

# SAC-5P-M12MS/ 3,0-PUR/M12FS VW - Sensor/actuator cable



1400293

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Sensor/actuator cable, 5-position, PUR halogen-free, irradiated, orange RAL 2003, Plug straight M12, coding: A, on Socket straight M12, coding: A, cable length: 3 m, Customer version

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1400293                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 25 pc                          |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | BF03                           |
| Product key                          | AF1CDA                         |
| GTIN                                 | 4046356483483                  |
| Weight per piece (including packing) | 136 g                          |
| Weight per piece (excluding packing) | 130.4 g                        |
| Customs tariff number                | 85444290                       |
| Country of origin                    | PL                             |

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## Technical data

### Product properties

|                      |                       |
|----------------------|-----------------------|
| Product type         | Sensor/actuator cable |
| Number of positions  | 5                     |
| No. of cable outlets | 1                     |
| 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                |

### 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 |

### Connector

#### Connection 1

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

#### Connection 2

|                     |                     |
|---------------------|---------------------|
| Type                | Socket straight M12 |
| Number of positions | 5                   |

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|             |   |
|-------------|---|
| Coding type | A |
|-------------|---|

## Cable/line

|              |     |
|--------------|-----|
| Cable length | 3 m |
|--------------|-----|

### PUR irradiated halogen-free orange [150]

|                                               |                                                                                                                                 |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Dimensional drawing                           |                                               |
| Number of positions                           | 5                                                                                                                               |
| Shielded                                      | no                                                                                                                              |
| Cable type                                    | PUR irradiated halogen-free orange [150]                                                                                        |
| Conductor structure signal line               | 42x 0.10 mm                                                                                                                     |
| AWG signal line                               | 22                                                                                                                              |
| Conductor structure, voltage supply           | 24x 0.15 mm                                                                                                                     |
| AWG power supply                              | 20                                                                                                                              |
| Conductor cross section                       | 4x 0.34 mm <sup>2</sup> (Signal line)<br>1x 0.5 mm <sup>2</sup> (PE connection)                                                 |
| External cable diameter                       | 5.20 mm ±0.2 mm                                                                                                                 |
| Outer sheath, material                        | PUR                                                                                                                             |
| External sheath, color                        | orange RAL 2003                                                                                                                 |
| Conductor material                            | Bare Cu litz wires                                                                                                              |
| Material wire insulation                      | PE                                                                                                                              |
| Single wire, color                            | brown, white, blue, black, green-yellow                                                                                         |
| Overall twist                                 | 5 cores, twisted                                                                                                                |
| Max. conductor resistance                     | ≤ 57.5 Ω/km (with 0.34 mm <sup>2</sup> conductor cross-section)<br>≤ 39 Ω/km (with 0.5 mm <sup>2</sup> conductor cross-section) |
| Nominal voltage, cable                        | 250 V (AC)                                                                                                                      |
| Test voltage                                  | 2000 V (50 Hz, 5 minutes)                                                                                                       |
| Smallest bending radius, fixed installation   | 20 mm                                                                                                                           |
| Smallest bending radius, movable installation | 30 mm                                                                                                                           |
| Dynamic load capacity (bending)               | Max. bending cycles: 5000000, Bending radius: 52 mm,<br>Traversing path: 10 m, Traversing rate: 3 m/s                           |
| Halogen-free                                  | The cable is halogen-free                                                                                                       |
| Flame resistance                              | DIN VDE 0472 part 804, test type B                                                                                              |
| Other resistance                              | hydrolysis and microbe resistant<br>UV resistant<br>Resistant to welding splashes                                               |
| Special properties                            | Silicone-free                                                                                                                   |

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|                                 |                                                  |
|---------------------------------|--------------------------------------------------|
|                                 | Irradiated                                       |
| Ambient temperature (operation) | -50 °C ... 105 °C (cable, fixed installation)    |
|                                 | -40 °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) (Cable, fixed installation)       | -50 °C ... 105 °C (cable, fixed installation)    |
| Ambient temperature (operation) (flexible installation)           | -40 °C ... 105 °C (Cable, flexible installation) |

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## Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



M12 x 1 socket, straight

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Schematic diagram



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

Schematic diagram



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

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Circuit diagram



Contact assignment of the M12 plug and the M12 socket

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## Approvals

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|  <b>UL Listed</b><br>Approval ID: FILE E 221474 | Nominal voltage U <sub>N</sub> | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
|----------------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------------------------------|-------------------|-------------------------------|
|                                                                                                                                  | keine                          |                                |                   |                               |
|                                                                                                                                  | 125 V                          | 4 A                            | -                 | -                             |

|  <b>cUL Listed</b><br>Approval ID: FILE E 221474 | Nominal voltage U <sub>N</sub> | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------------------------------|-------------------|-------------------------------|
|                                                                                                                                   | keine                          |                                |                   |                               |
|                                                                                                                                   | 125 V                          | 4 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% |
|-------------------------------------|----------------------------|

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