

## Series PE6

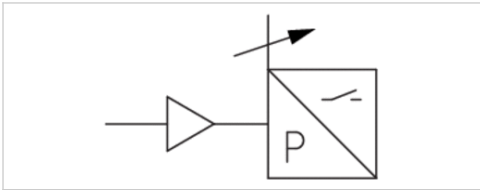


### AVENTICS™ Series PE6



# Pressure sensor, Series PE6

- Operating pressure -1 ... 0 ... 10 bar
- electronic
- with sensor element based on piezo resistance
- Electr. connection Plug M8x1 4-pin
- Compressed air connection Flange with O-ring Ø 1,2x1



|                                       |                            |
|---------------------------------------|----------------------------|
| Type                                  | electronic                 |
| Function                              | 2 x PNP                    |
| Compressed air connection             | Flange with O-ring Ø 1,2x1 |
| Working pressure min./max.            | See table below            |
| Ambient temperature min./max.         | 0 ... 60 °C                |
| Medium temperature min./max.          | 0 ... 50 °C                |
| Medium                                | Compressed air             |
| Max. oil content of compressed air    | 1 mg/m <sup>3</sup>        |
| Measurement                           | Relative pressure          |
| Display                               | LED                        |
| Switching logic                       | NO (make contact)          |
| Operating pressure display            | 2 LED                      |
| Shock resistance max.                 | 10 g                       |
| Vibration resistance                  | 10 - 55 Hz, 0,1 mm         |
| Repeatability (% of full scale value) | ± 1 %                      |
| Switching time                        | 2 ms                       |
| Switching point                       | adjustable 0 ... 100%      |
| Resetting point                       | adjustable 0 ... 100%      |
| Quiescent current consumption         | 20 mA                      |
| Short circuit resistance              | clocking                   |
| Mounting types                        | via flange                 |
| Protection class                      | IP40                       |
| Electr. connection                    | Plug M8x1 4-pin            |
| Weight                                | 0.006 kg                   |

## Technical data

| Part No.   | Type                 | Operating pressure range |  | Protection against overpressure |
|------------|----------------------|--------------------------|--|---------------------------------|
|            |                      | min./max.                |  |                                 |
| R412007880 | PE6-P2-L HYST. FEST  | -1 ... 0 bar             |  | 5 bar                           |
| R412007881 | PE6-P2-L HYST EINST  | -1 ... 0 bar             |  | 5 bar                           |
| R412007882 | PE6-P2-S HYST FEST   | -1 ... 0 bar             |  | 5 bar                           |
| R412007883 | PE6-P2-S HYST EINST  | -1 ... 0 bar             |  | 5 bar                           |
| R412007884 | PE6-P2-L HYST. FEST  | 0 ... 10 bar             |  | 15 bar                          |
| R412007885 | PE6-P2-L HYST. EINST | 0 ... 10 bar             |  | 15 bar                          |
| R412007886 | PE6-P2-S HYST. FEST  | 0 ... 10 bar             |  | 15 bar                          |
| R412007887 | PE6-P2-S HYST. EINST | 0 ... 10 bar             |  | 15 bar                          |

| Part No.   | Output signal | Precision (% of full scale value) | Hysteresis                   |
|------------|---------------|-----------------------------------|------------------------------|
|            | digital       |                                   |                              |
| R412007880 | 2 x PNP       | ± 3 %                             | 2% of the final value, fixed |
| R412007881 | 2 x PNP       | ± 3 %                             | adjustable                   |

| Part No.   | Output signal | Precision (% of full scale value) | Hysteresis                   |
|------------|---------------|-----------------------------------|------------------------------|
|            | digital       |                                   |                              |
| R412007882 | 2 x PNP       | $\pm 3 \%$                        | 2% of the final value, fixed |
| R412007883 | 2 x PNP       | $\pm 3 \%$                        | adjustable                   |
| R412007884 | 2 x PNP       | $\pm 3 \%$                        | 2% of the final value, fixed |
| R412007885 | 2 x PNP       | $\pm 3 \%$                        | adjustable                   |
| R412007886 | 2 x PNP       | $\pm 3 \%$                        | 2% of the final value, fixed |
| R412007887 | 2 x PNP       | $\pm 3 \%$                        | adjustable                   |

| Part No.   | Mounting orientation |
|------------|----------------------|
| R412007880 | L (horizontal)       |
| R412007881 | L (horizontal)       |
| R412007882 | S (vertical)         |
| R412007883 | S (vertical)         |
| R412007884 | L (horizontal)       |
| R412007885 | L (horizontal)       |
| R412007886 | S (vertical)         |
| R412007887 | S (vertical)         |

## Technical information

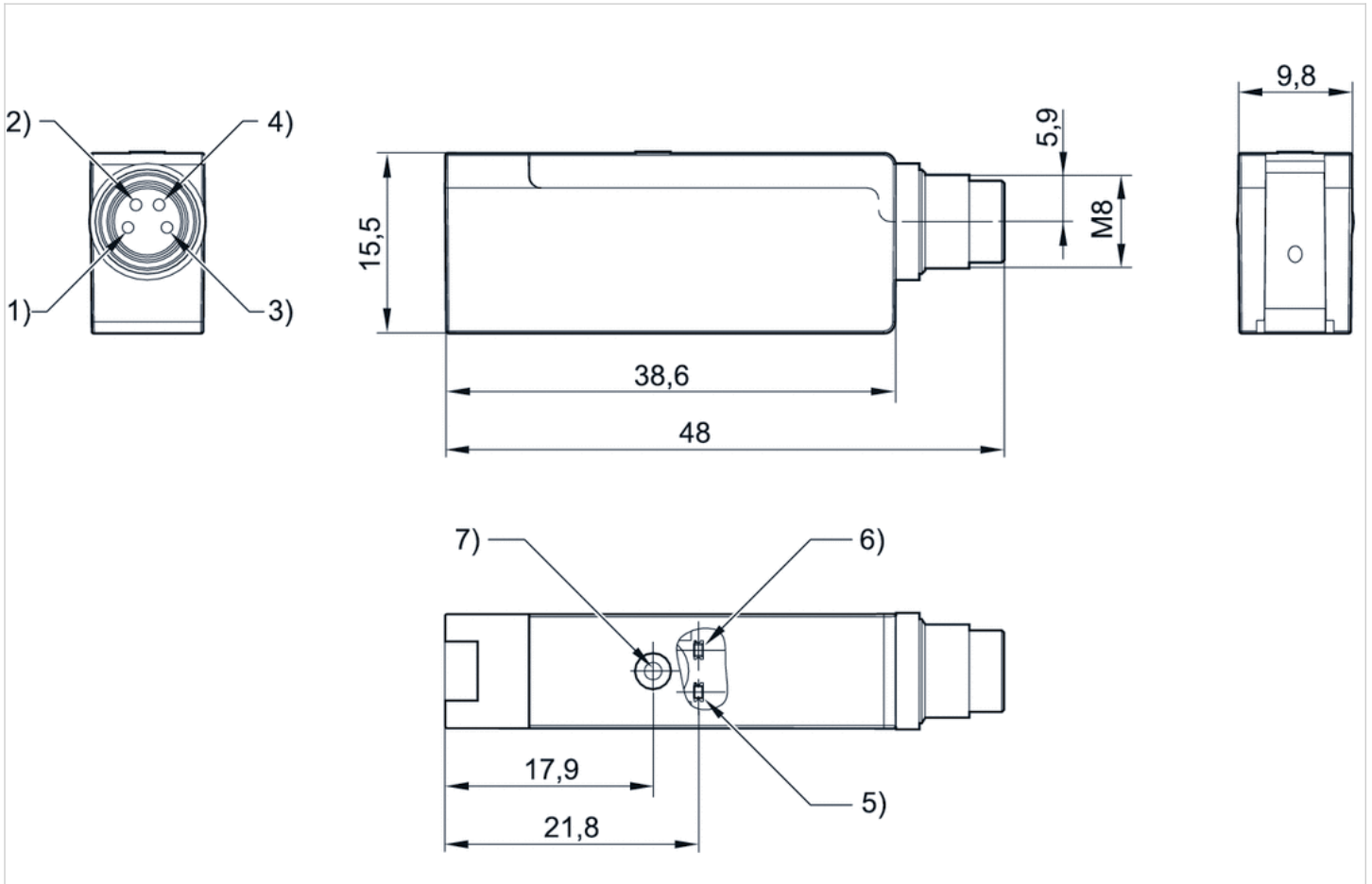
Notice: This product may only be operated with oil-free, dry compressed air.  
Flange plate with screws and seals in scope of delivery

## Technical information

| Material           |                                |
|--------------------|--------------------------------|
| Housing            | Polycarbonate                  |
| Seals              | Acrylonitrile butadiene rubber |
| Electr. connection | Brass, nickel-plated           |

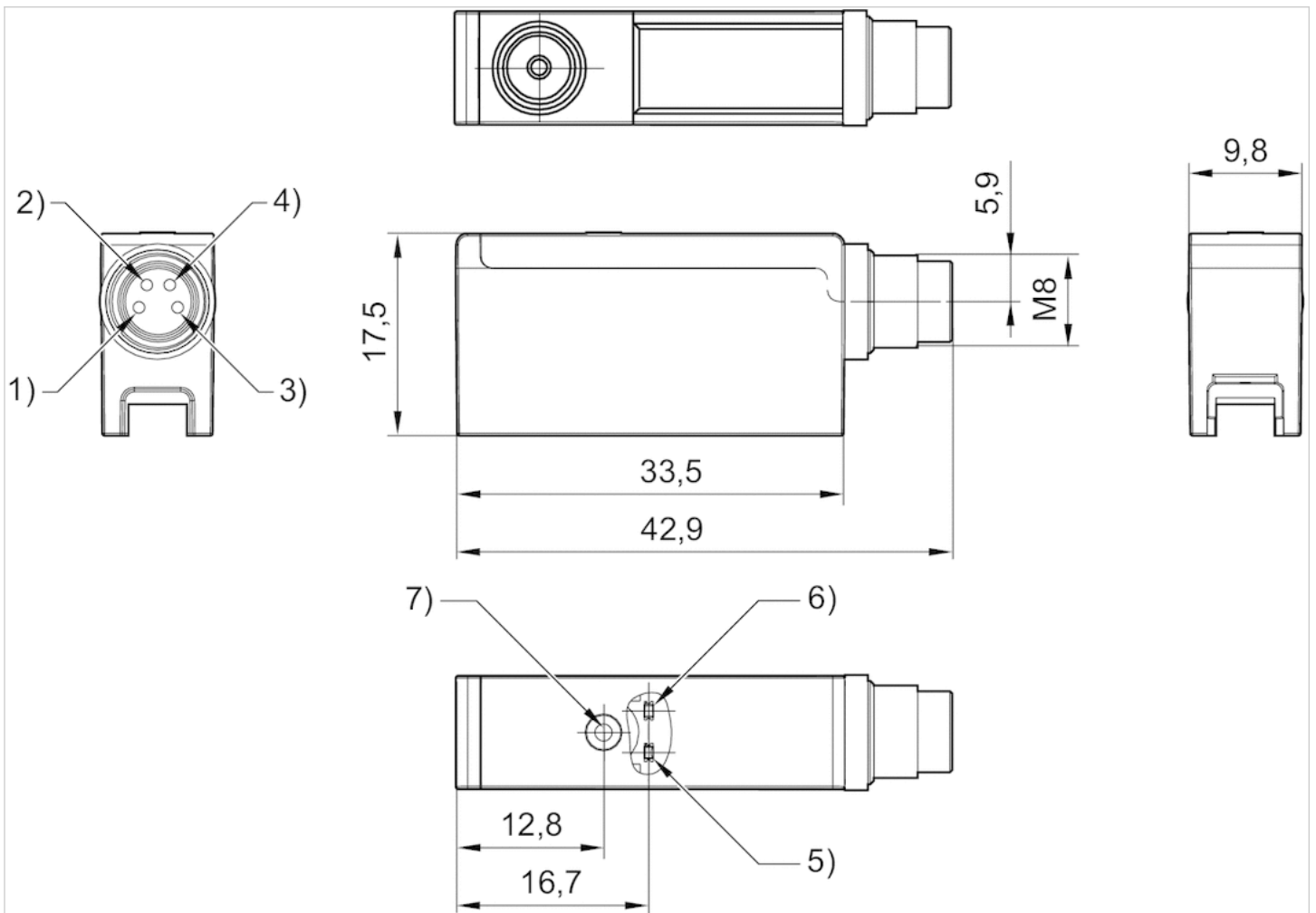
## Dimensions

PE6...-S



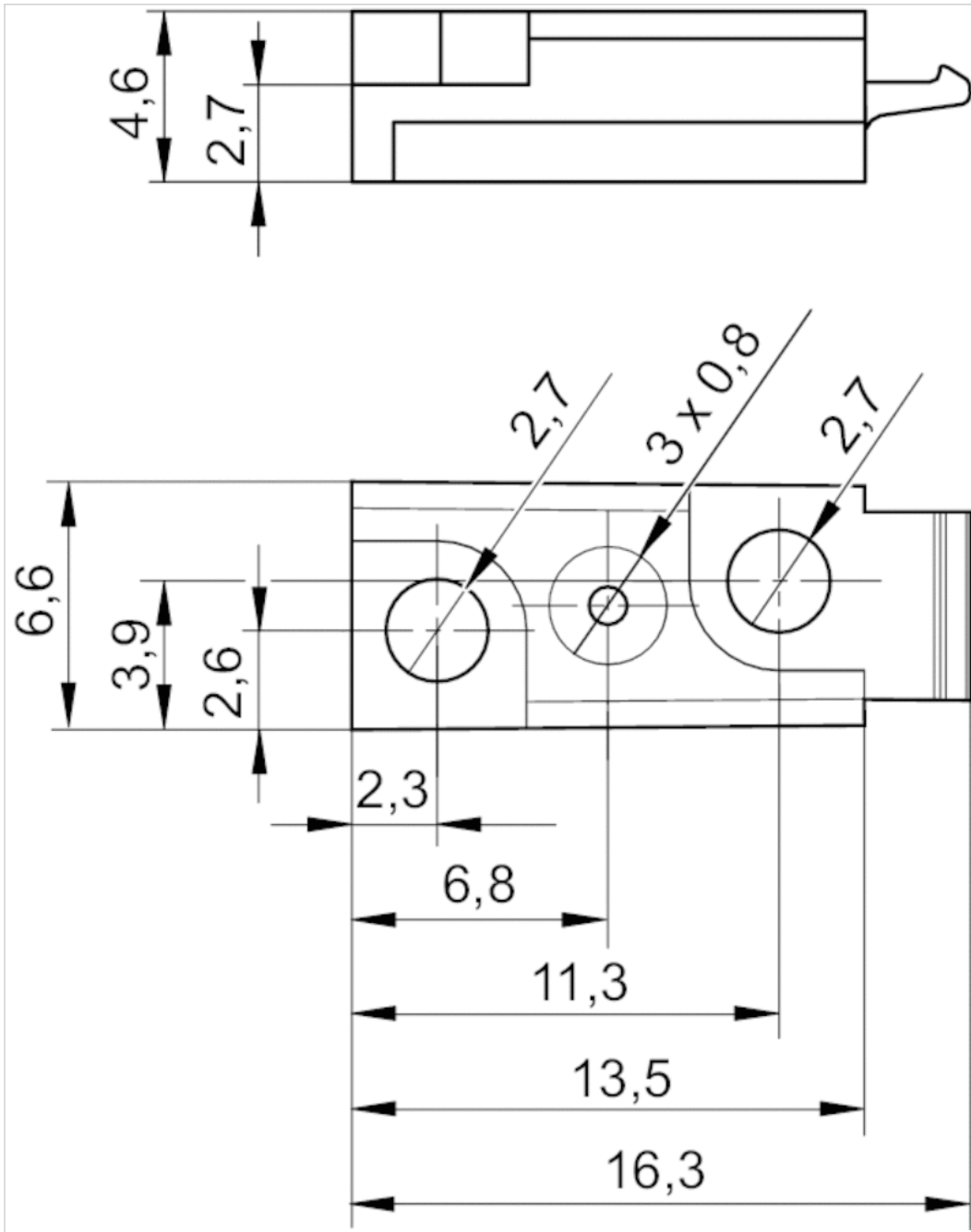
- 1) +UB
- 2) Switch output 2
- 3) GND
- 4) Switch output 1
- 5) LED for switch output 2
- 6) LED for switch output 1
- 7) setting knob

PE6...-L

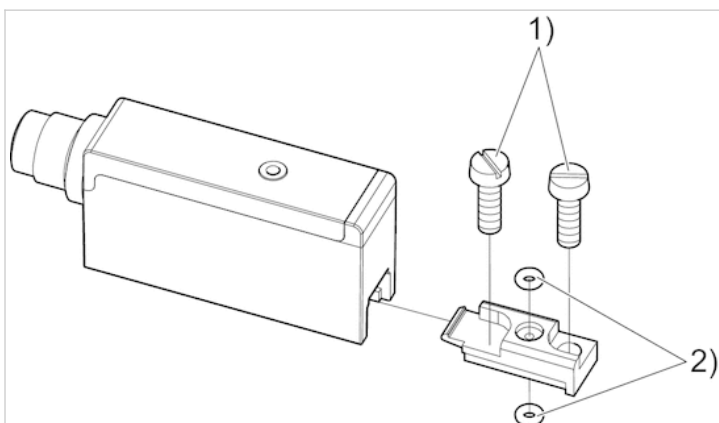


- 1) +UB
- 2) Switch output 2
- 3) GND
- 4) Switch output 1
- 5) LED for switch output 2
- 6) LED for switch output 1
- 7) setting knob

Flange plate, PE6



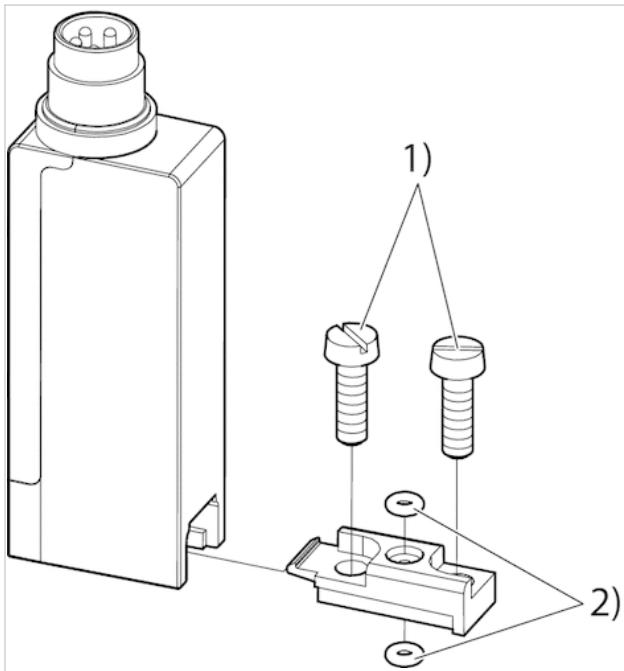
Pressure sensor, PE6...-L



1) Cylinder screw M2,5x8

2) O-ring Ø1,2x1 (included)

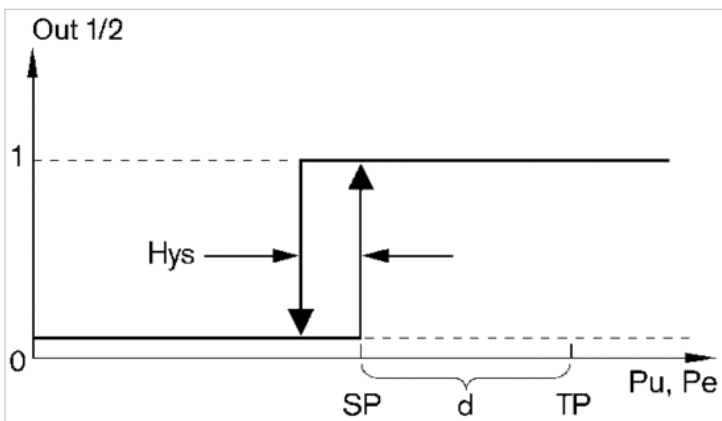
Pressure sensor, PE6...-S



- 1) Cylinder screw M2,5x8
- 2) O-ring Ø1,2x1 (included)

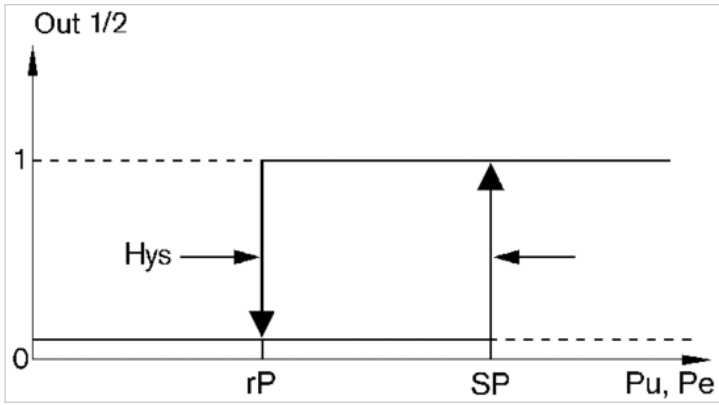
Diagrams

switching function (fixed hysteresis)



Vacuum sensor:  $d=20\%$   
 Pressure sensor:  $d=5\%$   
 SP = switch-on point, TP = teach point  
 OUT: switch output  
 Pu = pressure 0 - vacuum sensor  
 Pe = pressure > 0 - pressure sensor

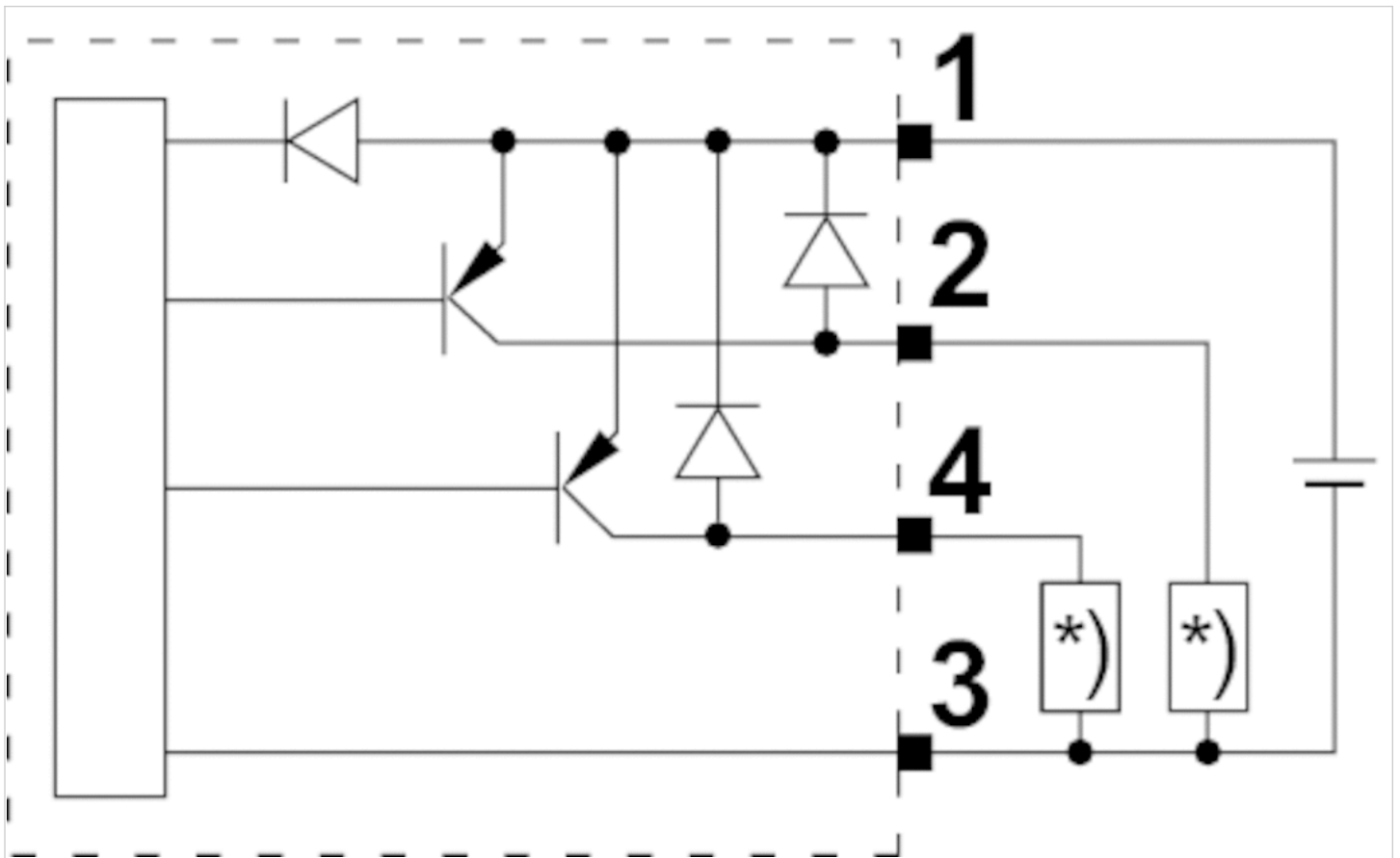
### Switching function (adjustable hysteresis)



SP = switch-on point, rP = resetting point  
 OUT: switch output  
 Pu = pressure 0 - vacuum sensor  
 Pe = pressure > 0 - pressure sensor

### Circuit diagram

### Block diagram



\* Storable position

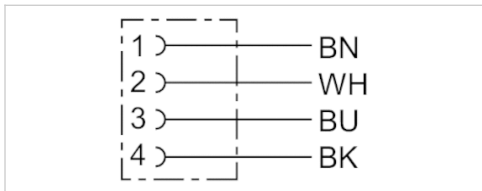


# Round plug connector, Series CON-RD

- Socket M8x1 4-pin A-coded straight 180°
- open cable ends
- with cable
- UL (Underwriters Laboratories)
- unshielded



|                               |                      |
|-------------------------------|----------------------|
| Ambient temperature min./max. | -40 ... 85 °C        |
| Operational voltage           | 48 V AC/DC           |
| Protection class              | IP67                 |
| Wire cross-section            | 0.25 mm <sup>2</sup> |
| Weight                        | See table below      |



## Technical data

| Part No.   | Max. current | Number of wires | Cable-Ø | Cable length | Certification                  | Weight   |
|------------|--------------|-----------------|---------|--------------|--------------------------------|----------|
| 1834484144 | 4 A          | 4               | 4.5 mm  | 3 m          | UL (Underwriters Laboratories) | 0.087 kg |
| 1834484146 | 4 A          | 4               | 4.5 mm  | 5 m          | UL (Underwriters Laboratories) | 0.14 kg  |

## Technical information

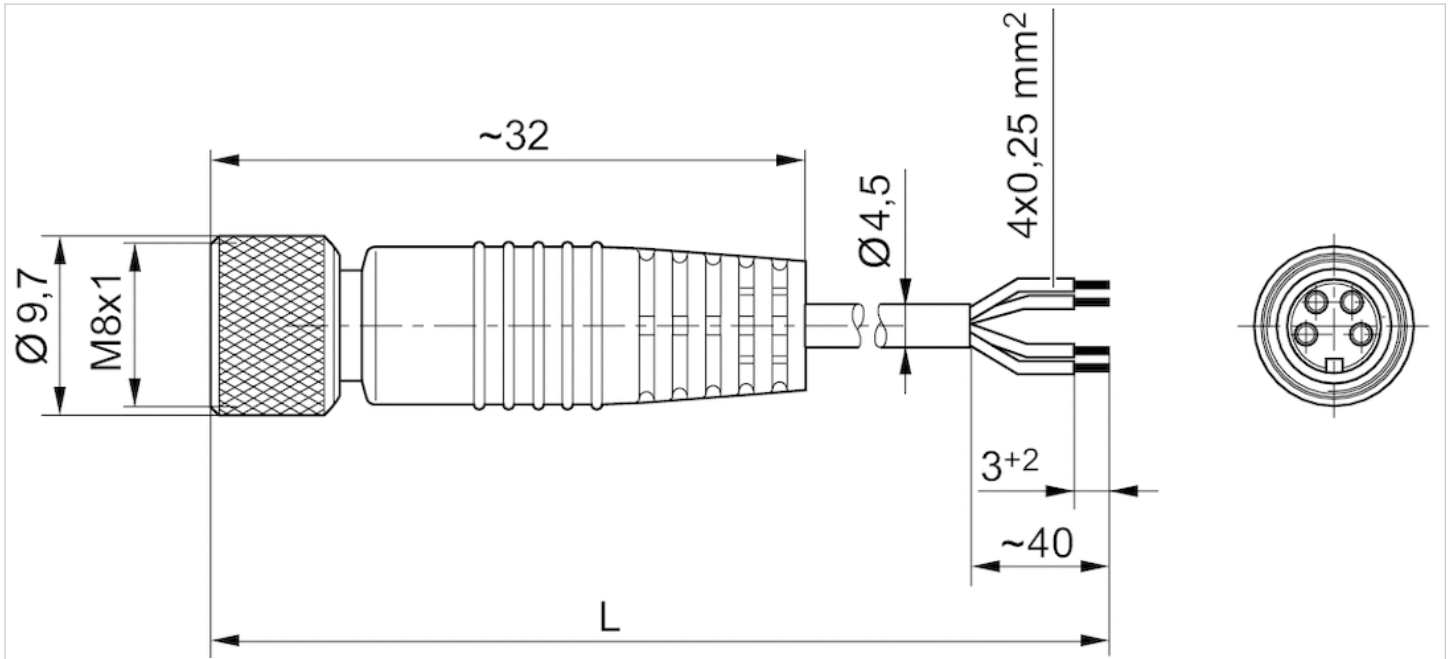
The specified protection class is only valid in assembled and tested state.

## Technical information

| Material     |              |
|--------------|--------------|
| Housing      | Polyurethane |
| Cable sheath | Polyurethane |

## Dimensions

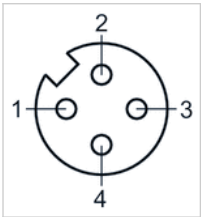
### Dimensions



L = length

## Pin assignments

### Pin assignment, socket



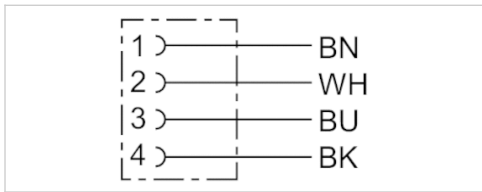
- (1) BN=brown
- (2) WH=white
- (3) BU=blue
- (4) BK=black

# Round plug connector, Series CON-RD

- Socket M8x1 4-pin A-coded angled 90°
- open cable ends
- with cable
- unshielded



|                               |                      |
|-------------------------------|----------------------|
| Ambient temperature min./max. | -25 ... 85 °C        |
| Operational voltage           | 48 V AC/DC           |
| Protection class              | IP67                 |
| Wire cross-section            | 0.25 mm <sup>2</sup> |
| Weight                        | See table below      |



## Technical data

| Part No.   | Max. current | Number of wires | Cable-Ø | Cable length | Weight   |
|------------|--------------|-----------------|---------|--------------|----------|
| 1834484145 | 4 A          | 4               | 4.5 mm  | 3 m          | 0.086 kg |
| 1834484147 | 4 A          | 4               | 4.5 mm  | 5 m          | 0.141 kg |

## Technical information

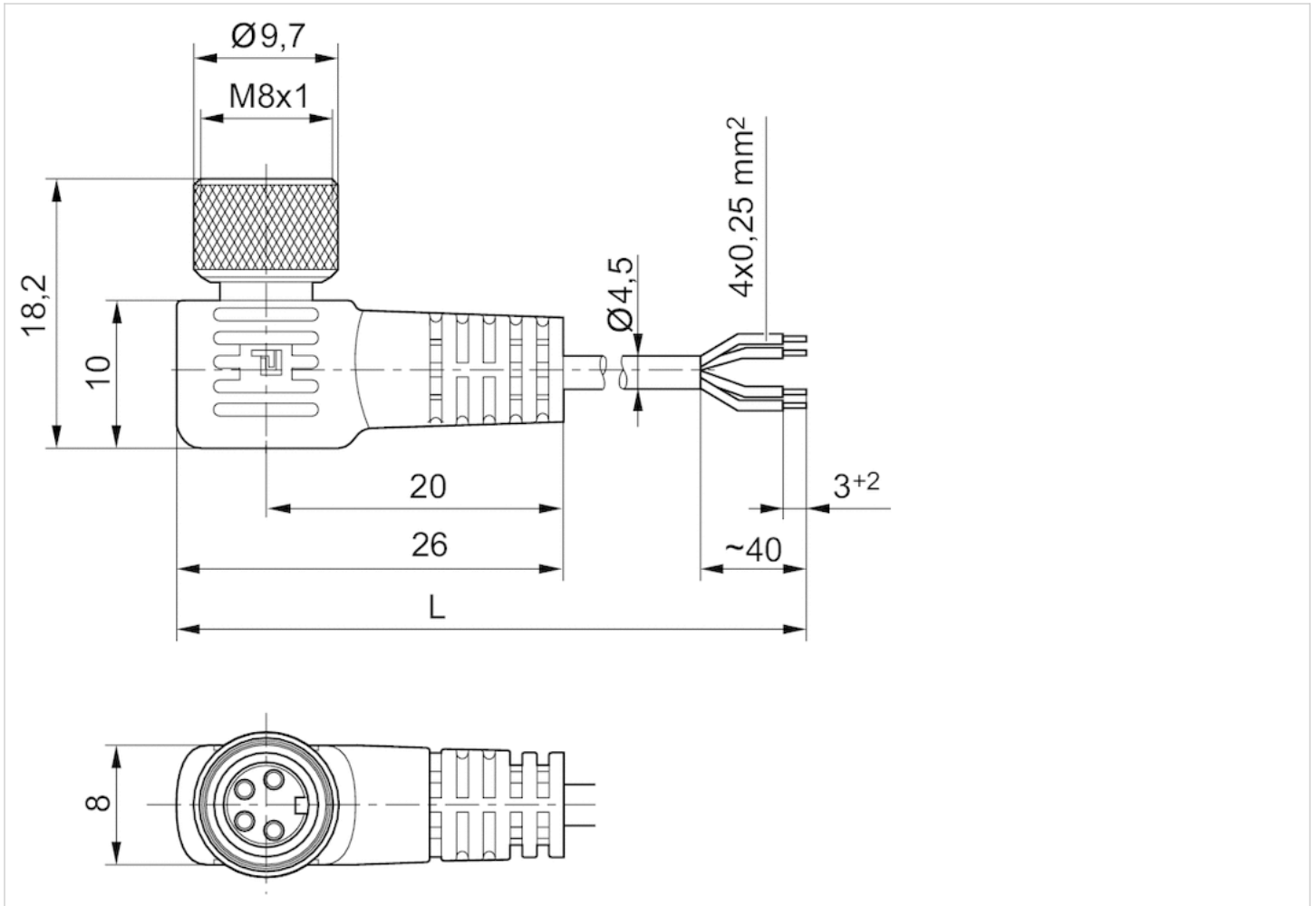
The specified protection class is only valid in assembled and tested state.

## Technical information

| Material     |              |
|--------------|--------------|
| Housing      | Polyurethane |
| Cable sheath | Polyurethane |

## Dimensions

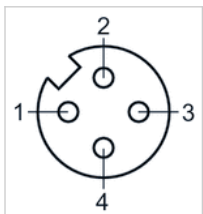
### Dimensions



L = length

## Pin assignments

### Pin assignment, socket



- (1) BN=brown
- (2) WH=white
- (3) BU=blue
- (4) BK=black

## Parts kit, Series PE6



Weight

0.003 kg

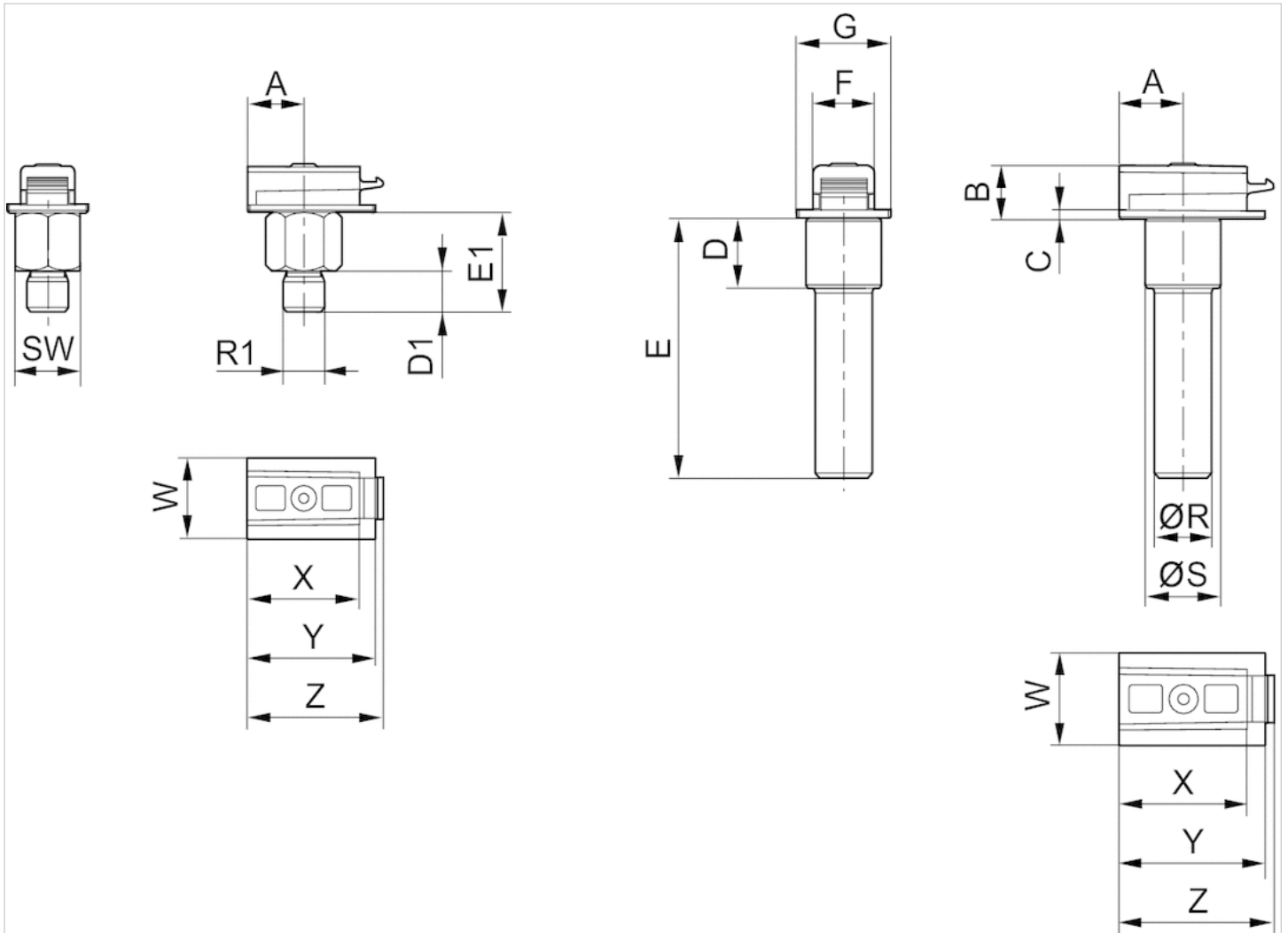
### Technical data

| Part No.   | Suitable for   |
|------------|--|
| R412007888 | flange with Ø6 pipe connection, flange with M5 thread connection |

### Technical information

| Material |                                |
|----------|--------------------------------|
| Housing  | Polycarbonate                  |
| Seal     | Acrylonitrile butadiene rubber |

## Dimensions



## Dimensions

| Part No.   | A   | B   | C | D   | D1 | E    | E1 | F   | G   | SW | ØR | R1 | ØS | W   | X    | Y    | Z    |
|------------|-----|-----|---|-----|----|------|----|-----|-----|----|----|----|----|-----|------|------|------|
| R412007888 | 6,8 | 5,6 | 1 | 7,3 | 5  | 27,3 | 12 | 6,6 | 9,8 | 8  | 6  | M5 | 8  | 9,8 | 13,5 | 15,4 | 16,2 |

Material: flange: polycarbonate, pipe: polyoxymethylene, thread M5: aluminum, O-ring: acrylonitrile butadiene caoutchouc

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2019-03



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青岛秉诚自动化设备有限公司  
地址：中国·青岛市重庆南路99号海尔云街甲3号楼7F

服务热线：4006-918-365  
网址：<http://www.ivalve.cc>

传真：(86-532)585-10-365  
Email：[sales@bechinas.com](mailto:sales@bechinas.com)