12 x 1, straight

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1432048>



### EAC

Approval ID: RU C-DE.BL08.B.00286



### UL Listed

Approval ID: FILE E 221474

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	300 V	4 A	-	-



### cUL Listed

Approval ID: FILE E 221474

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	300 V	4 A	-	-

### cULus Listed



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## Classifications

### ECLASS

ECLASS-11.0	27060311
ECLASS-12.0	27060311
ECLASS-13.0	27060311

### ETIM

ETIM 8.0	EC001855
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## Environmental product compliance

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

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## Accessories

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

1430873

<https://www.phoenixcontact.com/us/products/1430873>

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



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### SAC-M12-EXCLIP-M - Locking clip

1558988

<https://www.phoenixcontact.com/us/products/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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## PROT-M12 MS-PA-CHAIN - Screw plug

1430899

<https://www.phoenixcontact.com/us/products/1430899>

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



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## SAC-M12-EXCLIP-F - Locking clip

1558991

<https://www.phoenixcontact.com/us/products/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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## TSD 04 SAC - Torque screwdriver

1208429

<https://www.phoenixcontact.com/us/products/1208429>



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

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

1212224

<https://www.phoenixcontact.com/us/products/1212224>



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

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

1212600

<https://www.phoenixcontact.com/us/products/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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## SAC BIT M12-D15 - Tool

1208432

<https://www.phoenixcontact.com/us/products/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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