

SAC-HZ-5P-MS/0,5-542/FS SCO BK - Sensor/actuator cable



1409599  
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Sensor/actuator cable, 5-position, PVC, yellow, Plug straight M12, coding: A, on Socket straight M12, coding: A, cable length: 0.5 m



Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1409599                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 10 pc                          |
| Note                                 | Made to order (non-returnable) |
| Product key                          | BF1IGC                         |
| GTIN                                 | 4055626018553                  |
| Weight per piece (including packing) | 64.7 g                         |
| Weight per piece (excluding packing) | 22.22 g                        |
| Customs tariff number                | 85444290                       |
| Country of origin                    | US                             |

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## Technical data

### Notes

|         |                                                                                                     |
|---------|-----------------------------------------------------------------------------------------------------|
| General | These cable assemblies are UL/cUL listed for use in Class I, Division 2 (CID2) hazardous locations. |
|---------|-----------------------------------------------------------------------------------------------------|

### Product properties

|                      |                                     |
|----------------------|-------------------------------------|
| Product type         | Sensor/actuator cable               |
| Application          | U.S. cables for hazardous locations |
| 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                                          |
| 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                        |

### 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 |
|------|-------------------|

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|                     |   |
|---------------------|---|
| Number of positions | 5 |
| Coding type         | A |

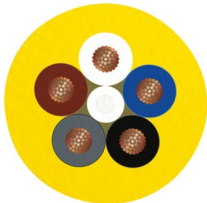
## Connection 2

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

## Cable/line

|              |       |
|--------------|-------|
| Cable length | 0.5 m |
|--------------|-------|

## 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               | 30x 1.30 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                                                                                 |
| Other resistance                              | UV resistant                                                                        |
| Special properties                            | UL standards PLTC and ITC                                                           |
| Ambient temperature (operation)               | -30 °C ... 105 °C (cable, fixed installation)                                       |

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|  |                                                 |
|--|-------------------------------------------------|
|  | -5 °C ... 105 °C (Cable, flexible installation) |
|--|-------------------------------------------------|

## Environmental and real-life conditions

### Ambient conditions

|                                 |                                  |
|---------------------------------|----------------------------------|
| Degree of protection            | IP65                             |
|                                 | IP67                             |
|                                 | IP68                             |
| Ambient temperature (operation) | -25 °C ... 90 °C (Plug / socket) |

## Approvals

### Conformity/Approvals

|                  |                                    |
|------------------|------------------------------------|
| UL, USA / Canada | Class I, Div. 2, Groups A, B, C, D |
|------------------|------------------------------------|

## Standards and regulations

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

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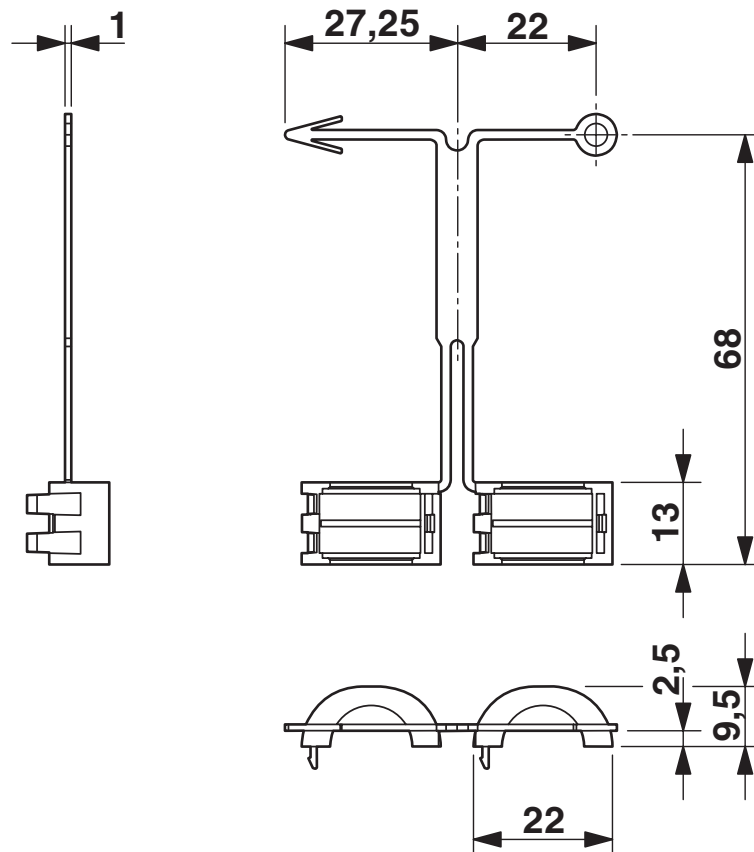


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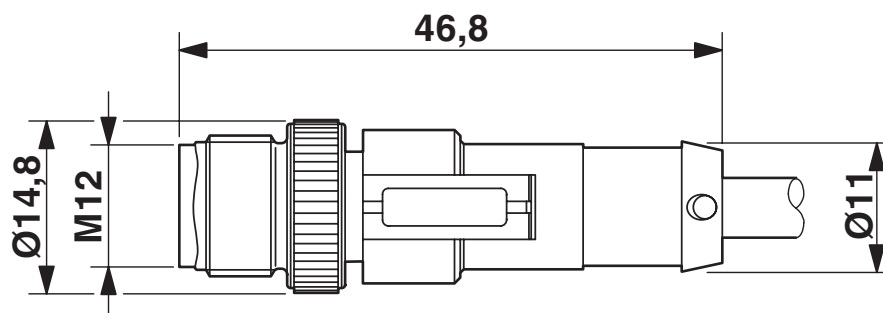
## Drawings

Dimensional drawing



EXCLIP socket

Dimensional drawing



Plug, M12 x 1, straight, shielded

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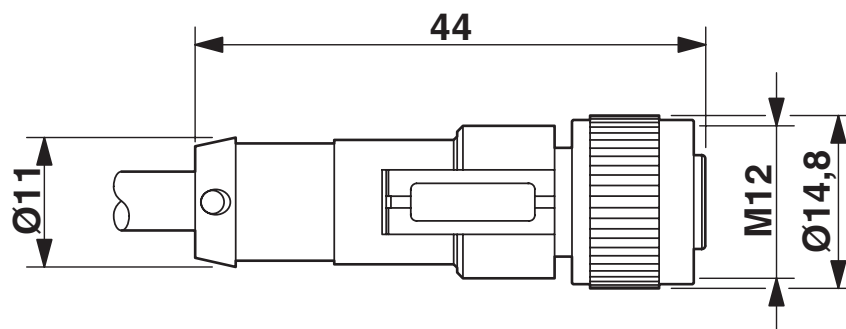
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Schematic diagram



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

Dimensional drawing



M12 x 1 socket, straight

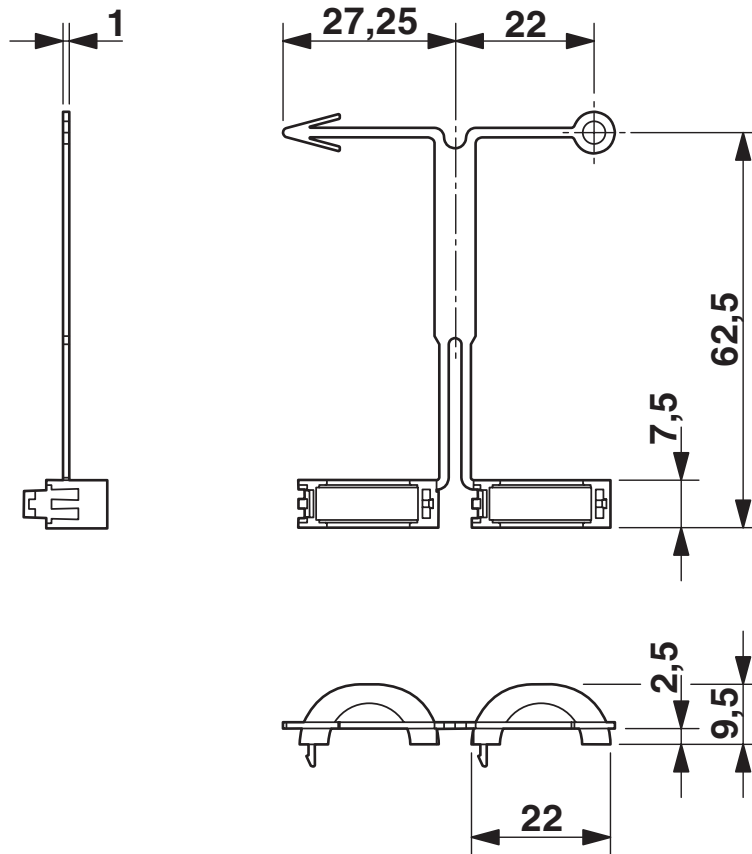
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Dimensional drawing



EXCLIP plug

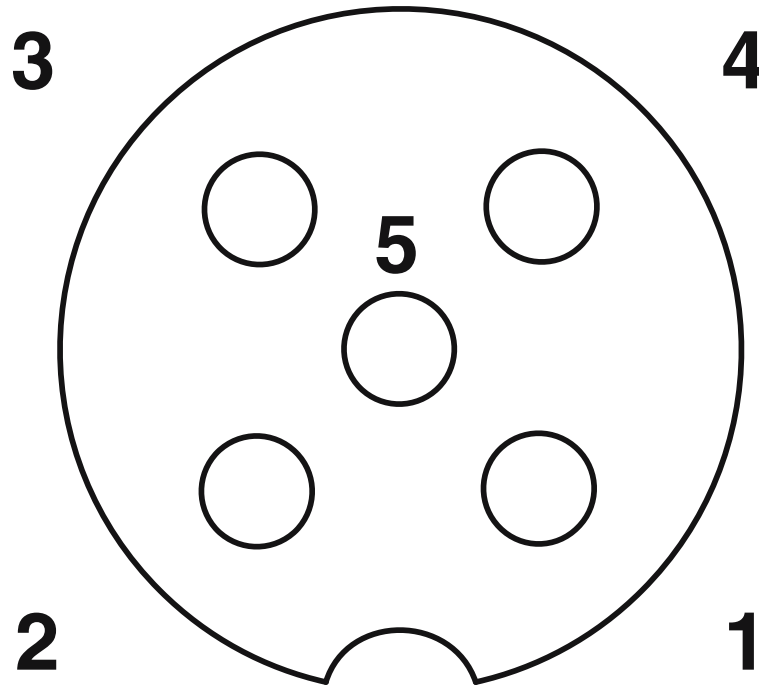
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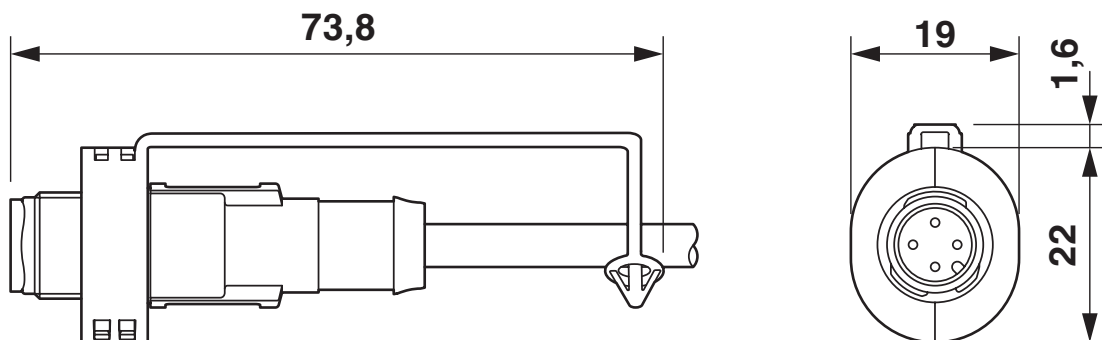
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Schematic diagram



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

Dimensional drawing



EXCLIP mounted plug

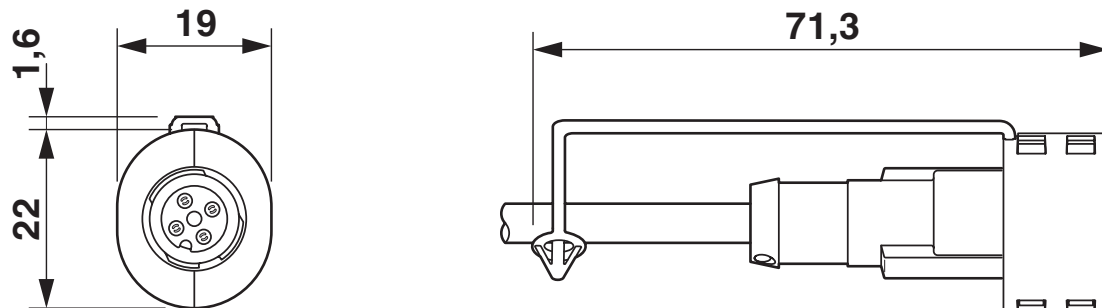
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Dimensional drawing



EXCLIP mounted plug

Circuit diagram



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/pc/products/1409599>



**EAC-RoHS**  
Approval ID: RU D-DE.HB35.B.00387

|                                                                                   |                                                 |                                |                   |                               |
|-----------------------------------------------------------------------------------|-------------------------------------------------|--------------------------------|-------------------|-------------------------------|
|  | <b>cUL Listed</b><br>Approval ID: FILE E 359524 |                                |                   |                               |
|                                                                                   | Nominal voltage U <sub>N</sub>                  | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
|                                                                                   | 150 V                                           | 4 A                            | -                 | -                             |

|                                                                                   |                                                |                                |                   |                               |
|-----------------------------------------------------------------------------------|------------------------------------------------|--------------------------------|-------------------|-------------------------------|
|  | <b>UL Listed</b><br>Approval ID: FILE E 359524 |                                |                   |                               |
|                                                                                   | Nominal voltage U <sub>N</sub>                 | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
|                                                                                   | 150 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 9.0 | 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-50                                                                                                                                                                                                                           |
|                                         | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |
| EU REACH SVHC                           |                                                                                                                                                                                                                                   |
| REACH candidate substance (CAS No.)     | No substance above 0.1 wt%                                                                                                                                                                                                        |

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