

# SAC-HZ-5P-M12MS/1,5-542/M12FRSH - Sensor/actuator cable



1409580

<https://www.phoenixcontact.com/us/products/1409580>

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, shielded, Plug straight M12, coding: A, on  
Socket angled M12, coding: A, cable length: 1.5 m



## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1409580                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | BF13                           |
| Product key                          | AF1IGC                         |
| GTIN                                 | 4055626018362                  |
| 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/1,5-542/M12FRSH - Sensor/actuator cable



1409580

<https://www.phoenixcontact.com/us/products/1409580>

## 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             | 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                       | 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

# SAC-HZ-5P-M12MS/1,5-542/M12FRSH - Sensor/actuator cable



1409580

<https://www.phoenixcontact.com/us/products/1409580>

## Connection 1

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

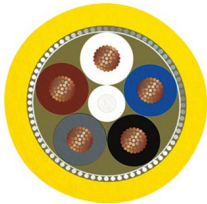
## Connection 2

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

## Cable/line

|              |       |
|--------------|-------|
| Cable length | 1.5 m |
|--------------|-------|

## PVC yellow 105 °C [542]

|                                               |                                                                                      |
|-----------------------------------------------|--------------------------------------------------------------------------------------|
| Dimensional drawing                           |  |
| Cable weight                                  | 57 kg/km                                                                             |
| UL AWM Style                                  | 2517 (105 °C / 300 V)                                                                |
| Number of positions                           | 5                                                                                    |
| Shielded                                      | yes                                                                                  |
| 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                       | 5.90 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                                                    |
| Optical shield covering                       | 85 %                                                                                 |
| 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 | 12 x D                                                                               |

# SAC-HZ-5P-M12MS/1,5-542/M12FRSH - Sensor/actuator cable



1409580

<https://www.phoenixcontact.com/us/products/1409580>

|                                               |                                                 |
|-----------------------------------------------|-------------------------------------------------|
| Smallest bending radius, movable installation | 71 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)   |
|                                               | -5 °C ... 105 °C (Cable, flexible installation) |

## Environmental and real-life conditions

### Ambient conditions

|                                                                   |                                  |
|-------------------------------------------------------------------|----------------------------------|
| Degree of protection                                              | IP65                             |
|                                                                   | IP67                             |
| Ambient temperature (operation) (male connector/female connector) | -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 |

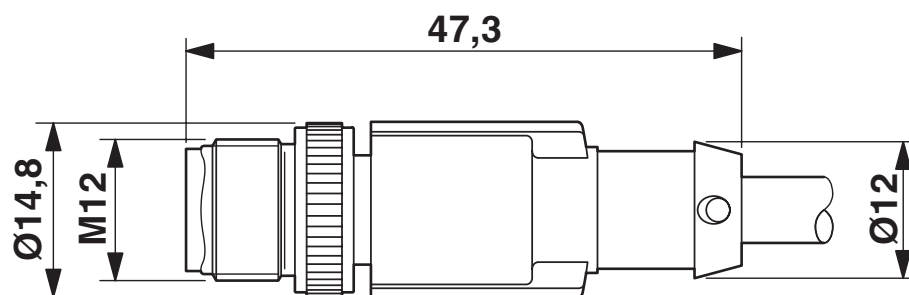
# SAC-HZ-5P-M12MS/1,5-542/M12FRSH - Sensor/actuator cable

1409580

<https://www.phoenixcontact.com/us/products/1409580>

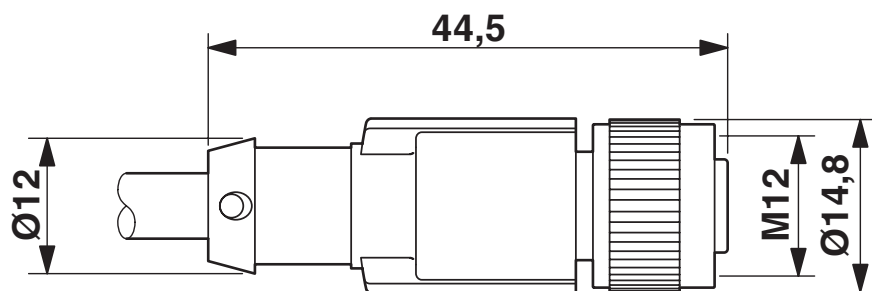
## Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



M12 x 1 socket, straight, shielded

# SAC-HZ-5P-M12MS/1,5-542/M12FRSH - Sensor/actuator cable



1409580

<https://www.phoenixcontact.com/us/products/1409580>

Dimensional drawing



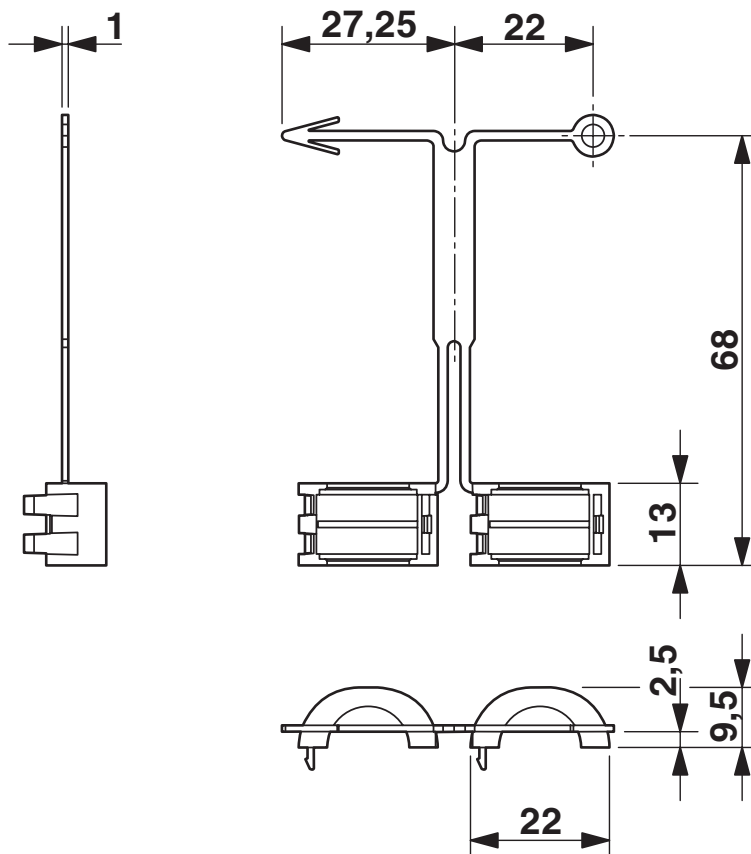
EXCLIP plug

# SAC-HZ-5P-M12MS/1,5-542/M12FRSH - Sensor/actuator cable

1409580

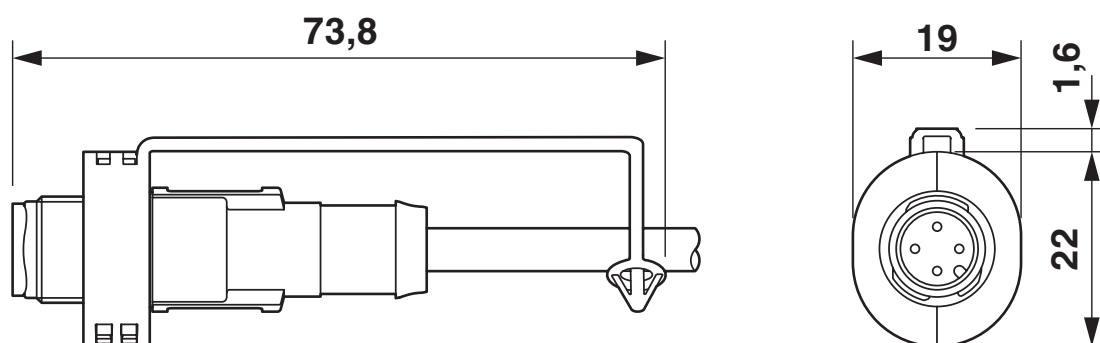
<https://www.phoenixcontact.com/us/products/1409580>

Dimensional drawing



EXCLIP socket

Dimensional drawing



EXCLIP mounted plug

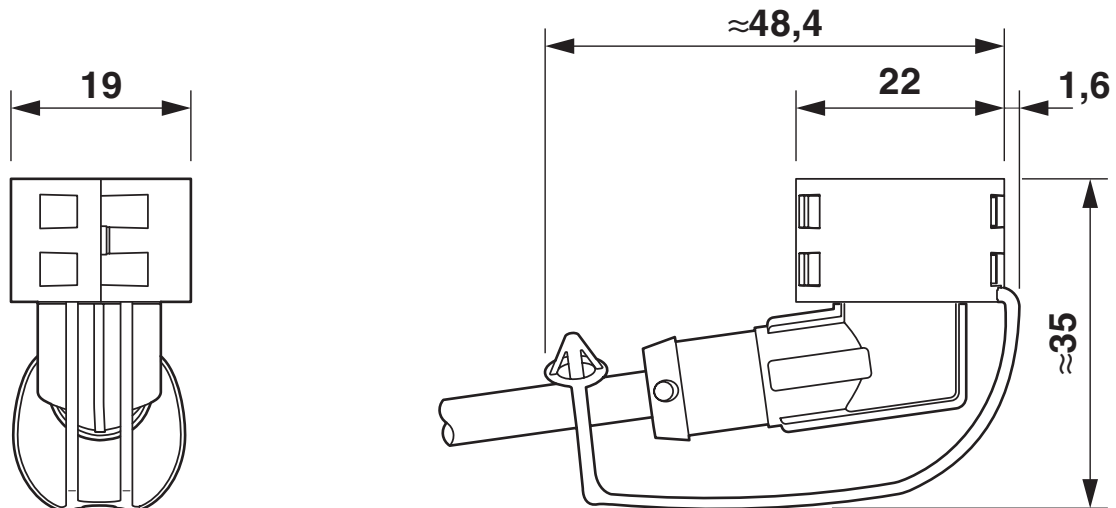
# SAC-HZ-5P-M12MS/1,5-542/M12FRSH - Sensor/actuator cable



1409580

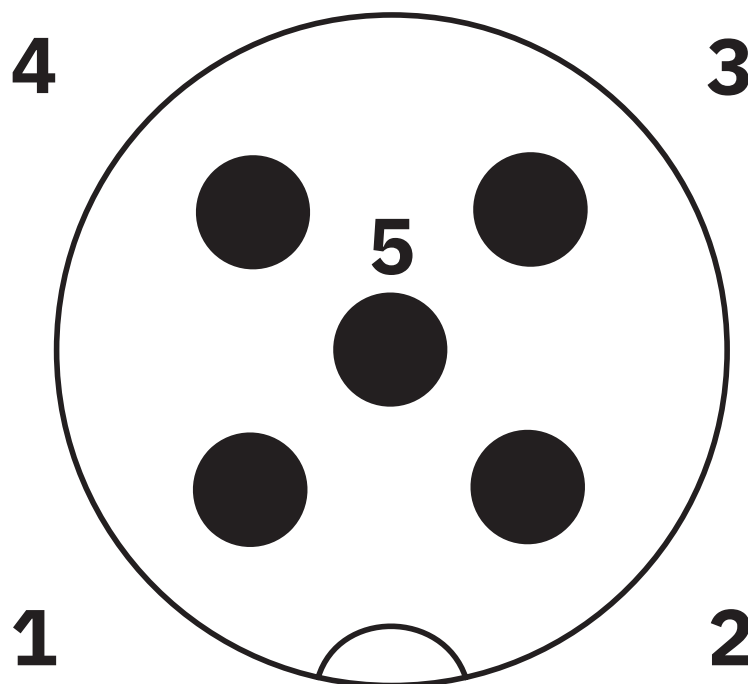
<https://www.phoenixcontact.com/us/products/1409580>

Dimensional drawing



EXCLIP mounted plug

Schematic diagram



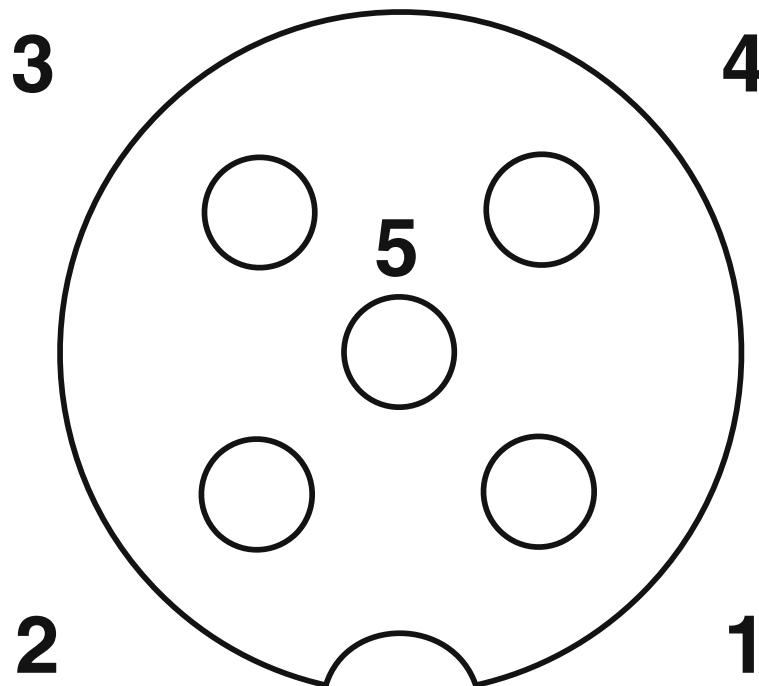
Pin assignment M12 male connector, 5-pos., A-coded, male side

# SAC-HZ-5P-M12MS/1,5-542/M12FRSH - Sensor/actuator cable

1409580

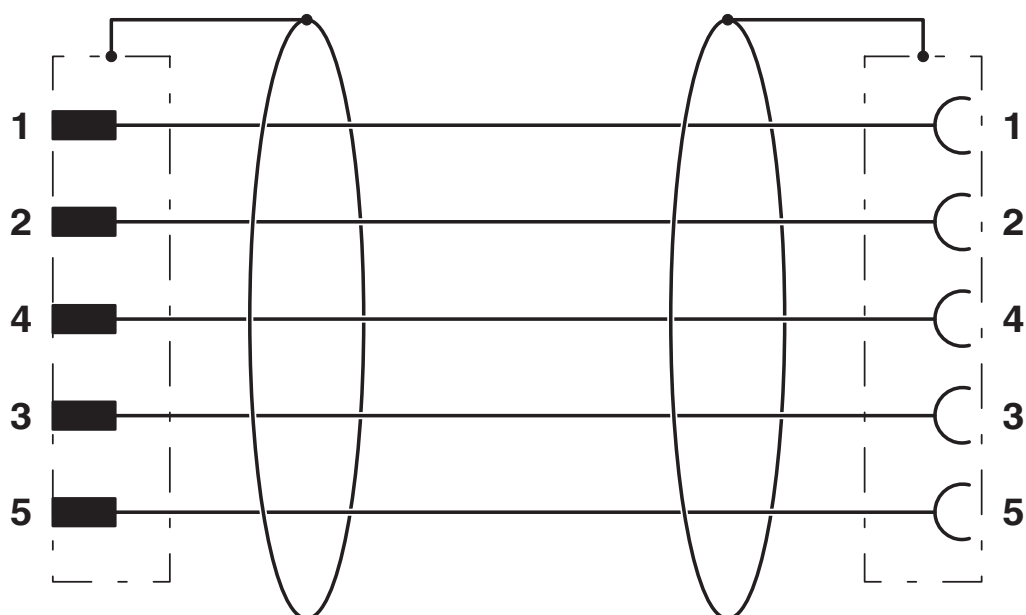
<https://www.phoenixcontact.com/us/products/1409580>

Schematic diagram



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

Circuit diagram



Contact assignment of the M12 plug and the M12 socket

# SAC-HZ-5P-M12MS/1,5-542/M12FRSH - Sensor/actuator cable



1409580

<https://www.phoenixcontact.com/us/products/1409580>

## Classifications

### ECLASS

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

### ETIM

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

### UNSPSC

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

# SAC-HZ-5P-M12MS/1,5-542/M12FRSH - Sensor/actuator cable



1409580  
<https://www.phoenixcontact.com/us/products/1409580>

## Environmental product compliance

|                                        |                                          |
|----------------------------------------|------------------------------------------|
| 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)