

# SAC-5P-M12MS/20,0-542/M12FS BK - Sensor/actuator cable



1417905

<https://www.phoenixcontact.com/us/products/1417905>

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Sensor/actuator cable, 5-position, PVC, yellow, Plug straight M12, coding: A, on Socket straight M12, coding: A, cable length: 20 m

## Commercial data

Item number	1417905
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF13
Product key	AF1ICC
GTIN	4055626211251
Weight per piece (including packing)	872 g
Weight per piece (excluding packing)	22.22 g
Customs tariff number	85444290
Country of origin	US

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## Technical data

### Product properties

Product type	Sensor/actuator cable
Application	Standard, U.S. cables
Number of positions	5
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, nickel-plated
Outer sheath, material	PVC

### 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

### Mechanical properties

#### Mechanical data

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

Status display	no
Status display present	no

### Connection data

#### Conductor connection

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

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## Connection 1

Type	Plug straight M12
Number of positions	5
Coding type	A

## Connection 2

Type	Socket straight M12
Number of positions	5
Coding type	A

## Cable/line

Cable length	20 m
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## PVC yellow 105 °C [542]

Dimensional drawing	
Cable weight	43 kg/km
UL AWM Style	2517 (105 °C / 300 V)
Number of positions	5
Shielded	no
Cable type	PVC yellow 105 °C [542]
Conductor structure signal line	7x 0.25 mm
AWG signal line	22
Wire diameter incl. insulation	1.27 mm ±0.03 mm
External cable diameter	5.40 mm ±0.2 mm
Outer sheath, material	PVC
External sheath, color	yellow
Conductor material	Tin-plated Cu litz wires
Material, filler	PP
Material wire insulation	PVC
Single wire, color	brown, blue, black, white, gray
Overall twist	5 wires around filler to the core
Max. conductor resistance	max. 50.5 Ω/km (20 °C)
Insulation resistance	≥ (550 M Ohms/m @ 500V)
Nominal voltage, cable	300 V
Minimum bending radius, flexible installation	8 x D
Smallest bending radius, movable installation	44 mm
Flame resistance	FT4

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Other resistance	UV resistant
Special properties	UL standards PLTC and ITC
Ambient temperature (operation)	-30 °C ... 105 °C (cable, fixed installation)
	-5 °C ... 105 °C (Cable, flexible installation)

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP65
	IP67
	IP68
Ambient temperature (operation) (male connector/female connector)	-25 °C ... 90 °C (Plug / socket)
Ambient temperature (operation) (Cable, fixed installation)	-40 °C ... 80 °C (cable, fixed installation)
Ambient temperature (operation) (Cable, 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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## Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



M12 x 1 socket, straight

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Schematic diagram



Pin assignment M12 male connector, 5-pos., A-coded, male side

Schematic diagram



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

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Circuit diagram



Contact assignment of the M12 plug and the M12 socket

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## Approvals

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 <b>UL Listed</b> Approval ID: FILE E 221474				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine				
	125 V	4 A	-	-

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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	31251501
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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	7.669 kg CO2e
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