

# SAC-5P-M12MS/20,0-547/M12FS BK - Sensor/actuator cable



1425128

<https://www.phoenixcontact.com/us/products/1425128>

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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                          | 1425128                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | BF13                           |
| Product key                          | AF11FC                         |
| GTIN                                 | 4055626402567                  |
| Weight per piece (including packing) | 1,573.3 g                      |
| Weight per piece (excluding packing) | 1,506.5 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 | $\geq 10 \text{ M}\Omega$ |
| Nominal voltage $U_N$ | 48 V AC                   |
|                       | 60 V DC                   |
| Nominal current $I_N$ | 4 A                       |

### Signaling

|                        |    |
|------------------------|----|
| Status display         | no |
| Status display present | no |

### Connection data

#### Conductor connection

|                   |                        |
|-------------------|------------------------|
| Tightening torque | 0.4 Nm (M12 connector) |
|-------------------|------------------------|

### Connector

#### Connection 1

|                     |                   |
|---------------------|-------------------|
| Type                | Plug straight M12 |
| Number of positions | 5                 |
| Coding type         | A                 |

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## Connection 2

|                     |                     |
|---------------------|---------------------|
| Type                | Socket straight M12 |
| Number of positions | 5                   |
| Coding type         | A                   |

## Cable/line

|              |      |
|--------------|------|
| Cable length | 20 m |
|--------------|------|

## PVC AWG 18 yellow 105°C [547]

|                                             |                                                                                    |
|---------------------------------------------|------------------------------------------------------------------------------------|
| Dimensional drawing                         |  |
| UL AWM Style                                | 2517 (105 °C / 300 V)                                                              |
| Number of positions                         | 5                                                                                  |
| Shielded                                    | no                                                                                 |
| Cable type                                  | PVC AWG 18 yellow 105°C [547]                                                      |
| Conductor structure signal line             | 41x 0.16 mm                                                                        |
| AWG signal line                             | 18                                                                                 |
| Wire diameter incl. insulation              | 1.7 mm ±0.03 mm                                                                    |
| External cable diameter                     | 6.60 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, white, blue, black, gray                                                    |
| Overall twist                               | 5 wires around filler to the core                                                  |
| Nominal voltage, cable                      | 300 V                                                                              |
| Minimum bending radius, fixed installation  | 8 x D                                                                              |
| Smallest bending radius, fixed installation | 53 mm                                                                              |
| Flame resistance                            | FT4                                                                                |
| Special properties                          | UL ITC/PLTC 105 °C<br>CSA AWM I/II A/B FT4 105 °C / 300 V                          |
| Ambient temperature (operation)             | -30 °C ... 105 °C (cable, fixed installation)                                      |

## Environmental and real-life conditions

### Ambient conditions

|      |
|------|
| IP65 |
|------|

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|                                                                   |                                  |
|-------------------------------------------------------------------|----------------------------------|
| Degree of protection                                              | IP67                             |
|                                                                   | IP68                             |
| Ambient temperature (operation) (male connector/female connector) | -25 °C ... 90 °C (Plug / socket) |

## Standards and regulations

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

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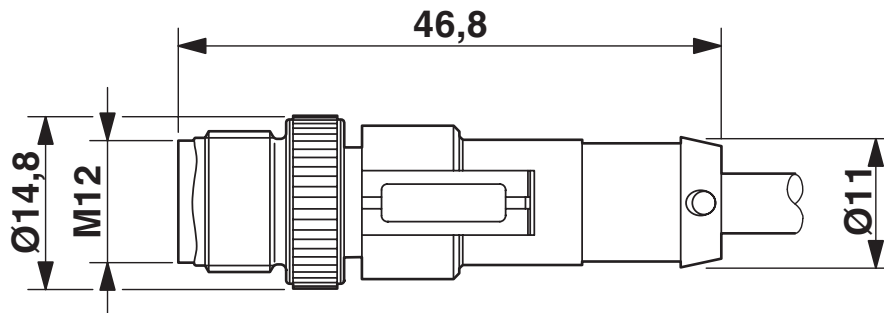


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## Drawings

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><br>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                   | -                 | -                           |

|  <b>cUL Listed</b><br>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 |
|-----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 26121600 |
|-------------|----------|

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## Environmental product compliance

### EU RoHS

|                                         |                    |
|-----------------------------------------|--------------------|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |
|-----------------------------------------|--------------------|

### 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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