

# SAC-8P-M12MR/ 1,5-542/M12FSSH - Sensor/actuator cable



1406074

<https://www.phoenixcontact.com/us/products/1406074>

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Sensor/actuator cable, 8-position, PVC, yellow, shielded, Plug angled M12, coding: A, on Socket straight M12, coding: A, cable length: 1.5 m

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1406074                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | BF13                           |
| Product key                          | AF1IDD                         |
| GTIN                                 | 4046356799737                  |
| Weight per piece (including packing) | 119.2 g                        |
| Weight per piece (excluding packing) | 119.2 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  | 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                |
| Outer sheath, material                 | PVC                                         |

### 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 |

### Connection data

#### Conductor connection

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

### Connector

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## Connection 1

|                     |                 |
|---------------------|-----------------|
| Type                | Plug angled M12 |
| Number of positions | 8               |
| Coding type         | A               |

## Connection 2

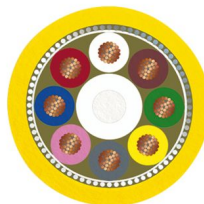
|                     |                     |
|---------------------|---------------------|
| Type                | Socket straight M12 |
| Number of positions | 8                   |
| Coding type         | A                   |

## Cable/line

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

## PVC yellow 105 °C [542]

### Dimensional drawing



|                                               |                                                    |
|-----------------------------------------------|----------------------------------------------------|
| Cable weight                                  | 58 kg/km                                           |
| UL AWM Style                                  | 2517 (105 °C / 300 V)                              |
| Number of positions                           | 8                                                  |
| Shielded                                      | yes                                                |
| Cable type                                    | PVC yellow 105 °C [542]                            |
| Conductor structure signal line               | 7x 0.20 mm                                         |
| AWG signal line                               | 24                                                 |
| Wire diameter incl. insulation                | 1.12 mm ±0.03 mm                                   |
| External cable diameter                       | 6.30 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                            | white, brown, green, yellow, gray, pink, blue, red |
| Overall twist                                 | 8 wires around filler to the core                  |
| Optical shield covering                       | 85 %                                               |
| Max. conductor resistance                     | max. 79.7 Ω/km (20 °C)                             |
| Insulation resistance                         | ≥ (550 M Ohms/m @ 500V)                            |
| Nominal voltage, cable                        | 300 V                                              |
| Minimum bending radius, flexible installation | 12 x D                                             |
| Smallest bending radius, movable installation | 76 mm                                              |

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|                                 |                                                 |
|---------------------------------|-------------------------------------------------|
| Flame resistance                | FT1, VW-1                                       |
| Other resistance                | UV resistant                                    |
| 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) |

## Standards and regulations

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

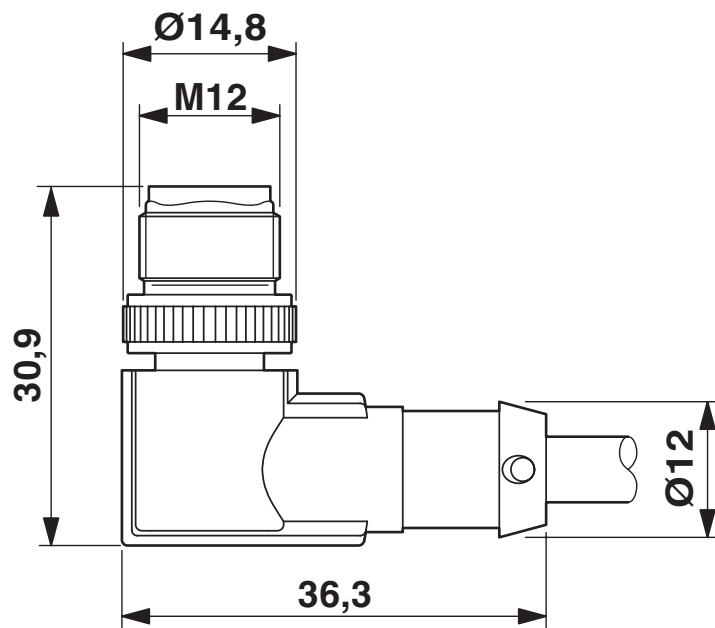
# SAC-8P-M12MR/ 1,5-542/M12FSSH - Sensor/actuator cable

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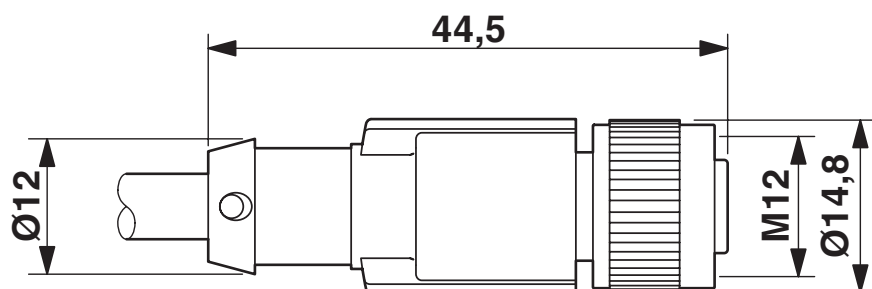
## Drawings

Dimensional drawing



M12 x 1 male plug, angled, shielded

Dimensional drawing



M12 x 1 socket, straight, shielded

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Schematic diagram



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

Schematic diagram



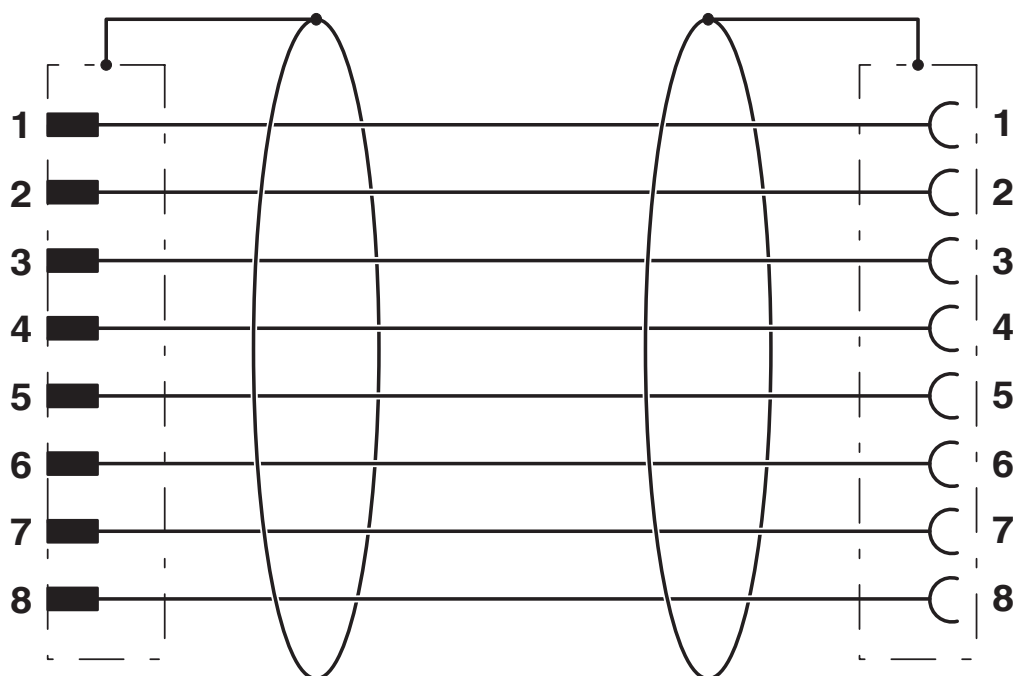
Pin assignment M12 socket, 8-pos., A-coded, view female side

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Circuit diagram



Contact assignment of the M12 plug and the M12 socket

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1406074>

| <div> <b>UL Listed</b><br/>Approval ID: FILE E 221474</div> |                                |                                |                   |                               |
|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------------------------------|-------------------|-------------------------------|
|                                                                                                                                              | Nominal voltage U <sub>N</sub> | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
| keine                                                                                                                                        |                                |                                |                   |                               |
|                                                                                                                                              | 30 V                           | 2 A                            | -                 | -                             |

| <div> <b>cUL Listed</b><br/>Approval ID: FILE E 221474</div> |                                |                                |                   |                               |
|-----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------------------------------|-------------------|-------------------------------|
|                                                                                                                                               | Nominal voltage U <sub>N</sub> | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
| keine                                                                                                                                         |                                |                                |                   |                               |
|                                                                                                                                               | 30 V                           | 2 A                            | -                 | -                             |

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27060311 |
| ECLASS-15.0 | 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-E                                   |
|                                         | No hazardous substances above the limits |
| EU REACH SVHC                           |                                          |
| REACH candidate substance (CAS No.)     | No substance above 0.1 wt%               |
| EF3.0 Climate Change                    |                                          |
| CO2e kg                                 | 2.143 kg CO2e                            |

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