

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



1409605

<https://www.phoenixcontact.com/us/products/1409605>

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, 5-position, PVC, yellow, Plug straight M12, coding: A, on free cable end, cable length: 5 m



## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1409605                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | BF13                           |
| Product key                          | AF1IGC                         |
| GTIN                                 | 4055626018591                  |
| Weight per piece (including packing) | 22.22 g                        |
| Weight per piece (excluding packing) | 22.22 g                        |
| Customs tariff number                | 85444290                       |
| Country of origin                    | US                             |

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



1409605

<https://www.phoenixcontact.com/us/products/1409605>

## 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

|                                        |                                             |
|----------------------------------------|---------------------------------------------|
| Material                               | TPE-U (Locking clip)                        |
| 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 | $\geq 100$ |
|-----------------------------|------------|

### Signaling

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

### Connection data

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



1409605

<https://www.phoenixcontact.com/us/products/1409605>

## Conductor connection

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

## Connector

### Connection 1

|             |                   |
|-------------|-------------------|
| Type        | Plug straight M12 |
| Coding type | A                 |

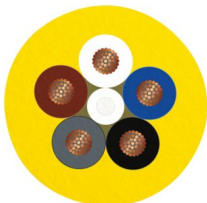
### Connection 2

|      |                |
|------|----------------|
| Type | free cable end |
|------|----------------|

## Cable/line

|              |     |
|--------------|-----|
| Cable length | 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               | 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                                                                                |

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



1409605

<https://www.phoenixcontact.com/us/products/1409605>

|                                 |                                                 |
|---------------------------------|-------------------------------------------------|
| Flame resistance                | FT4                                             |
| 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) (Locking clip)                    | -40 °C ... 65 °C (Locking clip)  |

## 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 |

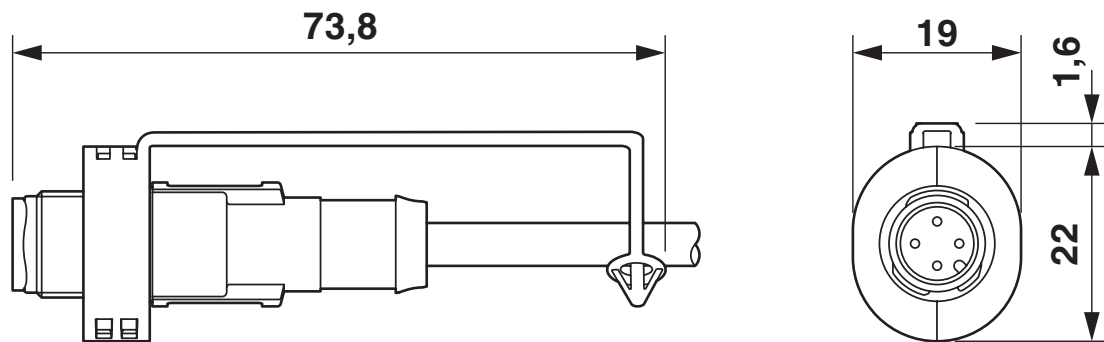
# SAC-HZ-5P-M12MS/ 5,0-542 BK - Sensor/actuator cable

1409605

<https://www.phoenixcontact.com/us/products/1409605>

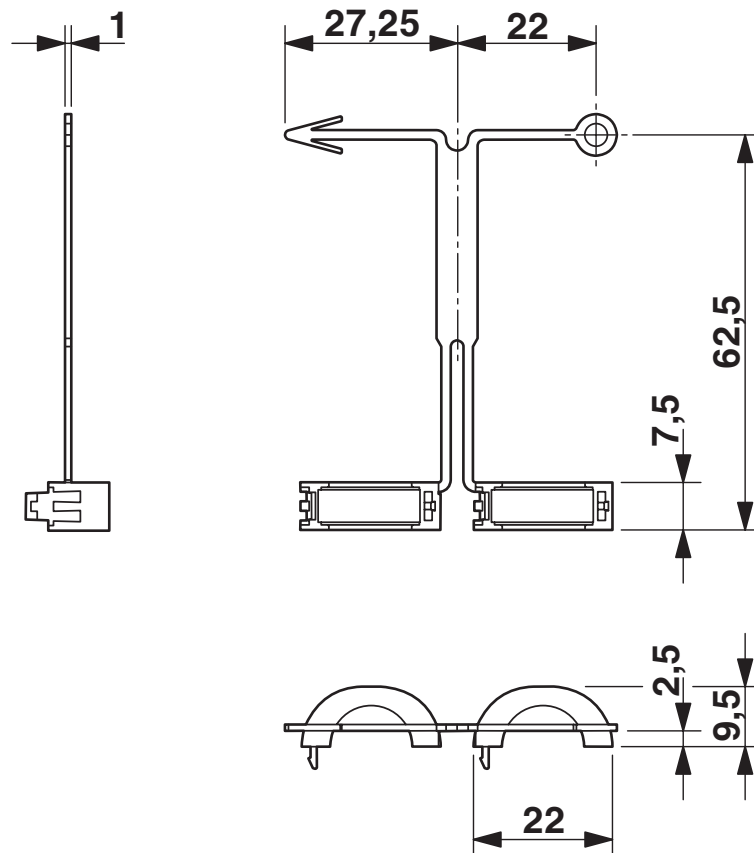
## Drawings

Dimensional drawing



EXCLIP mounted plug

Dimensional drawing



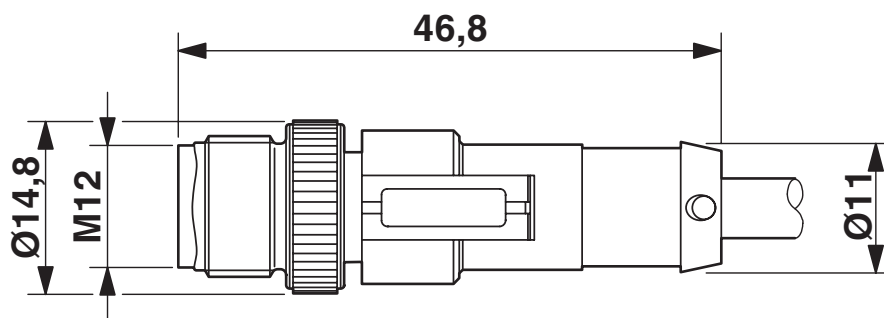
EXCLIP plug

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

1409605

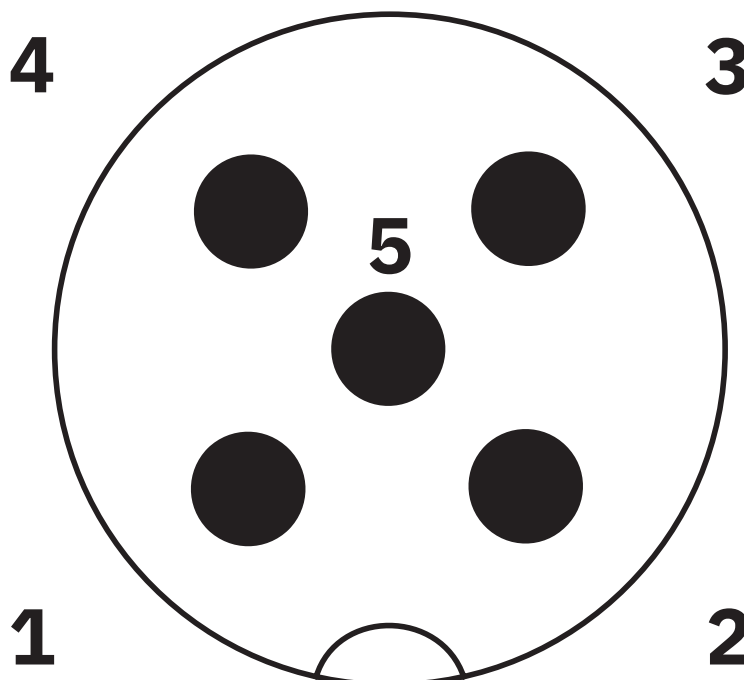
<https://www.phoenixcontact.com/us/products/1409605>

Dimensional drawing



Plug, M12 x 1, straight

Schematic diagram



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

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



1409605

<https://www.phoenixcontact.com/us/products/1409605>

Circuit diagram



Contact assignment of the M12 plug

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



1409605

<https://www.phoenixcontact.com/us/products/1409605>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1409605>

|  <b>cUL Listed</b><br>Approval ID: FILE E 359524 |                       |                       |                   |                             |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                                   | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine                                                                                                                             |                       |                       |                   |                             |
|                                                                                                                                   | 150 V                 | 4 A                   | -                 | -                           |

|  <b>UL Listed</b><br>Approval ID: FILE E 359524 |                       |                       |                   |                             |
|----------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                                  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine                                                                                                                            |                       |                       |                   |                             |
|                                                                                                                                  | 150 V                 | 4 A                   | -                 | -                           |

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



1409605

<https://www.phoenixcontact.com/us/products/1409605>

## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27060311 |
| ECLASS-15.0 | 27060311 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC001855 |
|----------|----------|

### UNSPSC

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

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



1409605

<https://www.phoenixcontact.com/us/products/1409605>

## 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% |
|-------------------------------------|----------------------------|

Phoenix Contact 2025 © - 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)