

# SAC-8P-M12MS/50,0-PUR/M12FS SH - Sensor/actuator cable



1401854

<https://www.phoenixcontact.com/us/products/1401854>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Sensor/actuator cable, 8-position, PUR halogen-free, black-gray RAL 7021, shielded, Plug straight M12, coding: A, on Socket straight M12, coding: A, cable length: 50 m

## Commercial data

Item number	1401854
Packing unit	1 pc
Minimum order quantity	25 pc
Note	Made to order (non-returnable)
Product key	AF1CMA
GTIN	4046356574914
Weight per piece (including packing)	2,649.1 g
Weight per piece (excluding packing)	22.22 g
Country of origin	PL

# SAC-8P-M12MS/50,0-PUR/M12FS SH - Sensor/actuator cable



1401854

<https://www.phoenixcontact.com/us/products/1401854>

## Technical data

### Product properties

Product type	Sensor/actuator cable
Number of positions	8
No. of cable outlets	1
Shielded	yes
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	CuZn
Contact surface material	Ni/Au
Contact carrier material	TPU GF
Material for screw connection	Zinc die-cast, nickel-plated

### Electrical properties

Insulation resistance	$\geq 100 \text{ M}\Omega$
Nominal voltage $U_N$	30 V AC
	30 V DC
Nominal current $I_N$	2 A

### Mechanical properties

#### Mechanical data

Insertion/withdrawal cycles	$\geq 100$
-----------------------------	------------

### Signaling

Status display	no
Status display present	no

### Connector

#### Connection 1

Type	Plug straight M12
Number of positions	8
Coding type	A

#### Connection 2

Type	Socket straight M12
------	---------------------

# SAC-8P-M12MS/50,0-PUR/M12FS SH - Sensor/actuator cable



1401854


<https://www.phoenixcontact.com/us/products/1401854>

Number of positions	8
Coding type	A

## Cable/line

Cable length	50 m
--------------	------

PUR halogen-free black [PUR]

Dimensional drawing	
Cable weight	53 kg/km
UL AWM Style	20549 / 10493 (80°C/300 V)
Number of positions	8
Shielded	yes
Cable type	PUR halogen-free black [PUR]
Conductor structure signal line	32x 0.10 mm
AWG signal line	24
Conductor cross-section	8x 0.25 mm <sup>2</sup> (Signal line)
Wire diameter incl. insulation	1.17 mm ±0.02 mm
External cable diameter	5.90 mm ±0.2 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, green, yellow, gray, pink, blue, red
Thickness, insulation	approx. 0.20 mm
Thickness, outer sheath	approx. 0.50 mm
Overall twist	8 wires around filler to the core
Optical shield covering	85 %
Max. conductor resistance	≤ 78 Ω/km (at 20 °C)
Insulation resistance	≥ 1 GΩ*km (at 20 °C)
Nominal voltage, cable	≤ 300 V AC
Test voltage	≥ 3000 V AC (Spark test)
Test voltage Core/Shield	≥ 2000.00 V AC (for 60 s)
Minimum bending radius, fixed installation	5 x D
Minimum bending radius, flexible installation	10 x D
Smallest bending radius, fixed installation	30 mm
Smallest bending radius, movable installation	59 mm
Dynamic load capacity (bending)	Max. bending cycles: 10000000, Bending radius: 10 x D,

# SAC-8P-M12MS/50,0-PUR/M12FS SH - Sensor/actuator cable



1401854

<https://www.phoenixcontact.com/us/products/1401854>

	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 according to IEC 60754-1
Flame resistance	in acc. with UL FT-2 according to UL 758/1581 (horizontal) in accordance with UL 758/1581 FT2 According to DIN EN 60332-2-2 (20 s)
Resistance to oil	in accordance with IEC 60811-404
Other resistance	hydrolysis and microbe resistant Resistant to salt water low-abrasion partly UV-resistant (in accordance with DIN EN ISO 4892-2-A)
Special properties	Flexible cable conduit capable
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
Ambient temperature (operation)	-25 °C ... 90 °C (Plug / socket) -25 °C ... 80 °C (cable, fixed installation) -5 °C ... 80 °C (Cable, flexible installation)

# SAC-8P-M12MS/50,0-PUR/M12FS SH - Sensor/actuator cable

1401854

<https://www.phoenixcontact.com/us/products/1401854>

## Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



M12 x 1 socket, straight, shielded

# SAC-8P-M12MS/50,0-PUR/M12FS SH - Sensor/actuator cable

1401854

<https://www.phoenixcontact.com/us/products/1401854>

Schematic diagram



Pin assignment M12 plug, 8-pos., view plug side

Schematic diagram



Pin assignment M12 socket, 8-pos., A-coded, view female side

# SAC-8P-M12MS/50,0-PUR/M12FS SH - Sensor/actuator cable



1401854

<https://www.phoenixcontact.com/us/products/1401854>

Circuit diagram



Contact assignment of the M12 plug and the M12 socket

# SAC-8P-M12MS/50,0-PUR/M12FS SH - Sensor/actuator cable



1401854

<https://www.phoenixcontact.com/us/products/1401854>

## Classifications

### ECLASS

ECLASS-13.0	27060311
ECLASS-15.0	27060311

### ETIM

ETIM 10.0	EC001855
-----------	----------

Phoenix Contact 2026 © - all rights reserved  
<https://www.phoenixcontact.com>

Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)