

# SAC-8P-M12MR/ 2,0-542 SH BK - Sensor/actuator cable



1406080

<https://www.phoenixcontact.com/us/products/1406080>

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Sensor/actuator cable, 8-position, PVC, yellow, shielded, Plug angled M12, coding: A, on free cable end, cable length: 2 m

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1406080       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | BF13          |
| Product key                          | AF1IDD        |
| GTIN                                 | 4046356799676 |
| Weight per piece (including packing) | 138.8 g       |
| Weight per piece (excluding packing) | 133.8 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  |
| 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

#### Connection 1

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


## Connection 2

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

## Cable/line

|              |     |
|--------------|-----|
| Cable length | 2 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  |
| Flame resistance                              | FT1, VW-1  |
| Other resistance                              | UV resistant   |
| Ambient temperature (operation)               | -30 °C ... 105 °C (cable, fixed installation)<br>-5 °C ... 105 °C (Cable, flexible installation) |

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## 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 |

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## Drawings

Dimensional drawing



M12 x 1 male plug, angled, shielded

Schematic diagram



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

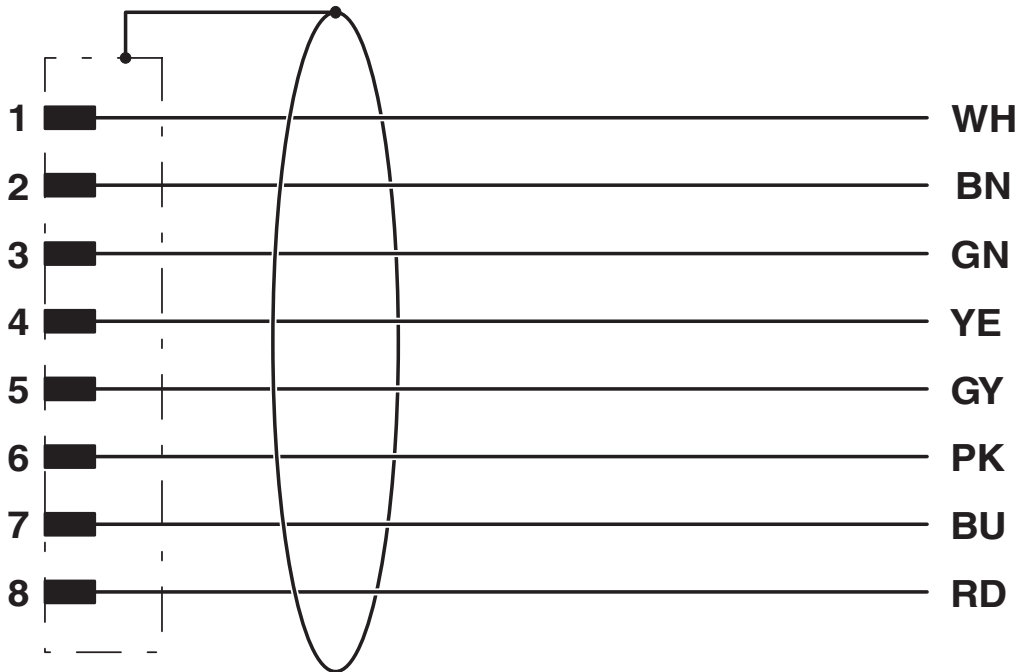
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Circuit diagram



Contact assignment of the M12 plug

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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  |                       |                       |                   |                             |
|  | 30 V                  | 2 A                   | -                 | -                           |

|  <b>cUL Listed</b><br>Approval ID: FILE E 221474 |                       |                       |                   |                             |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
|   | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
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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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