

# Series AS5

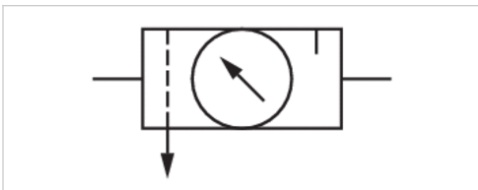


AVENTICS™ Series AS5



# Air preparation unit, 2-part, Series AS5-ACD

- G 3/4 G 1
- filter porosity 5  $\mu\text{m}$
- lockable
- for padlocks
- with pressure gauge



|                               |   |
|-------------------------------|---|
| Version                       | 2-part, Can be assembled into blocks                              |
| Parts                         | Filter pressure regulator, Lubricator                             |
| Mounting orientation          | vertical  |
| Working pressure min./max.    | 1.5 ... 16 bar  |
| Ambient temperature min./max. | -10 ... 50 °C   |
| Medium temperature min./max.  | -10 ... 50 °C   |
| Medium                        | Compressed air Neutral gases                                      |
| Nominal flow Qn               | 12300 l/min   |
| Regulator type                | Diaphragm-type pressure regulator                                 |
| Regulator function            | with relieving air exhaust  |
| Adjustment range min./max.    | 0.5 ... 8 bar   |
| Pressure supply               | single  |
| Filter reservoir volume       | 87 cm <sup>3</sup>  |
| Filter element                | exchangeable  |
| Lubricator reservoir volume   | 181 cm <sup>3</sup>   |
| Type of filling               | Semi-automatic oil filling during operation<br>Manual oil filling |
| Weight                        | See table below   |

## Technical data

| Part No.   | Port  | filter porosity | Flow        | Condensate drain                         |
|------------|-------|-----------------|-------------|--|
|            |       |                 | Qn          |  |
| R412009298 | G 3/4 | 5 $\mu\text{m}$ | 12300 l/min | semi-automatic, open without pressure    |
| R412009299 | G 3/4 | 5 $\mu\text{m}$ | 12300 l/min | fully automatic, open without pressure   |
| R412009307 | G 1   | 5 $\mu\text{m}$ | 12300 l/min | semi-automatic, open without pressure    |
| R412009308 | G 1   | 5 $\mu\text{m}$ | 12300 l/min | fully automatic, open without pressure   |
| R412009309 | G 1   | 5 $\mu\text{m}$ | 12300 l/min | fully automatic, closed without pressure |

| Part No.   | Pressure gauge      | Weight  |
|------------|---------------------|---------|
| R412009298 | with pressure gauge | 1.83 kg |
| R412009299 | with pressure gauge | 1.88 kg |
| R412009307 | with pressure gauge | 1.83 kg |
| R412009308 | with pressure gauge | 1.88 kg |
| R412009309 | with pressure gauge | 1.88 kg |

Nominal flow Qn with secondary pressure p2 = 6 bar at  $\Delta p = 1$  bar

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

Note: Polycarbonate reservoirs are susceptible to solvents, supplementary information can be found at "Customer information".

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Also suitable for separation of fluid oil or water due to the design.

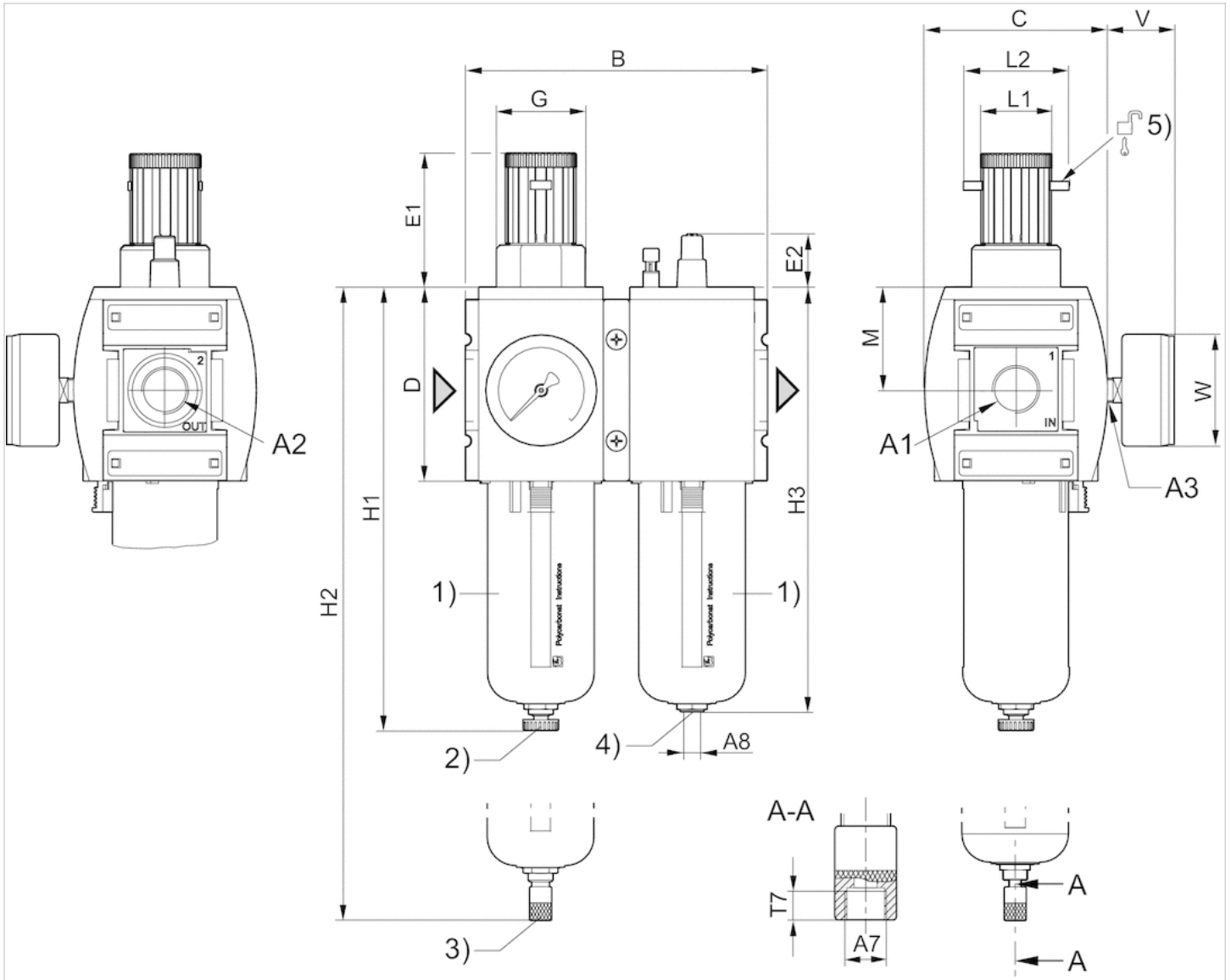
Max. achievable compressed air class acc. to ISO 8573-1:2010 6 : 7 : -

## Technical information

| Material         |                                 |
|------------------|---------------------------------|
| Housing          | Polyamide                       |
| Front plate      | Acrylonitrile butadiene styrene |
| Seals            | Acrylonitrile butadiene rubber  |
| Threaded bushing | Die cast zinc                   |
| Reservoir        | Polycarbonate                   |
| Protective guard | Polyamide                       |
| Filter insert    | Polyethylene                    |

# Dimensions

## Dimensions



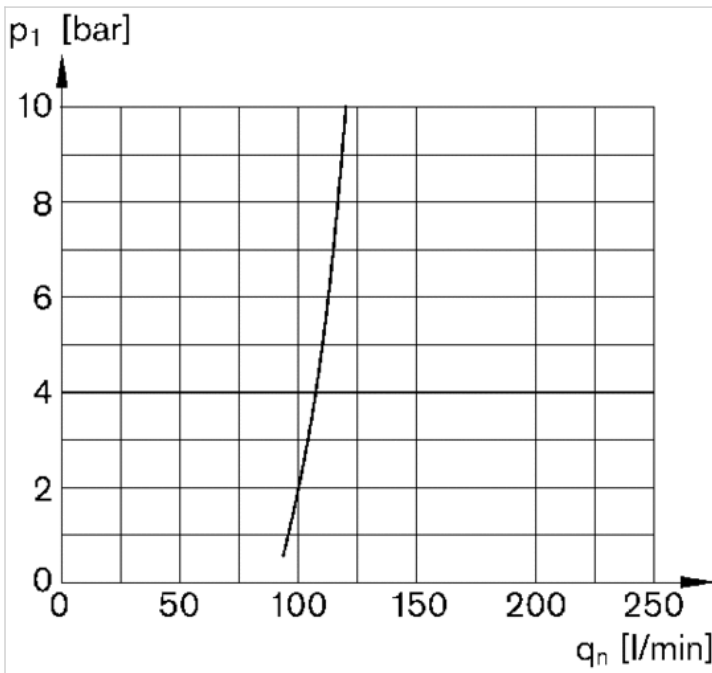
- A1 = input
- A2 = output
- A3 = pressure gauge connection
- A7 = condensate drain
- 1) Plastic reservoir and protective guard with window
- 2) Semi-automatic condensate drain
- 3) Fully automatic condensate drain
- 4) Port for semi-automatic oil filling
- 5) Mounting option for padlocks, max. shackle Ø 8

## Dimensions in mm

| A1    | A2    | A3    | A7    | A8    | B   | C   | D   | E1 | E2   | G       | H1  | H2  | H3  | L1 | L2 | M  | T7  | V  | W  |
|-------|-------|-------|-------|-------|-----|-----|-----|----|------|---------|-----|-----|-----|----|----|----|-----|----|----|
| G 3/4 | G 3/4 | G 1/4 | G 1/8 | G 1/8 | 170 | 103 | 109 | 75 | 30.5 | M50x1,5 | 250 | 266 | 239 | 41 | 60 | 58 | 8.5 | 38 | 63 |
| G 1   | G 1   | G 1/4 | G 1/8 | G 1/8 | 170 | 103 | 109 | 75 | 30.5 | M50x1,5 | 250 | 266 | 239 | 41 | 60 | 58 | 8.5 | 38 | 63 |

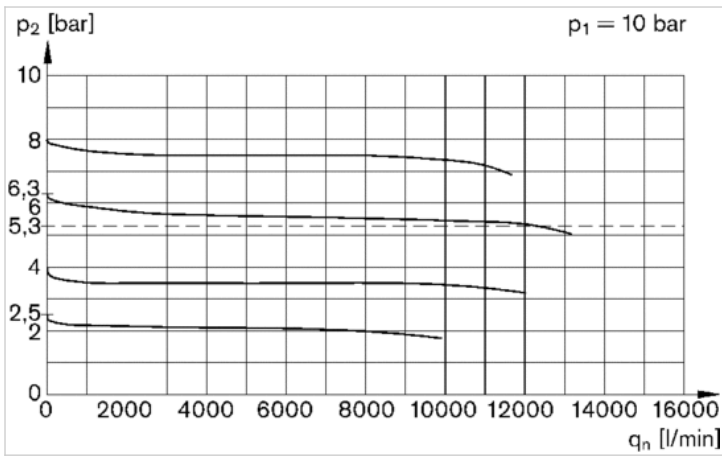
## Diagrams

### Lubricator activation margin



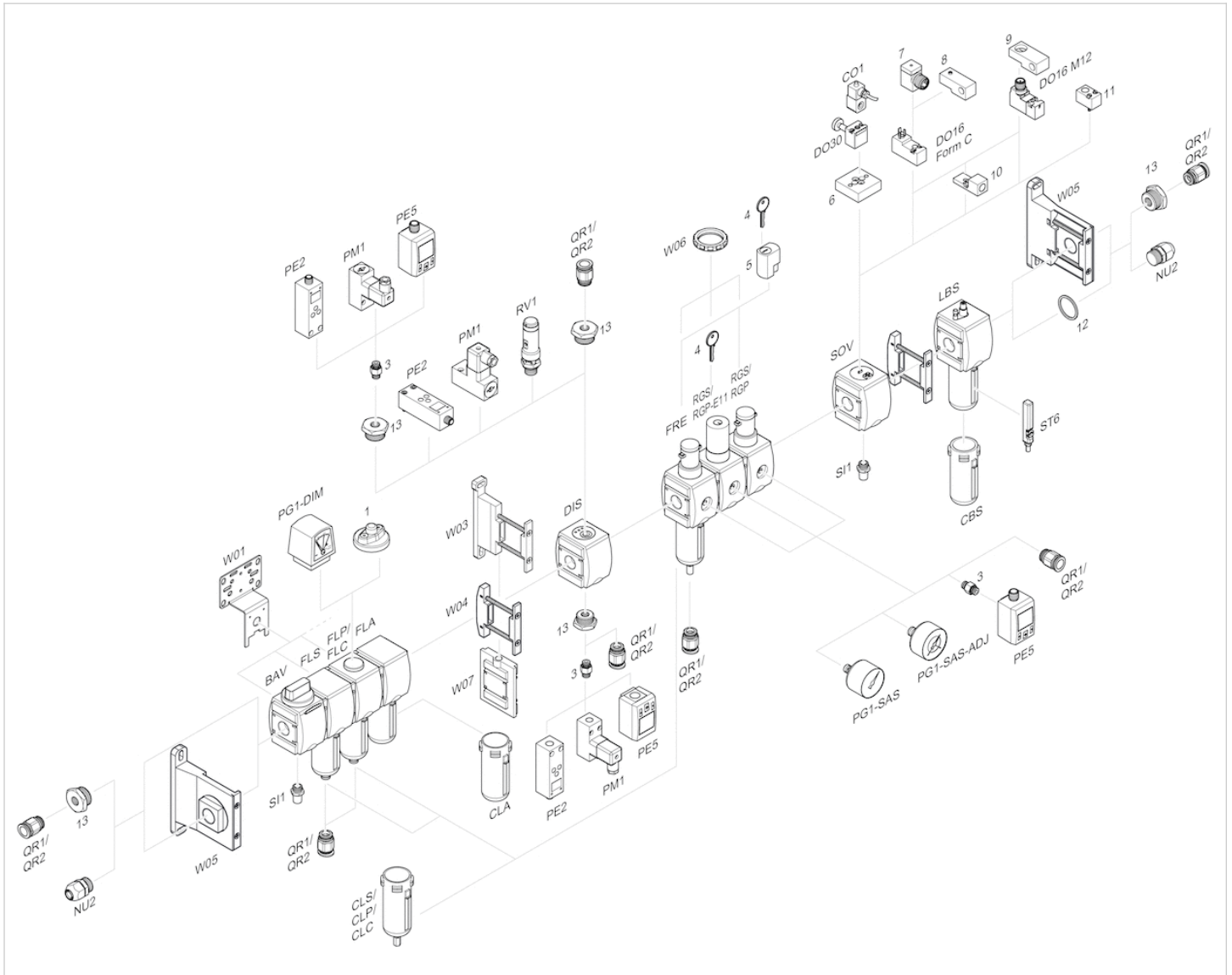
p1 = working pressure  
qn = nominal flow

### Flow rate characteristic (setting range p2: 0.5 - 8 bar)



p1 = Working pressure  
p2 = Secondary pressure  
qn = Nominal flow

# Accessories overview



- 1 = contamination display
- 3 = Double nipple
- 4 = Key for E11 locking
- 5 = mortise lock
- 6 = Transition plate DO30
- 7 = Adapter, Series CON-VP
- 8 = Mounting aid DO16, form C
- 9 = Mounting aid DO16, M12
- 10 = Adapter for external pilot air
- 11 = Adapter pneumatic operation
- 12 = Sealing ring
- 13 = Reducing nipple

# Air preparation unit, 2-part, Series AS5-ACC

- G 1 G 3/4
- filter porosity 5 µm
- lockable
- for padlocks
- with pressure gauge



|                               |  |
|-------------------------------|--|
| Version                       | 2-part, Can be assembled into blocks   |
| Parts                         | Shut-off valve, Filter pressure regulator, Pressure gauge, Silencer, Mountings |
| Mounting orientation          | vertical   |
| Working pressure min./max.    | 1.5 ... 16 bar   |
| Ambient temperature min./max. | -10 ... 50 °C  |
| Medium temperature min./max.  | -10 ... 50 °C  |
| Medium                        | Compressed air Neutral gases   |
| Regulator type                | Diaphragm-type pressure regulator  |
| Regulator function            | with relieving air exhaust   |
| Adjustment range min./max.    | 0.5 ... 8 bar  |
| Pressure supply               | single   |
| Filter reservoir volume       | 87 cm <sup>3</sup>   |
| Filter element                | exchangeable   |
| Max. Internal air consumption | 1.5 l/min  |
| Weight                        | See table below  |

## Technical data

| Part No.   | Port  | filter porosity | Condensate drain                       | Pressure gauge      |
|------------|-------|-----------------|--|---------------------|
| R412027676 | G 1   | 5 µm            | semi-automatic, open without pressure  | with pressure gauge |
| R412027675 | G 3/4 | 5 µm            | semi-automatic, open without pressure  | with pressure gauge |
| R412027677 | G 1   | 5 µm            | fully automatic, open without pressure | with pressure gauge |

| Part No.   | Weight  |
|------------|---------|
| R412027676 | 2.79 kg |
| R412027675 | 2.79 kg |
| R412027677 | 2.84 kg |

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

Note: Polycarbonate reservoirs are susceptible to solvents, supplementary information can be found at "Customer information".

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Also suitable for separation of fluid oil or water due to the design.

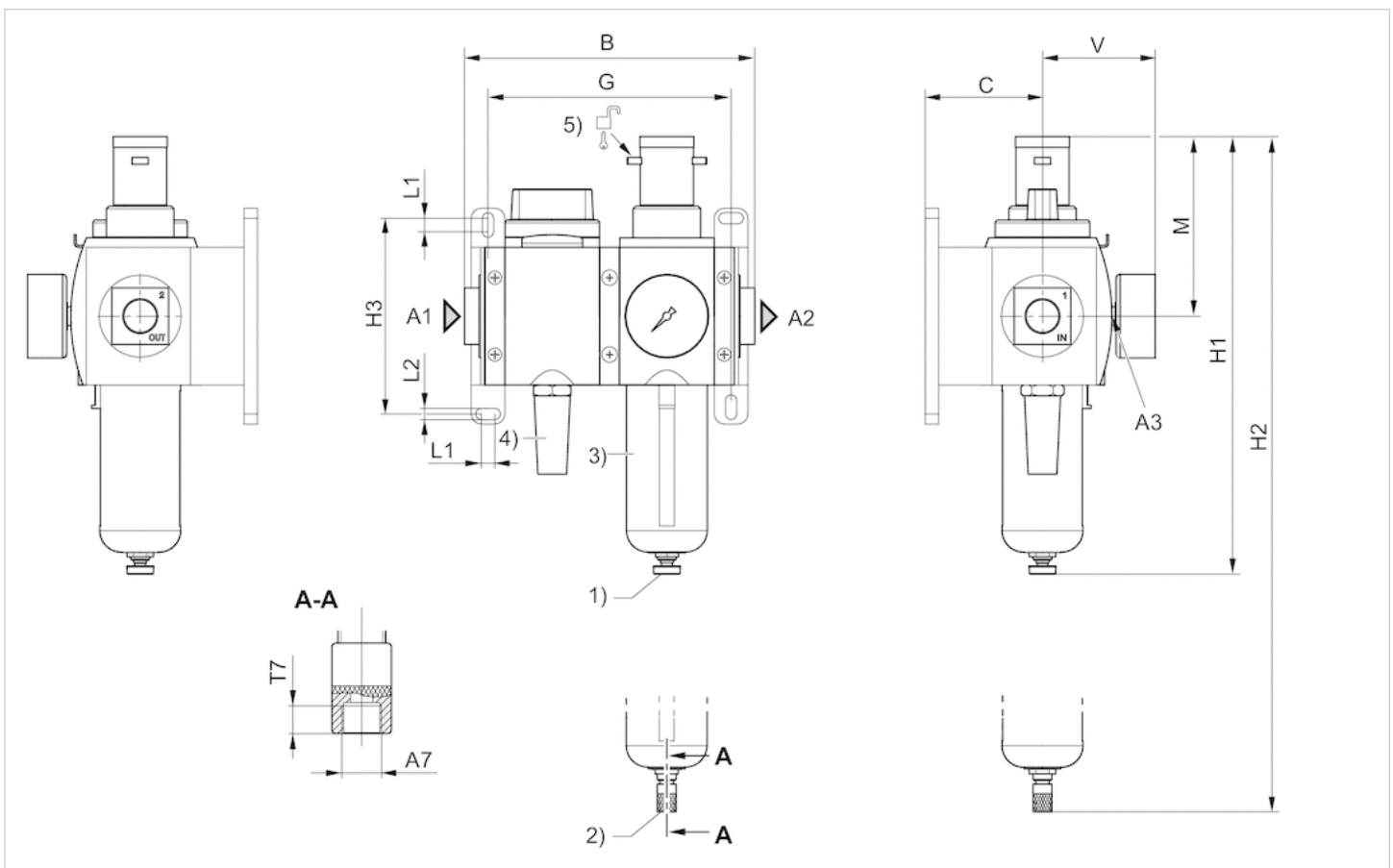
Max. achievable compressed air class acc. to ISO 8573-1:2010 6 : 7 : -

## Technical information

| Material         |                                 |
|------------------|---------------------------------|
| Housing          | Polyamide                       |
| Front plate      | Acrylonitrile butadiene styrene |
| Seals            | Acrylonitrile butadiene rubber  |
| Threaded bushing | Die cast zinc                   |
| Reservoir        | Polycarbonate                   |
| Protective guard | Polyamide                       |
| Filter insert    | Polyethylene                    |

## Dimensions

### Dimensions



A1 = input

A2 = output

A3 = pressure gauge connection

A7 = condensate drain

1) Semi-automatic condensate drain

2) Fully automatic condensate drain

3) Plastic reservoir and protective guard with window

4) Silencer

5) Mounting option for padlocks, max. shackle  $\varnothing$  8

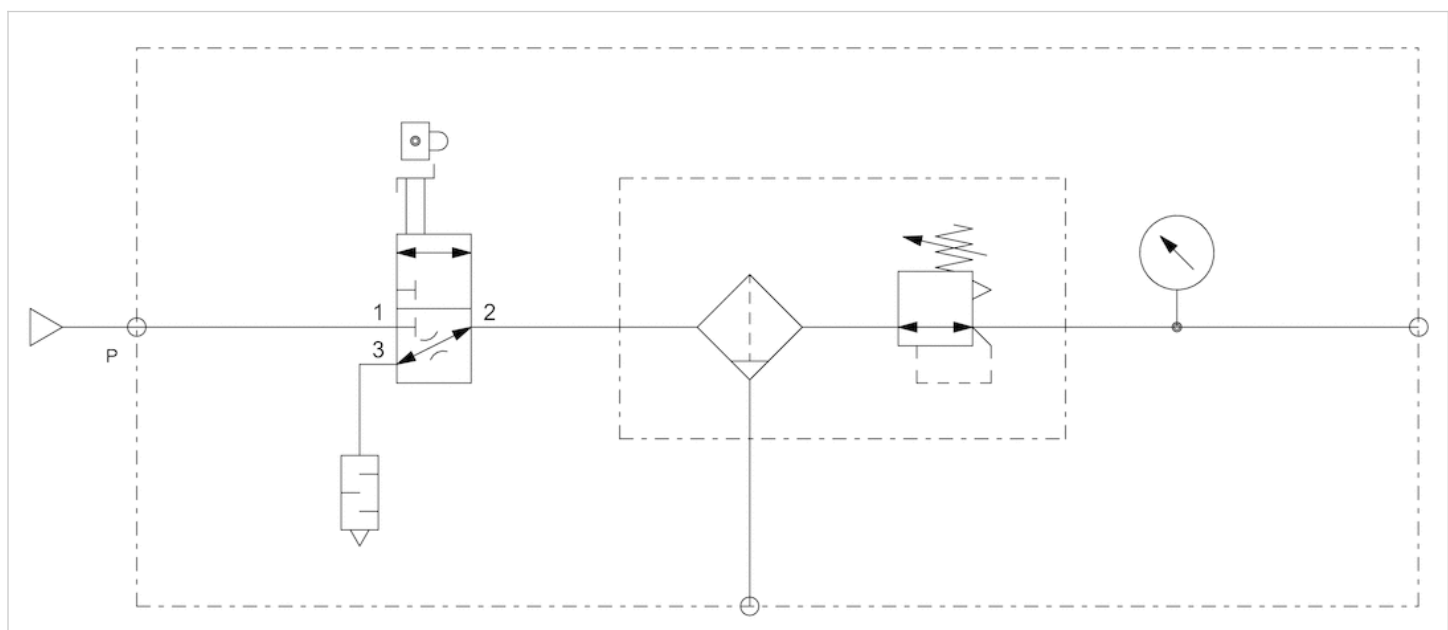


Dimensions in mm

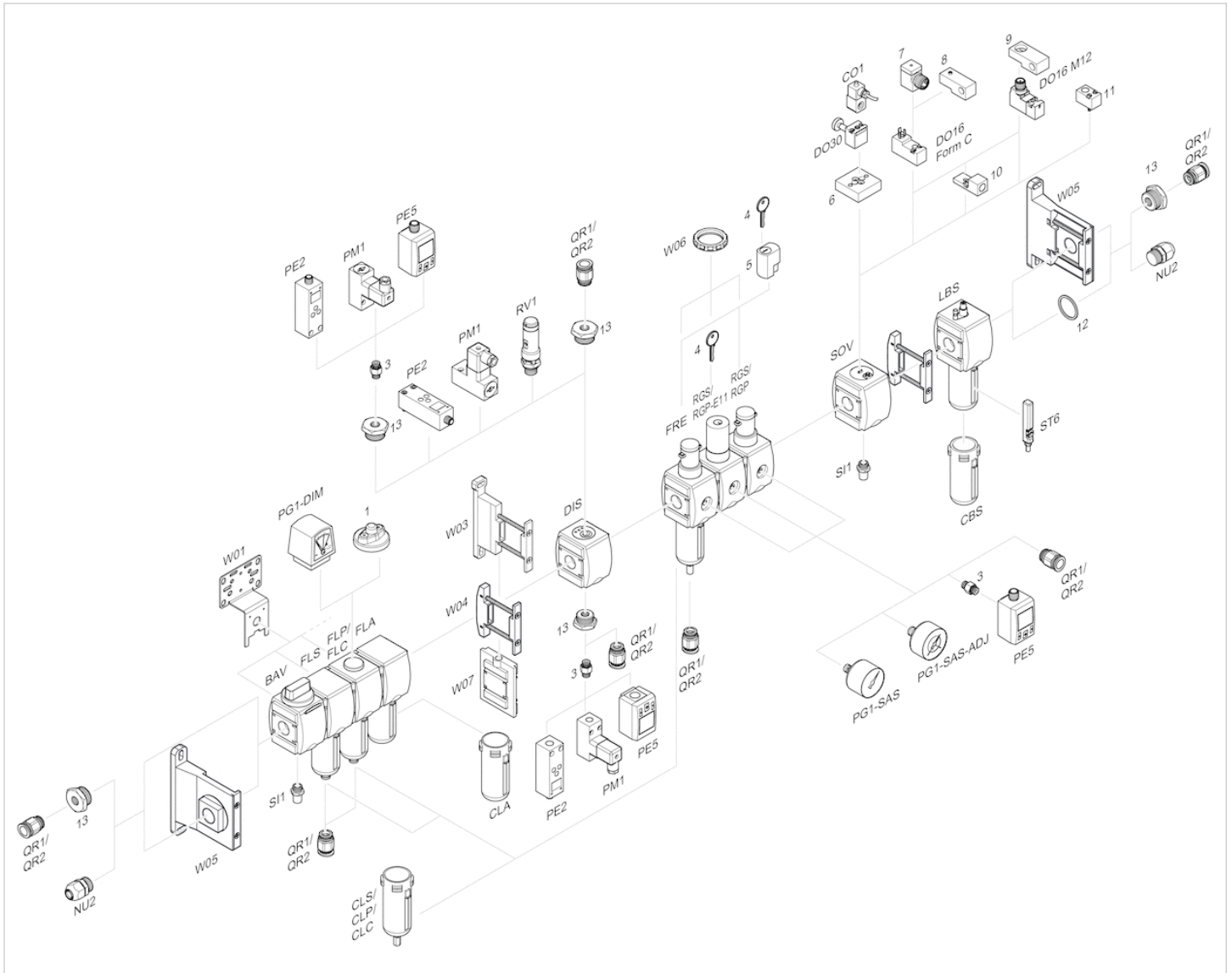
| Part No.   | A1    | A2    | A3    | A7    | B     | C  | G     | H1    | H2  | H3  | L1 | L2  | M     | T7  | V    |
|------------|-------|-------|-------|-------|-------|----|-------|-------|-----|-----|----|-----|-------|-----|------|
| R412027676 | G 1   | G 1   | G 1   | -     | 215,2 | 87 | 180,2 | 324,3 | -   | 145 | 10 | 8,4 | 133,1 | -   | 83,5 |
| R412027675 | G 3/4 | G 3/4 | G 3/4 | -     | 215,2 | 87 | 180,2 | 324,3 | -   | 145 | 10 | 8,4 | 133,1 | -   | 83,5 |
| R412027677 | G 1   | G 1   | G 1   | G 1/8 | 215,2 | 87 | 180,2 | -     | 341 | 145 | 10 | 8,4 | 133,1 | 8,5 | 83,5 |

Circuit diagram

Block diagram



# Accessories overview



- 1 = contamination display
- 3 = Double nipple
- 4 = Key for E11 locking
- 5 = mortise lock
- 6 = Transition plate DO30
- 7 = Adapter, Series CON-VP
- 8 = Mounting aid DO16, form C
- 9 = Mounting aid DO16, M12
- 10 = Adapter for external pilot air
- 11 = Adapter pneumatic operation
- 12 = Sealing ring
- 13 = Reducing nipple

# Pressure regulator, Series AS5-RGS






- G 3/4 G 1
- Qn = 14500 l/min
- Standard pressure regulator
- Activation Mechanical
- lockable
- for padlocks



|                                  |   |
|----------------------------------|---|
| Parts                            | Pressure regulator                                      |
| Mounting orientation             | Any   |
| Working pressure min./max.       | See table below   |
| Ambient temperature min./max.    | -10 ... 50 °C   |
| Medium temperature min./max.     | -10 ... 50 °C   |
| Medium                           | Compressed air Neutral gases                            |
| Regulator type                   | Diaphragm-type pressure regulator                       |
| Regulator function               | Can be assembled into blocks with relieving air exhaust |
| Adjustment range min./max.       | See table below   |
| Lock type                        | for padlocks  |
| Pressure supply                  | single  |
| Activation                       | Mechanical  |
| Internal air consumption qv max. | 1.5 l/min   |
| Weight                           | See table below   |

## Technical data

| Part No.   |  |   | Port  | Flow        | Working pressure min./max. | Adjustment range min./max. |
|------------|--|---|-------|-------------|----------------------------|----------------------------|
|            |  |   |       | Qn          |                            |                            |
| R412009101 |  |   | G 3/4 | 14500 l/min | 0.1 ... 16 bar             | 0.1 ... 1 bar              |
| R412009103 |  |   | G 3/4 | 14500 l/min | 0.1 ... 16 bar             | 0.1 ... 2 bar              |
| R412009105 |  |   | G 3/4 | 14500 l/min | 0.2 ... 16 bar             | 0.2 ... 4 bar              |
| R412009107 |  |   | G 3/4 | 14500 l/min | 0.5 ... 16 bar             | 0.5 ... 8 bar              |
| R412009109 |  |   | G 3/4 | 14500 l/min | 0.5 ... 16 bar             | 0.5 ... 10 bar             |
| R412009111 |  |   | G 3/4 | 14500 l/min | 0.5 ... 16 bar             | 0.5 ... 16 bar             |
| R412009100 |  | — | G 3/4 | 14500 l/min | 0.1 ... 16 bar             | 0.1 ... 1 bar              |
| R412009102 |  | — | G 3/4 | 14500 l/min | 0.1 ... 16 bar             | 0.1 ... 2 bar              |
| R412009104 |  | — | G 3/4 | 14500 l/min | 0.2 ... 16 bar             | 0.2 ... 4 bar              |
| R412009106 |  | — | G 3/4 | 14500 l/min | 0.5 ... 16 bar             | 0.5 ... 8 bar              |
| R412009108 |  | — | G 3/4 | 14500 l/min | 0.5 ... 16 bar             | 0.5 ... 10 bar             |
| R412009110 |  | — | G 3/4 | 14500 l/min | 0.5 ... 16 bar             | 0.5 ... 16 bar             |
| R412009113 |  |   | G 1   | 14500 l/min | 0.1 ... 16 bar             | 0.1 ... 1 bar              |
| R412009115 |  |   | G 1   | 14500 l/min | 0.1 ... 16 bar             | 0.1 ... 2 bar              |
| R412009117 |  |   | G 1   | 14500 l/min | 0.2 ... 16 bar             | 0.2 ... 4 bar              |
| R412009119 |  |   | G 1   | 14500 l/min | 0.5 ... 16 bar             | 0.5 ... 8 bar              |
| R412009121 |  |   | G 1   | 14500 l/min | 0.5 ... 16 bar             | 0.5 ... 10 bar             |
| R412009123 |  |   | G 1   | 14500 l/min | 0.5 ... 16 bar             | 0.5 ... 16 bar             |
| R412009112 |  | — | G 1   | 14500 l/min | 0.1 ... 16 bar             | 0.1 ... 1 bar              |

| Part No.   |   |   | Port | Flow        | Working pressure min./max. | Adjustment range min./max. |
|------------|---|---|------|-------------|----------------------------|----------------------------|
|            |   |   |      | Qn          |                            |                            |
| R412009114 |  | — | G 1  | 14500 l/min | 0.1 ... 16 bar             | 0.1 ... 2 bar              |
| R412009116 |  | — | G 1  | 14500 l/min | 0.2 ... 16 bar             | 0.2 ... 4 bar              |
| R412009118 |  | — | G 1  | 14500 l/min | 0.5 ... 16 bar             | 0.5 ... 8 bar              |
| R412009120 |  | — | G 1  | 14500 l/min | 0.5 ... 16 bar             | 0.5 ... 10 bar             |
| R412009122 |  | — | G 1  | 14500 l/min | 0.5 ... 16 bar             | 0.5 ... 16 bar             |

| Part No.   | Weight   |    |
|------------|----------|----|
| R412009101 | 0.997 kg | 1) |
| R412009103 | 0.997 kg | 1) |
| R412009105 | 0.997 kg | 1) |
| R412009107 | 0.997 kg | 1) |
| R412009109 | 0.997 kg | 1) |
| R412009111 | 0.997 kg | 1) |
| R412009100 | 0.905 kg | 2) |
| R412009102 | 0.905 kg | 2) |
| R412009104 | 0.905 kg | 2) |
| R412009106 | 0.905 kg | 2) |
| R412009108 | 0.905 kg | 2) |
| R412009110 | 0.905 kg | 2) |
| R412009113 | 0.997 kg | 1) |
| R412009115 | 0.997 kg | 1) |
| R412009117 | 0.997 kg | 1) |
| R412009119 | 0.997 kg | 1) |
| R412009121 | 0.997 kg | 1) |
| R412009123 | 0.997 kg | 1) |
| R412009112 | 0.905 kg | 2) |
| R412009114 | 0.905 kg | 2) |
| R412009116 | 0.905 kg | 2) |
| R412009118 | 0.905 kg | 2) |
| R412009120 | 0.905 kg | 2) |
| R412009122 | 0.905 kg | 2) |

Nominal flow Qn with secondary pressure p2 = 6 bar at  $\Delta p = 1$  bar

- 1) Pressure gauge enclosed separately.
- 2) Order pressure gauge separately.

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

The rear pressure gauge connection on the pressure regulator is closed with a blanking plug, the front connection is open. Depending on the customer application, a second blanking plug may be necessary. Please order separately (see accessories).

A change in the flow direction (from air supply on the left to air supply on the right occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Relieving exhaust ( $\leq 0.3$  bar over set pressure).

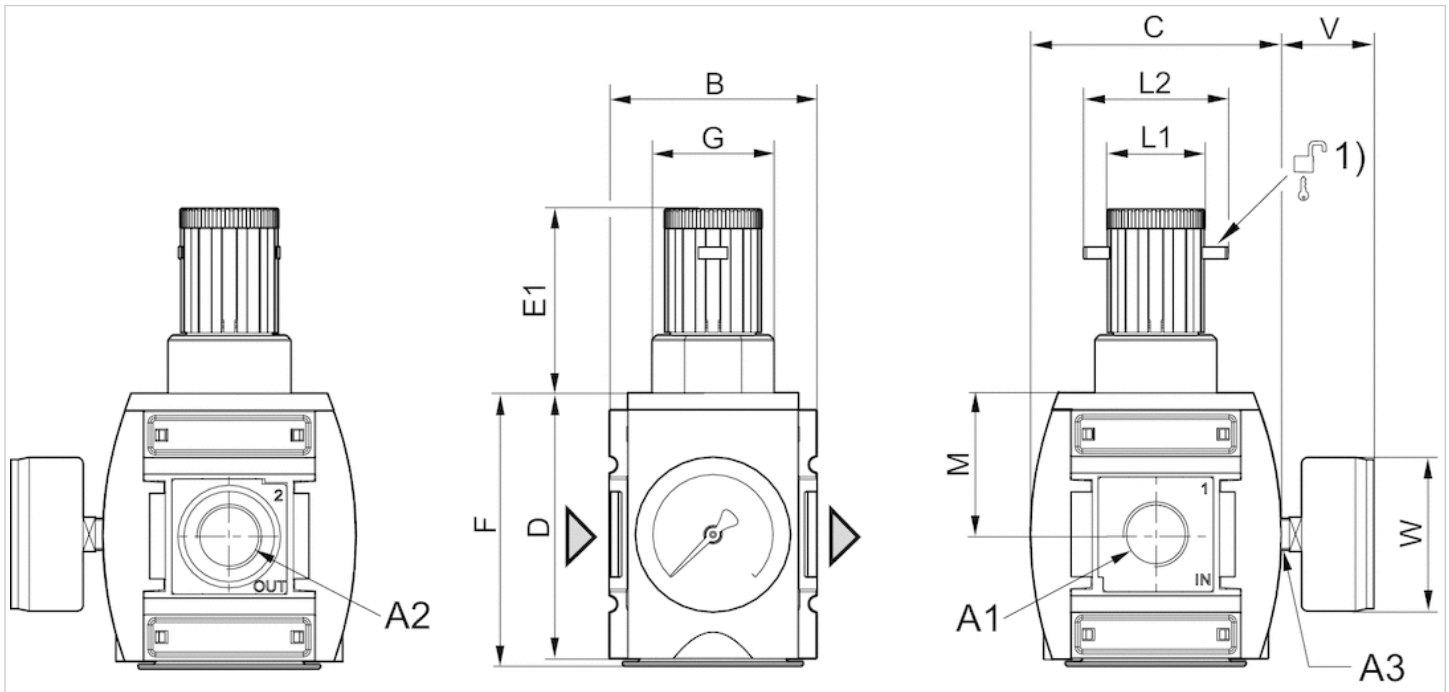
With rear exhaust ( $> 3$  bar ).

## Technical information

| Material         |                                 |
|------------------|---------------------------------|
| Housing          | Polyamide                       |
| Front plate      | Acrylonitrile butadiene styrene |
| Seals            | Acrylonitrile butadiene rubber  |
| Threaded bushing | Die cast zinc                   |

## Dimensions

### Dimensions



A1 = input

A2 = output

A3 = pressure gauge connection

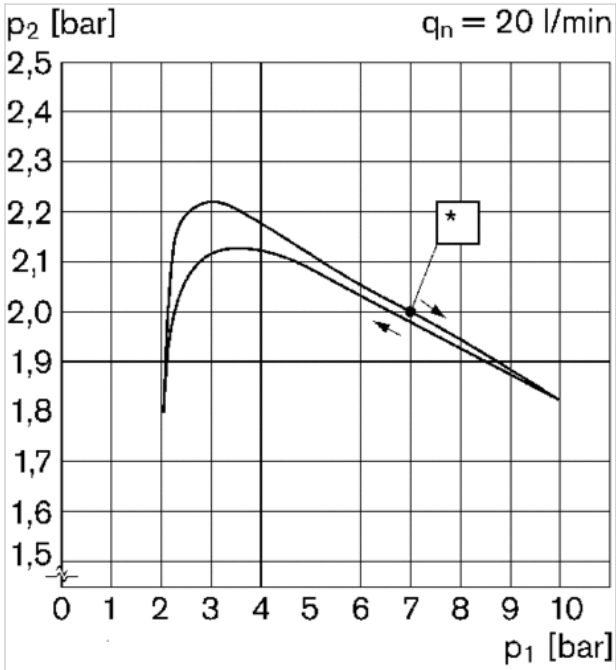
1) Mounting option for padlocks, max. shackle Ø 8

### Dimensions in mm

| A1    | A2    | A3    | B  | C   | D   | E1 | F   | G       | L1 | L2 | M  | V  | W  |
|-------|-------|-------|----|-----|-----|----|-----|---------|----|----|----|----|----|
| G 3/4 | G 3/4 | G 1/4 | 85 | 103 | 109 | 75 | 112 | M50x1,5 | 41 | 60 | 58 | 38 | 63 |
| G 1   | G 1   | G 1/4 | 85 | 103 | 109 | 75 | 112 | M50x1,5 | 41 | 60 | 58 | 38 | 63 |

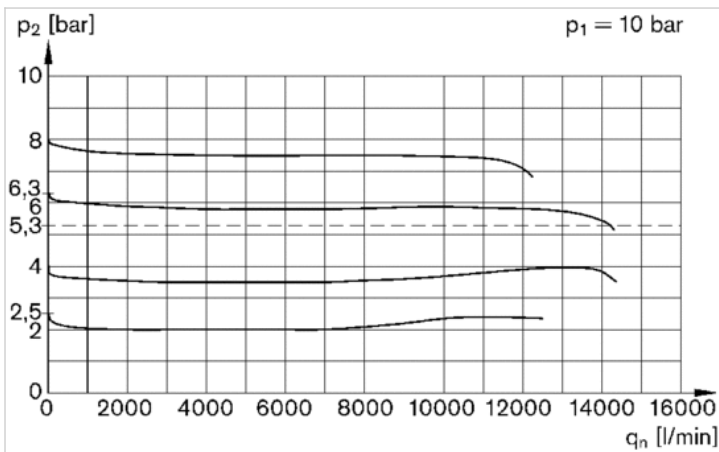
# Diagrams

## Pressure characteristics curve



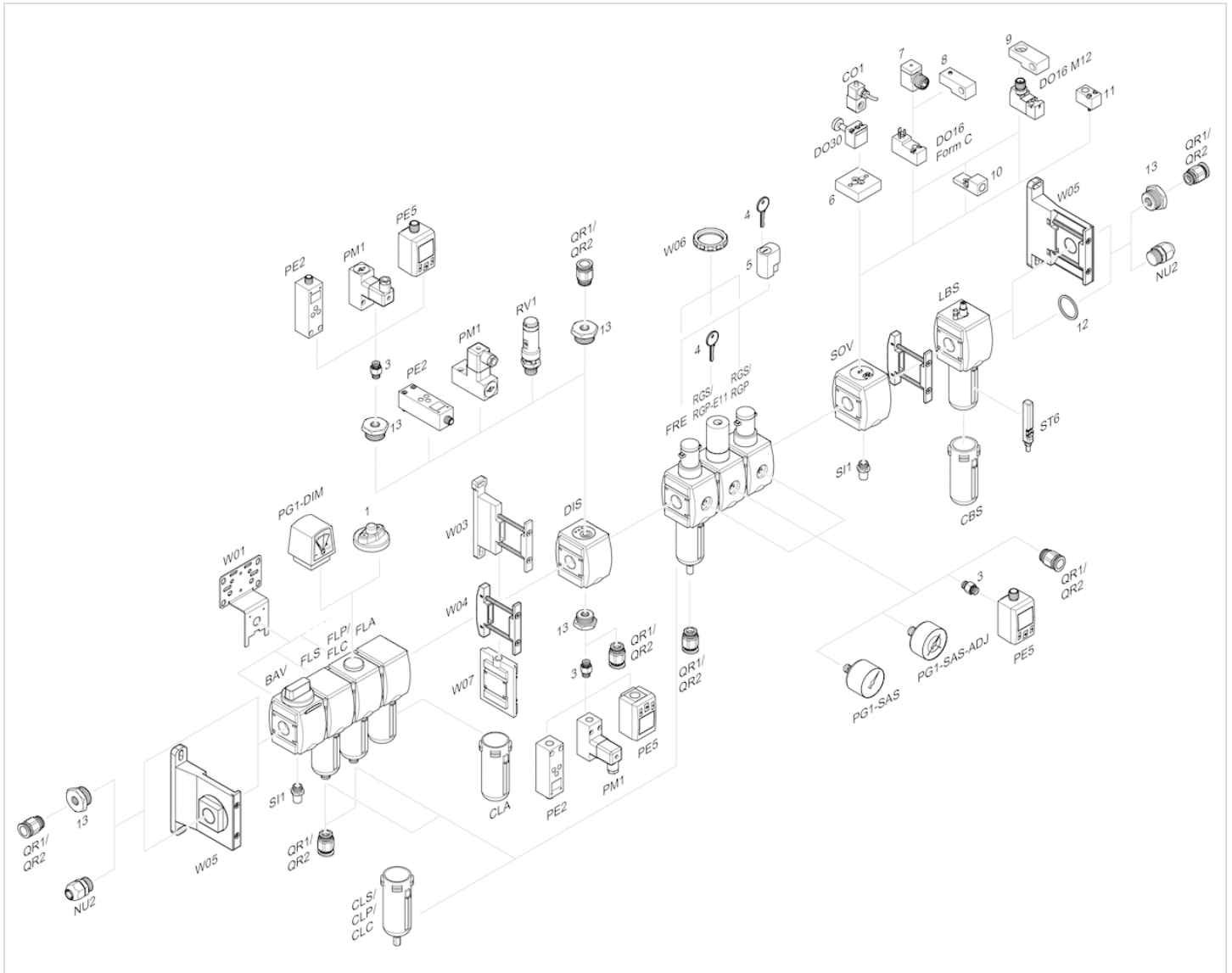
$p_1$  = working pressure  
 $p_2$  = secondary pressure  
 $q_n$  = nominal flow  
 \* starting point

## Flow rate characteristic (setting range $p_2$ : 0.5 - 8 bar)



$p_1$  = working pressure  
 $p_2$  = secondary pressure  
 $q_n$  = nominal flow

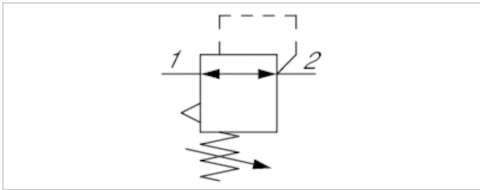
## Accessories overview



- 1 = contamination display
- 3 = Double nipple
- 4 = Key for E11 locking
- 5 = mortise lock
- 6 = Transition plate DO30
- 7 = Adapter, Series CON-VP
- 8 = Mounting aid DO16, form C
- 9 = Mounting aid DO16, M12
- 10 = Adapter for external pilot air
- 11 = Adapter pneumatic operation
- 12 = Sealing ring
- 13 = Reducing nipple

# Pressure regulator, Series AS5-RGS-...-E11

- G 1
- Qn = 14500 l/min
- Standard pressure regulator
- Activation Mechanical
- lockable
- with E11 locking



|                                  |   |
|----------------------------------|---|
| Parts                            | Pressure regulator  |
| Mounting orientation             | Any   |
| Working pressure min./max.       | 0.5 ... 16 bar  |
| Ambient temperature min./max.    | -10 ... 50 °C   |
| Medium temperature min./max.     | -10 ... 50 °C   |
| Medium                           | Compressed air Neutral gases  |
| Regulator type                   | Diaphragm-type pressure regulator Can be assembled into blocks with relieving air exhaust |
| Regulator function               | with relieving air exhaust  |
| Adjustment range min./max.       | 0.5 ... 10 bar  |
| Lock type                        | with E11 locking  |
| Pressure supply                  | single  |
| Activation                       | Mechanical  |
| Internal air consumption qv max. | 1.5 l/min   |
| Weight                           | 0.905 kg  |

## Technical data

| Part No.   | Port | Flow        |
|------------|------|-------------|
|            |      | Qn          |
| R412009099 | G 1  | 14500 l/min |

Order pressure gauge separately, Nominal flow Qn with secondary pressure p2 = 6 bar at  $\Delta p = 1$  bar

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .  
 The rear pressure gauge connection on the pressure regulator is closed with a blanking plug, the front connection is open. Depending on the customer application, a second blanking plug may be necessary. Please order separately (see accessories).  
 A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.  
 Relieving exhaust ( $\leq 0.3$  bar over set pressure).  
 With rear exhaust ( $> 3$  bar ).  
 The E11 locking is delivered without a key (see accessories for keys).

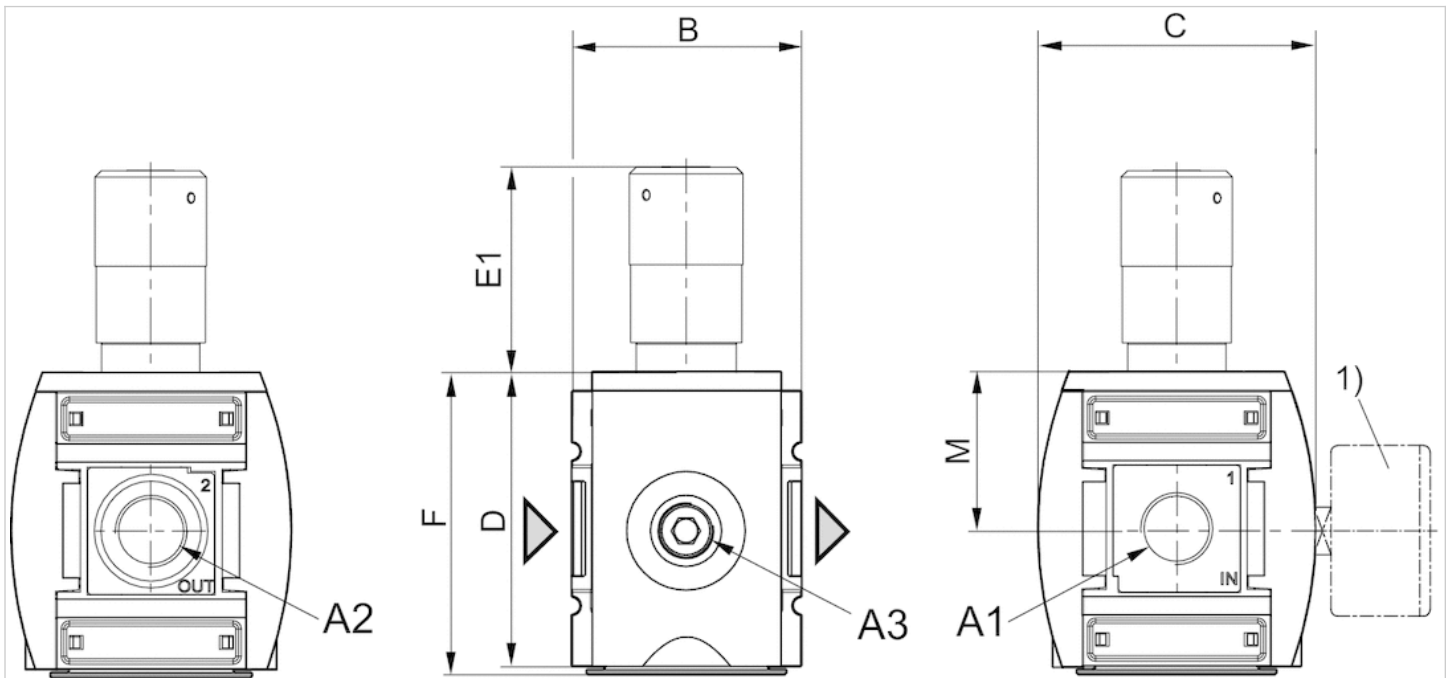


## Technical information

| Material         |                                 |
|------------------|---------------------------------|
| Housing          | Polyamide                       |
| Front plate      | Acrylonitrile butadiene styrene |
| Seals            | Acrylonitrile butadiene rubber  |
| Threaded bushing | Die cast zinc                   |

## Dimensions

### Dimensions



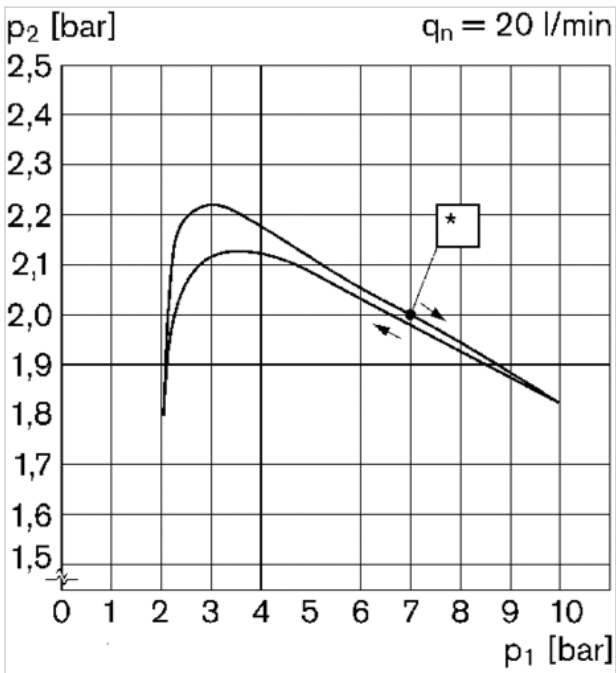
- A1 = input
- A2 = output
- A3 = pressure gauge connection
- 1) Order pressure gauge separately

### Dimensions in mm

| A1  | A2  | A3    | B  | C   | D   | E1 | F   | M  |
|-----|-----|-------|----|-----|-----|----|-----|----|
| G 1 | G 1 | G 1/4 | 85 | 103 | 109 | 90 | 112 | 58 |

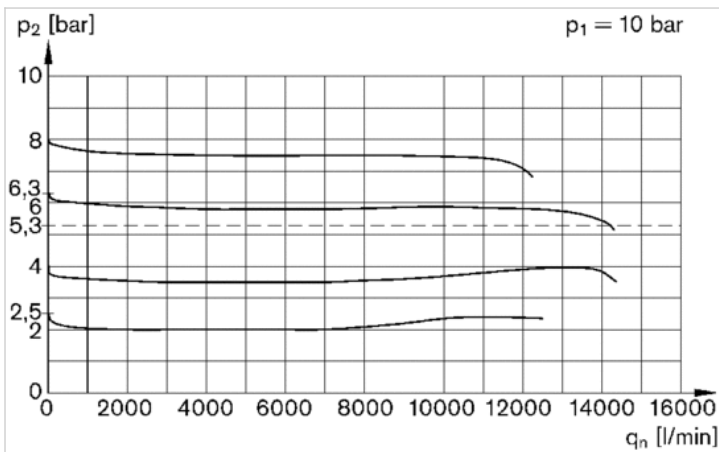
## Diagrams

### Pressure characteristics curve



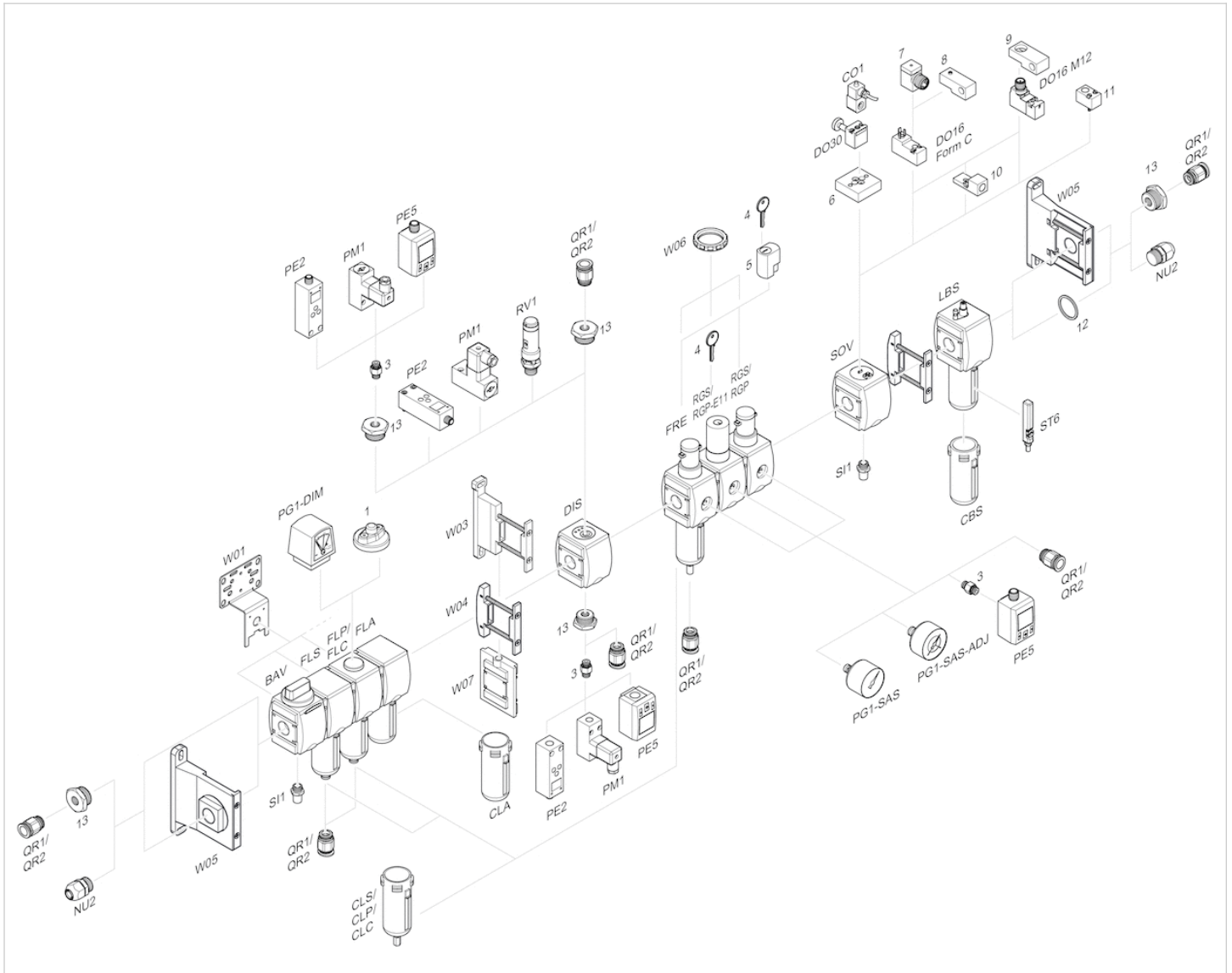
$p_1$  = working pressure  
 $p_2$  = secondary pressure  
 $q_n$  = nominal flow  
 \* starting point

### Flow rate characteristic (setting range $p_2$ : 0.5 - 8 bar)



$p_1$  = working pressure  
 $p_2$  = secondary pressure  
 $q_n$  = nominal flow

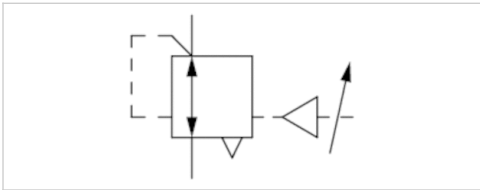
# Accessories overview



- 1 = contamination display
- 3 = Double nipple
- 4 = Key for E11 locking
- 5 = mortise lock
- 6 = Transition plate DO30
- 7 = Adapter, Series CON-VP
- 8 = Mounting aid DO16, form C
- 9 = Mounting aid DO16, M12
- 10 = Adapter for external pilot air
- 11 = Adapter pneumatic operation
- 12 = Sealing ring
- 13 = Reducing nipple

# Pressure regulator, Series AS5-RGS

- G 3/4 G 1
- $Q_n = 16500$  l/min
- Standard pressure regulator
- Activation pneumatically



|                               |   |
|-------------------------------|---|
| Parts                         | Pressure regulator  |
| Mounting orientation          | Any   |
| Working pressure min./max.    | 0.5 ... 16 bar  |
| Ambient temperature min./max. | -10 ... 50 °C   |
| Medium temperature min./max.  | -10 ... 50 °C   |
| Medium                        | Compressed air Neutral gases  |
| Regulator type                | Diaphragm-type pressure regulator Can be assembled into blocks with relieving air exhaust |
| Regulator function            |   |
| Adjustment range min./max.    | 0.5 ... 16 bar  |
| Pressure supply               | single  |
| Activation                    | pneumatically   |
| Weight                        | 1.07 kg   |

## Technical data

| Part No.   | Port  | Flow        |
|------------|-------|-------------|
|            |       | $Q_n$       |
| R412009094 | G 3/4 | 16500 l/min |
| R412009095 | G 1   | 16500 l/min |

Control pressure: see diagram, Nominal flow  $Q_n$  with secondary pressure  $p_2 = 6$  bar at  $\Delta p = 1$  bar

Order pressure gauge separately

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

The rear pressure gauge connection on the pressure regulator is closed with a blanking plug, the front connection is open. Depending on the customer application, a second blanking plug may be necessary. Please order separately (see accessories).

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Relieving exhaust ( $\leq 0.3$  bar over set pressure).

With rear exhaust ( $> 3$  bar ).

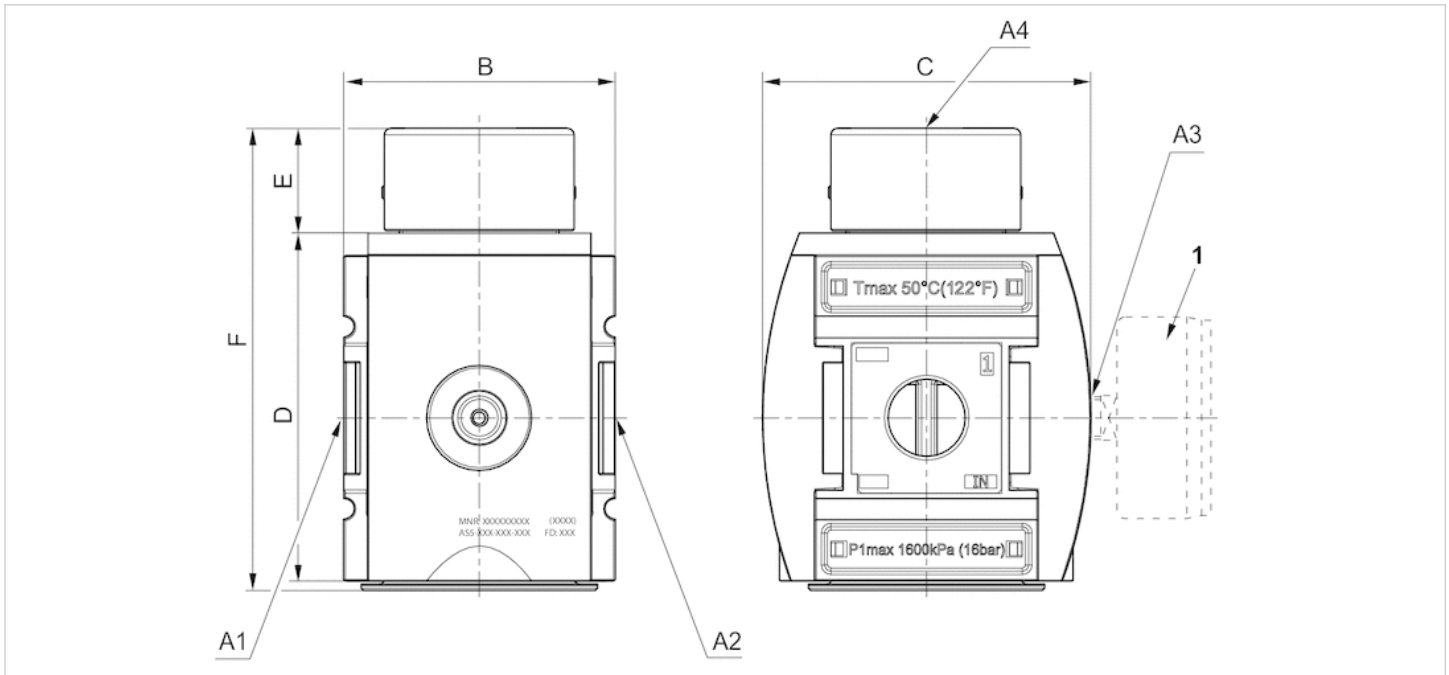
## Technical information

| Material    |                                 |
|-------------|---------------------------------|
| Housing     | Polyamide                       |
| Front plate | Acrylonitrile butadiene styrene |

|                  |                                |
|------------------|--------------------------------|
| Material         |                                |
| Seals            | Acrylonitrile butadiene rubber |
| Threaded bushing | Die cast zinc                  |

## Dimensions

### Dimensions



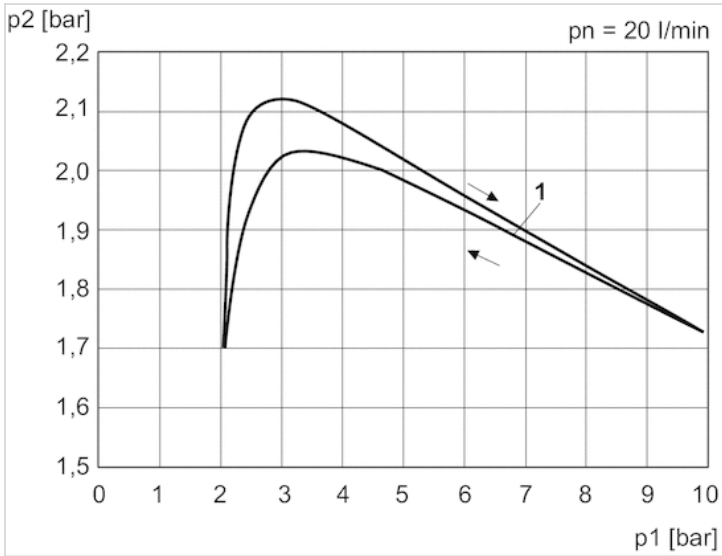
- A1 = input
- A2 = output
- A3 = pressure gauge connection
- A4 = control pressure connection
- 1) Order pressure gauge separately

### Dimensions in mm

| A1    | A2    | A3    | A4    | B  | C   | D   | E    | F   |
|-------|-------|-------|-------|----|-----|-----|------|-----|
| G 3/4 | G 3/4 | G 1/4 | G 1/4 | 85 | 103 | 109 | 32.6 | 145 |
| G 1   | G 1   | G 1/4 | G 1/4 | 85 | 103 | 109 | 32.6 | 145 |

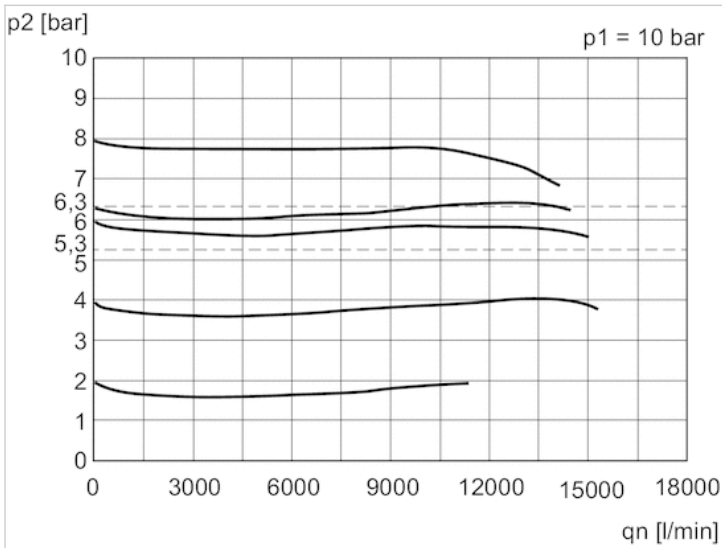
# Diagrams

## Pressure characteristics curve



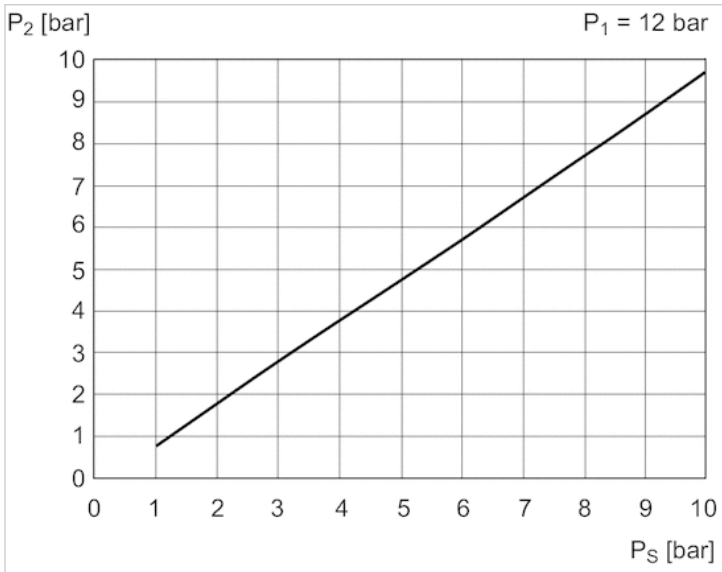
p1 = working pressure  
 p2 = secondary pressure  
 qn = nominal flow  
 1) = Starting point

## Flow rate characteristic (setting range p2: 0.5 - 8 bar)



p1 = working pressure  
 p2 = secondary pressure  
 qn = nominal flow

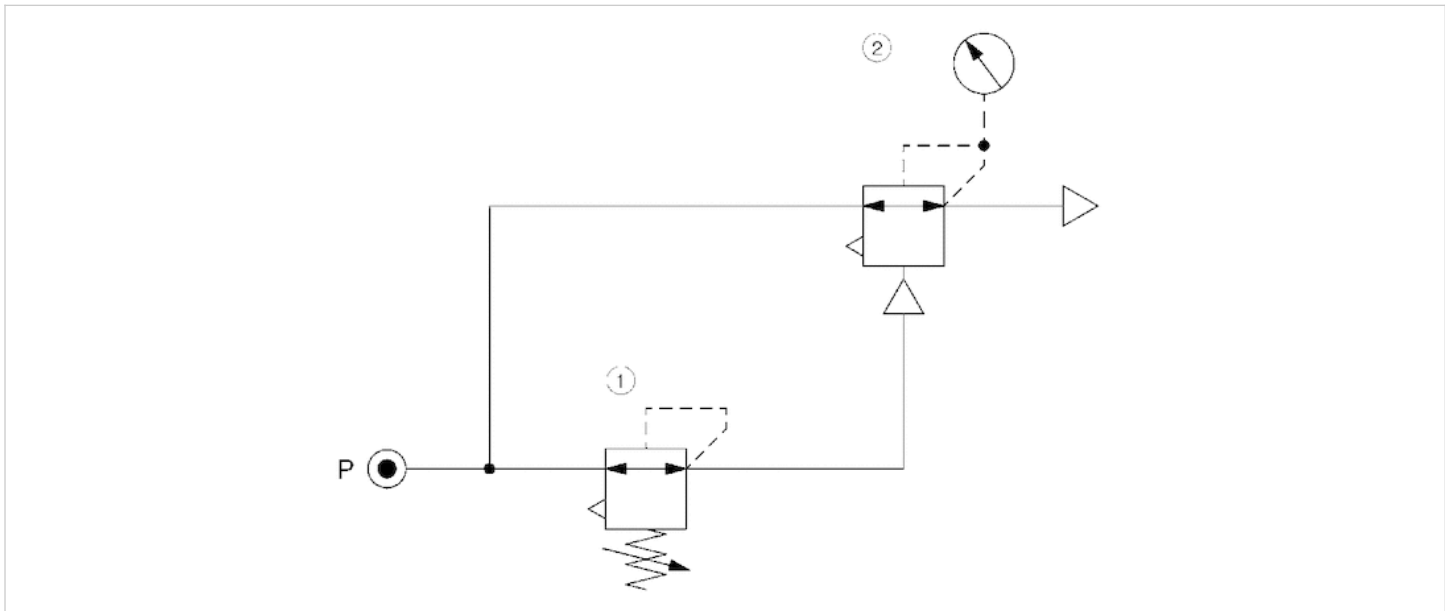
control pressure characteristic



$p_1$  = working pressure  
 $p_2$  = secondary pressure  
 $PS$  = control pressure

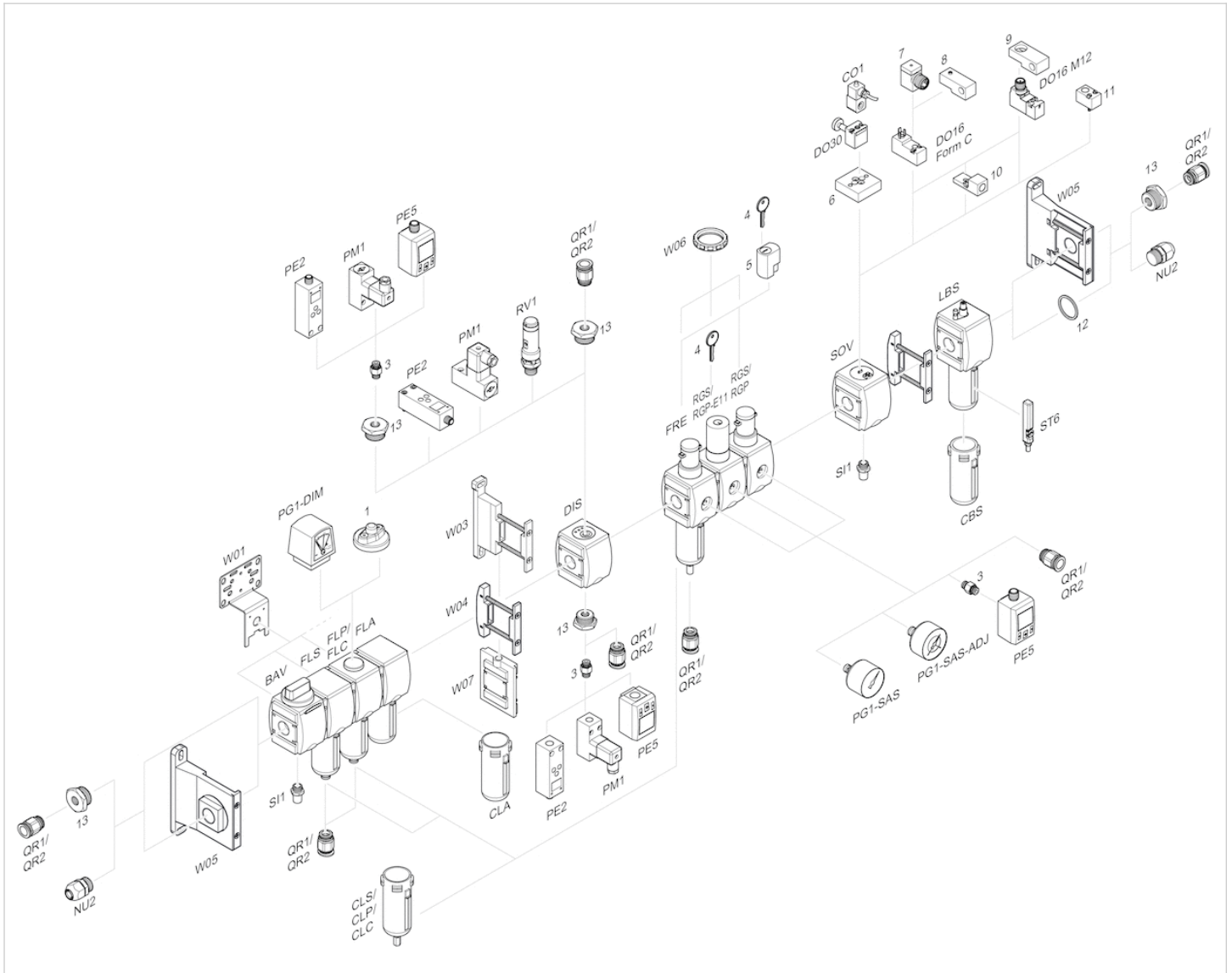
Circuit diagram

Application example



- 1) precision pressure regulator
- 2) pressure regulator valve, pneumatically operated

## Accessories overview



- 1 = contamination display
- 3 = Double nipple
- 4 = Key for E11 locking
- 5 = mortise lock
- 6 = Transition plate DO30
- 7 = Adapter, Series CON-VP
- 8 = Mounting aid DO16, form C
- 9 = Mounting aid DO16, M12
- 10 = Adapter for external pilot air
- 11 = Adapter pneumatic operation
- 12 = Sealing ring
- 13 = Reducing nipple

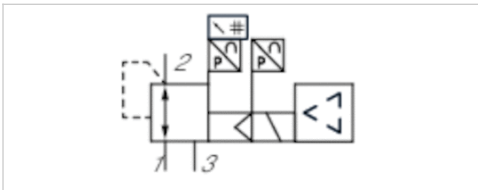


# E/P pressure regulator, Series EV18

- Pressure supply, right, Display: display
- $Q_n = 16500$  l/min
- Compressed air connection output G 1 G 3/4
- Electr. connection M12, 5-pin, A-coded
- serial control IO-Link
- Pilot valves



|                               |                           |
|-------------------------------|---------------------------|
| Version                       | Poppet valve              |
| Working pressure max          | 11 bar                    |
| Ambient temperature min./max. | 0 ... 50 °C               |
| Medium temperature min./max.  | 0 ... 50 °C               |
| Max. particle size            | 50 µm                     |
| Oil content of compressed air | 0 ... 5 mg/m <sup>3</sup> |
| Nominal flow $Q_n$            | 16500 l/min               |
| DC operating voltage          | 24 V                      |
| Voltage tolerance DC          | -20% / +30%               |
| Hysteresis                    | 0.12 bar                  |
| Permissible ripple            | 5%                        |
| Max. power consumption        | 220 mA                    |
| Weight                        | 2.15 kg                   |



## Technical data

| Part No.   | Pressure setting range<br>min./max. | Compressed air connection |
|------------|-------------------------------------|---------------------------|
|            |                                     | Input                     |
| R414011411 | 0 ... 10 bar                        | G 1                       |
| R414011412 | 0 ... 10 bar                        | G 1                       |
| R414011414 | 0 ... 10 bar                        | G 1                       |
| R414011417 | 0 ... 10 bar                        | G 3/4                     |
| R414011418 | 0 ... 10 bar                        | G 3/4                     |
| R414011420 | 0 ... 10 bar                        | G 3/4                     |

| Part No.   | Compressed air connection | Nominal input value | Actual output value | serial control |
|------------|---------------------------|---------------------|---------------------|----------------|
|            | Output                    | Min./max.           | Min./max.           |                |
| R414011411 | G 1                       | 0 ... 10 V          | 0 ... 10 V          | -              |
| R414011412 | G 1                       | 4 ... 20 mA         | 4 ... 20 mA         | -              |
| R414011414 | G 1                       | -                   | -                   | IO-Link        |
| R414011417 | G 3/4                     | 0 ... 10 V          | 0 ... 10 V          | -              |
| R414011418 | G 3/4                     | 4 ... 20 mA         | 4 ... 20 mA         | -              |
| R414011420 | G 3/4                     | -                   | -                   | IO-Link        |

## Technical information

The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!  
 The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .  
 The oil content of compressed air must remain constant during the life cycle.  
 Use only the approved oils from AVENTICS. Further information can be found in the “Technical information” document (available in the MediaCentre).

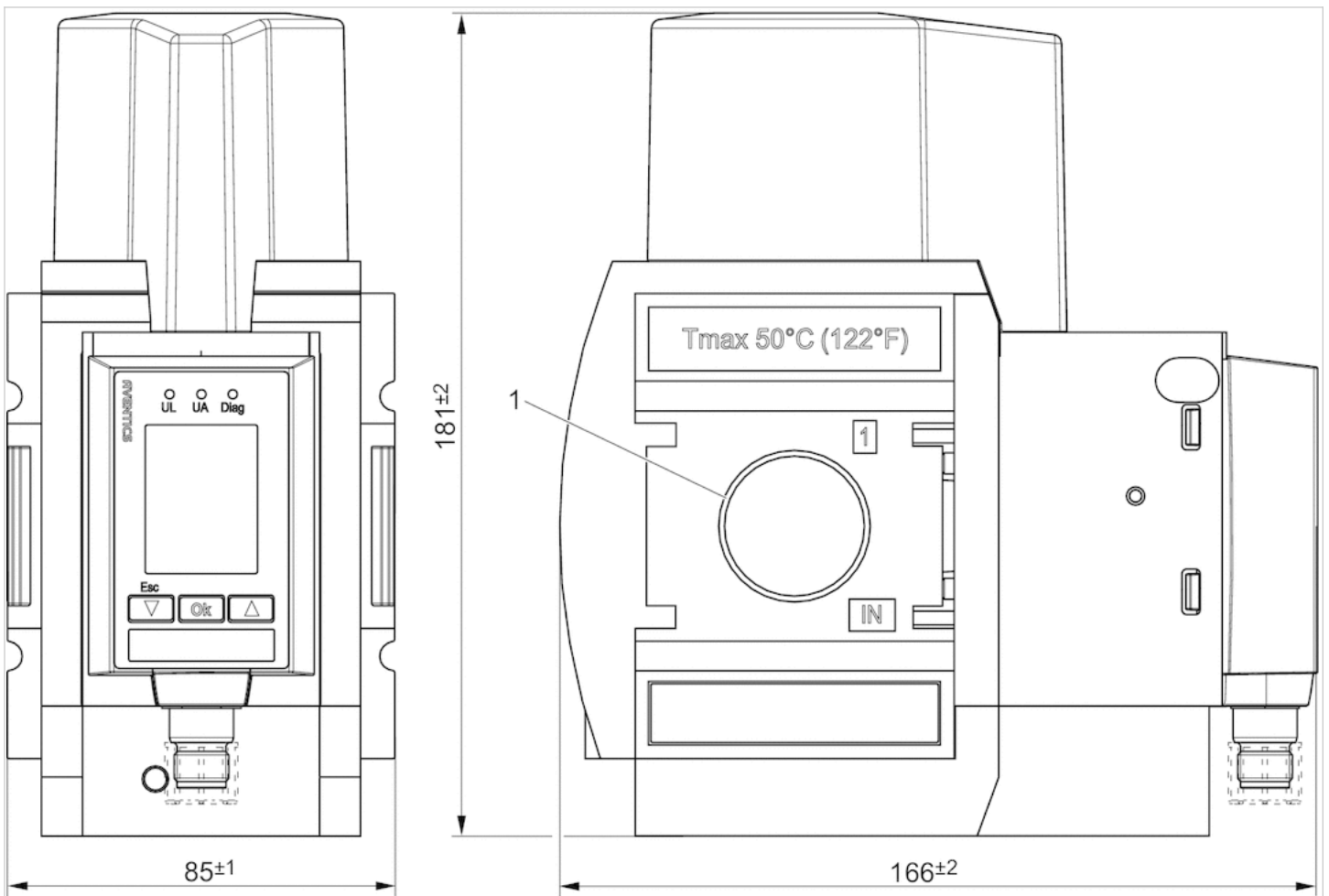
Power outage: maintain pressure

## Technical information

| Material   |                          |
|------------|--------------------------|
| Housing    | Polyamide                |
| Base plate | Aluminum                 |
| Seals      | Nitrile butadiene rubber |

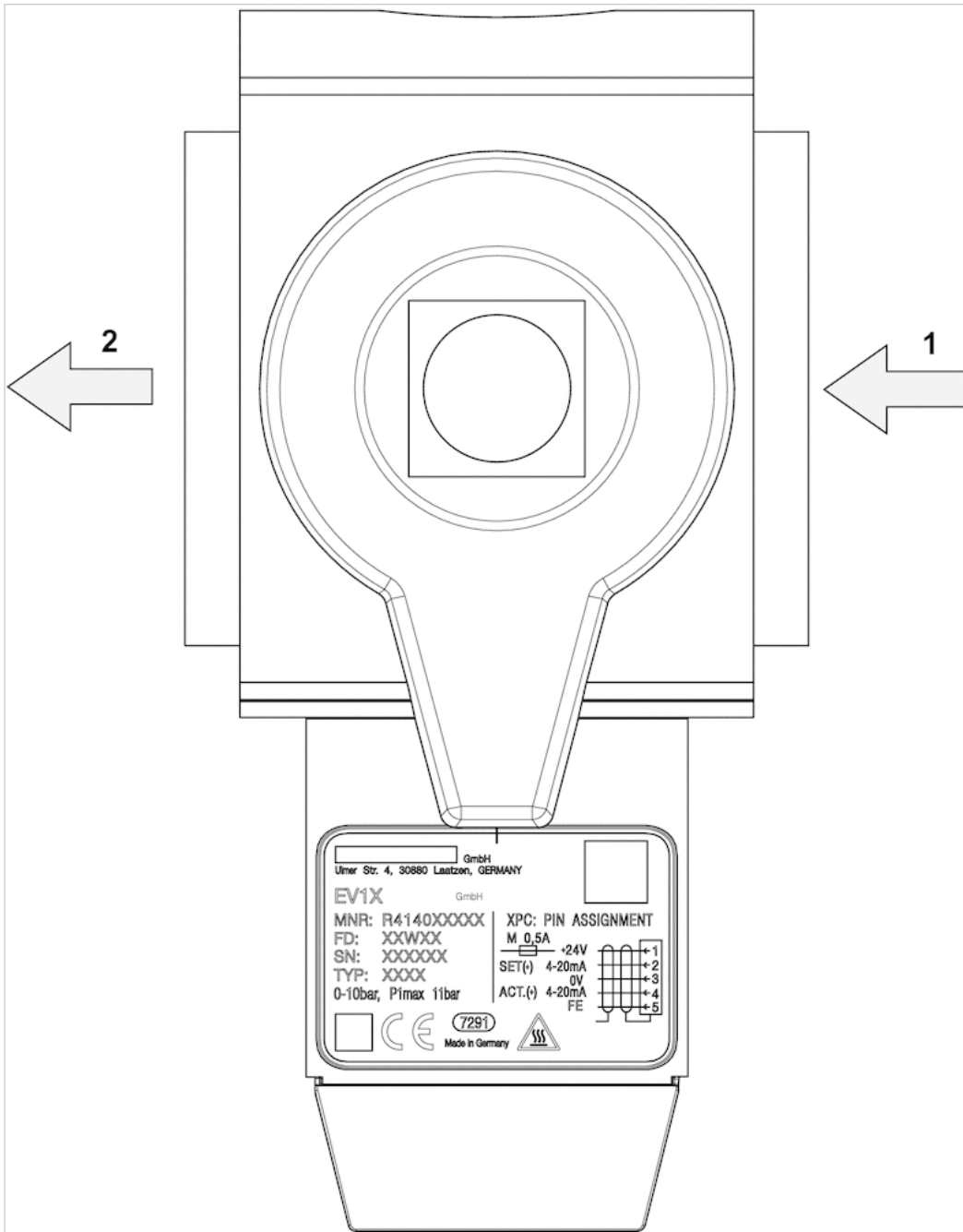
## Dimensions

### Dimensions



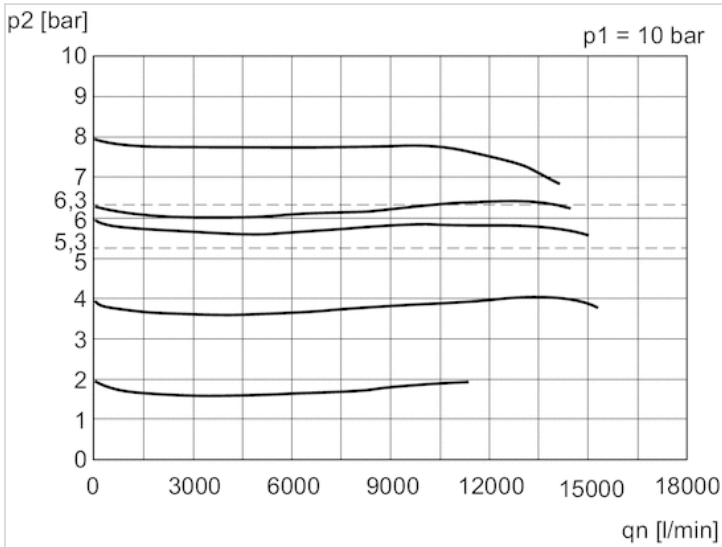
1) Connection thread

Pressure supply, right



## Diagrams

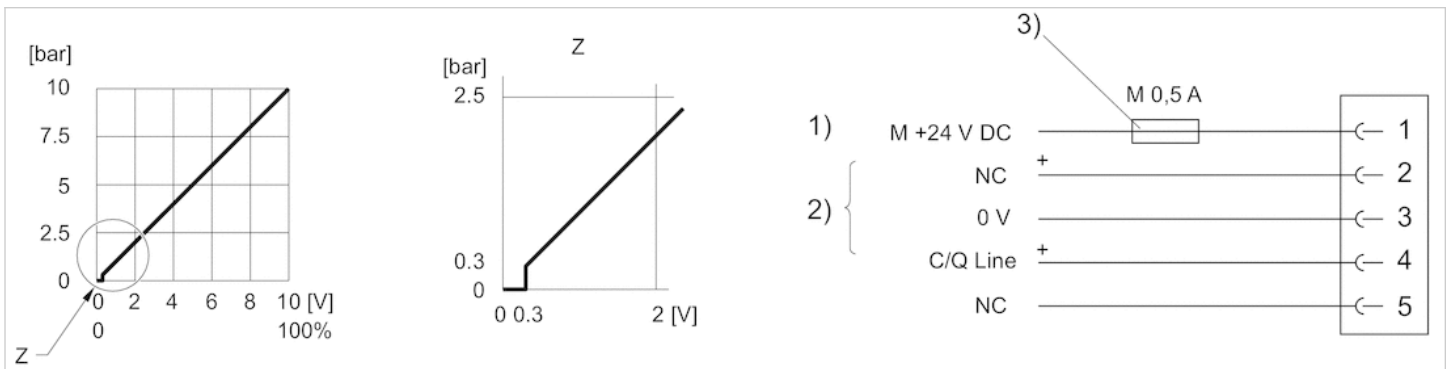
### Flow characteristic curve



p1 = Working pressure  
 p2 = Secondary pressure  
 qn = Nominal flow

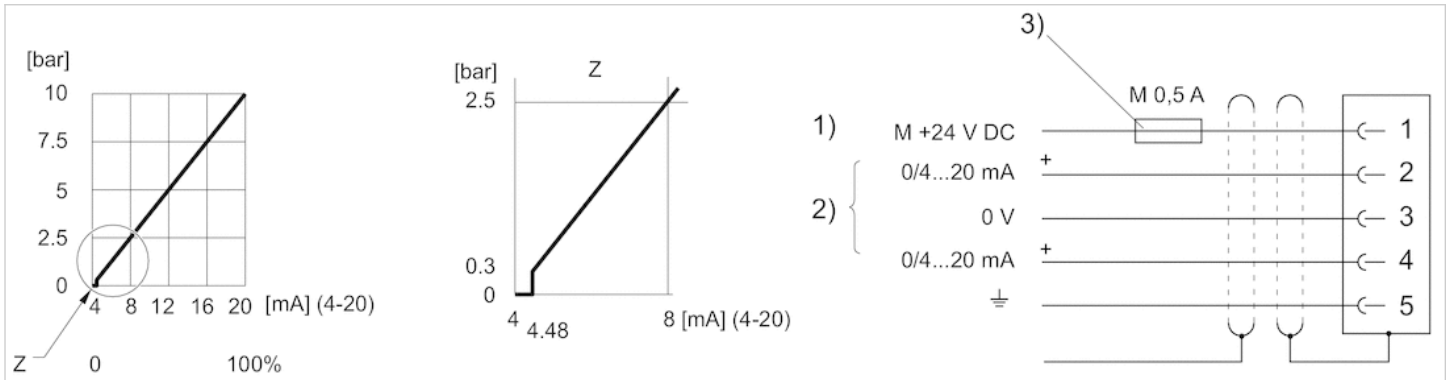
## Circuit diagram

### Characteristic curve and plug assignment for IO-Link version



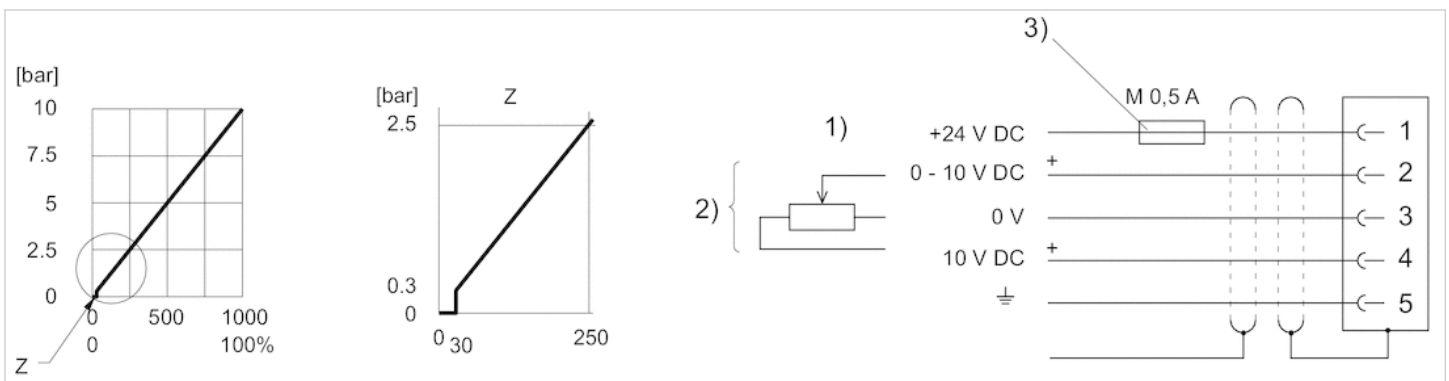
- 1) power supply
  - 2) C/Q Line (pin 4) Not connected (NC) (pin 2) are related to 0 V (pin 3).
  - 3) The power supply must be protected by an external M 0.5 A fuse.
- Connect the plug via a shielded cable to ensure EMC.

Characteristic and pin assignment for current control with actual output value



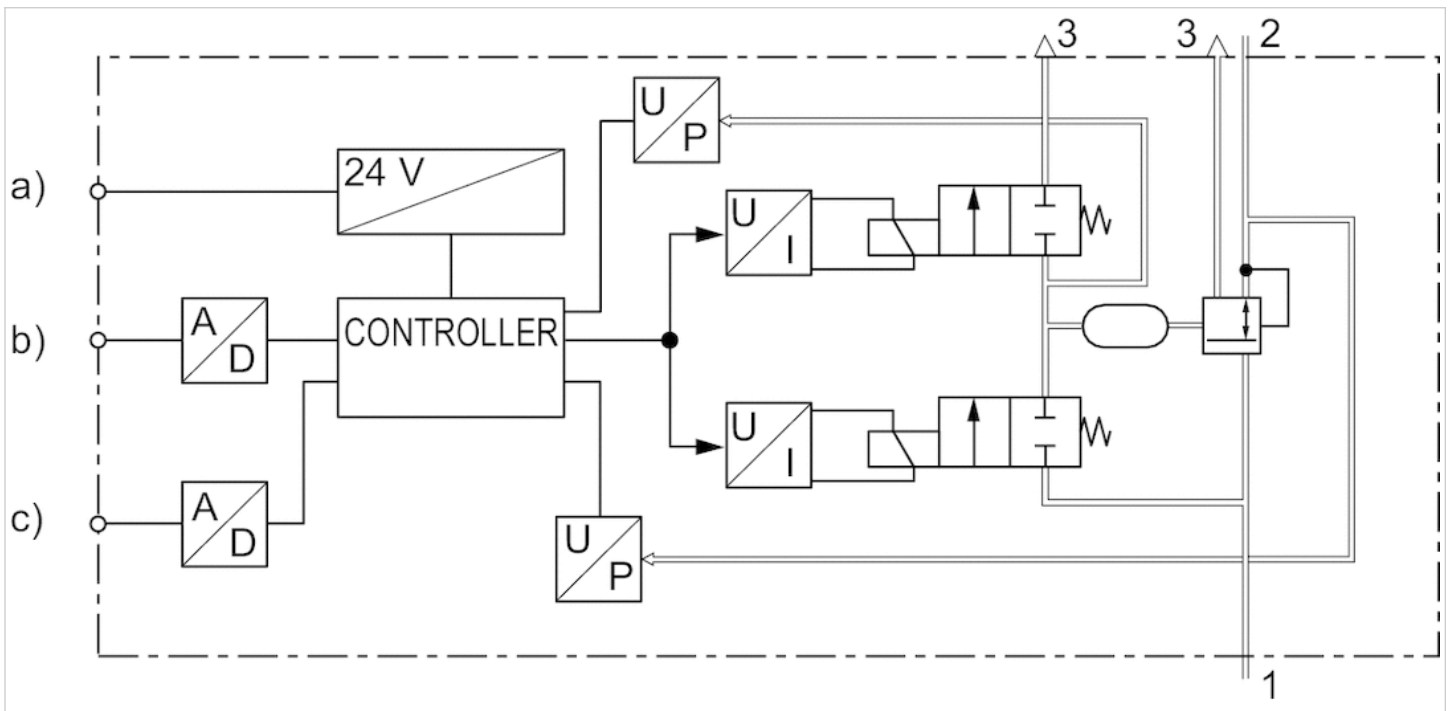
- 1) power supply
- 2) Actual value (pin 4) and nominal value (pin 2) are related to 0 V (pin 3). Nominal input value (ohmic load 100 Ω), actual output value: external ohmic load 300 Ω. If the power supply is switched off, the nominal input value is high-ohmic.
- 3) The power supply must be protected by an external M 0.5 A fuse. Connect the plug via a shielded cable to ensure EMC.

Characteristic and pin assignment for voltage control with actual output value



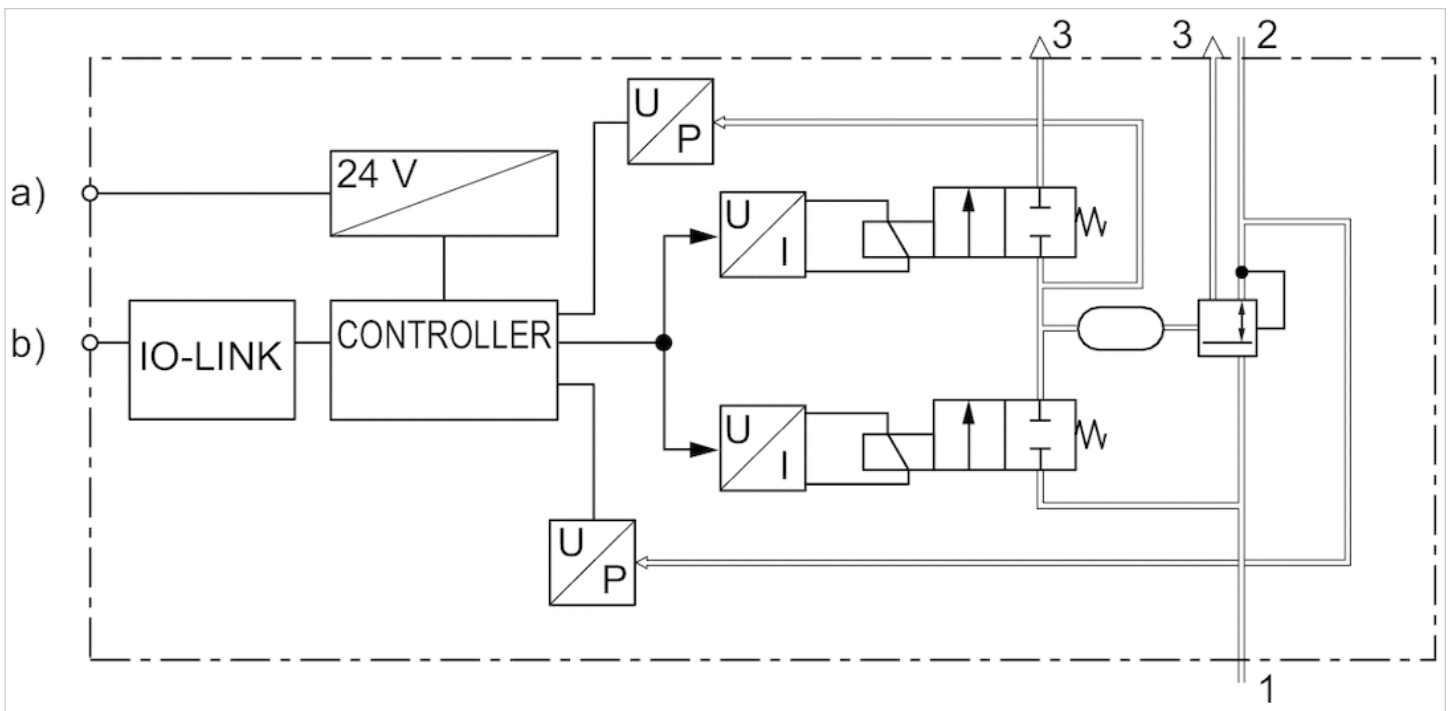
- 1) power supply
- 2) Actual value (pin 4) and nominal value (pin 2) are related to 0 V (pin 3). Nominal input value (R = 1 MΩ), actual output value: min. load resistance > 10 KΩ. If the power supply is switched off, the nominal input value is high-ohmic.
- 3) The power supply must be protected by an external M 0.5 A fuse. Connect the plug via a shielded cable to ensure EMC.

Functional diagram



- a) Voltage supply
- b) Nominal value
- c) Actual output value

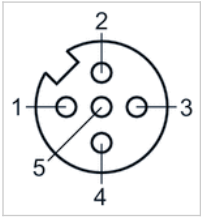
Functional diagram, IO-Link



- a) Supply Voltage
- b) C/Q Line

## Pin assignments

### Plug assignment



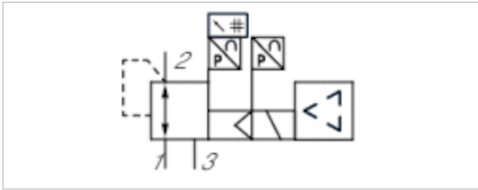
- 1) 24 V DC
- 2) Nominal input value
- 3) GND
- 4) Actual output value
- 5) Ground

# E/P pressure regulator, Series EV18

- Pressure supply, left, Display: display
- $Q_n = 16500$  l/min
- Compressed air connection output G 1 G 3/4
- Electr. connection M12, 5-pin, A-coded
- serial control IO-Link
- Pilot valves



|                               |                           |
|-------------------------------|---------------------------|
| Version                       | Poppet valve              |
| Working pressure max          | 11 bar                    |
| Ambient temperature min./max. | 0 ... 50 °C               |
| Medium temperature min./max.  | 0 ... 50 °C               |
| Max. particle size            | 50 µm                     |
| Oil content of compressed air | 0 ... 5 mg/m <sup>3</sup> |
| Nominal flow $Q_n$            | 16500 l/min               |
| DC operating voltage          | 24 V                      |
| Voltage tolerance DC          | -20% / +30%               |
| Hysteresis                    | 0.12 bar                  |
| Permissible ripple            | 5%                        |
| Max. power consumption        | 220 mA                    |
| Weight                        | 2.15 kg                   |



## Technical data

| Part No.   | Pressure setting range<br>min./max. | Compressed air connection |
|------------|-------------------------------------|---------------------------|
|            |                                     | Input                     |
| R414011409 | 0 ... 10 bar                        | G 1                       |
| R414011410 | 0 ... 10 bar                        | G 1                       |
| R414011413 | 0 ... 10 bar                        | G 1                       |
| R414011415 | 0 ... 10 bar                        | G 3/4                     |
| R414011416 | 0 ... 10 bar                        | G 3/4                     |
| R414011419 | 0 ... 10 bar                        | G 3/4                     |

| Part No.   | Compressed air connection | Nominal input value | Actual output value | serial control |
|------------|---------------------------|---------------------|---------------------|----------------|
|            | Output                    | Min./max.           | Min./max.           |                |
| R414011409 | G 1                       | 0 ... 10 V          | 0 ... 10 V          | -              |
| R414011410 | G 1                       | 4 ... 20 mA         | 4 ... 20 mA         | -              |
| R414011413 | G 1                       | -                   | -                   | IO-Link        |
| R414011415 | G 3/4                     | 0 ... 20 mA         | 0 ... 10 V          | -              |
| R414011416 | G 3/4                     | 4 ... 20 mA         | 4 ... 20 mA         | -              |
| R414011419 | G 3/4                     | -                   | -                   | IO-Link        |

## Technical information



The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!  
 The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .  
 The oil content of compressed air must remain constant during the life cycle.  
 Use only the approved oils from AVENTICS. Further information can be found in the “Technical information” document (available in the MediaCentre).

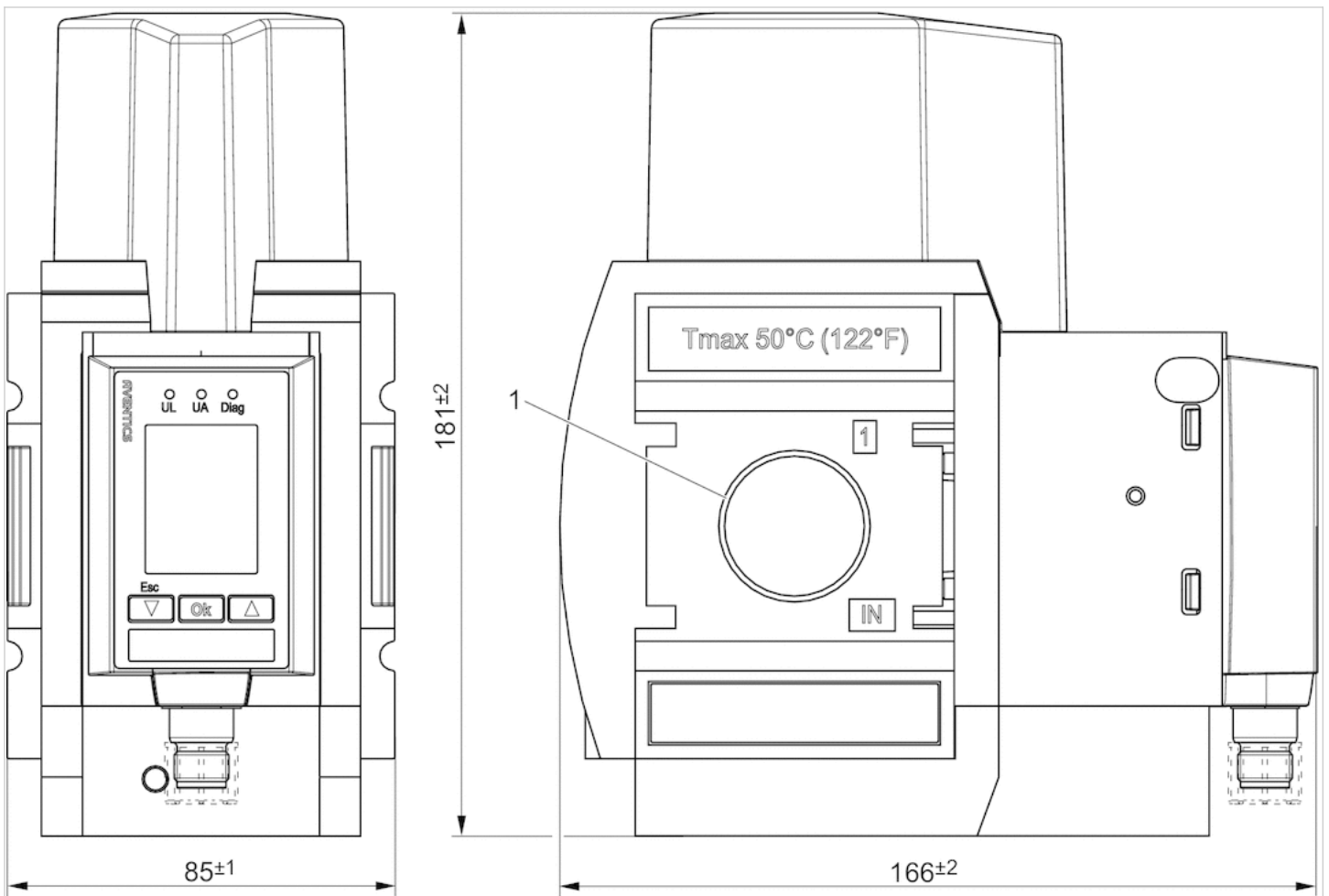
Power outage: maintain pressure

## Technical information

| Material   |                          |
|------------|--------------------------|
| Housing    | Polyamide                |
| Base plate | Aluminum                 |
| Seals      | Nitrile butadiene rubber |

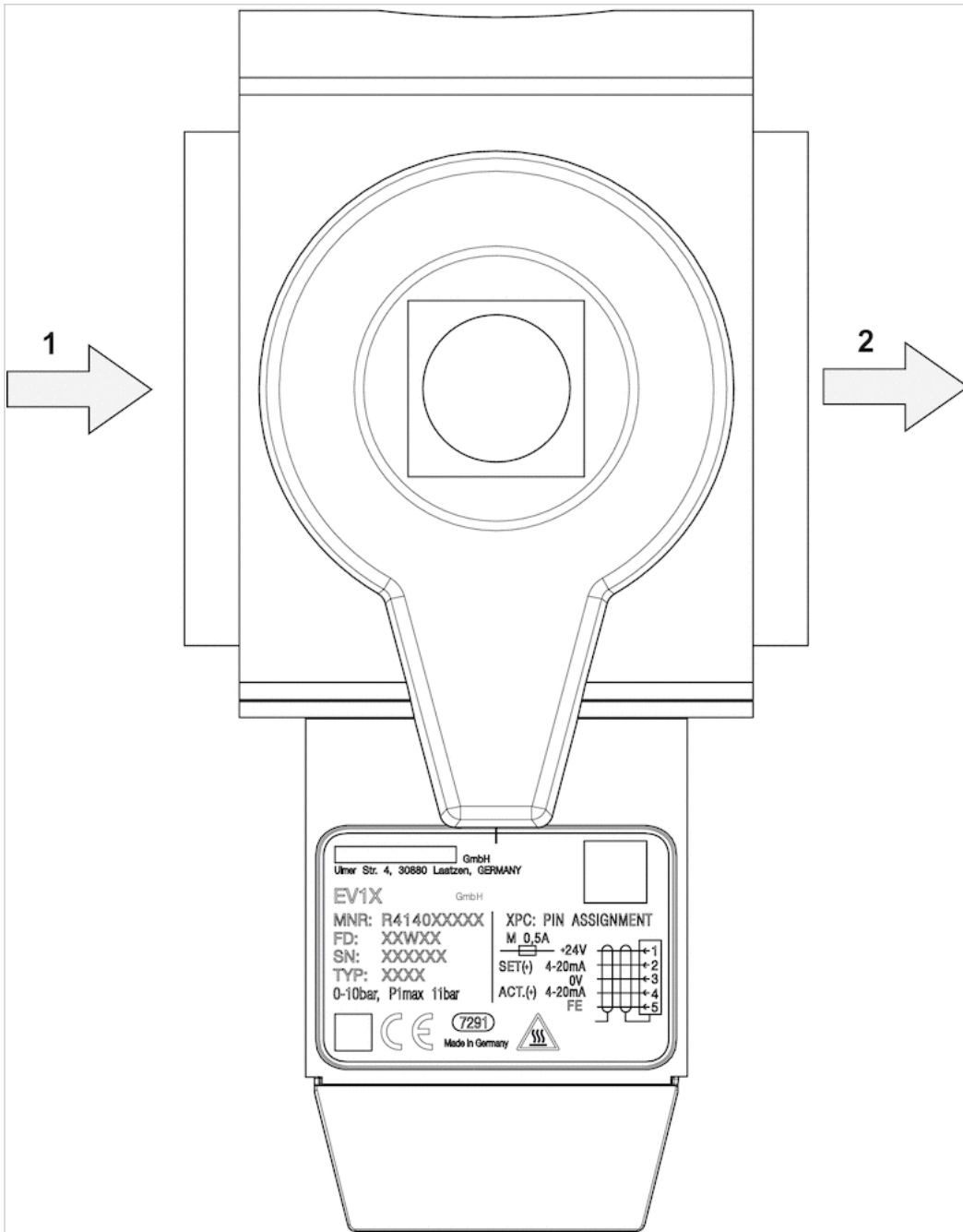
## Dimensions

### Dimensions



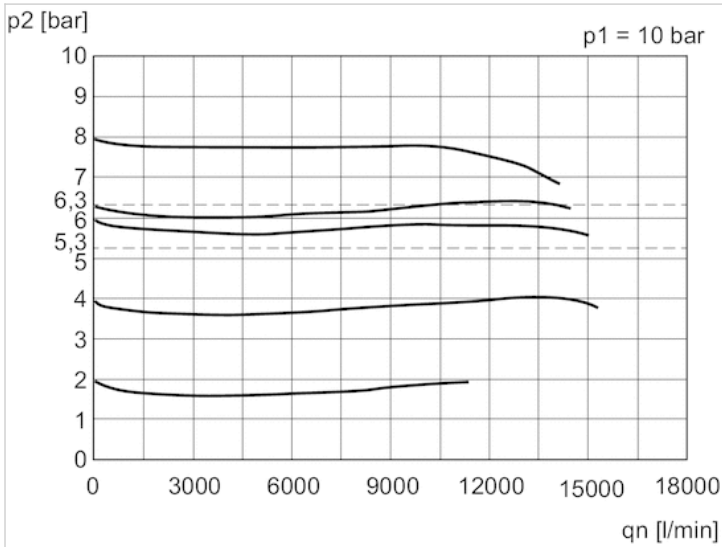
1) Connection thread

Pressure supply, left



## Diagrams

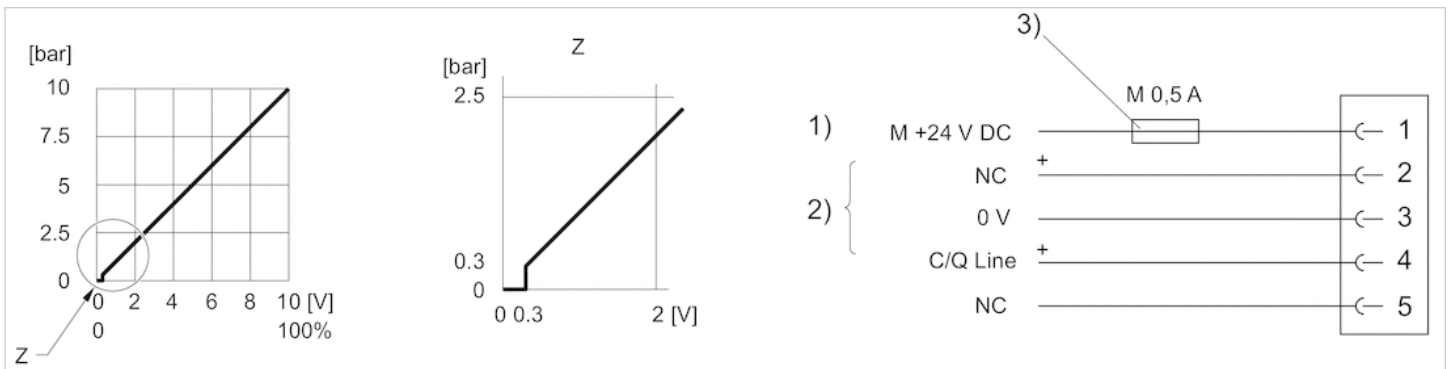
### Flow characteristic curve



$p_1$  = Working pressure  
 $p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

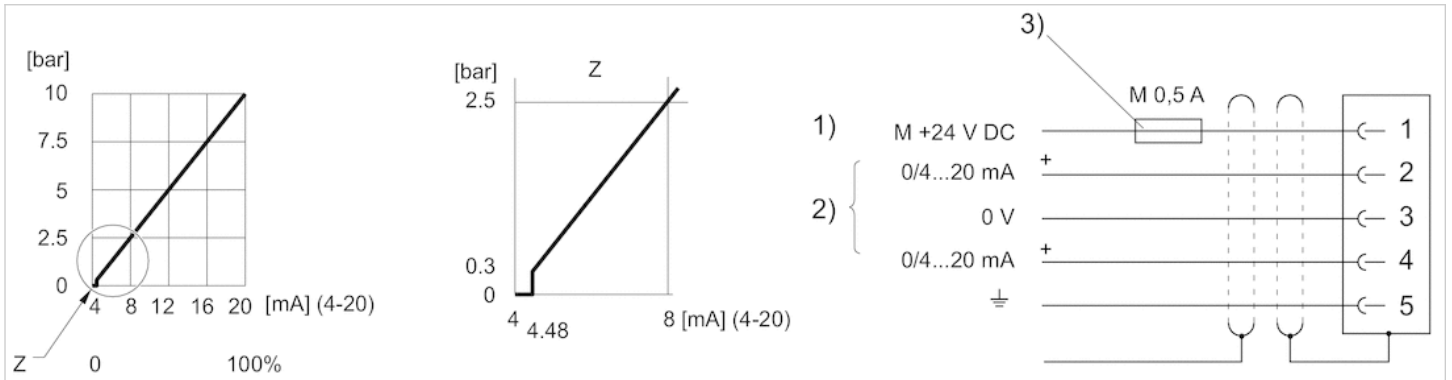
## Circuit diagram

### Characteristic curve and plug assignment for IO-Link version



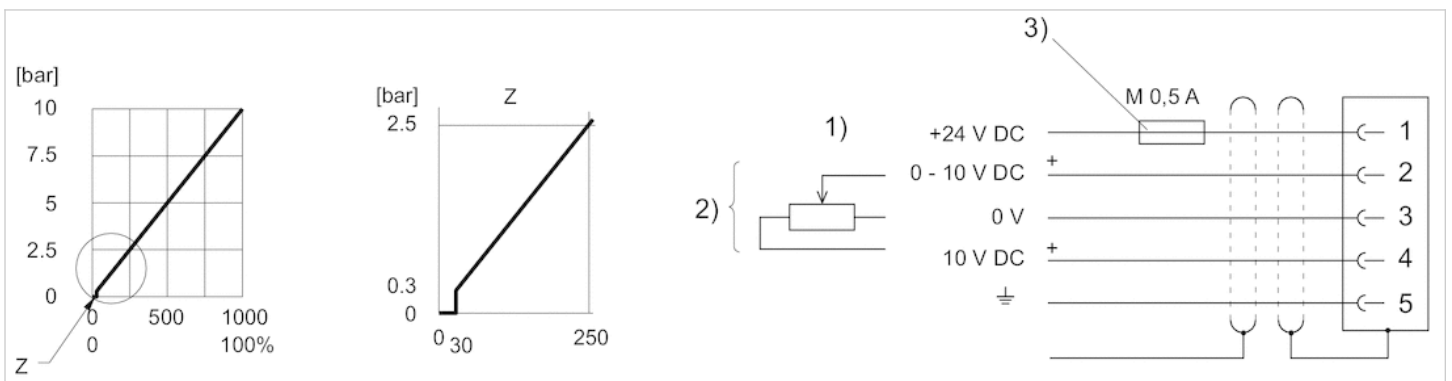
- 1) power supply
  - 2) C/Q Line (pin 4) Not connected (NC) (pin 2) are related to 0 V (pin 3).
  - 3) The power supply must be protected by an external M 0.5 A fuse.
- Connect the plug via a shielded cable to ensure EMC.

Characteristic and pin assignment for current control with actual output value



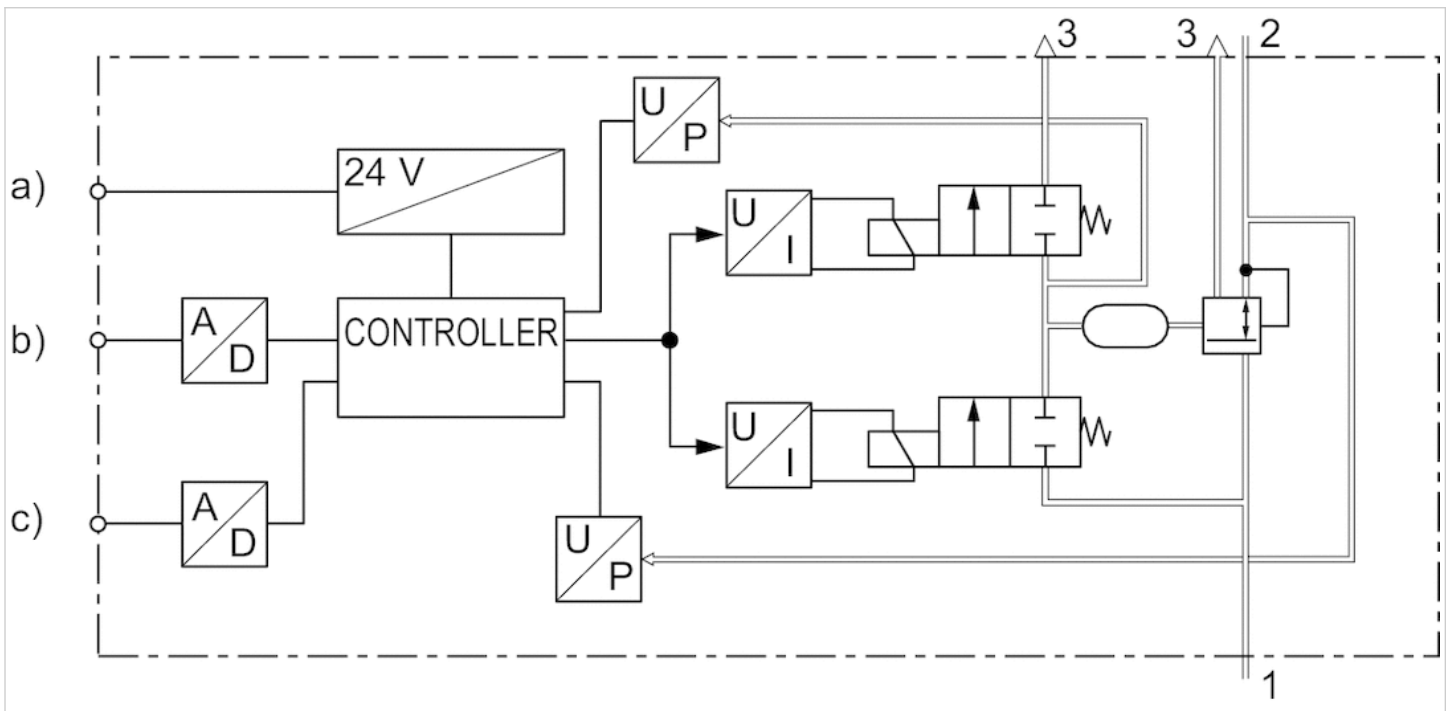
- 1) power supply
- 2) Actual value (pin 4) and nominal value (pin 2) are related to 0 V (pin 3). Nominal input value (ohmic load 100 Ω), actual output value: external ohmic load 300 Ω. If the power supply is switched off, the nominal input value is high-ohmic.
- 3) The power supply must be protected by an external M 0.5 A fuse. Connect the plug via a shielded cable to ensure EMC.

Characteristic and pin assignment for voltage control with actual output value



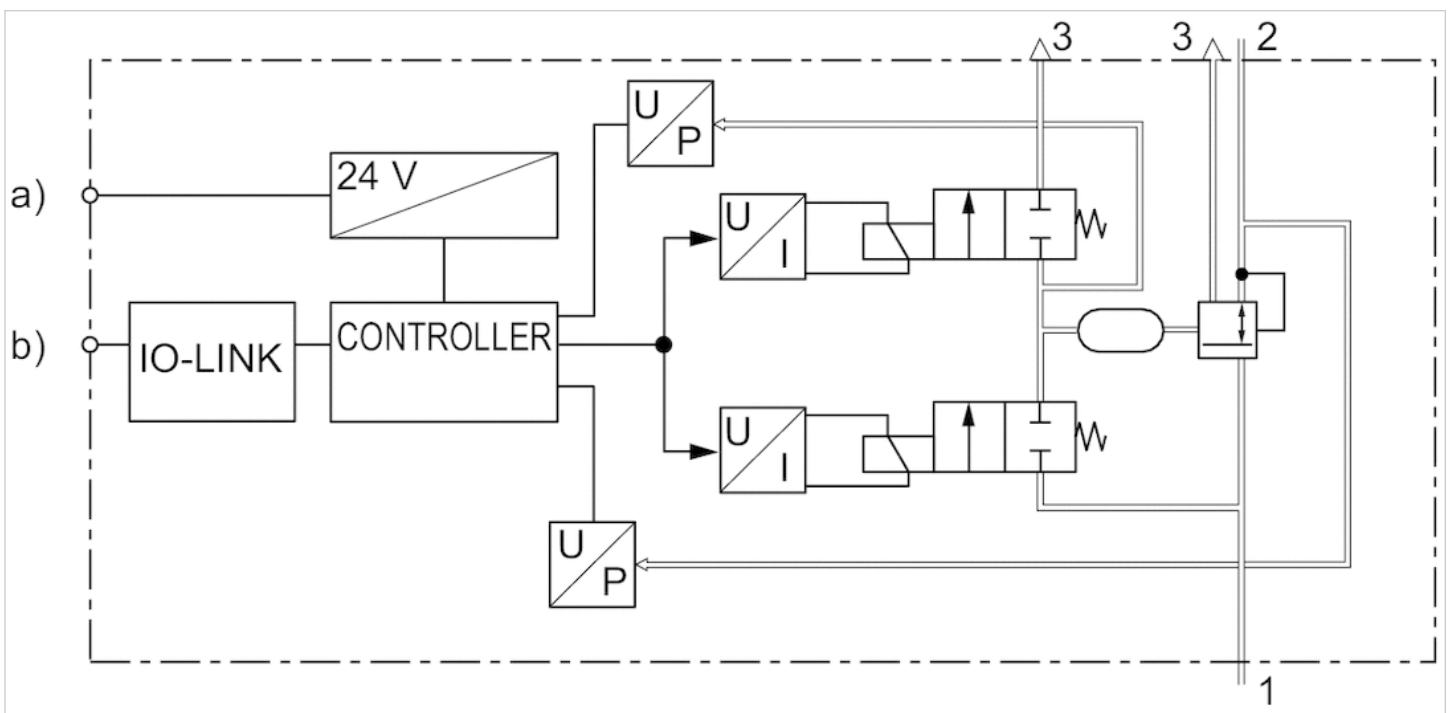
- 1) power supply
- 2) Actual value (pin 4) and nominal value (pin 2) are related to 0 V (pin 3). Nominal input value (R = 1 MΩ), actual output value: min. load resistance > 10 KΩ. If the power supply is switched off, the nominal input value is high-ohmic.
- 3) The power supply must be protected by an external M 0.5 A fuse. Connect the plug via a shielded cable to ensure EMC.

Functional diagram



- a) Voltage supply
- b) Nominal value
- c) Actual output value

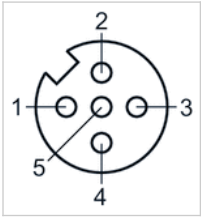
Functional diagram, IO-Link



- a) Supply Voltage
- b) C/Q Line

## Pin assignments

### Plug assignment



- 1) 24 V DC
- 2) Nominal input value
- 3) GND
- 4) Actual output value
- 5) Ground

# Filter pressure regulator, Series AS5-FRE

- G 3/4 G 1
- filter porosity 5 µm
- lockable
- for padlocks



|                                 |                                      |
|---------------------------------|--------------------------------------|
| Version                         | 1-part, Can be assembled into blocks |
| Parts                           | Filter pressure regulator            |
| Mounting orientation            | vertical                             |
| Working pressure min./max.      | 1.5 ... 16 bar                       |
| Ambient temperature min./max.   | -10 ... 50 °C                        |
| Medium temperature min./max.    | -10 ... 50 °C                        |
| Medium                          | Compressed air Neutral gases         |
| Nominal flow Qn                 | 14000 l/min                          |
| Regulator type                  | Diaphragm-type pressure regulator    |
| Regulator function Adjustment   | with relieving air exhaust           |
| range min./max. Pressure supply | See table below                      |
| Filter reservoir volume         | 87 cm <sup>3</sup>                   |
| Filter element                  | exchangeable                         |
| Max. Internal air consumption   | 1.5 l/min                            |
| Weight                          | See table below                      |

## Technical data

| Part No.   |   |   | Port  | filter porosity | Flow        | Adjustment range min./max. |
|------------|---|---|-------|-----------------|-------------|----------------------------|
|            |   |   |       |                 | Qn          |                            |
| R412009200 |  |  | G 3/4 | 5 µm            | 14000 l/min | 0.5 ... 8 bar              |
| R412009201 |  |  | G 3/4 | 5 µm            | 14000 l/min | 0.5 ... 8 bar              |
| R412009202 |  |  | G 3/4 | 5 µm            | 14000 l/min | 0.5 ... 8 bar              |
| R412009206 |  |  | G 3/4 | 5 µm            | 14000 l/min | 0.5 ... 8 bar              |
| R412009207 |  |  | G 3/4 | 5 µm            | 14000 l/min | 0.5 ... 8 bar              |
| R412009208 |  |  | G 3/4 | 5 µm            | 14000 l/min | 0.5 ... 8 bar              |
| R412009175 |  | —   | G 3/4 | 5 µm            | 14000 l/min | 0.5 ... 8 bar              |
| R412009176 |  | —   | G 3/4 | 5 µm            | 14000 l/min | 0.5 ... 8 bar              |
| R412009177 |  | —   | G 3/4 | 5 µm            | 14000 l/min | 0.5 ... 8 bar              |
| R412009193 |  | —   | G 3/4 | 5 µm            | 14000 l/min | 0.5 ... 10 bar             |
| R412009194 |  | —   | G 3/4 | 5 µm            | 14000 l/min | 0.5 ... 10 bar             |
| R412009195 |  | —   | G 3/4 | 5 µm            | 14000 l/min | 0.5 ... 10 bar             |
| R412009181 |  | —   | G 3/4 | 5 µm            | 14000 l/min | 0.5 ... 8 bar              |
| R412009182 |  | —   | G 3/4 | 5 µm            | 14000 l/min | 0.5 ... 8 bar              |
| R412009183 |  | —   | G 3/4 | 5 µm            | 14000 l/min | 0.5 ... 8 bar              |
| R412009209 |  |  | G 1   | 5 µm            | 14000 l/min | 0.5 ... 8 bar              |
| R412009210 |  |  | G 1   | 5 µm            | 14000 l/min | 0.5 ... 8 bar              |
| R412009211 |  |  | G 1   | 5 µm            | 14000 l/min | 0.5 ... 8 bar              |
| R412009215 |  |  | G 1   | 5 µm            | 14000 l/min | 0.5 ... 8 bar              |

| Part No.   |  |  | Port | filter porosity | Flow        | Adjustment range min./max. |
|------------|---|---|------|-----------------|-------------|----------------------------|
|            |   |   |      |                 | Qn          |                            |
| R412009216 |  |  | G 1  | 5 µm            | 14000 l/min | 0.5 ... 8 bar              |
| R412009217 |  |  | G 1  | 5 µm            | 14000 l/min | 0.5 ... 8 bar              |
| R412009184 |  | —   | G 1  | 5 µm            | 14000 l/min | 0.5 ... 8 bar              |
| R412009185 |  | —   | G 1  | 5 µm            | 14000 l/min | 0.5 ... 8 bar              |
| R412009186 |  | —   | G 1  | 5 µm            | 14000 l/min | 0.5 ... 8 bar              |
| R412009190 |  | —   | G 1  | 5 µm            | 14000 l/min | 0.5 ... 8 bar              |
| R412009191 |  | —   | G 1  | 5 µm            | 14000 l/min | 0.5 ... 8 bar              |
| R412009192 |  | —   | G 1  | 5 µm            | 14000 l/min | 0.5 ... 8 bar              |
| R412009196 |  | —   | G 1  | 5 µm            | 14000 l/min | 0.5 ... 10 bar             |
| R412009197 |  | —   | G 1  | 5 µm            | 14000 l/min | 0.5 ... 10 bar             |
| R412009198 |  | —   | G 1  | 5 µm            | 14000 l/min | 0.5 ... 10 bar             |

| Part No.   | Condensate drain                         | Pressure gauge      | Reservoir     |
|------------|--|---------------------|---------------|
| R412009200 | semi-automatic, open without pressure    | with pressure gauge | Polycarbonate |
| R412009201 | fully automatic, open without pressure   | with pressure gauge | Polycarbonate |
| R412009202 | fully automatic, closed without pressure | with pressure gauge | Polycarbonate |
| R412009206 | semi-automatic, open without pressure    | with pressure gauge | Die cast zinc |
| R412009207 | fully automatic, open without pressure   | with pressure gauge | Die cast zinc |
| R412009208 | fully automatic, closed without pressure | with pressure gauge | Die cast zinc |
| R412009175 | semi-automatic, open without pressure    | -                   | Polycarbonate |
| R412009176 | fully automatic, open without pressure   | -                   | Polycarbonate |
| R412009177 | fully automatic, closed without pressure | -                   | Polycarbonate |
| R412009193 | semi-automatic, open without pressure    | -                   | Polycarbonate |
| R412009194 | fully automatic, open without pressure   | -                   | Polycarbonate |
| R412009195 | fully automatic, closed without pressure | -                   | Polycarbonate |
| R412009181 | semi-automatic, open without pressure    | -                   | Die cast zinc |
| R412009182 | fully automatic, open without pressure   | -                   | Die cast zinc |
| R412009183 | fully automatic, closed without pressure | -                   | Die cast zinc |
| R412009209 | semi-automatic, open without pressure    | with pressure gauge | Polycarbonate |
| R412009210 | fully automatic, open without pressure   | with pressure gauge | Polycarbonate |
| R412009211 | fully automatic, closed without pressure | with pressure gauge | Polycarbonate |
| R412009215 | semi-automatic, open without pressure    | with pressure gauge | Die cast zinc |
| R412009216 | fully automatic, open without pressure   | with pressure gauge | Die cast zinc |
| R412009217 | fully automatic, closed without pressure | with pressure gauge | Die cast zinc |
| R412009184 | semi-automatic, open without pressure    | -                   | Polycarbonate |
| R412009185 | fully automatic, open without pressure   | -                   | Polycarbonate |
| R412009186 | fully automatic, closed without pressure | -                   | Polycarbonate |
| R412009190 | semi-automatic, open without pressure    | -                   | Die cast zinc |
| R412009191 | fully automatic, open without pressure   | -                   | Die cast zinc |
| R412009192 | fully automatic, closed without pressure | -                   | Die cast zinc |
| R412009196 | semi-automatic, open without pressure    | -                   | Polycarbonate |
| R412009197 | fully automatic, open without pressure   | -                   | Polycarbonate |
| R412009198 | fully automatic, closed without pressure | -                   | Polycarbonate |

| Part No.   | Protective guard | Weight  |    |
|------------|------------------|---------|----|
| R412009200 | Polyamide        | 1.08 kg | 1) |
| R412009201 | Polyamide        | 1.13 kg | 1) |



| Part No.   | Protective guard | Weight  |    |
|------------|------------------|---------|----|
| R412009202 | Polyamide        | 1.13 kg | 1) |
| R412009206 | -                | 1.57 kg | 1) |
| R412009207 | -                | 1.62 kg | 1) |
| R412009208 | -                | 1.62 kg | 1) |
| R412009175 | Polyamide        | 0.99 kg | 2) |
| R412009176 | Polyamide        | 1.04 kg | 2) |
| R412009177 | Polyamide        | 1.04 kg | 2) |
| R412009193 | Polyamide        | 0.99 kg | 2) |
| R412009194 | Polyamide        | 1.04 kg | 2) |
| R412009195 | Polyamide        | 1.04 kg | 2) |
| R412009181 | -                | 1.48 kg | 2) |
| R412009182 | -                | 1.53 kg | 2) |
| R412009183 | -                | 1.53 kg | 2) |
| R412009209 | Polyamide        | 1.08 kg | 1) |
| R412009210 | Polyamide        | 1.13 kg | 1) |
| R412009211 | Polyamide        | 1.13 kg | 1) |
| R412009215 | -                | 1.57 kg | 1) |
| R412009216 | -                | 1.62 kg | 1) |
| R412009217 | -                | 1.62 kg | 1) |
| R412009184 | Polyamide        | 0.99 kg | 2) |
| R412009185 | Polyamide        | 1.04 kg | 2) |
| R412009186 | Polyamide        | 1.04 kg | 2) |
| R412009190 | -                | 1.48 kg | 2) |
| R412009191 | -                | 1.53 kg | 2) |
| R412009192 | -                | 1.53 kg | 2) |
| R412009196 | Polyamide        | 0.99 kg | 2) |
| R412009197 | Polyamide        | 1.04 kg | 2) |
| R412009198 | Polyamide        | 1.04 kg | 2) |

Nominal flow  $Q_n$  with secondary pressure  $p_2 = 6$  bar at  $\Delta p = 1$  bar

1) Pressure gauge enclosed separately.

2) Order pressure gauge separately.

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

Note: Polycarbonate reservoirs are susceptible to solvents, supplementary information can be found at "Customer information".

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Also suitable for separation of fluid oil or water due to the design.

Max. achievable compressed air class acc. to ISO 8573-1:2010 6 : 7 : -

## Technical information

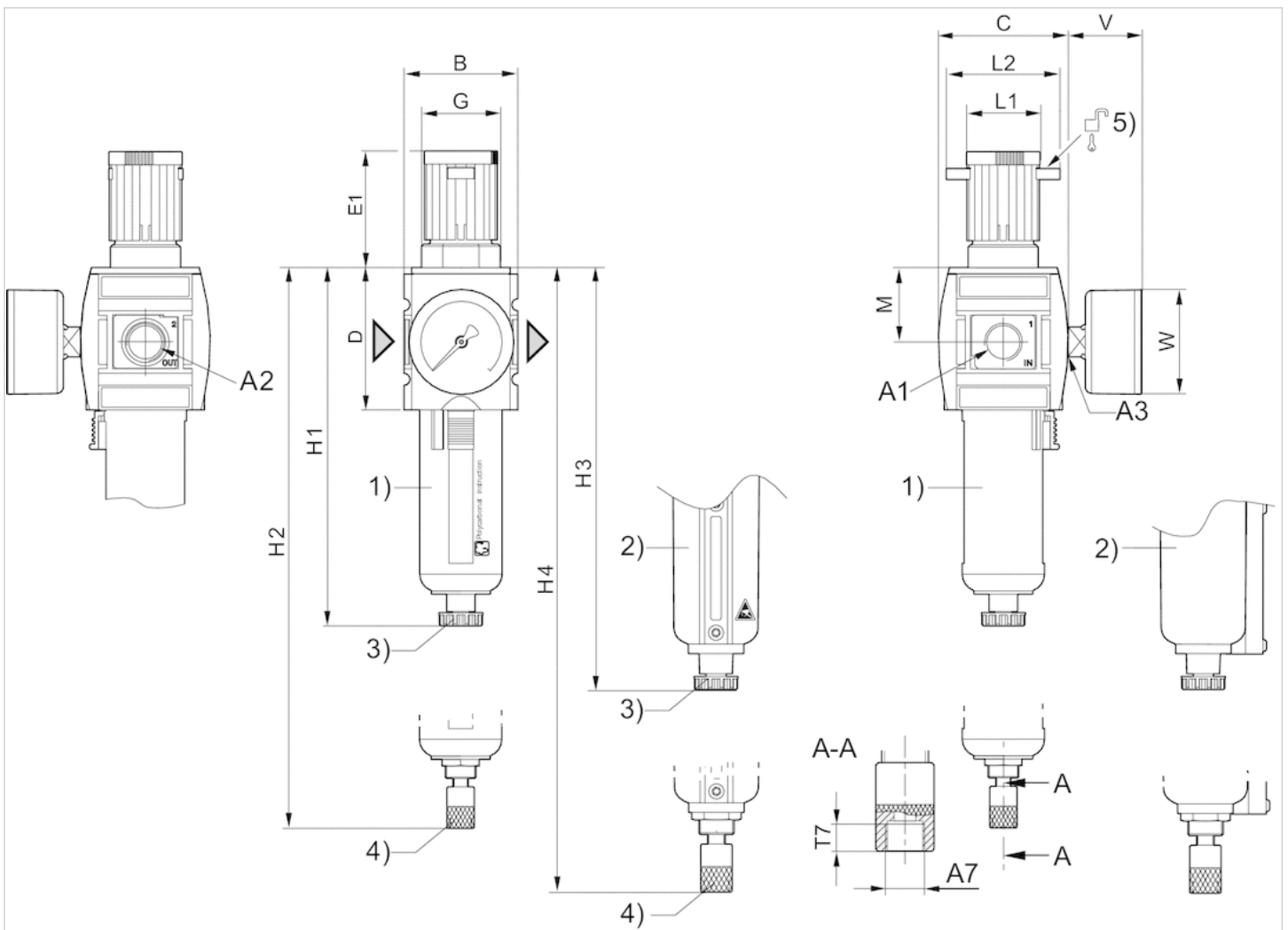
### Material

|             |                                 |
|-------------|---------------------------------|
| Housing     | Polyamide                       |
| Front plate | Acrylonitrile butadiene styrene |

| Material         |                                |
|------------------|--------------------------------|
| Seals            | Acrylonitrile butadiene rubber |
| Threaded bushing | Die cast zinc                  |
| Reservoir        | Polycarbonate Die cast zinc    |
| Protective guard | Polyamide                      |
| Filter insert    | Polyethylene                   |

## Dimensions

### Dimensions



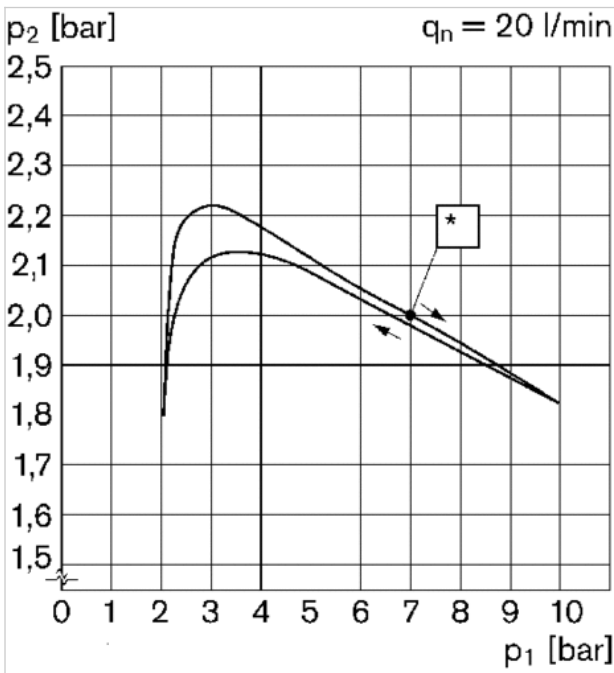
- A1 = input
- A2 = output
- A3 = pressure gauge connection
- A7 = condensate drain
- 1) Plastic reservoir and protective guard with window
- 2) Metal reservoir with level indicator
- 3) Semi-automatic condensate drain
- 4) Fully automatic condensate drain
- 5) Mounting option for padlocks, max. shackle Ø 8

Dimensions in mm

| A1    | A2    | A3    | A7    | B  | C   | D   | E1 | G       | H1  | H2  | H3    | H4    | L1 | L2 | M  | T7  | V  | W  |
|-------|-------|-------|-------|----|-----|-----|----|---------|-----|-----|-------|-------|----|----|----|-----|----|----|
| G 3/4 | G 3/4 | G 1/4 | G 1/8 | 85 | 103 | 109 | 75 | M50x1,5 | 250 | 206 | 193.5 | 210.5 | 41 | 60 | 58 | 8.5 | 38 | 63 |
| G 1   | G 1   | G 1/4 | G 1/8 | 85 | 103 | 109 | 75 | M50x1,5 | 250 | 206 | 193.5 | 210.5 | 41 | 60 | 58 | 8.5 | 38 | 63 |

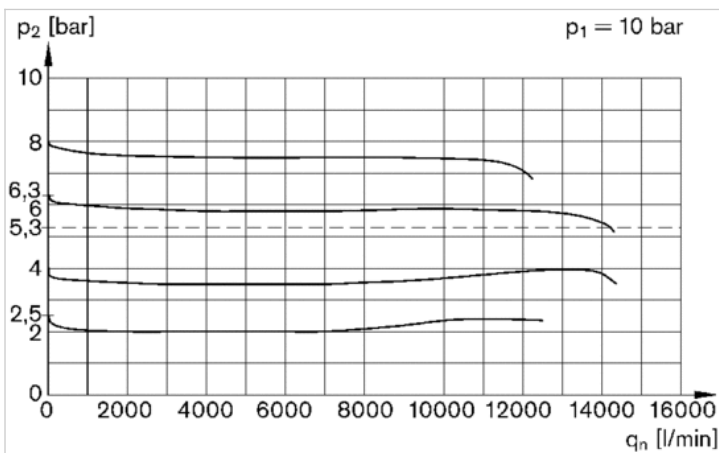
Diagrams

Pressure characteristics curve



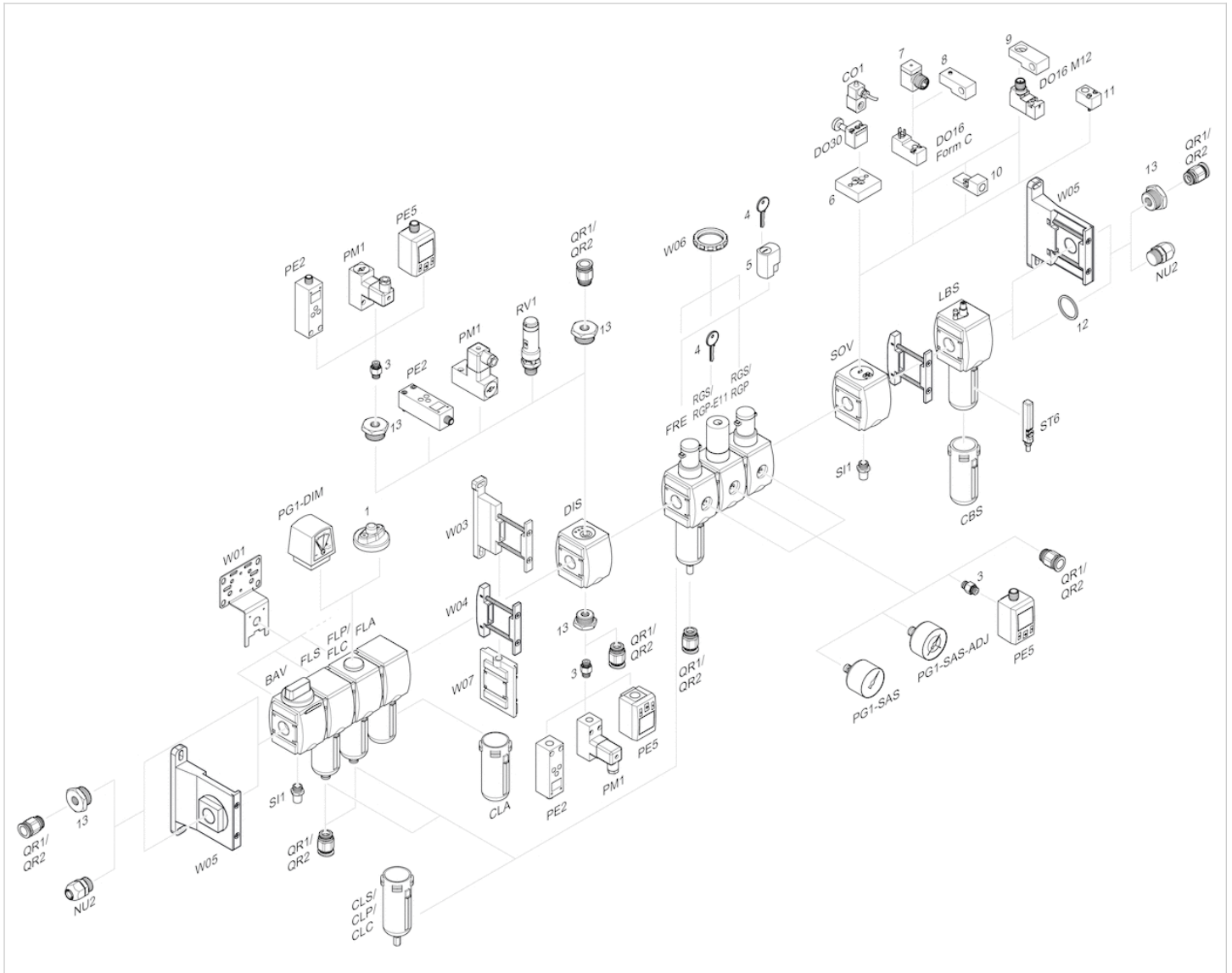
p1 = working pressure  
 p2 = secondary pressure  
 qn = nominal flow  
 \* starting point

Flow rate characteristic (setting range p2: 0.5 - 8 bar)



p1 = working pressure  
 p2 = secondary pressure  
 qn = nominal flow

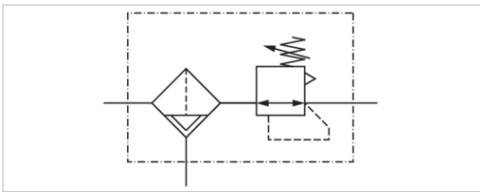
# Accessories overview



- 1 = contamination display
- 3 = Double nipple
- 4 = Key for E11 locking
- 5 = mortise lock
- 6 = Transition plate DO30
- 7 = Adapter, Series CON-VP
- 8 = Mounting aid DO16, form C
- 9 = Mounting aid DO16, M12
- 10 = Adapter for external pilot air
- 11 = Adapter pneumatic operation
- 12 = Sealing ring
- 13 = Reducing nipple

# Filter pressure regulator, Series AS5-FRE

- G 3/4 G 1
- filter porosity 25 µm
- lockable
- for padlocks



|   |   |
|---|---|
| Version   | 1-part, Can be assembled into blocks                  |
| Parts   | Filter pressure regulator                             |
| Mounting orientation  | vertical  |
| Working pressure min./max.                                    | 1.5 ... 16 bar  |
| Ambient temperature min./max.                                 | -10 ... 50 °C   |
| Medium temperature min./max.                                  | -10 ... 50 °C   |
| Medium  | Compressed air Neutral gases                          |
| Nominal flow Qn   | 13000 l/min   |
| Regulator type  | Diaphragm-type pressure regulator                     |
| Regulator function Adjustment range min./max. Pressure supply | with relieving air exhaust<br>0.5 ... 8 bar<br>single |
| Filter reservoir volume                                       | 87 cm <sup>3</sup>                                    |
| Filter element  | exchangeable  |
| Condensate drain  | semi-automatic, open without pressure                 |
| Max. Internal air consumption                                 | 1.5 l/min   |
| Weight  | 1.57 kg   |

## Technical data

| Part No.   | Port  | filter porosity | Flow        | Condensate drain                      |
|------------|-------|-----------------|-------------|---------------------------------------|
|            |       |                 | Qn          |                                       |
| R412009188 | G 3/4 | 25 µm           | 13000 l/min | semi-automatic, open without pressure |
| R412009189 | G 1   | 25 µm           | 13000 l/min | semi-automatic, open without pressure |

Nominal flow Qn with secondary pressure p<sub>2</sub> = 6 bar at Δp = 1 bar

Order pressure gauge separately.

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

Note: Polycarbonate reservoirs are susceptible to solvents, supplementary information can be found at "Customer information".

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Also suitable for separation of fluid oil or water due to the design.

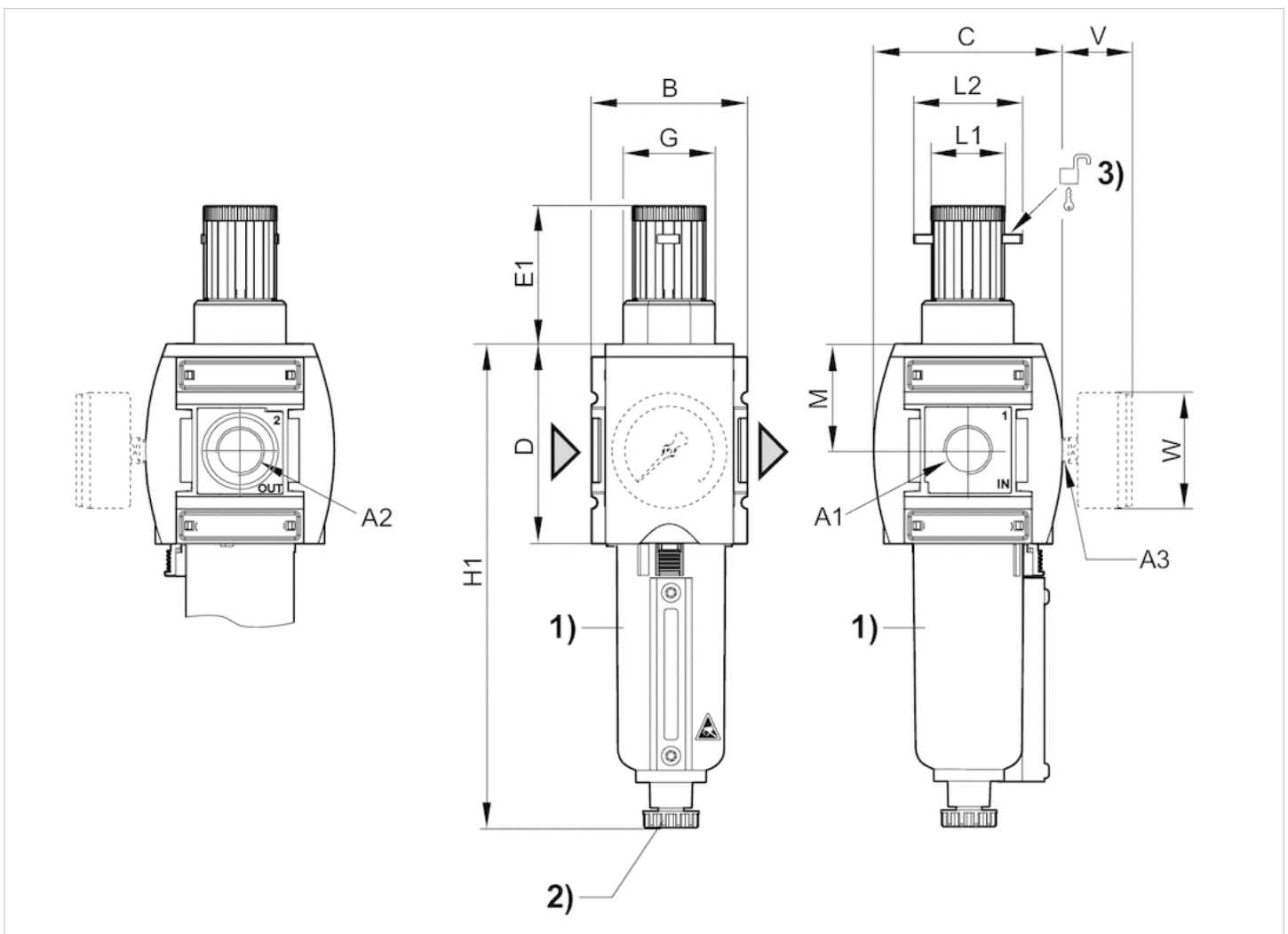
Max. achievable compressed air class acc. to ISO 8573-1:2010 7 : 7 : -

## Technical information

| Material         |                                 |
|------------------|---------------------------------|
| Housing          | Polyamide                       |
| Front plate      | Acrylonitrile butadiene styrene |
| Seals            | Acrylonitrile butadiene rubber  |
| Threaded bushing | Die cast zinc                   |
| Reservoir        | Die cast zinc                   |
| Protective guard | Polyamide                       |
| Filter insert    | Polyethylene                    |

## Dimensions

### Dimensions



A1 = input

A2 = output

A3 = pressure gauge connection

1) Metal reservoir with level indicator

2) Semi-automatic condensate drain

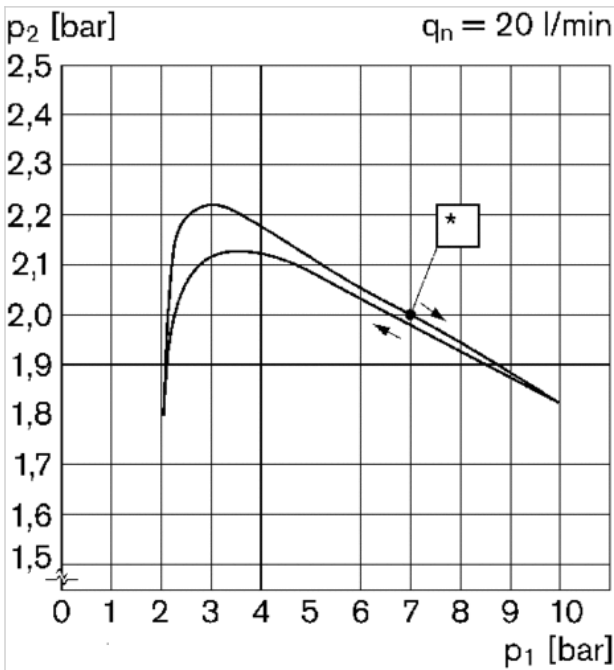
3) Mounting option for padlocks, max. shackle  $\varnothing$  8

Dimensions in mm

| A1    | A2    | A3    | B  | C   | D   | E1 | G       | H1  | L1 | L2 | M  | V  | W  |
|-------|-------|-------|----|-----|-----|----|---------|-----|----|----|----|----|----|
| G 3/4 | G 3/4 | G 1/4 | 85 | 103 | 109 | 75 | M50x1,5 | 250 | 41 | 60 | 58 | 38 | 63 |
| G 1   | G 1   | G 1/4 | 85 | 103 | 109 | 75 | M50x1,5 | 250 | 41 | 60 | 58 | 38 | 63 |

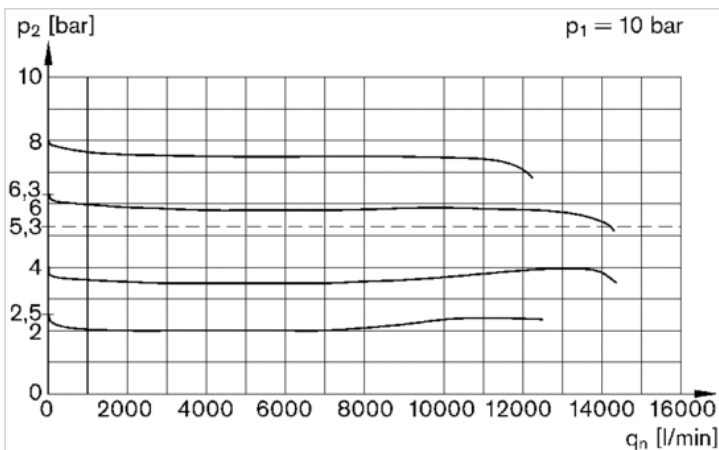
Diagrams

Pressure characteristics curve



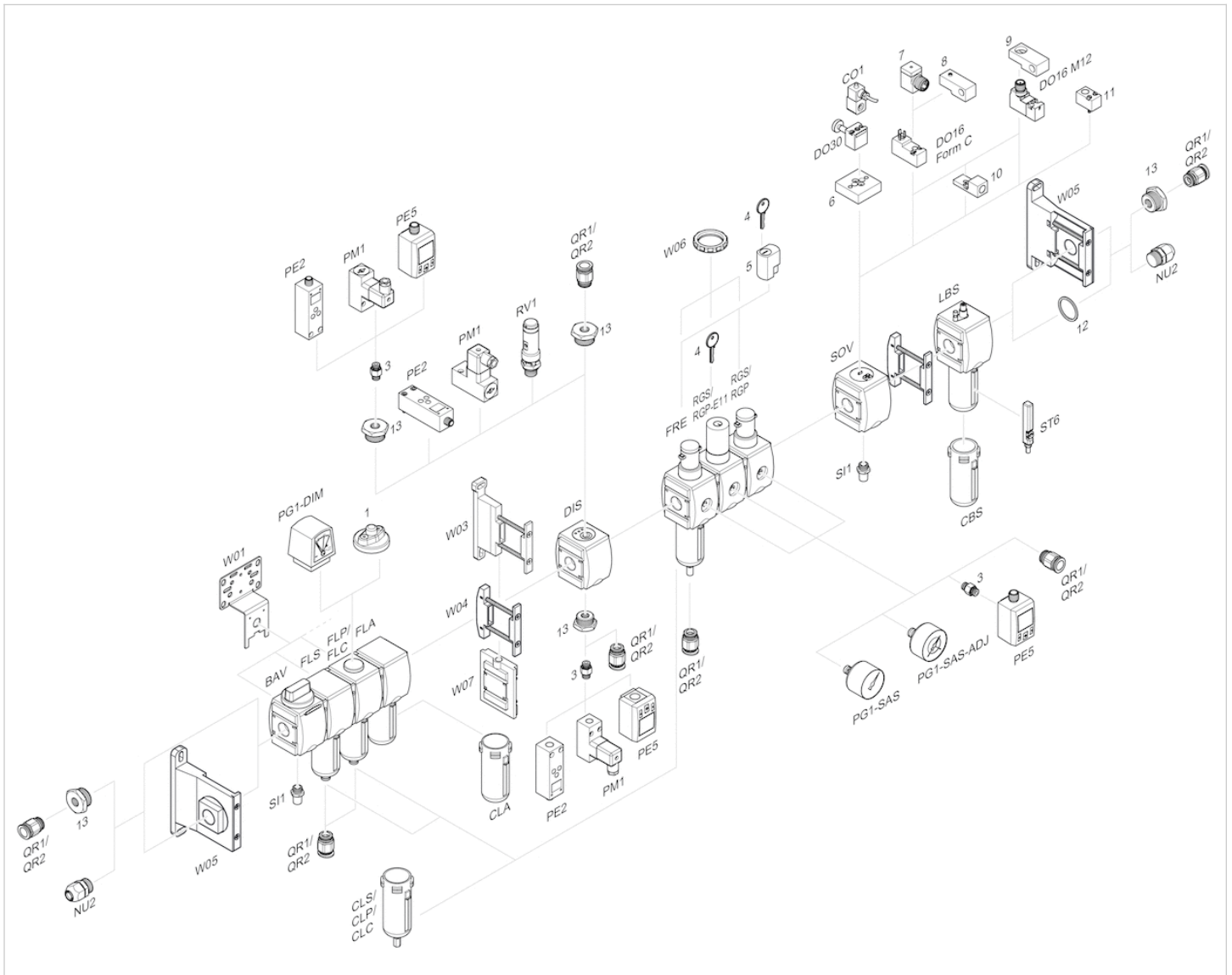
p1 = working pressure  
 p2 = secondary pressure  
 qn = nominal flow  
 \* starting point

Flow rate characteristic (setting range p2: 0.5 - 8 bar)



p1 = working pressure  
 p2 = secondary pressure  
 qn = nominal flow

## Accessories overview

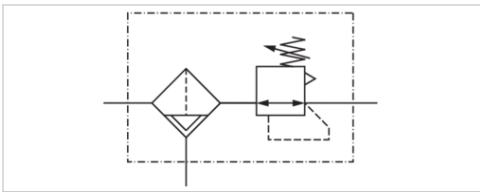


- 1 = contamination display
- 3 = Double nipple
- 4 = Key for E11 locking
- 5 = mortise lock
- 6 = Transition plate DO30
- 7 = Adapter, Series CON-VP
- 8 = Mounting aid DO16, form C
- 9 = Mounting aid DO16, M12
- 10 = Adapter for external pilot air
- 11 = Adapter pneumatic operation
- 12 = Sealing ring
- 13 = Reducing nipple



# Filter pressure regulator, Series AS5-FRE

- G 3/4 G 1
- filter porosity 40 µm
- lockable
- for padlocks



|   |  |
|---|--|
| Version   | 1-part, Can be assembled into blocks                   |
| Parts   | Filter pressure regulator                              |
| Mounting orientation  | vertical   |
| Working pressure min./max.                                    | 1.5 ... 16 bar   |
| Ambient temperature min./max.                                 | -10 ... 50 °C  |
| Medium temperature min./max.                                  | -10 ... 50 °C  |
| Medium  | Compressed air Neutral gases                           |
| Nominal flow Qn   | 14000 l/min  |
| Regulator type  | Diaphragm-type pressure regulator                      |
| Regulator function Adjustment range min./max. Pressure supply | with relieving air exhaust<br>0.5 ... 10 bar<br>single |
| Filter reservoir volume                                       | 87 cm <sup>3</sup>                                     |
| Filter element  | exchangeable   |
| Max. Internal air consumption                                 | 1.5 l/min  |
| Weight  | See table below  |

## Technical data

| Part No.   | Port  | filter porosity | Flow        | Condensate drain                         | Weight  |
|------------|-------|-----------------|-------------|--|---------|
|            |       |                 | Qn          |  |         |
| R412009218 | G 3/4 | 40 µm           | 14000 l/min | semi-automatic, open without pressure    | 0.99 kg |
| R412009219 | G 3/4 | 40 µm           | 14000 l/min | fully automatic, open without pressure   | 1.04 kg |
| R412009220 | G 3/4 | 40 µm           | 14000 l/min | fully automatic, closed without pressure | 1.04 kg |
| R412009221 | G 1   | 40 µm           | 14000 l/min | semi-automatic, open without pressure    | 0.99 kg |
| R412009222 | G 1   | 40 µm           | 14000 l/min | fully automatic, open without pressure   | 1.04 kg |
| R412009223 | G 1   | 40 µm           | 14000 l/min | fully automatic, closed without pressure | 1.04 kg |

Nominal flow Qn with secondary pressure p<sub>2</sub> = 6 bar at Δp = 1 bar

Order pressure gauge separately.

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

Note: Polycarbonate reservoirs are susceptible to solvents, supplementary information can be found at "Customer information".

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Also suitable for separation of fluid oil or water due to the design.

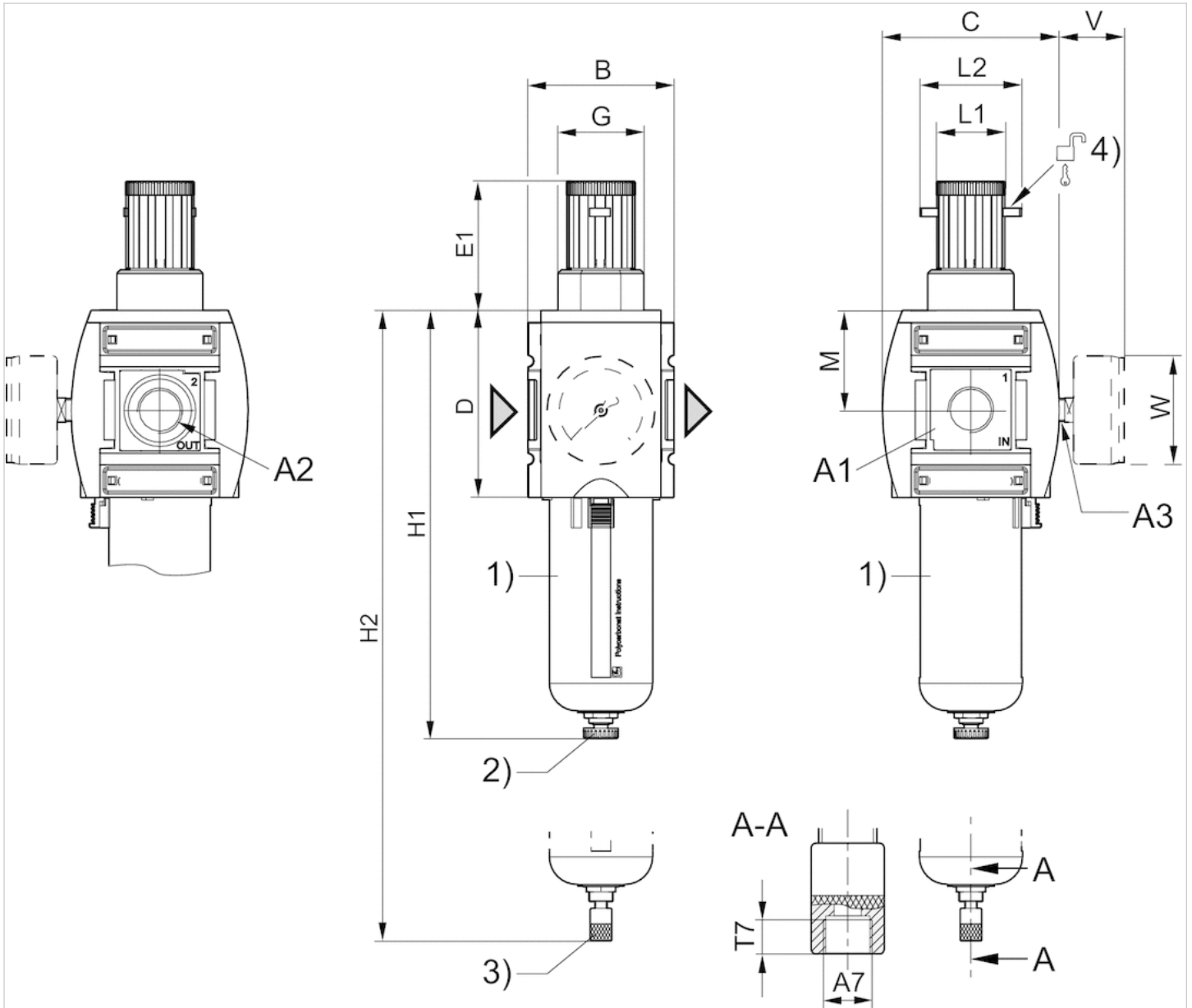
Max. achievable compressed air class acc. to ISO 8573-1:2010 7 : 7 : -

## Technical information

| Material         |                                 |
|------------------|---------------------------------|
| Housing          | Polyamide                       |
| Front plate      | Acrylonitrile butadiene styrene |
| Seals            | Acrylonitrile butadiene rubber  |
| Threaded bushing | Die cast zinc                   |
| Reservoir        | Polycarbonate                   |
| Protective guard | Polyamide                       |
| Filter insert    | Polyethylene                    |

# Dimensions

## Dimensions



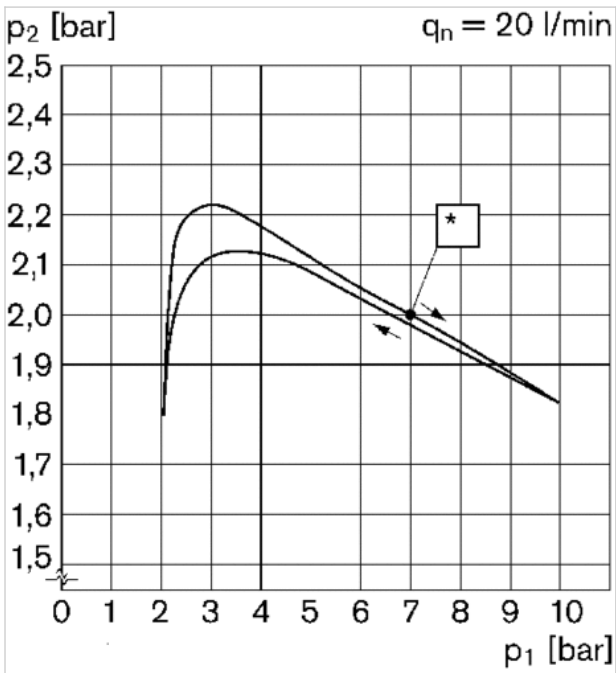
- A1 = input
- A2 = output
- A3 = pressure gauge connection
- A7 = condensate drain
- 1) Plastic reservoir and protective guard with window
- 2) Semi-automatic condensate drain
- 3) Fully automatic condensate drain
- 4) Mounting option for padlocks, max. shackle Ø 8

## Dimensions in mm

| A1    | A2    | A3    | A7    | B  | C   | D   | E1 | G       | H1  | H2  | L1 | L2 | M  | T7  | V  | W  |
|-------|-------|-------|-------|----|-----|-----|----|---------|-----|-----|----|----|----|-----|----|----|
| G 3/4 | G 3/4 | G 1/4 | G 1/8 | 85 | 103 | 109 | 75 | M50x1,5 | 250 | 266 | 41 | 60 | 58 | 8.5 | 38 | 63 |
| G 1   | G 1   | G 1/4 | G 1/8 | 85 | 103 | 109 | 75 | M50x1,5 | 250 | 266 | 41 | 60 | 58 | 8.5 | 38 | 63 |

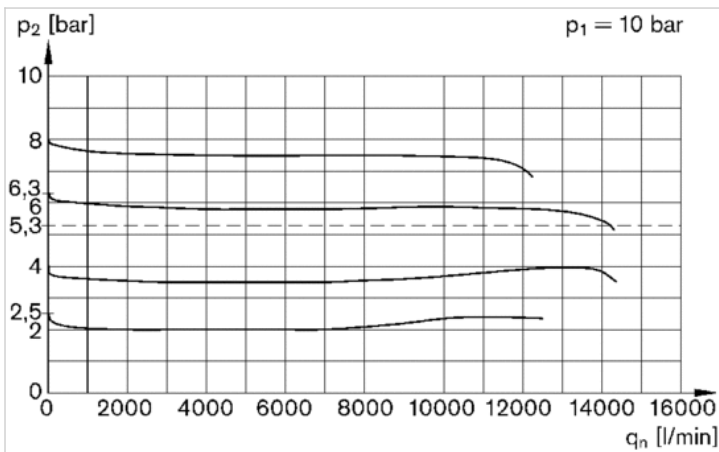
# Diagrams

## Pressure characteristics curve



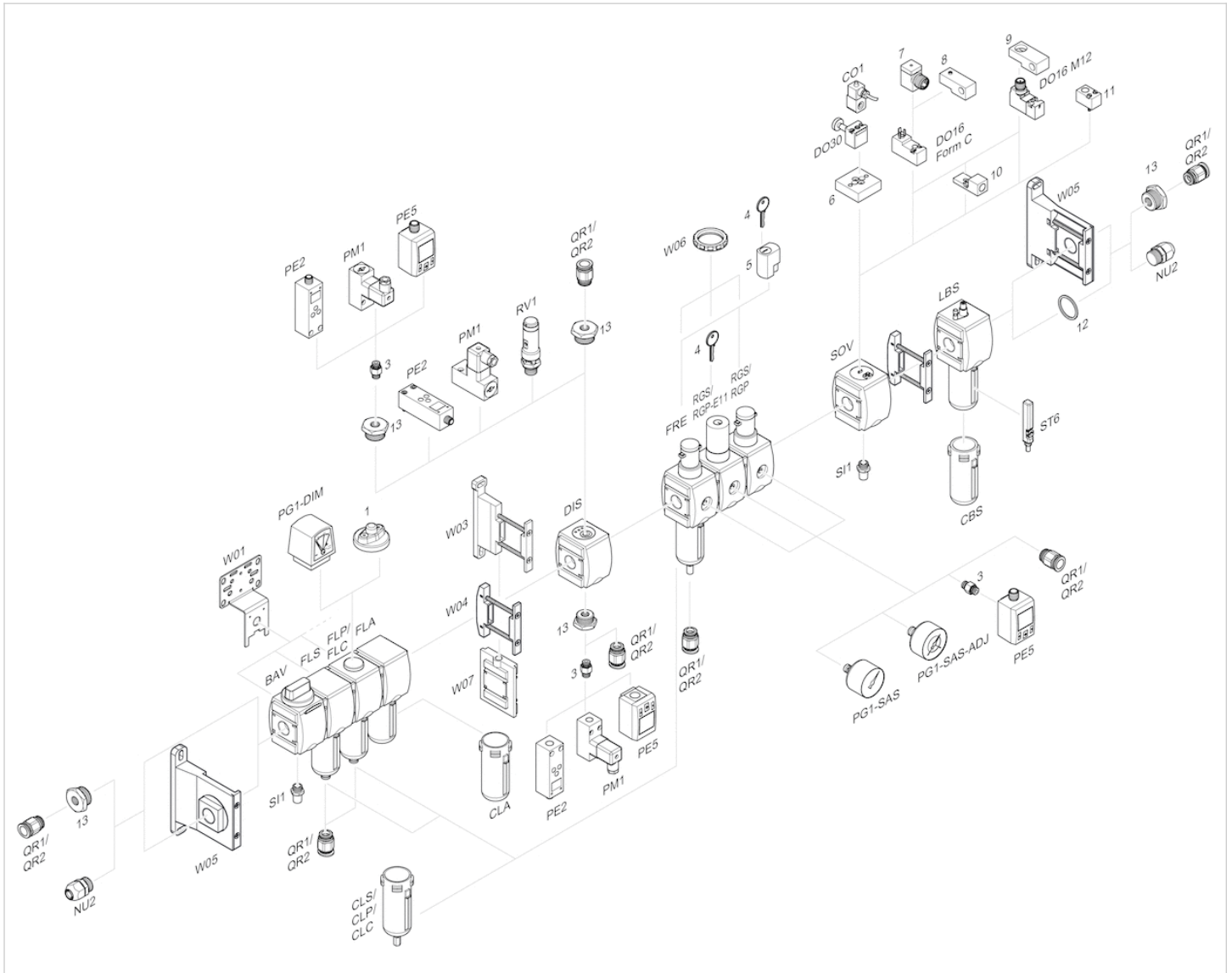
$p_1$  = working pressure  
 $p_2$  = secondary pressure  
 $q_n$  = nominal flow  
 \* starting point

## Flow rate characteristic (setting range $p_2$ : 0.5 - 8 bar)



$p_1$  = working pressure  
 $p_2$  = secondary pressure  
 $q_n$  = nominal flow

# Accessories overview

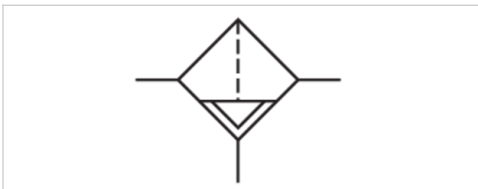


- 1 = contamination display
- 3 = Double nipple
- 4 = Key for E11 locking
- 5 = mortise lock
- 6 = Transition plate DO30
- 7 = Adapter, Series CON-VP
- 8 = Mounting aid DO16, form C
- 9 = Mounting aid DO16, M12
- 10 = Adapter for external pilot air
- 11 = Adapter pneumatic operation
- 12 = Sealing ring
- 13 = Reducing nipple

# Filter, Series AS5-FLS

- G 3/4 G 1

- filter porosity 5 µm



|                               |   |
|-------------------------------|---|
| Version                       | Standard filter, Can be assembled into blocks |
| Parts                         | Filter  |
| Mounting orientation          | vertical                                      |
| Working pressure min./max.    | 1.5 ... 16 bar                                |
| Ambient temperature min./max. | -10 ... 50 °C                                 |
| Medium temperature min./max.  | -10 ... 50 °C                                 |
| Medium                        | Compressed air Neutral gases                  |
| Filter reservoir volume       | 87 cm <sup>3</sup>                            |
| Filter element                | exchangeable                                  |
| filter porosity               | 5 µm  |
| Condensate drain              | See table below                               |
| Weight                        | See table below                               |

## Technical data

| Part No.   | Port  | Flow Qn    | Condensate drain                         |
|------------|-------|------------|--|
| R412009000 | G 3/4 | 7800 l/min | semi-automatic, open without pressure    |
| R412009001 | G 3/4 | 7800 l/min | fully automatic, open without pressure   |
| R412009002 | G 3/4 | 7800 l/min | fully automatic, closed without pressure |
| R412009006 | G 3/4 | 7800 l/min | semi-automatic, open without pressure    |
| R412009007 | G 3/4 | 7800 l/min | fully automatic, open without pressure   |
| R412009008 | G 3/4 | 7800 l/min | fully automatic, closed without pressure |
| R412009009 | G 1   | 7800 l/min | semi-automatic, open without pressure    |
| R412009010 | G 1   | 7800 l/min | fully automatic, open without pressure   |
| R412009011 | G 1   | 7800 l/min | fully automatic, closed without pressure |
| R412009015 | G 1   | 7800 l/min | semi-automatic, open without pressure    |
| R412009016 | G 1   | 7800 l/min | fully automatic, open without pressure   |
| R412009017 | G 1   | 7800 l/min | fully automatic, closed without pressure |

| Part No.   | Version  | Weight   |
|------------|--|----------|
| R412009000 | reservoir, polycarbonate, with PA protective guard | 0.718 kg |
| R412009001 | reservoir, polycarbonate, with PA protective guard | 0.769 kg |
| R412009002 | reservoir, polycarbonate, with PA protective guard | 0.769 kg |
| R412009006 | -  | 1.21 kg  |
| R412009007 | -  | 1.26 kg  |
| R412009008 | -  | 1.26 kg  |
| R412009009 | reservoir, polycarbonate, with PA protective guard | 0.718 kg |

| Part No.   | Version  | Weight   |
|------------|--|----------|
| R412009010 | reservoir, polycarbonate, with PA protective guard | 0.769 kg |
| R412009011 | reservoir, polycarbonate, with PA protective guard | 0.769 kg |
| R412009015 | -  | 1.21 kg  |
| R412009016 | -  | 1.26 kg  |
| R412009017 | -  | 1.26 kg  |

Nominal flow  $Q_n$  with secondary pressure  $p_2 = 6$  bar at  $\Delta p = 1$  bar

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

Note: Polycarbonate reservoirs are susceptible to solvents, supplementary information can be found at "Customer information".

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Also suitable for separation of fluid oil or water due to the design.

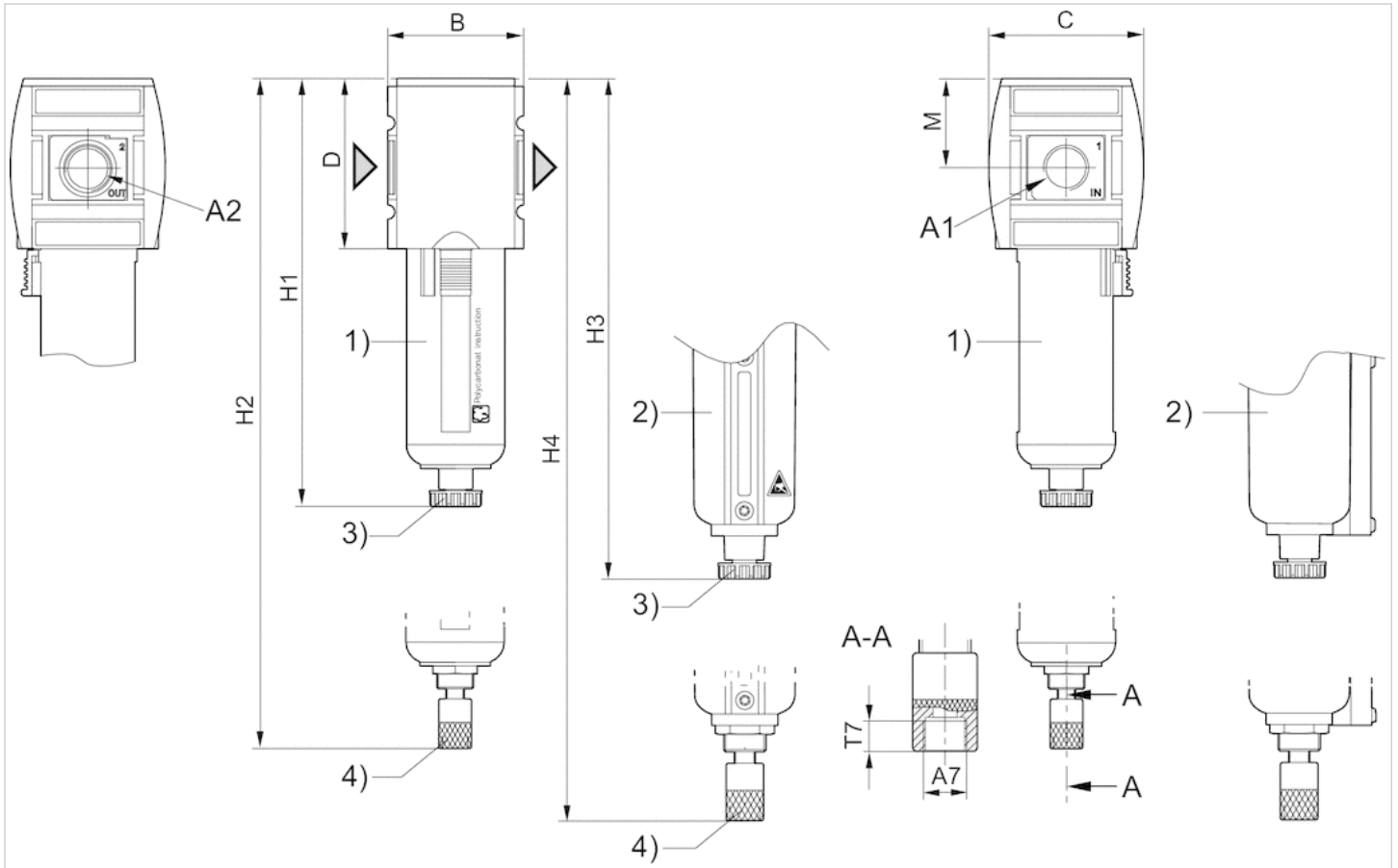
Max. achievable compressed air class acc. to ISO 8573-1:2010 6 : 7 : -

## Technical information

| Material         |                                 |
|------------------|---------------------------------|
| Housing          | Polyamide                       |
| Front plate      | Acrylonitrile butadiene styrene |
| Seals            | Acrylonitrile butadiene rubber  |
| Threaded bushing | Die cast zinc                   |
| Reservoir        | Polycarbonate Die cast zinc     |
| Protective guard | Polyamide                       |
| Filter insert    | Polyethylene                    |

## Dimensions

### Dimensions



A1 = input

A2 = output

A7 = condensate drain

1) Plastic reservoir and protective guard with window

2) Metal reservoir with level indicator

3) Semi-automatic condensate drain

4) Fully automatic condensate drain

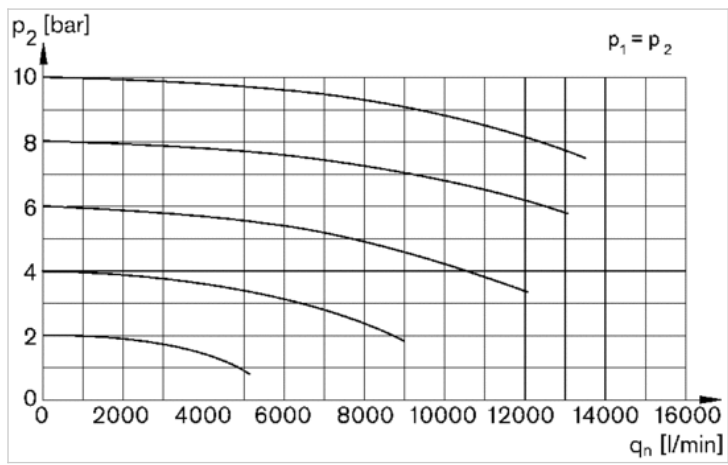
### Dimensions in mm

| A1    | A2    | A7    | B  | C   | D   | H1  | H2  | H3  | H4    | M  | T7  |
|-------|-------|-------|----|-----|-----|-----|-----|-----|-------|----|-----|
| G 3/4 | G 3/4 | G 1/8 | 85 | 103 | 109 | 250 | 266 | 254 | 270.5 | 58 | 8.5 |
| G 1   | G 1   | G 1/8 | 85 | 103 | 109 | 250 | 266 | 254 | 270.5 | 58 | 8.5 |



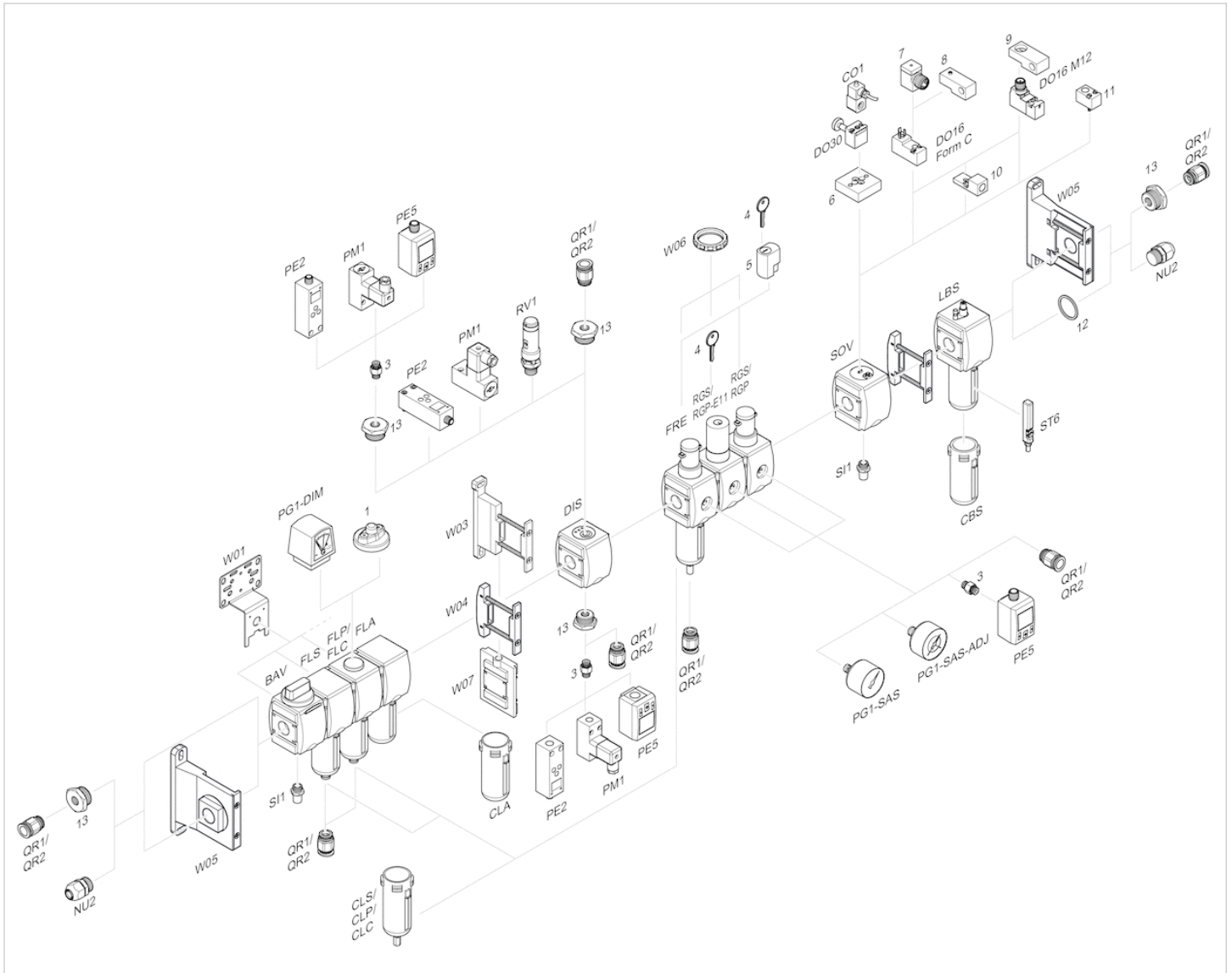
## Diagrams

### Flow rate characteristic



$p_1$  = Working pressure  
 $p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

# Accessories overview

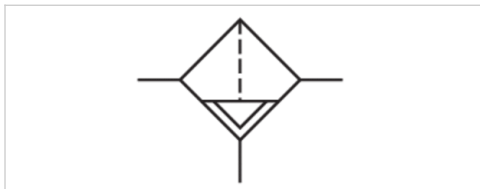


- 1 = contamination display
- 3 = Double nipple
- 4 = Key for E11 locking
- 5 = mortise lock
- 6 = Transition plate DO30
- 7 = Adapter, Series CON-VP
- 8 = Mounting aid DO16, form C
- 9 = Mounting aid DO16, M12
- 10 = Adapter for external pilot air
- 11 = Adapter pneumatic operation
- 12 = Sealing ring
- 13 = Reducing nipple

# Filter, Series AS5-FLS

- G 3/4 G 1

- filter porosity 25 µm



|                               |   |
|-------------------------------|---|
| Version                       | Standard filter, Can be assembled into blocks |
| Parts                         | Filter  |
| Mounting orientation          | vertical                                      |
| Working pressure min./max.    | 1.5 ... 16 bar                                |
| Ambient temperature min./max. | -10 ... 50 °C                                 |
| Medium temperature min./max.  | -10 ... 50 °C                                 |
| Medium                        | Compressed air Neutral gases                  |
| Filter reservoir volume       | 87 cm <sup>3</sup>                            |
| Filter element                | exchangeable                                  |
| filter porosity               | 25 µm   |
| Condensate drain              | semi-automatic, open without pressure         |
| Weight                        | See table below                               |

## Technical data

| Part No.   | Port  | Flow Qn    | Weight  |
|------------|-------|------------|---------|
| R412009089 | G 3/4 | 7800 l/min | 1.21 kg |
| R412009090 | G 1   | 7800 l/min | 1.26 kg |

Nominal flow with secondary pressure 6.3 bar at  $\Delta p = 1$  bar

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

Note: Polycarbonate reservoirs are susceptible to solvents, supplementary information can be found at "Customer information".

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Also suitable for separation of fluid oil or water due to the design.

Max. achievable compressed air class acc. to ISO 8573-1:2010 7 : 7 :-

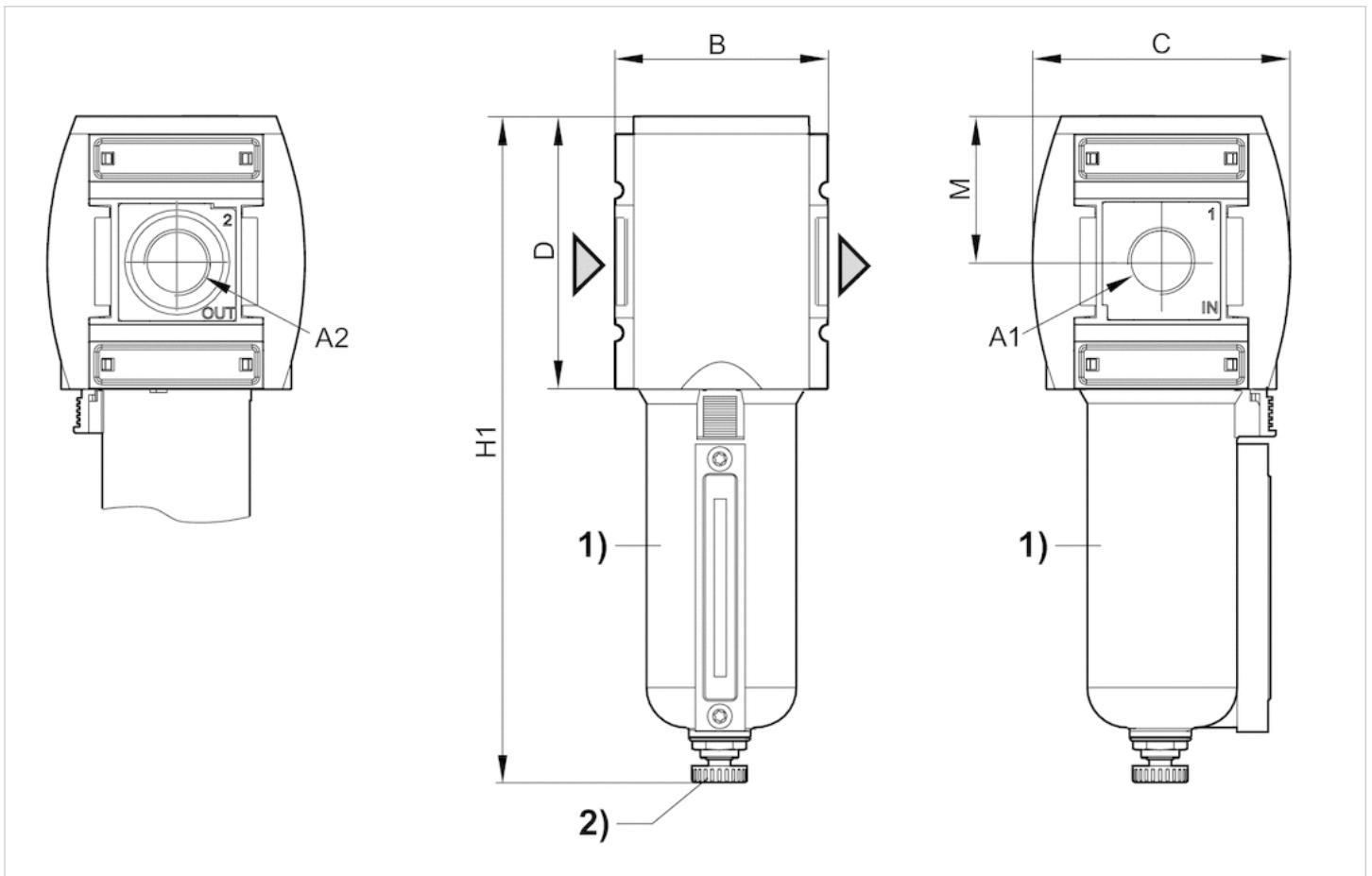
## Technical information

| Material    |                                 |
|-------------|---------------------------------|
| Housing     | Polyamide                       |
| Front plate | Acrylonitrile butadiene styrene |

| Material         |                                |
|------------------|--------------------------------|
| Seals            | Acrylonitrile butadiene rubber |
| Threaded bushing | Die cast zinc                  |
| Reservoir        | Die cast zinc                  |
| Filter insert    | Polyethylene                   |

## Dimensions

### Dimensions



A1 = input

A2 = output

1) Metal reservoir with level indicator

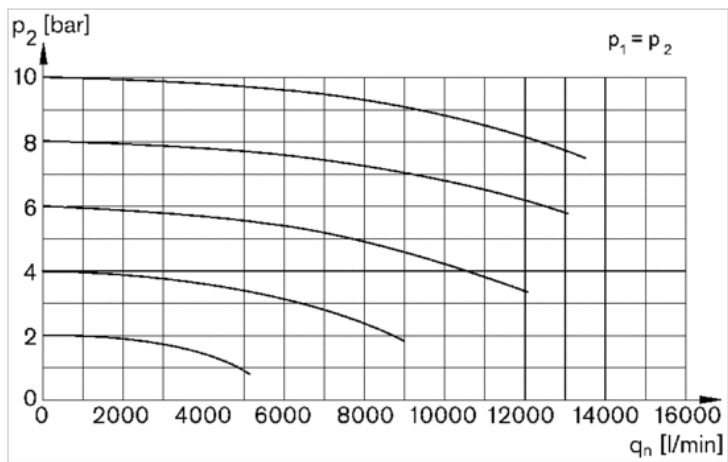
2) Semi-automatic condensate drain

### Dimensions in mm

| A1    | A2    | B  | C   | D   | H1  | M  |
|-------|-------|----|-----|-----|-----|----|
| G 3/4 | G 3/4 | 85 | 103 | 109 | 250 | 58 |
| G 1   | G 1   | 85 | 103 | 109 | 250 | 58 |

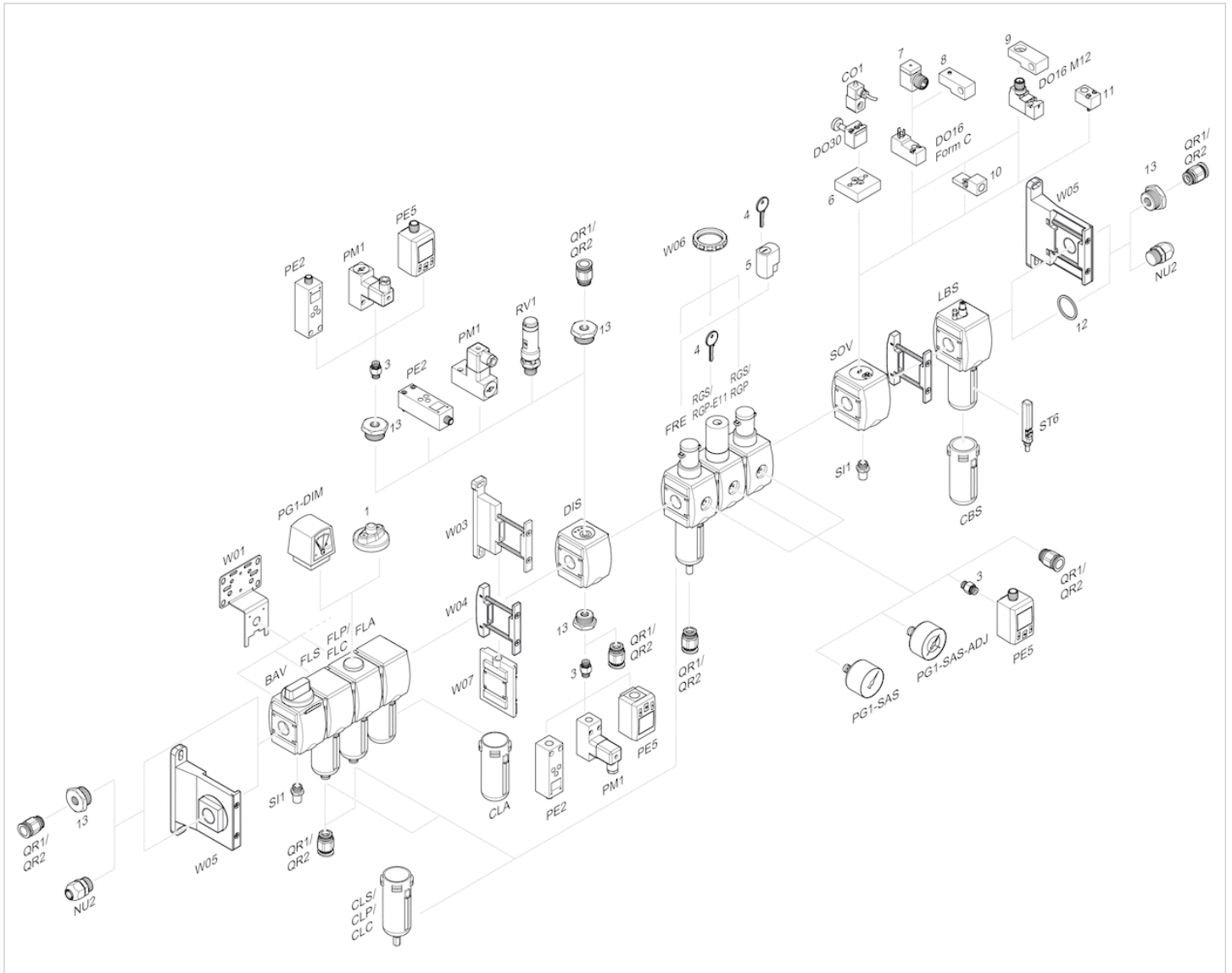
## Diagrams

### Flow rate characteristic



$p_1$  = Working pressure  
 $p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

# Accessories overview

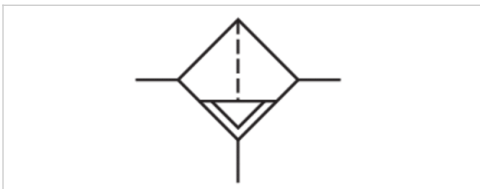


- 1 = contamination display
- 3 = Double nipple
- 4 = Key for E11 locking
- 5 = mortise lock
- 6 = Transition plate DO30
- 7 = Adapter, Series CON-VP
- 8 = Mounting aid DO16, form C
- 9 = Mounting aid DO16, M12
- 10 = Adapter for external pilot air
- 11 = Adapter pneumatic operation
- 12 = Sealing ring
- 13 = Reducing nipple

# Filter, Series AS5-FLS

- G 3/4 G 1

- filter porosity 40 µm



|                               |   |
|-------------------------------|---|
| Version                       | Standard filter, Can be assembled into blocks |
| Parts                         | Filter  |
| Mounting orientation          | vertical                                      |
| Working pressure min./max.    | 1.5 ... 16 bar                                |
| Ambient temperature min./max. | -10 ... 50 °C                                 |
| Medium temperature min./max.  | -10 ... 50 °C                                 |
| Medium                        | Compressed air Neutral gases                  |
| Filter reservoir volume       | 87 cm <sup>3</sup>                            |
| Filter element                | exchangeable                                  |
| filter porosity               | 40 µm   |
| Condensate drain              | See table below                               |
| Weight                        | See table below                               |

## Technical data

| Part No.   | Port  | Flow Qn    | Condensate drain                         | Weight   |
|------------|-------|------------|--|----------|
| R412009003 | G 3/4 | 7800 l/min | semi-automatic, open without pressure    | 0.718 kg |
| R412009004 | G 3/4 | 7800 l/min | fully automatic, open without pressure   | 0.769 kg |
| R412009005 | G 3/4 | 7800 l/min | fully automatic, closed without pressure | 0.769 kg |
| R412009012 | G 1   | 7800 l/min | semi-automatic, open without pressure    | 0.718 kg |
| R412009013 | G 1   | 7800 l/min | fully automatic, open without pressure   | 0.769 kg |
| R412009014 | G 1   | 7800 l/min | fully automatic, closed without pressure | 0.769 kg |

Nominal flow Qn with secondary pressure p2 = 6 bar at Δp = 1 bar

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

Note: Polycarbonate reservoirs are susceptible to solvents, supplementary information can be found at "Customer information".

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Also suitable for separation of fluid oil or water due to the design.

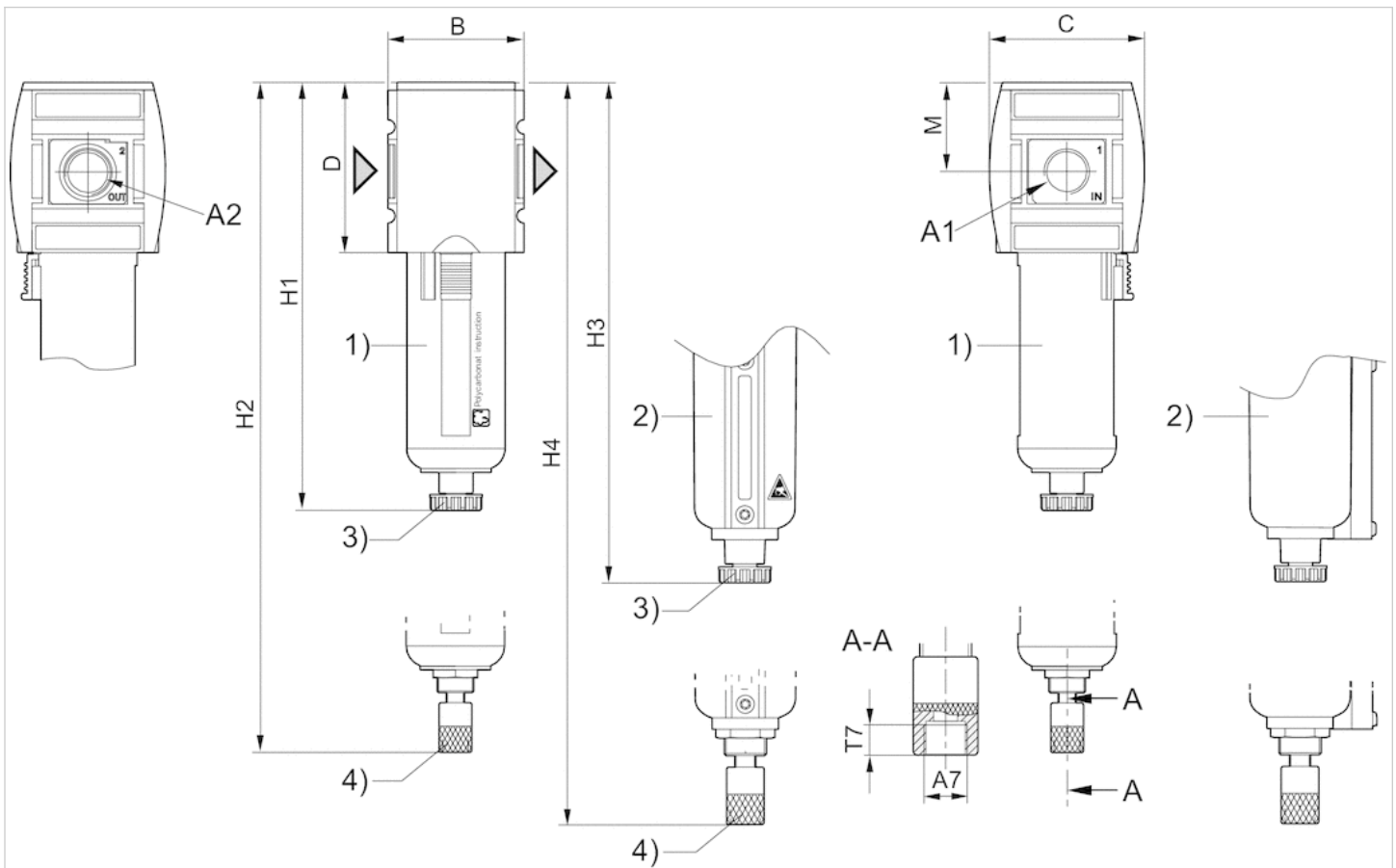
Max. achievable compressed air class acc. to ISO 8573-1:2010 7 : 7 : -

## Technical information

| Material         |                                 |
|------------------|---------------------------------|
| Housing          | Polyamide                       |
| Front plate      | Acrylonitrile butadiene styrene |
| Seals            | Acrylonitrile butadiene rubber  |
| Threaded bushing | Die cast zinc                   |
| Reservoir        | Polycarbonate                   |
| Protective guard | Polyamide                       |
| Filter insert    | Sintered bronze                 |

## Dimensions

### Dimensions



A1 = input

A2 = output

A7 = condensate drain

1) Plastic reservoir and protective guard with window

2) Metal reservoir with level indicator

3) Semi-automatic condensate drain

4) Fully automatic condensate drain

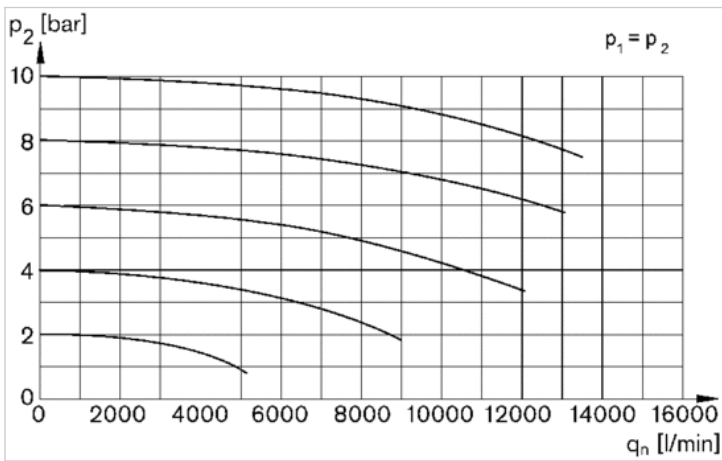


Dimensions in mm

| A1    | A2    | A7    | B  | C   | D   | H1  | H2  | H3  | H4    | M  | T7  |
|-------|-------|-------|----|-----|-----|-----|-----|-----|-------|----|-----|
| G 3/4 | G 3/4 | G 1/8 | 85 | 103 | 109 | 250 | 266 | 254 | 270.5 | 58 | 8.5 |
| G 1   | G 1   | G 1/8 | 85 | 103 | 109 | 250 | 266 | 254 | 270.5 | 58 | 8.5 |

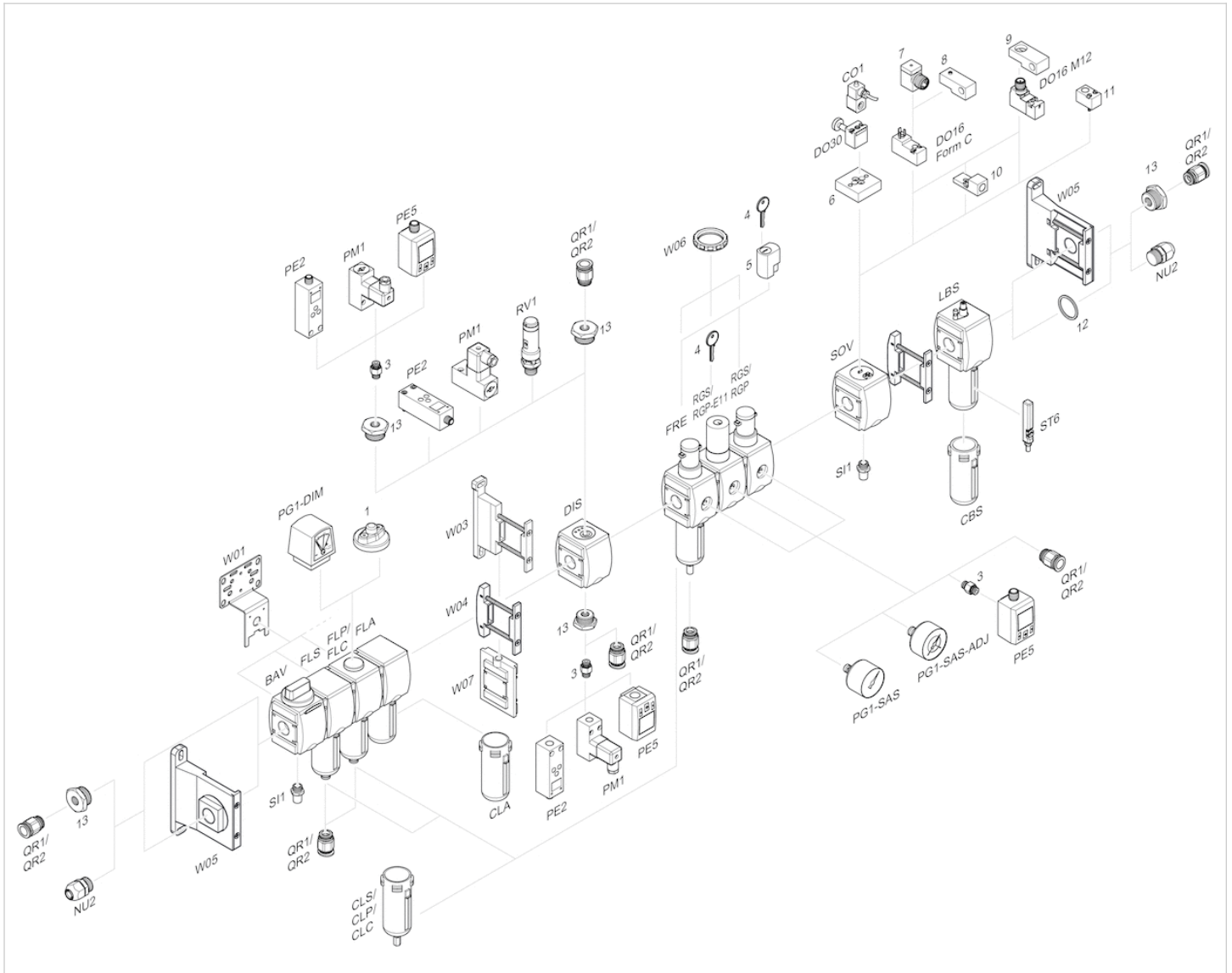
Diagrams

Flow rate characteristic



$p_1$  = Working pressure  
 $p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

## Accessories overview



- 1 = contamination display
- 3 = Double nipple
- 4 = Key for E11 locking
- 5 = mortise lock
- 6 = Transition plate DO30
- 7 = Adapter, Series CON-VP
- 8 = Mounting aid DO16, form C
- 9 = Mounting aid DO16, M12
- 10 = Adapter for external pilot air
- 11 = Adapter pneumatic operation
- 12 = Sealing ring
- 13 = Reducing nipple

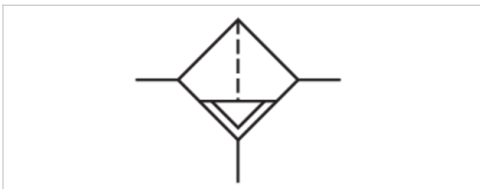
# Pre-filter, Series AS5-FLP

- G 3/4 G 1

- filter porosity 0.3 µm



|                               |  |
|-------------------------------|--|
| Version                       | Pre-filter, Can be assembled into blocks |
| Parts                         | Pre-filter                               |
| Mounting orientation          | vertical                                 |
| Working pressure min./max.    | 1.5 ... 16 bar                           |
| Ambient temperature min./max. | -10 ... 50 °C                            |
| Medium temperature min./max.  | -10 ... 50 °C                            |
| Medium                        | Compressed air Neutral gases             |
| Filter reservoir volume       | 87 cm <sup>3</sup>                       |
| Filter element                | exchangeable                             |
| filter porosity               | 0.3 µm                                   |
| Condensate drain              | See table below                          |
| Weight                        | See table below                          |



## Technical data

| Part No.   | Port  | Flow Qn    | Condensate drain                         | Weight  |
|------------|-------|------------|--|---------|
| R412009018 | G 3/4 | 2200 l/min | semi-automatic, open without pressure    | 0.71 kg |
| R412009019 | G 3/4 | 2200 l/min | fully automatic, open without pressure   | 0.76 kg |
| R412009020 | G 3/4 | 2200 l/min | fully automatic, closed without pressure | 0.76 kg |
| R412009024 | G 3/4 | 2200 l/min | semi-automatic, open without pressure    | 1.21 kg |
| R412009025 | G 3/4 | 2200 l/min | fully automatic, open without pressure   | 1.26 kg |
| R412009026 | G 3/4 | 2200 l/min | fully automatic, closed without pressure | 1.26 kg |
| R412009027 | G 1   | 2200 l/min | semi-automatic, open without pressure    | 0.71 kg |
| R412009028 | G 1   | 2200 l/min | fully automatic, open without pressure   | 0.76 kg |
| R412009029 | G 1   | 2200 l/min | fully automatic, closed without pressure | 0.76 kg |
| R412009033 | G 1   | 2200 l/min | semi-automatic, open without pressure    | 1.21 kg |
| R412009034 | G 1   | 2200 l/min | fully automatic, open without pressure   | 1.26 kg |
| R412009035 | G 1   | 2200 l/min | fully automatic, closed without pressure | 1.26 kg |

Nominal flow Qn with secondary pressure p<sub>2</sub> = 6 bar at Δp = 0.1 bar

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

Note: Polycarbonate reservoirs are susceptible to solvents, supplementary information can be found at "Customer information".

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Recommended pre-filtering 5 µm

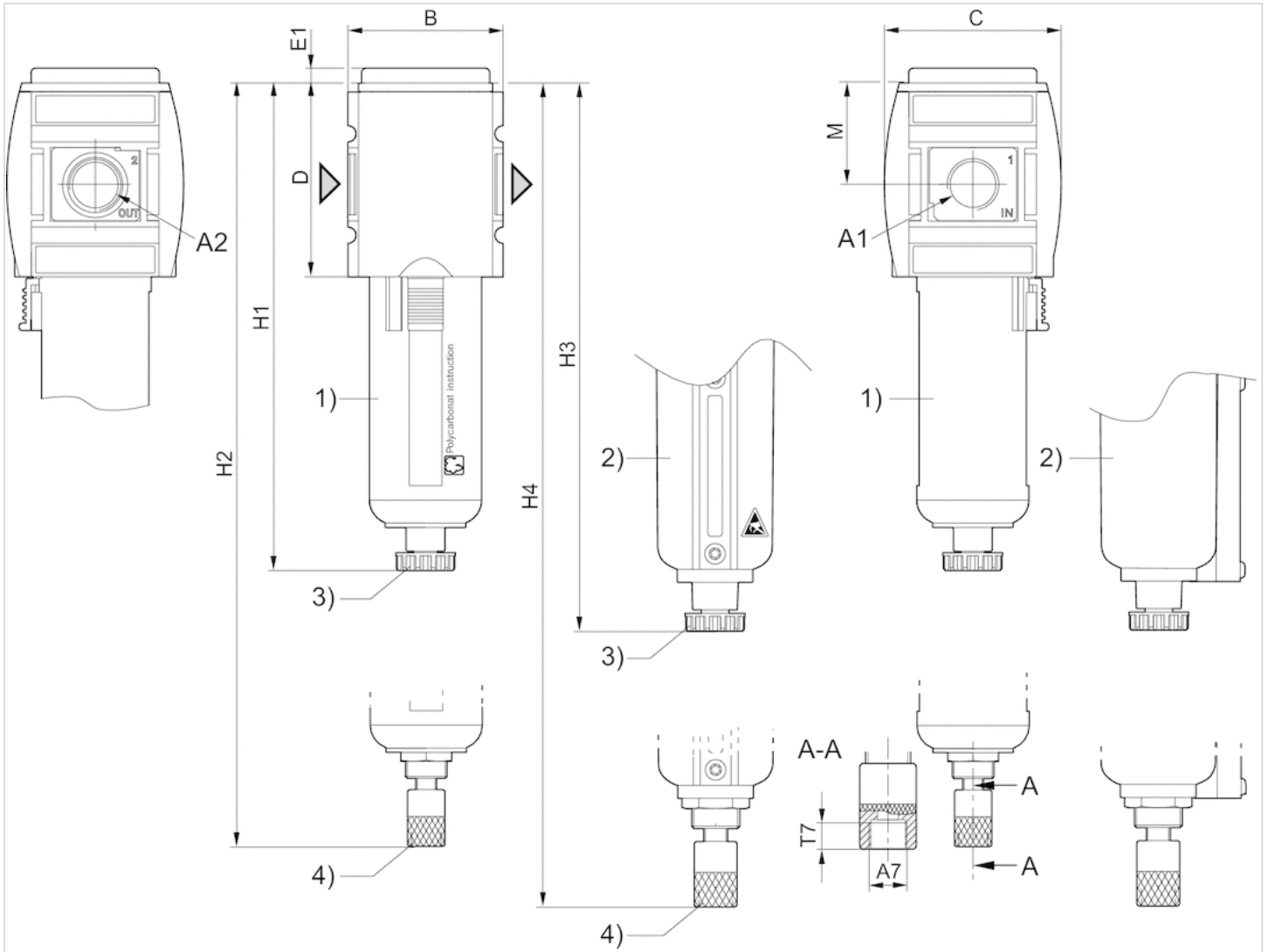
Max. achievable compressed air class acc. to ISO 8573-1:2010 2 : - : 3

## Technical information

| Material         |                                 |
|------------------|---------------------------------|
| Housing          | Polyamide                       |
| Front plate      | Acrylonitrile butadiene styrene |
| Seals            | Acrylonitrile butadiene rubber  |
| Threaded bushing | Die cast zinc                   |
| Reservoir        | Polycarbonate Die cast zinc     |
| Protective guard | Polyamide                       |
| Filter insert    | Impregnated paper               |

# Dimensions

## Dimensions



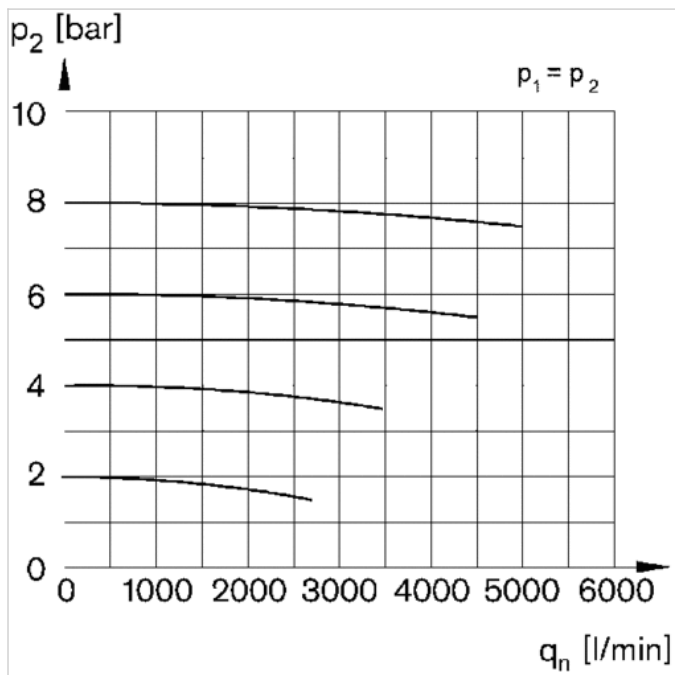
- A1 = input
- A2 = output
- A7 = condensate drain
- 1) Plastic reservoir and protective guard with window
- 2) Metal reservoir with inspection glass
- 3) Semi-automatic condensate drain
- 4) Fully automatic condensate drain

## Dimensions in mm

| A1    | A2    | A7    | B  | C   | D   | E1 | H1  | H2  | H3  | H4    | M  | T7  |
|-------|-------|-------|----|-----|-----|----|-----|-----|-----|-------|----|-----|
| G 3/4 | G 3/4 | G 1/8 | 85 | 103 | 109 | 5  | 250 | 266 | 254 | 270.5 | 58 | 8.5 |
| G 1   | G 1   | G 1/8 | 85 | 103 | 109 | 5  | 250 | 266 | 254 | 270.5 | 58 | 8.5 |

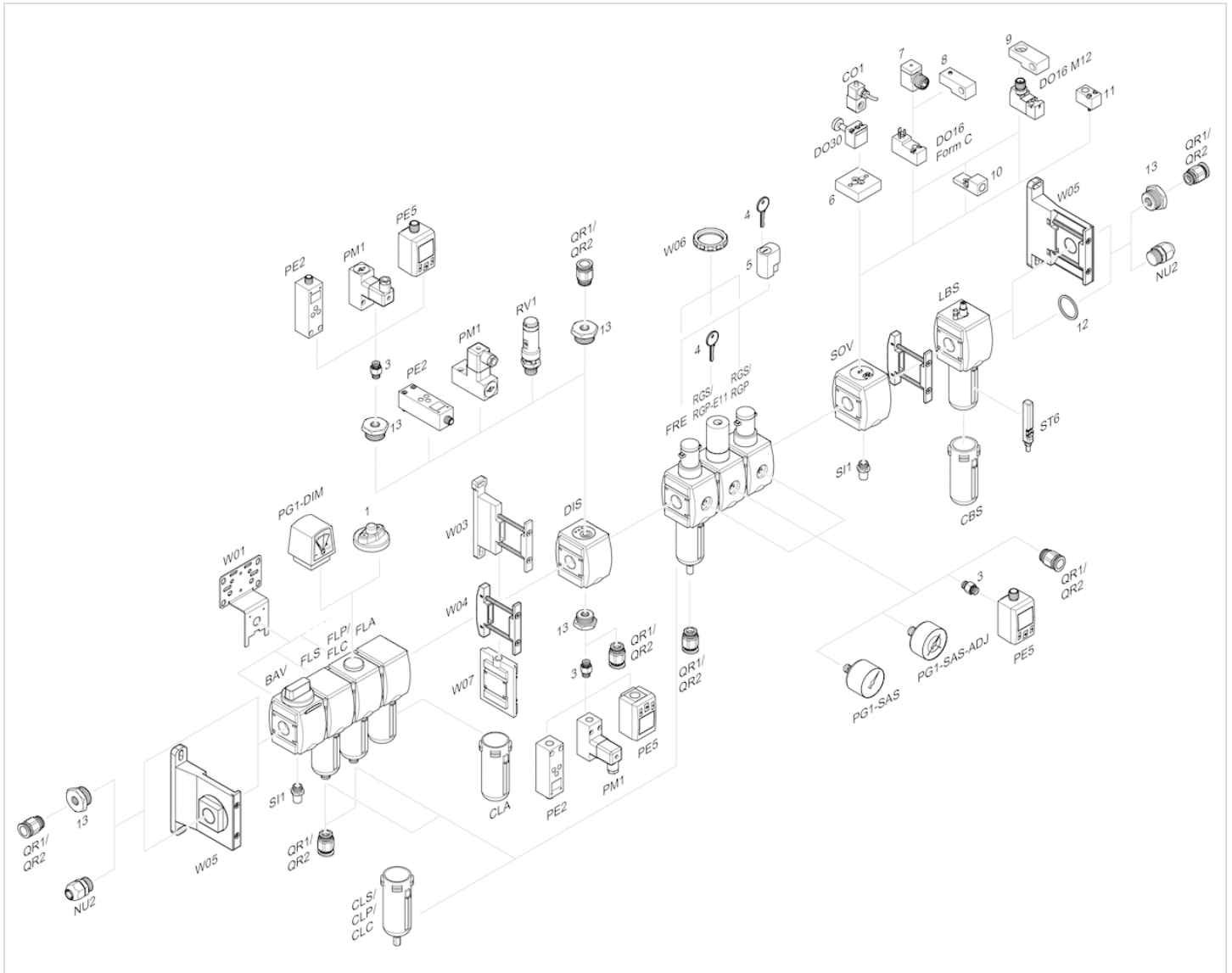
## Diagrams

## Flow rate characteristic



$p_1$  = Working pressure  
 $p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

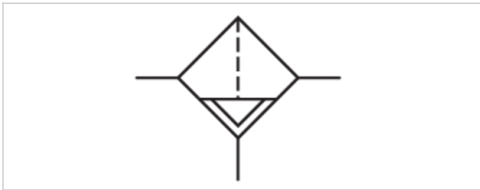
## Accessories overview



- 1 = contamination display
- 3 = Double nipple
- 4 = Key for E11 locking
- 5 = mortise lock
- 6 = Transition plate DO30
- 7 = Adapter, Series CON-VP
- 8 = Mounting aid DO16, form C
- 9 = Mounting aid DO16, M12
- 10 = Adapter for external pilot air
- 11 = Adapter pneumatic operation
- 12 = Sealing ring
- 13 = Reducing nipple

# Pre-filter, Series AS5-FLP

- G 3/4 G 1
- filter porosity 0.3  $\mu\text{m}$
- contamination display integrated



|                               |  |
|-------------------------------|--|
| Version                       | Pre-filter, Can be assembled into blocks |
| Parts                         | Pre-filter                               |
| Mounting orientation          | vertical                                 |
| Working pressure min./max.    | 1.5 ... 16 bar                           |
| Ambient temperature min./max. | -10 ... 50 °C                            |
| Medium temperature min./max.  | -10 ... 50 °C                            |
| Medium                        | Compressed air Neutral gases             |
| Filter reservoir volume       | 87 cm <sup>3</sup>                       |
| Filter element                | exchangeable                             |
| filter porosity               | 0.3 $\mu\text{m}$                        |
| Condensate drain              | See table below                          |
| contamination display         | integrated                               |
| Weight                        | See table below                          |

## Technical data

| Part No.   | Port  | Flow Qn    | Condensate drain                         | Weight   |
|------------|-------|------------|--|----------|
| R412009021 | G 3/4 | 2200 l/min | semi-automatic, open without pressure    | 0.361 kg |
| R412009022 | G 3/4 | 2200 l/min | fully automatic, open without pressure   | 0.41 kg  |
| R412009023 | G 3/4 | 2200 l/min | fully automatic, closed without pressure | 0.41 kg  |
| R412009030 | G 1   | 2200 l/min | semi-automatic, open without pressure    | 0.361 kg |
| R412009031 | G 1   | 2200 l/min | fully automatic, open without pressure   | 0.41 kg  |
| R412009032 | G 1   | 2200 l/min | fully automatic, closed without pressure | 0.762 kg |

Nominal flow Qn with secondary pressure p<sub>2</sub> = 6 bar at  $\Delta p$  = 0.1 bar

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

Note: Polycarbonate reservoirs are susceptible to solvents, supplementary information can be found at "Customer information".

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Recommended pre-filtering 5  $\mu\text{m}$

Max. achievable compressed air class acc. to ISO 8573-1:2010 2 : - : 3

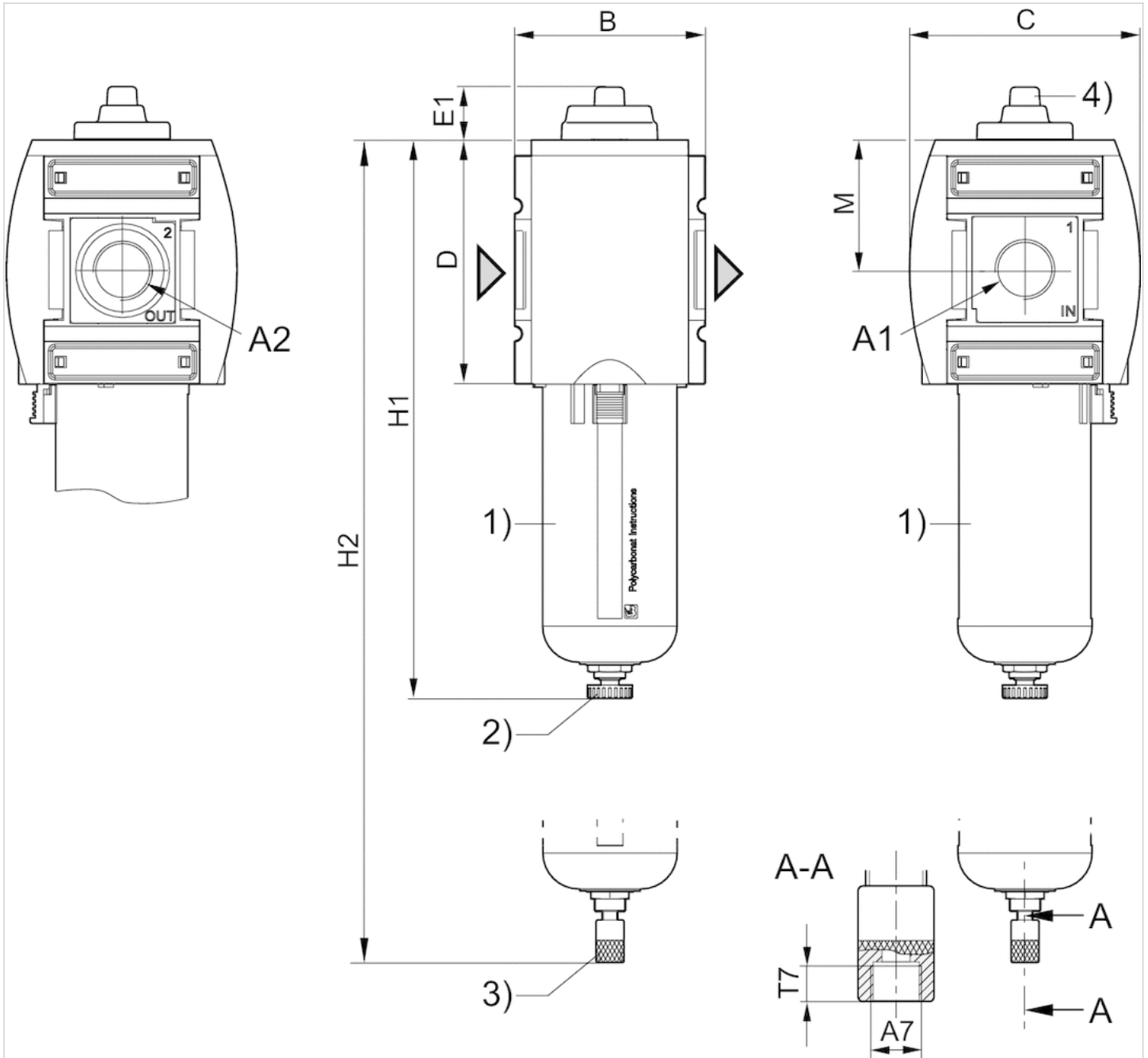


## Technical information

| Material         |                                 |
|------------------|---------------------------------|
| Housing          | Polyamide                       |
| Front plate      | Acrylonitrile butadiene styrene |
| Seals            | Acrylonitrile butadiene rubber  |
| Threaded bushing | Die cast zinc                   |
| Reservoir        | Polycarbonate                   |
| Protective guard | Polyamide                       |
| Filter insert    | Impregnated paper               |

## Dimensions

### Dimensions



- A1 = input
- A2 = output
- A7 = condensate drain
- 1) Plastic reservoir and protective guard with window
- 2) Semi-automatic condensate drain
- 3) Fully automatic condensate drain
- 4) contamination display

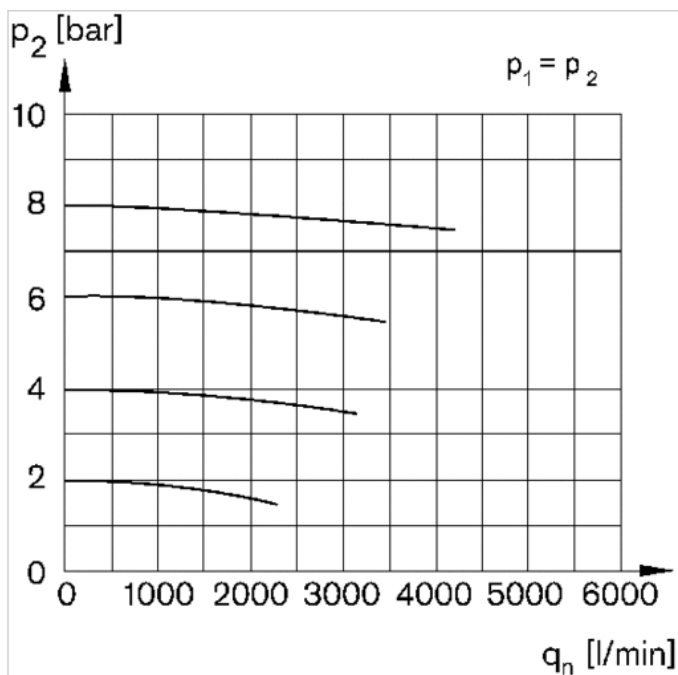
### Dimensions in mm

| A1    | A2    | A7    | B  | C   | D   | E1   | H1  | H2  | M  | T7  |
|-------|-------|-------|----|-----|-----|------|-----|-----|----|-----|
| G 3/4 | G 3/4 | G 1/8 | 85 | 103 | 109 | 23.7 | 250 | 266 | 58 | 8.5 |

| A1  | A2  | A7    | B  | C   | D   | E1   | H1  | H2  | M  | T7  |
|-----|-----|-------|----|-----|-----|------|-----|-----|----|-----|
| G 1 | G 1 | G 1/8 | 85 | 103 | 109 | 23.7 | 250 | 266 | 58 | 8.5 |

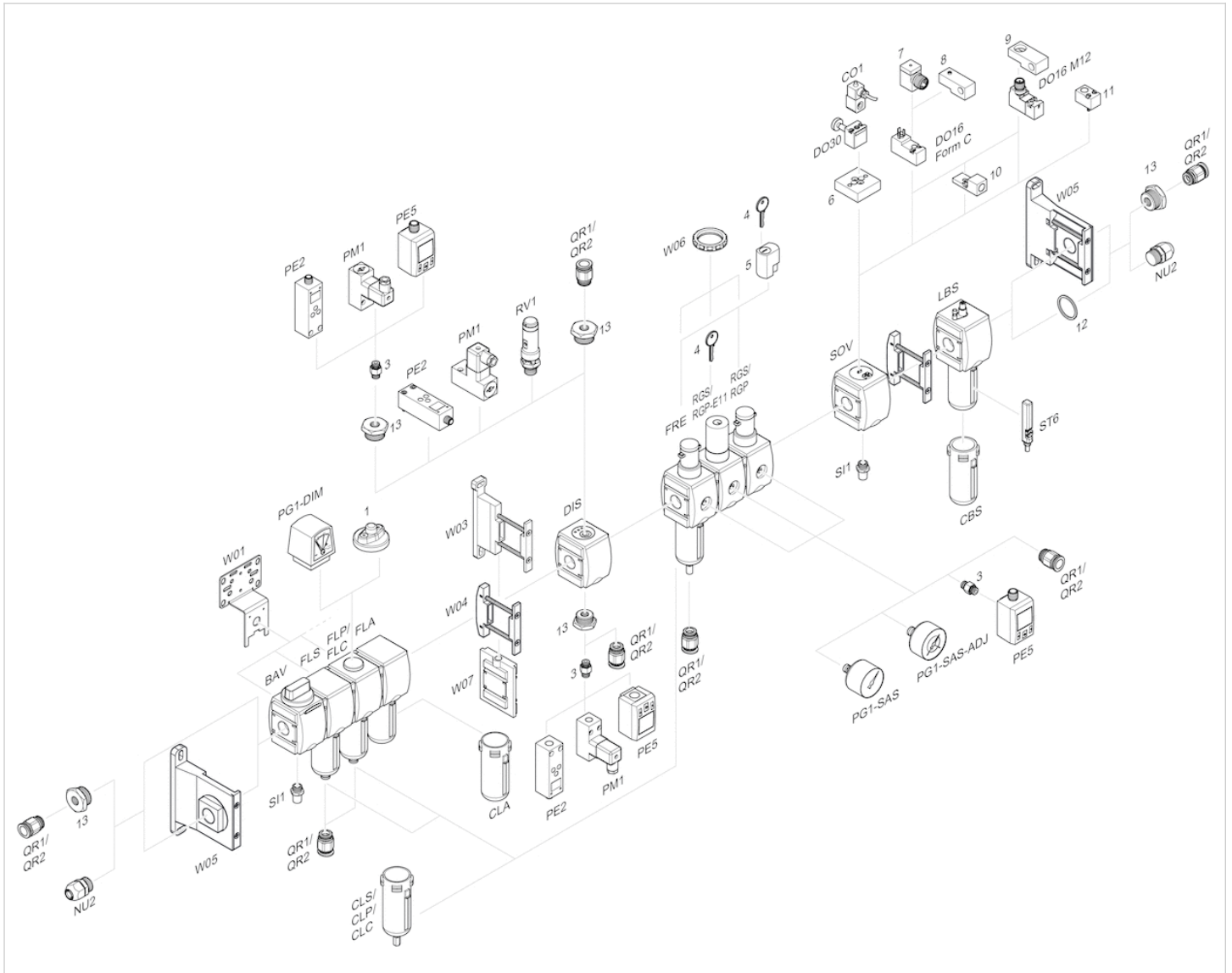
## Diagrams

### Flow rate characteristic



$p_1$  = Working pressure  
 $p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

# Accessories overview



- 1 = contamination display
- 3 = Double nipple
- 4 = Key for E11 locking
- 5 = mortise lock
- 6 = Transition plate DO30
- 7 = Adapter, Series CON-VP
- 8 = Mounting aid DO16, form C
- 9 = Mounting aid DO16, M12
- 10 = Adapter for external pilot air
- 11 = Adapter pneumatic operation
- 12 = Sealing ring
- 13 = Reducing nipple

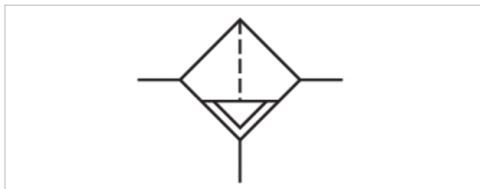
# Microfilter, Series AS5-FLC

- G 3/4 G 1

- filter porosity 0.01 µm



|                               |   |
|-------------------------------|---|
| Version                       | Microfilter, Can be assembled into blocks |
| Parts                         | Microfilter                               |
| Mounting orientation          | vertical                                  |
| Working pressure min./max.    | 1.5 ... 16 bar                            |
| Ambient temperature min./max. | -10 ... 50 °C                             |
| Medium temperature min./max.  | -10 ... 50 °C                             |
| Medium                        | Compressed air Neutral gases              |
| Filter reservoir volume       | 87 cm <sup>3</sup>                        |
| Filter element                | exchangeable                              |
| filter porosity               | 0.01 µm                                   |
| Condensate drain              | See table below                           |
| Weight                        | See table below                           |



## Technical data

| Part No.   | Port  | Flow Qn    | Condensate drain                         |
|------------|-------|------------|--|
| R412009036 | G 3/4 | 1600 l/min | semi-automatic, open without pressure    |
| R412009037 | G 3/4 | 1600 l/min | fully automatic, open without pressure   |
| R412009038 | G 3/4 | 1600 l/min | fully automatic, closed without pressure |
| R412009042 | G 3/4 | 1600 l/min | semi-automatic, open without pressure    |
| R412009043 | G 3/4 | 1600 l/min | fully automatic, open without pressure   |
| R412009044 | G 3/4 | 1600 l/min | fully automatic, closed without pressure |
| R412009045 | G 1   | 1600 l/min | semi-automatic, open without pressure    |
| R412009046 | G 1   | 1600 l/min | fully automatic, open without pressure   |
| R412009047 | G 1   | 1600 l/min | fully automatic, closed without pressure |
| R412009051 | G 1   | 1600 l/min | semi-automatic, open without pressure    |
| R412009052 | G 1   | 1600 l/min | fully automatic, closed without pressure |
| R412009053 | G 1   | 1600 l/min | fully automatic, closed without pressure |

| Part No.   | Version  | Weight  |    |
|------------|--|---------|----|
| R412009036 | reservoir, polycarbonate, with PA protective guard | 0.71 kg | 1) |
| R412009037 | reservoir, polycarbonate, with PA protective guard | 0.76 kg | 1) |
| R412009038 | reservoir, polycarbonate, with PA protective guard | 0.76 kg | 1) |
| R412009042 | -  | 1.21 kg | 2) |
| R412009043 | -  | 1.26 kg | 2) |
| R412009044 | -  | 1.26 kg | 2) |
| R412009045 | reservoir, polycarbonate, with PA protective guard | 0.71 kg | 1) |

| Part No.   | Version  | Weight  |    |
|------------|--|---------|----|
| R412009046 | reservoir, polycarbonate, with PA protective guard | 0.76 kg |    |
| R412009047 | reservoir, polycarbonate, with PA protective guard | 0.76 kg |    |
| R412009051 | -  | 1.21 kg | 1) |
| R412009052 | -  | 1.26 kg | 1) |
| R412009053 | -  | 1.26 kg | 1) |

Nominal flow Qn with secondary pressure p2 = 6 bar at  $\Delta p = 0.1$  bar

1) Reservoir with level indicator.

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

Note: Polycarbonate reservoirs are susceptible to solvents, supplementary information can be found at "Customer information".

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Recommended pre-filtering 0.3  $\mu\text{m}$

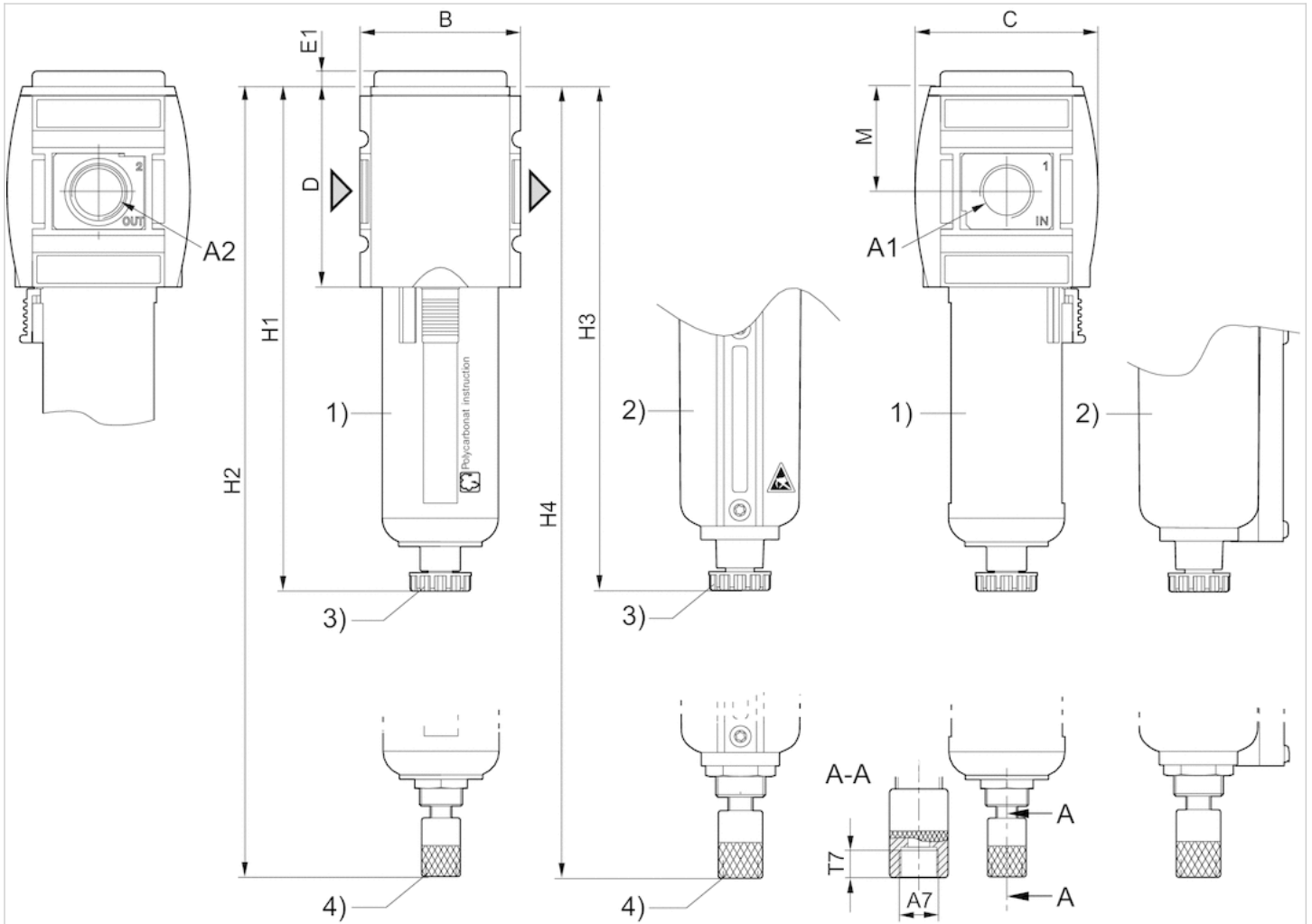
Max. achievable compressed air class acc. to ISO 8573-1:2010 1 : - : 2

## Technical information

| Material         |                                 |
|------------------|---------------------------------|
| Housing          | Polyamide                       |
| Front plate      | Acrylonitrile butadiene styrene |
| Seals            | Acrylonitrile butadiene rubber  |
| Threaded bushing | Die cast zinc                   |
| Reservoir        | Polycarbonate Die cast zinc     |
| Protective guard | Polyamide                       |
| Filter insert    | Borosilicate glass fiber        |

# Dimensions

## Dimensions



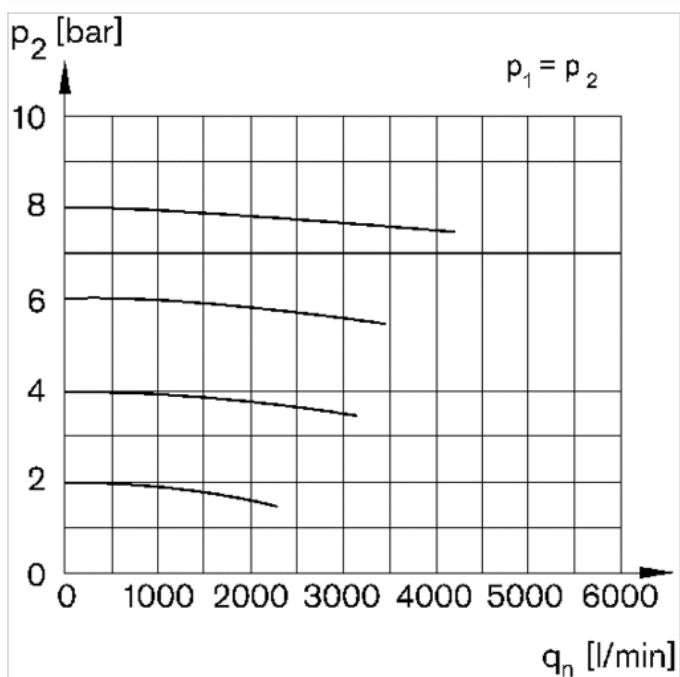
- A1 = input
- A2 = output
- A7 = condensate drain
- 1) Plastic reservoir and protective guard with window
- 2) Metal reservoir with inspection glass
- 3) Semi-automatic condensate drain
- 4) Fully automatic condensate drain

## Dimensions in mm

| A1    | A2    | A7    | B  | C   | D   | E1 | H1  | H2  | H3  | H4  | M  | T7  |
|-------|-------|-------|----|-----|-----|----|-----|-----|-----|-----|----|-----|
| G 3/4 | G 3/4 | G 1/8 | 85 | 103 | 109 | 5  | 250 | 266 | 254 | 270 | 58 | 8.5 |
| G 1   | G 1   | G 1/8 | 85 | 103 | 109 | 5  | 250 | 266 | 254 | 270 | 58 | 8.5 |

## Diagrams

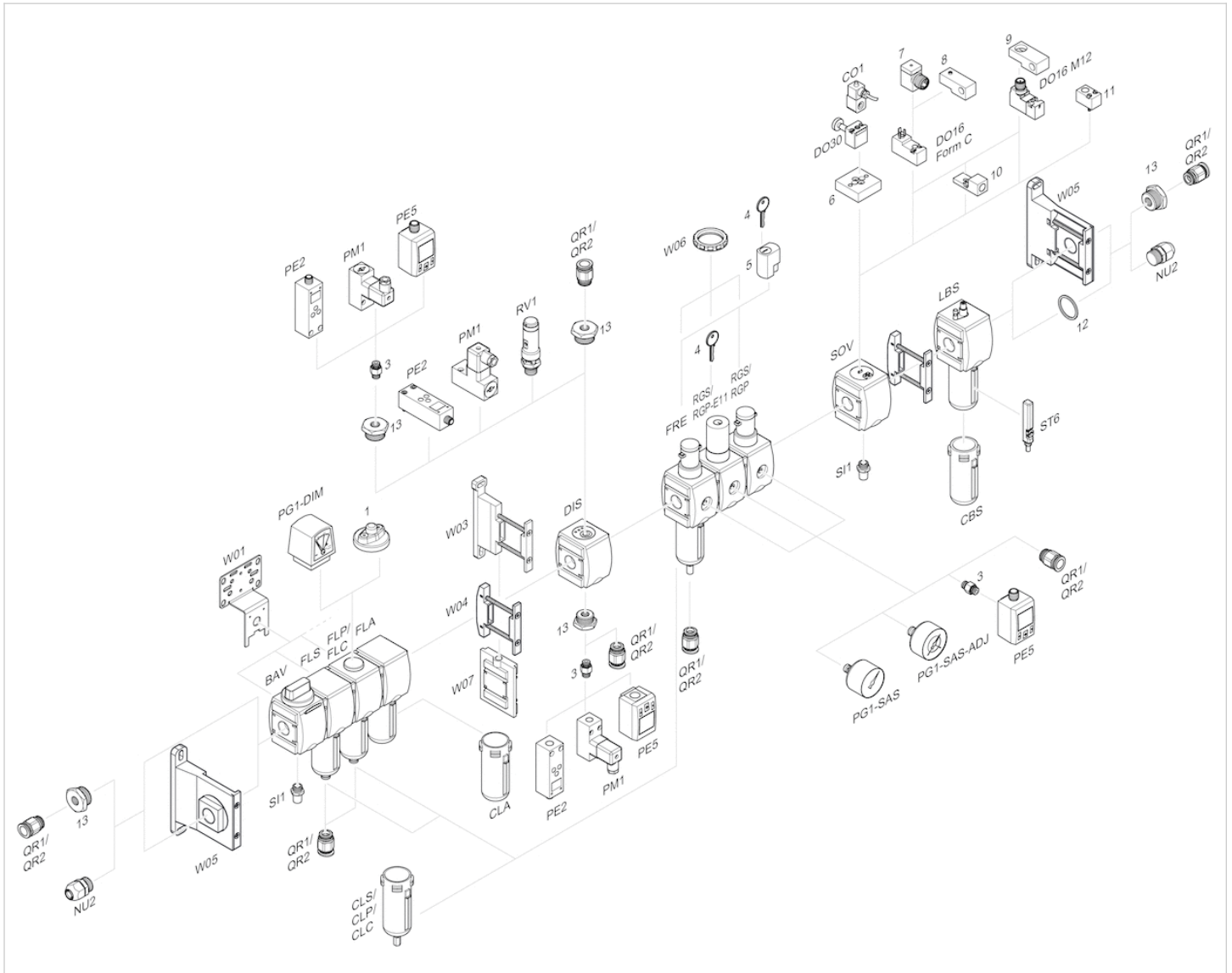
### Flow rate characteristic



$p_1$  = Working pressure  
 $p_2$  = Secondary pressure  
 $q_n$  = Nominal flow



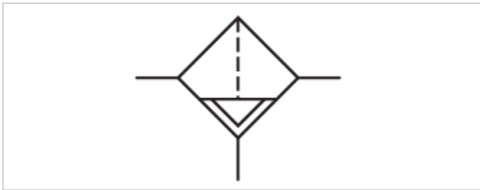
## Accessories overview



- 1 = contamination display
- 3 = Double nipple
- 4 = Key for E11 locking
- 5 = mortise lock
- 6 = Transition plate DO30
- 7 = Adapter, Series CON-VP
- 8 = Mounting aid DO16, form C
- 9 = Mounting aid DO16, M12
- 10 = Adapter for external pilot air
- 11 = Adapter pneumatic operation
- 12 = Sealing ring
- 13 = Reducing nipple

# Microfilter, Series AS5-FLC

- G 3/4 G 1
- filter porosity 0.01  $\mu\text{m}$
- contamination display integrated



|                               |   |
|-------------------------------|---|
| Version                       | Microfilter, Can be assembled into blocks |
| Parts                         | Microfilter                               |
| Mounting orientation          | vertical                                  |
| Working pressure min./max.    | See table below                           |
| Ambient temperature min./max. | -10 ... 50 °C                             |
| Medium temperature min./max.  | -10 ... 50 °C                             |
| Medium                        | Compressed air Neutral gases              |
| Filter reservoir volume       | 87 cm <sup>3</sup>                        |
| Filter element                | exchangeable                              |
| filter porosity               | 0.01 $\mu\text{m}$                        |
| Condensate drain              | See table below                           |
| contamination display         | integrated                                |
| Weight                        | See table below                           |

## Technical data

| Part No.   | Port  | Flow Qn    | Working pressure min./max. |
|------------|-------|------------|----------------------------|
| R412009054 | G 3/4 | 1600 l/min | 1.5 ... 16 bar             |
| R412009060 | G 3/4 | 1600 l/min | 1.5 ... 16 bar             |
| R412009055 | G 3/4 | 1600 l/min | 1.5 ... 16 bar             |
| R412009056 | G 3/4 | 1600 l/min | 1.5 ... 16 bar             |
| R412009061 | G 3/4 | 1600 l/min | 1.5 ... 16 bar             |
| R412009062 | G 3/4 | 1600 l/min | 1.5 ... 16 bar             |
| R412009063 | G 1   | 1600 l/min | 1.5 ... 16 bar             |
| R412009069 | G 1   | 1600 l/min | 0 ... 16 bar               |
| R412009064 | G 1   | 1600 l/min | 1.5 ... 16 bar             |
| R412009065 | G 1   | 1600 l/min | 1.5 ... 16 bar             |
| R412009070 | G 1   | 1600 l/min | 1.5 ... 16 bar             |
| R412009071 | G 1   | 1600 l/min | 1.5 ... 16 bar             |

| Part No.   | Condensate drain                         |
|------------|--|
| R412009054 | semi-automatic, open without pressure    |
| R412009060 | semi-automatic, open without pressure    |
| R412009055 | fully automatic, open without pressure   |
| R412009056 | fully automatic, closed without pressure |
| R412009061 | fully automatic, open without pressure   |
| R412009062 | fully automatic, closed without pressure |

| Part No.   | Condensate drain                         |
|------------|--|
| R412009063 | semi-automatic, open without pressure    |
| R412009069 | semi-automatic, open without pressure    |
| R412009064 | fully automatic, open without pressure   |
| R412009065 | fully automatic, closed without pressure |
| R412009070 | fully automatic, open without pressure   |
| R412009071 | fully automatic, closed without pressure |

| Part No.   | Version  | Weight   |
|------------|--|----------|
| R412009054 | reservoir, polycarbonate, with PA protective guard | 0.361 kg |
| R412009060 | -  | 1.55 kg  |
| R412009055 | reservoir, polycarbonate, with PA protective guard | 0.41 kg  |
| R412009056 | reservoir, polycarbonate, with PA protective guard | 0.41 kg  |
| R412009061 | -  | 1.58 kg  |
| R412009062 | -  | 1.57 kg  |
| R412009063 | reservoir, polycarbonate, with PA protective guard | 0.361 kg |
| R412009069 | -  | 1.48 kg  |
| R412009064 | reservoir, polycarbonate, with PA protective guard | 0.41 kg  |
| R412009065 | reservoir, polycarbonate, with PA protective guard | 0.762 kg |
| R412009070 | -  | 1.5 kg   |
| R412009071 | -  | 1.5 kg   |

Nominal flow  $Q_n$  with secondary pressure  $p_2 = 6$  bar at  $\Delta p = 0.1$  bar

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

Note: Polycarbonate reservoirs are susceptible to solvents, supplementary information can be found at "Customer information".  
A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Recommended pre-filtering 0.3 µm

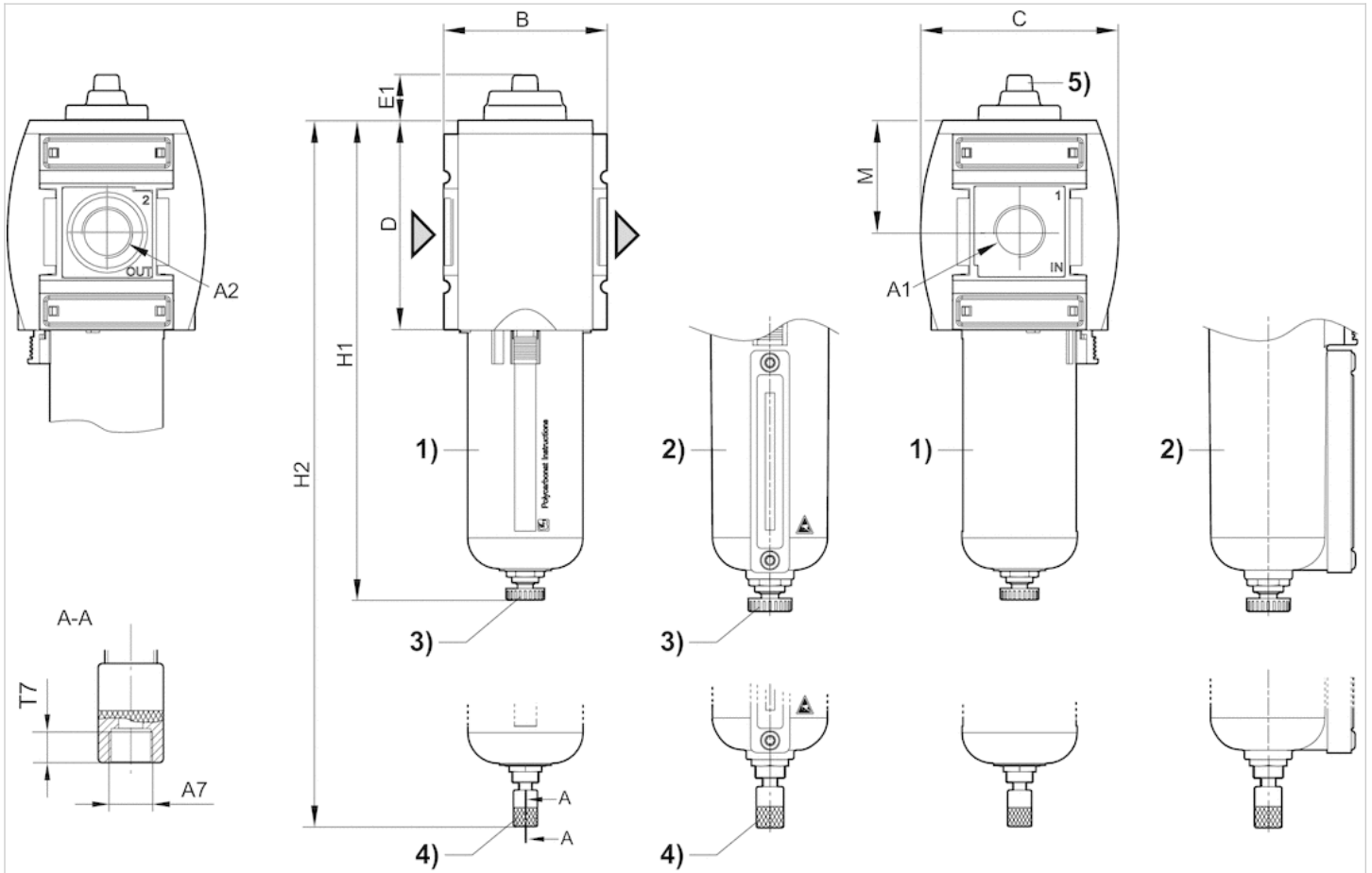
Max. achievable compressed air class acc. to ISO 8573-1:2010 1 : - : 2

## Technical information

| Material         |                                 |
|------------------|---------------------------------|
| Housing          | Polyamide                       |
| Front plate      | Acrylonitrile butadiene styrene |
| Seals            | Acrylonitrile butadiene rubber  |
| Threaded bushing | Die cast zinc                   |
| Reservoir        | Polycarbonate Die cast zinc     |
| Protective guard | Polyamide                       |
| Filter insert    | Borosilicate glass fiber        |

# Dimensions

## Dimensions



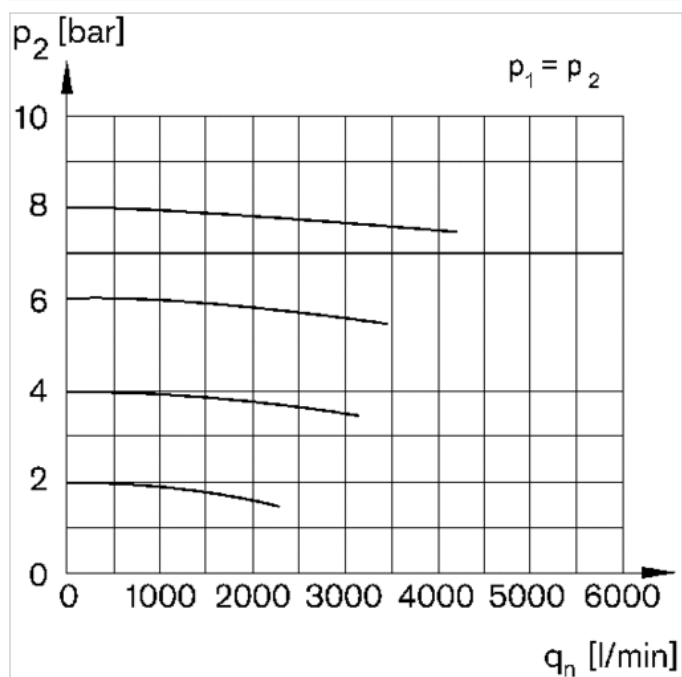
- A1 = input
- A2 = output
- A7 = condensate drain
- 1) Plastic reservoir and protective guard with window
- 2) Metal reservoir with level indicator
- 3) Semi-automatic condensate drain
- 4) Fully automatic condensate drain
- 5) contamination display

## Dimensions in mm

| A1    | A2    | A7    | B  | C   | D   | E1   | H1  | H2  | M  | T7  |
|-------|-------|-------|----|-----|-----|------|-----|-----|----|-----|
| G 3/4 | G 3/4 | G 1/8 | 85 | 103 | 109 | 23.7 | 250 | --  | 58 | 8.5 |
| G 3/4 | G 3/4 | --    | 85 | 103 | 109 | 23.7 | --  | 266 | 58 | --  |
| G 1   | G 1   | G 1/8 | 85 | 103 | 109 | 23.7 | 250 | --  | 58 | 8.5 |
| G 1   | G 1   | --    | 85 | 103 | 109 | 23.7 | --  | 266 | 58 | --  |

## Diagrams

### Flow rate characteristic

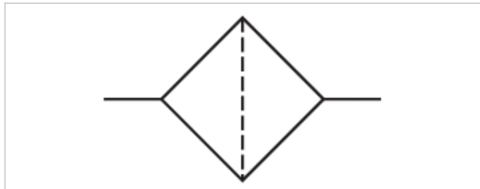


$p_1$  = Working pressure  
 $p_2$  = Secondary pressure  
 $q_n$  = Nominal flow



# Active carbon filter, Series AS5-FLA

- G 3/4 G 1



|                               |  |
|-------------------------------|--|
| Version                       | Active carbon filter, Can be assembled into blocks |
| Parts                         | Active carbon filter                               |
| Mounting orientation          | vertical   |
| Working pressure min./max.    | 0 ... 16 bar                                       |
| Ambient temperature min./max. | -10 ... 50 °C                                      |
| Medium temperature min./max.  | -10 ... 50 °C                                      |
| Medium                        | Compressed air Neutral gases                       |
| Filter reservoir volume       | 87 cm <sup>3</sup>                                 |
| Filter element                | exchangeable                                       |
| Condensate drain              | without  |
| Weight                        | See table below                                    |

## Technical data

| Part No.   | Port  | Flow Qn    | Version  | Weight   |
|------------|-------|------------|--|----------|
| R412009072 | G 3/4 | 1700 l/min | reservoir, polycarbonate, with PA protective guard | 0.71 kg  |
| R412009074 | G 3/4 | 1700 l/min | -  | 0.375 kg |
| R412009075 | G 1   | 1700 l/min | reservoir, polycarbonate, with PA protective guard | 0.71 kg  |
| R412009077 | G 1   | 1700 l/min | -  | 0.375 kg |

Nominal flow Qn with secondary pressure p<sub>2</sub> = 6 bar at Δp = 0.1 bar.

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

Note: Polycarbonate reservoirs are susceptible to solvents, supplementary information can be found at "Customer information".

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Recommended pre-filtering 0.01 μm

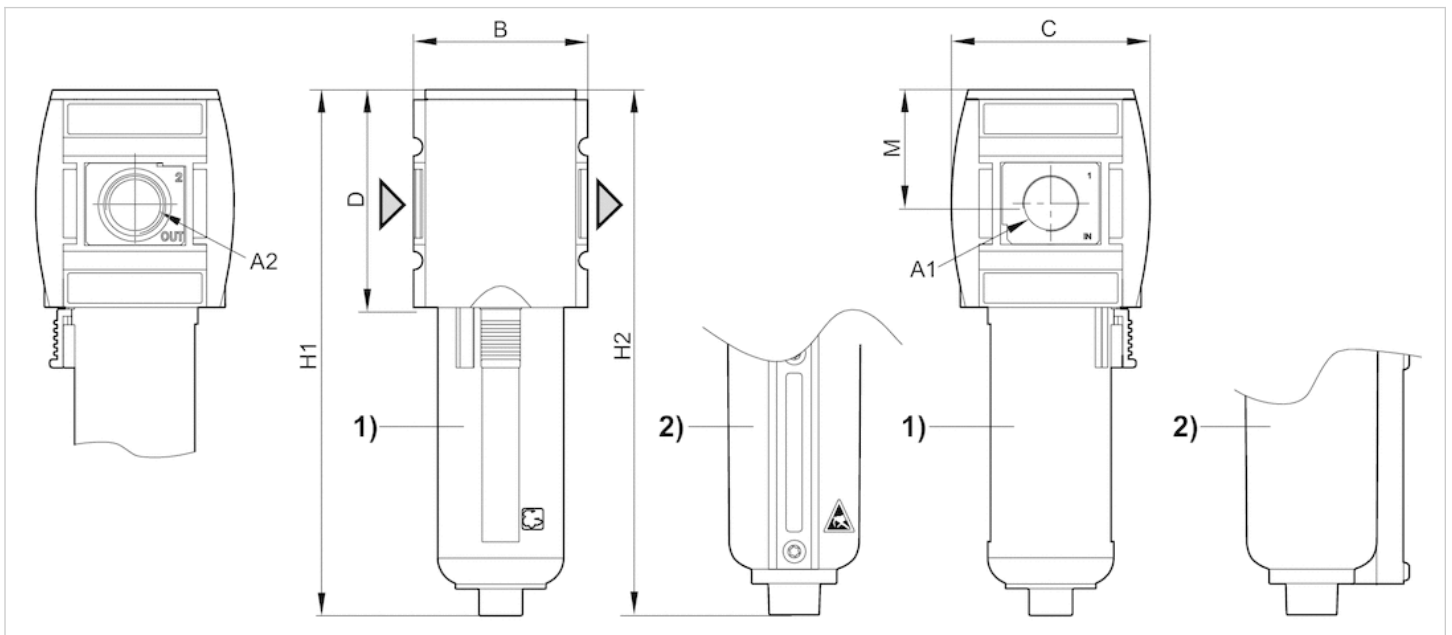
Max. achievable compressed air class acc. to ISO 8573-1:2010 - : - : 1

## Technical information

| Material         |                                 |
|------------------|---------------------------------|
| Housing          | Polyamide                       |
| Front plate      | Acrylonitrile butadiene styrene |
| Seals            | Acrylonitrile butadiene rubber  |
| Threaded bushing | Die cast zinc                   |
| Reservoir        | Polycarbonate Die cast zinc     |
| Protective guard | Polyamide                       |
| Filter insert    | Active carbon                   |

## Dimensions

### Dimensions



A1 = input

A2 = output

1) Plastic reservoir and protective guard with window

2) Metal reservoir with inspection glass

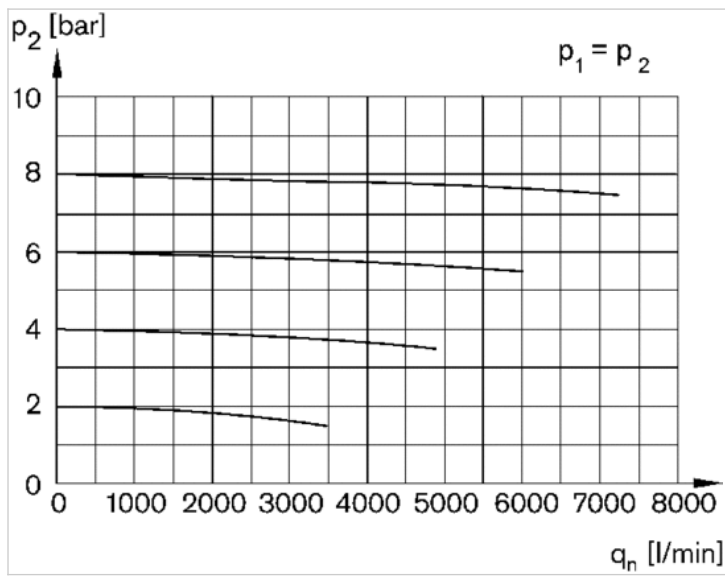
### Dimensions in mm

| A1    | A2    | B  | C   | D   | H1  | H2  | M  |
|-------|-------|----|-----|-----|-----|-----|----|
| G 3/4 | G 3/4 | 85 | 103 | 109 | 242 | 246 | 58 |
| G 1   | G 1   | 85 | 103 | 109 | 242 | 246 | 58 |



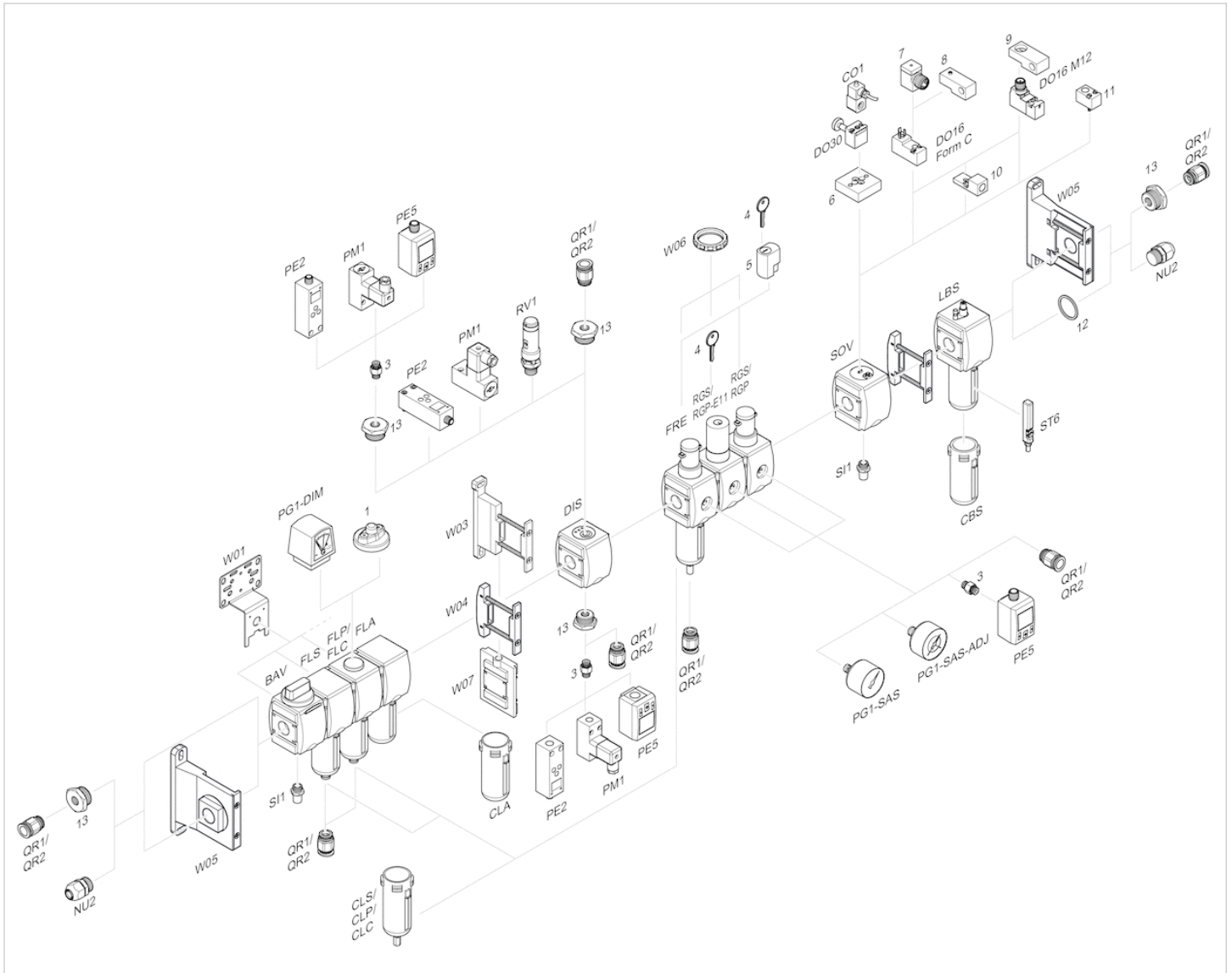
## Diagrams

### Flow rate characteristic



$p_1$  = Working pressure  
 $p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

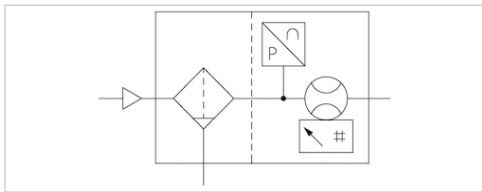
# Accessories overview



- 1 = contamination display
- 3 = Double nipple
- 4 = Key for E11 locking
- 5 = mortise lock
- 6 = Transition plate DO30
- 7 = Adapter, Series CON-VP
- 8 = Mounting aid DO16, form C
- 9 = Mounting aid DO16, M12
- 10 = Adapter for external pilot air
- 11 = Adapter pneumatic operation
- 12 = Sealing ring
- 13 = Reducing nipple

# Flow sensor, IO-Link, Series AF2

- 2 analog outputs, 2 switch outputs, 1 frequency output, 1 pulse output, IO-Link, With mounting
- Qn min. 22 l/min
- Qn max. 6490 l/min
- Electrical connection Plug, M12x1, 5-pin



### Certificates

|                               |   |
|-------------------------------|---|
| Working pressure min./max.    | 0 ... 16 bar  |
| Ambient temperature min./max. | -20 ... 60 °C                                       |
| Medium temperature min./max.  | -20 ... 60 °C                                       |
| Medium                        | Compressed air Argon Nitrogen Helium Carbon dioxide |
| filter porosity               | 5 µm  |
| Display                       | OLED  |
| Flow display unit             | l/sec, l/min, m³/min, m³/h, ft³/s, m³/min           |
| Pressure display unit         | bar, psi  |
| Temperature display unit      | °C, °F  |
| DC operating voltage min.     | 17 V DC   |
| DC operating voltage max.     | 30 V DC   |
| Max. power consumption *)     | 175 mA  |
| Response time                 | 10 ms   |
| Protection class              | IP65, IP67 according to IEC 60529                   |
| Short circuit resistance      | short circuit resistant                             |
| Shock resistance max.         | 30 g, 11 ms   |
| Vibration resistance          | 1 g (10 - 2000 Hz) IEC 60068 - 2-6                  |
| Reproducibility               | ± 1.5% of the measured value                        |
| Weight                        | 2.82 kg   |
| *)                            | Current consumption without load                    |

## Technical data

| Part No.   | for series | Compressed air connection | Nominal flow Qn | Nominal flow Qn | Nominal flow Qn |
|------------|------------|---------------------------|-----------------|-----------------|-----------------|
|            |            |                           | Min., standard  | Max., standard  | Min., extended  |
| R412026836 | AS5        | G 1                       | 22 l/min        | 4326 l/min      | 4326 l/min      |

| Part No.   | Nominal flow Qn |
|------------|-----------------|
|            | Max., extended  |
| R412026836 | 6490 l/min      |

Standard measurement range for flow measurement: compressed air 0.5 ... 100 m/s, extended measurement range: compressed air >100 ... 150 m/s, in accordance with ISO 8778, Flow display range: 0 ... 12980 l/min

## Technical information

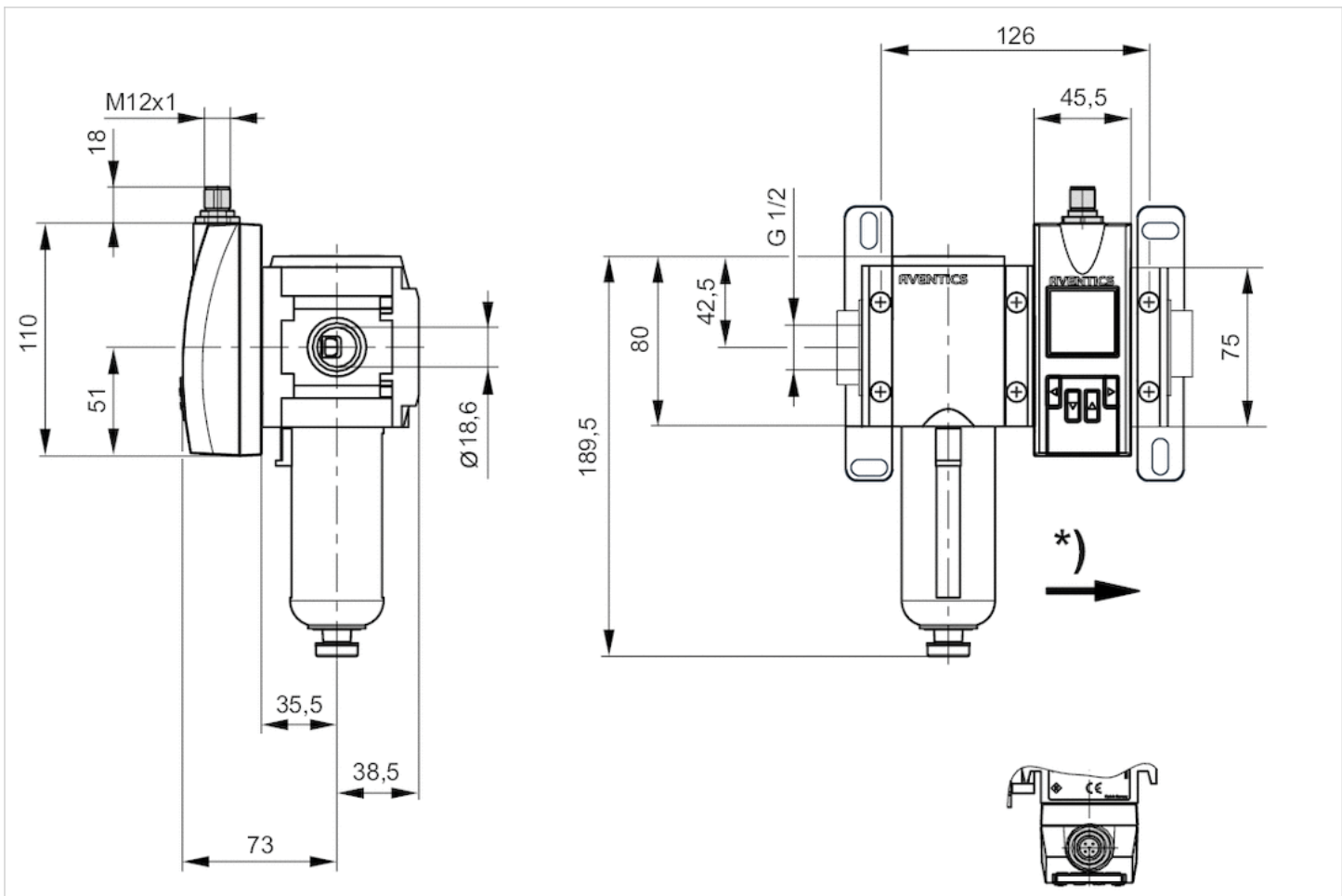
The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .  
 The protection class is only ensured when the plug is mounted properly. For detailed information, see operating instructions.  
 The device is designed to be installed in AS series air preparation units or to be fitted as a stand-alone device using a W05 block assembly kit.  
 Liquid oil or water must be separated via prefiltering. If it is not separated sufficiently, drifting may result.  
 Precision- Standard measurement range: ±3% of measured value, + 0.3% of final value- Extended measurement range: ±8% of measured value, + 1% of final value  
 The IO-Link device description (IODD) for the AF2 flow rate sensor is available for download in the Media Center.

## Technical information

|          |                          |
|----------|--------------------------|
| Material |                          |
| Housing  | Polyamide, Polycarbonate |
| Seals    | Fluorocaoutchouc         |

## Dimensions

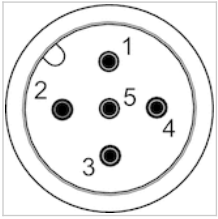
### Dimensions in mm



\* Flow direction

## Pin assignments

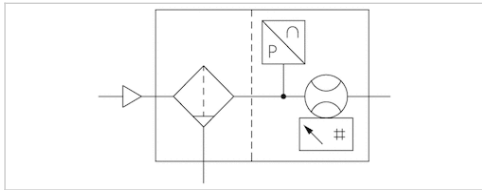
### Pin assignments, M12x1, 5-pin



| Pin        | 1                            | 2                         | 3        |
|------------|------------------------------|---------------------------|----------|
| Allocation | L+                           | QA (output 4 ... 20 mA)   | m = mass |
|            | 4                            | 5                         |          |
|            | C/Q1 (IO-Link/switch output) | Analog output 4 ... 20 mA |          |

# Flow sensor, Ethernet, Series AF2

- Ethernet, With mounting
- Qn min. 22 l/min
- Qn max. 6490 l/min
- Electrical connection Plug, M12x1, 8-pin



|                               |  |
|-------------------------------|--|
| Certificates                  | CE declaration of conformity RoHS UL (Underwriters Laboratories) |
| Working pressure min./max.    | 0 ... 16 bar   |
| Ambient temperature min./max. | -20 ... 60 °C  |
| Medium temperature min./max.  | -20 ... 60 °C  |
| Medium                        | Compressed air Argon Nitrogen Helium Carbon dioxide              |
| filter porosity               | 5 µm   |
| Display                       | OLED   |
| Flow display unit             | l/sec, l/min, m³/min, m³/h, ft³/s, m³/min                        |
| Pressure display unit         | bar, psi   |
| Temperature display unit      | °C, °F   |
| DC operating voltage max.     | 45 V DC  |
| Power consumption max.        | 12 W   |
| Response time                 | 10 ms  |
| Protection class              | IP65, IP67 according to IEC 60529                                |
| Shock resistance max.         | 30 g, 11 ms  |
| Vibration resistance          | 1 g (10 - 2000 Hz) IEC 60068 - 2-6                               |
| Reproducibility               | ± 1.5% of the measured value                                     |
| Weight                        | 2.82 kg  |

## Technical data

| Part No.   | for series | Compressed air connection | Nominal flow Qn |                |
|------------|------------|---------------------------|-----------------|----------------|
|            |            |                           | Min., standard  | Max., standard |
| R412026839 | AS5        | G 1                       | 22 l/min        | 4326 l/min     |

| Part No.   | Nominal flow Qn |
|------------|-----------------|
|            | Max., extended  |
| R412026839 | 6490 l/min      |

Standard measurement range for flow measurement: compressed air 0.5 ... 100 m/s, extended measurement range: compressed air >100 ... 150 m/s, in accordance with ISO 8778, Flow display range: 0 ... 12980 l/min

## Technical information

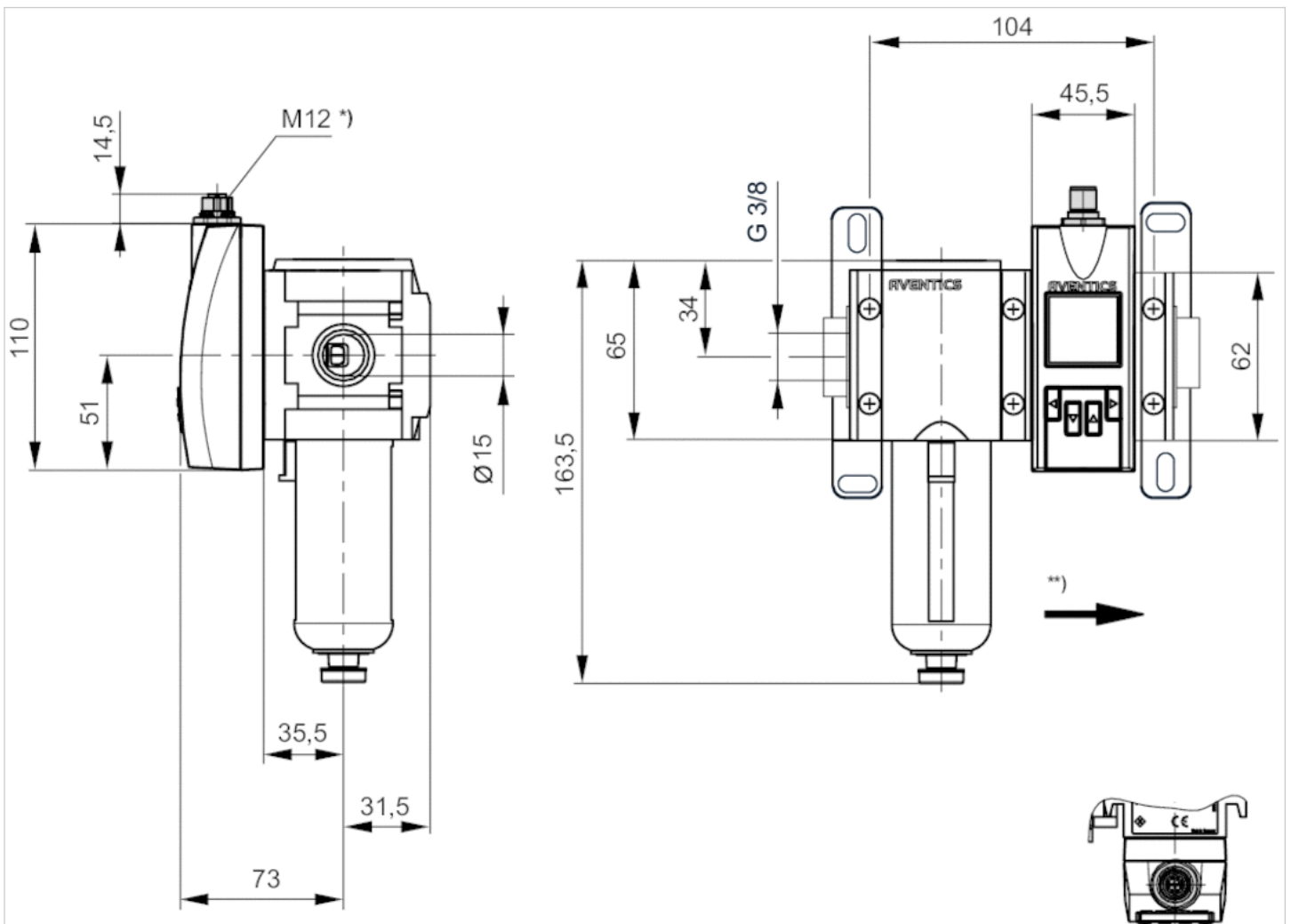
The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .  
 The protection class is only ensured when the plug is mounted properly. For detailed information, see operating instructions.  
 The device is designed to be installed in AS series air preparation units or to be fitted as a stand-alone device using a W05 block assembly kit.  
 Liquid oil or water must be separated via prefiltering. If it is not separated sufficiently, drifting may result.  
 Precision- Standard measurement range: ±3% of measured value, + 0.3% of final value- Extended measurement range: ±8% of measured value, + 1% of final value

## Technical information

|          |                          |
|----------|--------------------------|
| Material |                          |
| Housing  | Polyamide, Polycarbonate |
| Seals    | Fluorocaoutchouc         |

## Dimensions

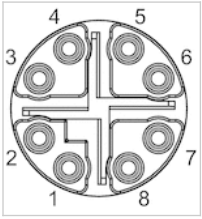
### Dimensions in mm



\* Internal thread  
 \*\* Flow direction

## Pin assignments

### Pin assignments, M12, X-coded



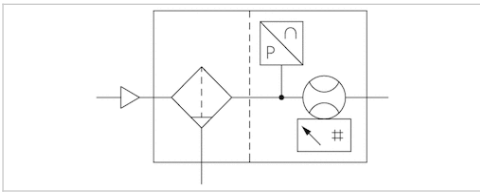
| Pin      | 1           | 2           | 3           | 4           | 7       | 8    | 5       |
|----------|-------------|-------------|-------------|-------------|---------|------|---------|
| Color    | WH / OG     | OG          | WH / GN     | GN          | WH / BU | BU   | WH / BN |
| Function | TX(+) + POE | TX(-) + POE | RX(+) - POE | RX(-) - POE | POE+    | POE+ | POE-    |

|  |  |  |  |  |  |  |      |
|--|--|--|--|--|--|--|------|
|  |  |  |  |  |  |  | 6    |
|  |  |  |  |  |  |  | BN   |
|  |  |  |  |  |  |  | POE- |



# Flow sensor, IO-Link, Series AF2

- 2 analog outputs, 2 switch outputs, 1 frequency output, 1 pulse output, IO-Link, Without mounting
- Qn min. 22 l/min
- Qn max. 6490 l/min
- Electrical connection Plug, M12x1, 5-pin



## Certificates

Working pressure min./max.

Ambient temperature min./max.

Medium temperature min./max.

Medium

filter porosity

Display

Flow display unit

Pressure display unit

Temperature display unit

DC operating voltage min.

DC operating voltage max.

Max. power consumption \*)

Response time

Protection class

Short circuit resistance

Shock resistance max.

Vibration resistance

Reproducibility

Weight

\*)

CE declaration of conformity RoHS UL  
(Underwriters Laboratories)

0 ... 16 bar

-20 ... 60 °C

-20 ... 60 °C

Compressed air Argon Nitrogen Helium  
Carbon dioxide

5 µm

OLED

l/sec, l/min, m³/min, m³/h, ft³/s, m³/min

bar, psi

°C, °F

17 V DC

30 V DC

175 mA

10 ms

IP65, IP67 according to IEC 60529

short circuit resistant

30 g, 11 ms

1 g (10 - 2000 Hz) IEC 60068 - 2-6

± 1.5% of the measured value

2.3 kg

Current consumption without load

## Technical data

| Part No.   | for series | Compressed air connection | Nominal flow Qn | Nominal flow Qn | Nominal flow Qn |
|------------|------------|---------------------------|-----------------|-----------------|-----------------|
|            |            |                           | Min., standard  | Max., standard  | Min., extended  |
| R412027178 | AS5        | G 1                       | 22 l/min        | 4326 l/min      | 4326 l/min      |

| Part No.   | Nominal flow Qn |
|------------|-----------------|
|            | Max., extended  |
| R412027178 | 6490 l/min      |

Standard measurement range for flow measurement: compressed air 0.5 ... 100 m/s, extended measurement range: compressed air >100 ... 150 m/s, in accordance with ISO 8778, Flow display range: 0 ... 12980 l/min

## Technical information

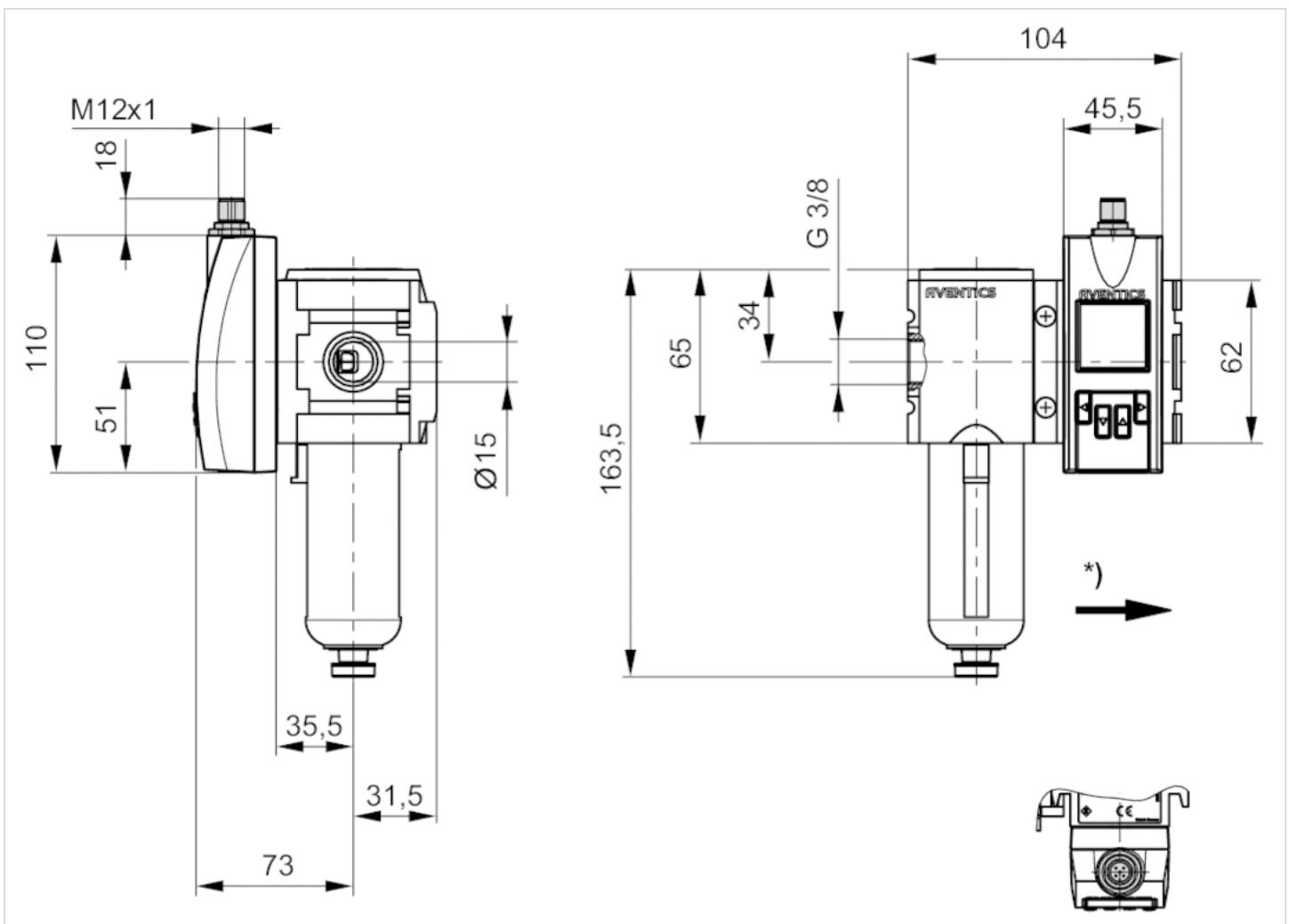
The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .  
 The protection class is only ensured when the plug is mounted properly. For detailed information, see operating instructions.  
 The device is designed to be installed in AS series air preparation units or to be fitted as a stand-alone device using a W05 block assembly kit.  
 Liquid oil or water must be separated via prefiltering. If it is not separated sufficiently, drifting may result.  
 Precision- Standard measurement range: ±3% of measured value, + 0.3% of final value- Extended measurement range: ±8% of measured value, + 1% of final value  
 The IO-Link device description (IODD) for the AF2 flow rate sensor is available for download in the Media Center.

## Technical information

|          |                          |
|----------|--------------------------|
| Material |                          |
| Housing  | Polyamide, Polycarbonate |
| Seals    | Fluorocaoutchouc         |

## Dimensions

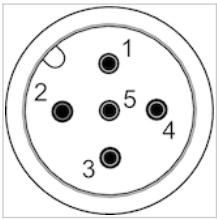
### Dimensions in mm



\* Flow direction

## Pin assignments

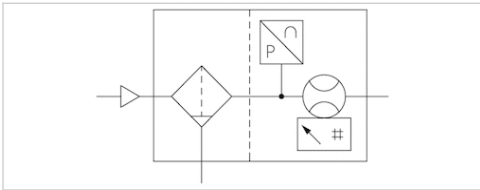
### Pin assignments, M12x1, 5-pin



| Pin        | 1                            | 2                       | 3                         |
|------------|------------------------------|-------------------------|---------------------------|
| Allocation | L+                           | QA (output 4 ... 20 mA) | m = mass                  |
|            | 4                            | 5                       |                           |
|            | C/Q1 (IO-Link/switch output) |                         | Analog output 4 ... 20 mA |

# Flow sensor, Ethernet, Series AF2

- Ethernet, Without mounting
- Qn min. 22 l/min
- Qn max. 6490 l/min
- Electrical connection Plug, M12x1, 8-pin



## Certificates

|                               |   |
|-------------------------------|---|
| Working pressure min./max.    | 0 ... 16 bar  |
| Ambient temperature min./max. | -20 ... 60 °C                                       |
| Medium temperature min./max.  | -20 ... 60 °C                                       |
| Medium                        | Compressed air Argon Nitrogen Helium Carbon dioxide |
| filter porosity               | 5 µm  |
| Display                       | OLED  |
| Flow display unit             | l/sec, l/min, m³/min, m³/h, ft³/s, m³/min           |
| Pressure display unit         | bar, psi  |
| Temperature display unit      | °C, °F  |
| DC operating voltage max.     | 45 V DC   |
| Power consumption max.        | 12 W  |
| Response time                 | 10 ms   |
| Protection class              | IP65, IP67 according to IEC 60529                   |
| Shock resistance max.         | 30 g, 11 ms   |
| Vibration resistance          | 1 g (10 - 2000 Hz) IEC 60068 - 2-6                  |
| Reproducibility               | ± 1.5% of the measured value                        |
| Weight                        | 2.3 kg  |

## Technical data

| Part No.   | for series | Compressed air connection | Nominal flow Qn |                |
|------------|------------|---------------------------|-----------------|----------------|
|            |            |                           | Min., standard  | Max., standard |
| R412027181 | AS5        | G 1                       | 22 l/min        | 4326 l/min     |

| Part No.   | Nominal flow Qn |
|------------|-----------------|
|            | Max., extended  |
| R412027181 | 6490 l/min      |

Standard measurement range for flow measurement: compressed air 0.5 ... 100 m/s, extended measurement range: compressed air >100 ... 150 m/s, in accordance with ISO 8778, Flow display range: 0 ... 12980 l/min

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

The protection class is only ensured when the plug is mounted properly. For detailed information, see operating instructions.

The device is designed to be installed in AS series air preparation units or to be fitted as a stand-alone device using a W05 block assembly kit.

Liquid oil or water must be separated via prefiltering. If it is not separated sufficiently, drifting may result.

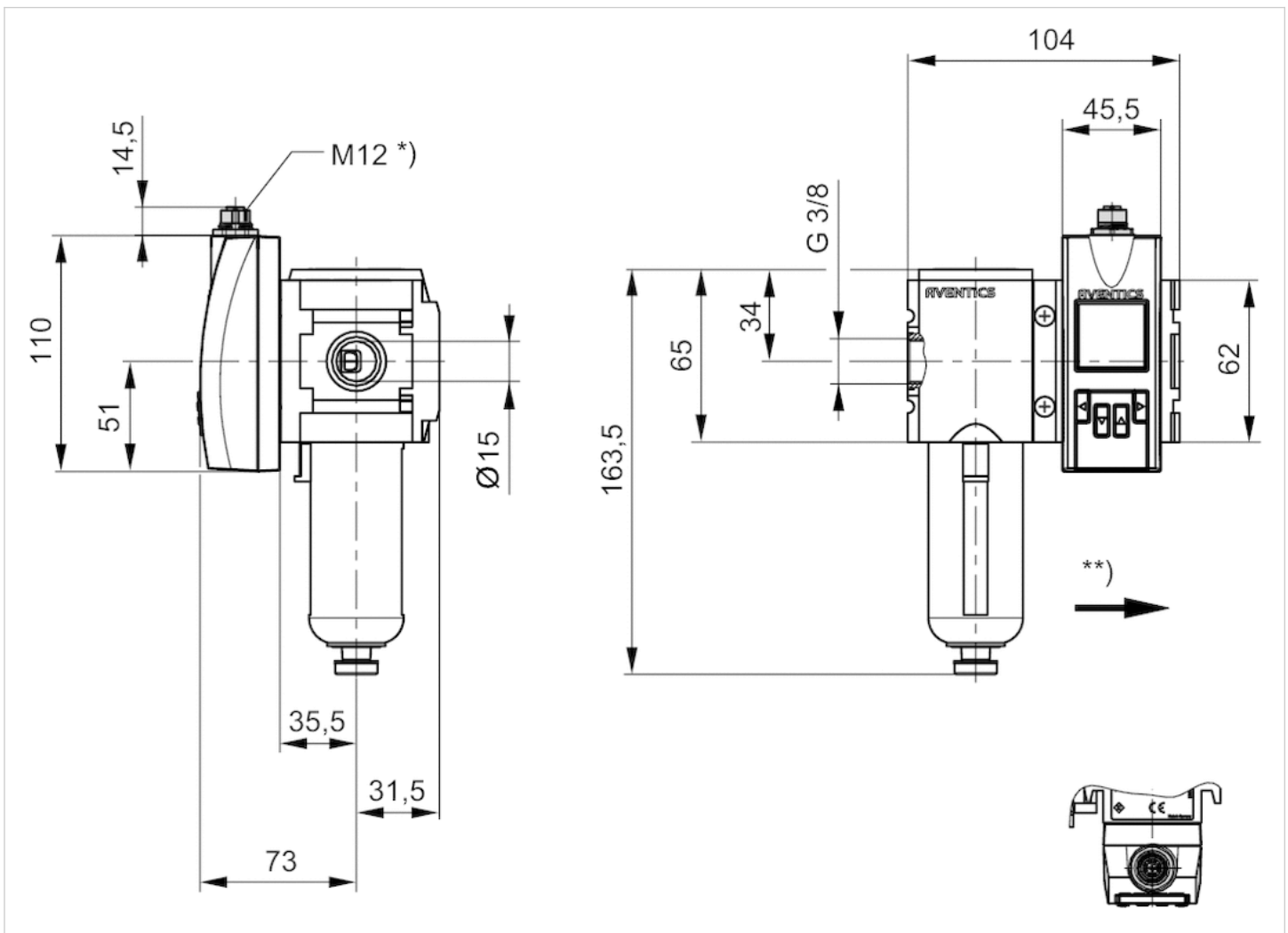
Precision- Standard measurement range: ±3% of measured value, + 0.3% of final value- Extended measurement range: ±8% of measured value, + 1% of final value

## Technical information

|          |                          |
|----------|--------------------------|
| Material |                          |
| Housing  | Polyamide, Polycarbonate |
| Seals    | Fluorocaoutchouc         |

## Dimensions

### Dimensions in mm

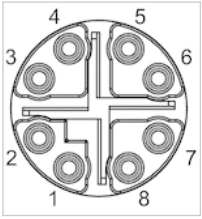


\* Internal thread

\*\* Flow direction

## Pin assignments

### Pin assignments, M12, X-coded



| Pin      | 1           | 2           | 3           | 4           | 7       | 8    | 5       |
|----------|-------------|-------------|-------------|-------------|---------|------|---------|
| Color    | WH / OG     | OG          | WH / GN     | GN          | WH / BU | BU   | WH / BN |
| Function | TX(+) + POE | TX(-) + POE | RX(+) - POE | RX(-) - POE | POE+    | POE+ | POE-    |

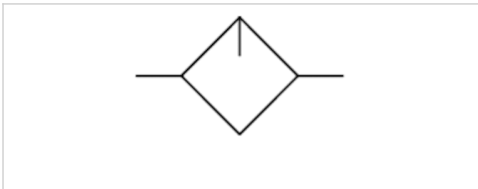
|  |  |  |  |  |  |  |      |
|--|--|--|--|--|--|--|------|
|  |  |  |  |  |  |  | 6    |
|  |  |  |  |  |  |  | BN   |
|  |  |  |  |  |  |  | POE- |

# Standard oil-mist lubricator, Series AS5-LBS

- G 3/4 G 1



|                               |   |
|-------------------------------|---|
| Version                       | Oil-mist lubricator, Can be assembled into blocks                 |
| Parts                         | Standard oil-mist lubricator                                      |
| Mounting orientation          | vertical  |
| Working pressure min./max.    | 0.5 ... 16 bar  |
| Ambient temperature min./max. | -10 ... 50 °C   |
| Medium temperature min./max.  | -10 ... 50 °C   |
| Medium                        | Compressed air Neutral gases                                      |
| Lubricator reservoir volume   | 181 cm <sup>3</sup>   |
| Type of filling               | Semi-automatic oil filling during operation<br>Manual oil filling |
| Weight                        | See table below   |



## Technical data

| Part No.   | Port  | Nominal flow Qn | Material Reservoir        | Protective guard |
|------------|-------|-----------------|---------------------------|------------------|
| R412009225 | G 3/4 | 15800 l/min     | Polycarbonate             | Polyamide        |
| R412009229 | G 3/4 | 15800 l/min     | Die cast zinc with window | -                |
| R412009226 | G 3/4 | 15800 l/min     | Polycarbonate             | Polyamide        |
| R412009231 | G 1   | 15800 l/min     | Polycarbonate             | Polyamide        |
| R412009235 | G 1   | 15800 l/min     | Die cast zinc with window | -                |
| R412009232 | G 1   | 15800 l/min     | Polycarbonate             | Polyamide        |

| Part No.   | Reservoir   | Weight   |    |
|------------|---|----------|----|
| R412009225 | reservoir, PA, with PA protective guard           | 0.76 kg  |    |
| R412009229 | reservoir, metal, standard, with inspection glass | 0.762 kg |    |
| R412009226 | reservoir, PA, with PA protective guard           | 0.77 kg  | 1) |
| R412009231 | reservoir, PA, with PA protective guard           | 0.76 kg  |    |
| R412009235 | reservoir, metal, standard, with inspection glass | 0.762 kg |    |
| R412009232 | reservoir, PA, with PA protective guard           | 0.77 kg  | 1) |

Nominal flow Qn with secondary pressure p<sub>2</sub> = 6 bar at Δp = 1 bar

1) Electrical level detection

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .  
 Electrical level detection only with ST6 sensor with reed contact, sensor holder included in the scope of the delivery.  
 Sensor not included in scope of delivery, sensor installation prepared.  
 The entire preset drip quantity enters the pressure system.

Manual oil filling possible during operation at a maximum operating pressure of 10 bar.

Note: Polycarbonate reservoirs are susceptible to solvents, supplementary information can be found at "Customer information".  
 A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Oil dosing at 1000 l/min 1-2 drops

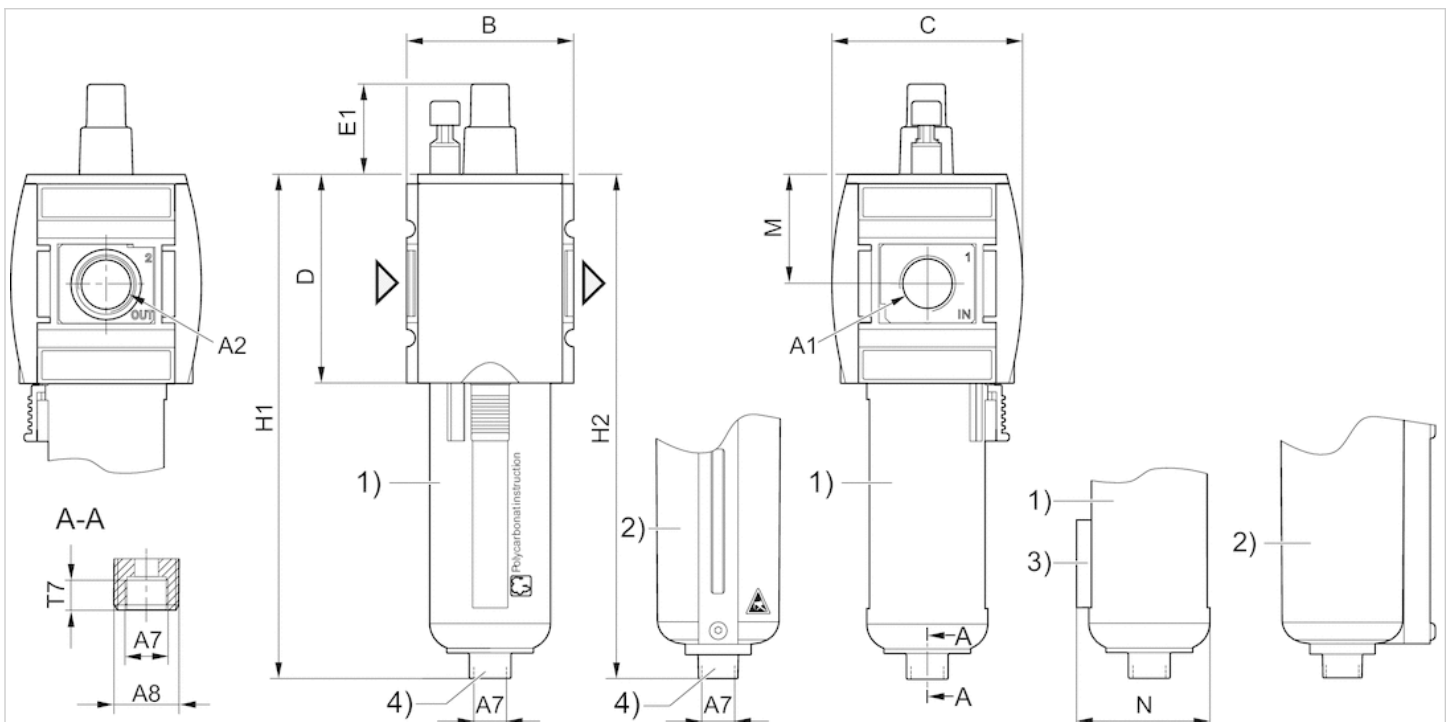
## Technical information

### Material

|                  |                                 |
|------------------|---------------------------------|
| Housing          | Polyamide                       |
| Front plate      | Acrylonitrile butadiene styrene |
| Seals            | Acrylonitrile butadiene rubber  |
| Threaded bushing | Die cast zinc                   |
| Reservoir        | Polycarbonate Die cast zinc     |
| Protective guard | Polyamide                       |

## Dimensions

### Dimensions



A1 = input  
 A2 = output



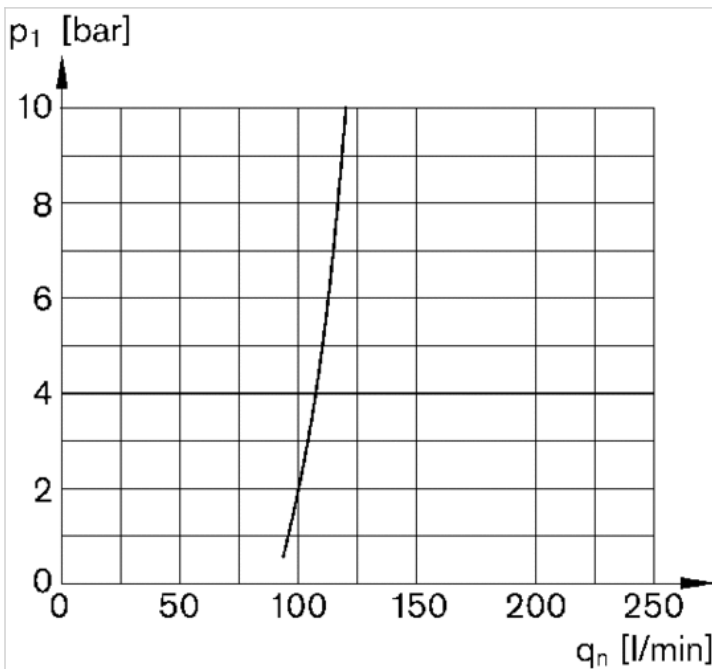
- 1) Plastic reservoir and protective guard with window
- 2) Metal reservoir with inspection glass
- 3) Holder for sensor
- 4) Port for semi-automatic oil filling

Dimensions in mm

| A1    | A2    | A7    | A8    | B  | C   | D   | E1   | H1  | H2  | M  | T7  |
|-------|-------|-------|-------|----|-----|-----|------|-----|-----|----|-----|
| G 3/4 | G 3/4 | G 1/8 | G 1/4 | 85 | 103 | 109 | 30.5 | 239 | 243 | 58 | 8.5 |
| G 1   | G 1   | G 1/8 | G 1/4 | 85 | 103 | 109 | 30.5 | 239 | 243 | 58 | 8.5 |

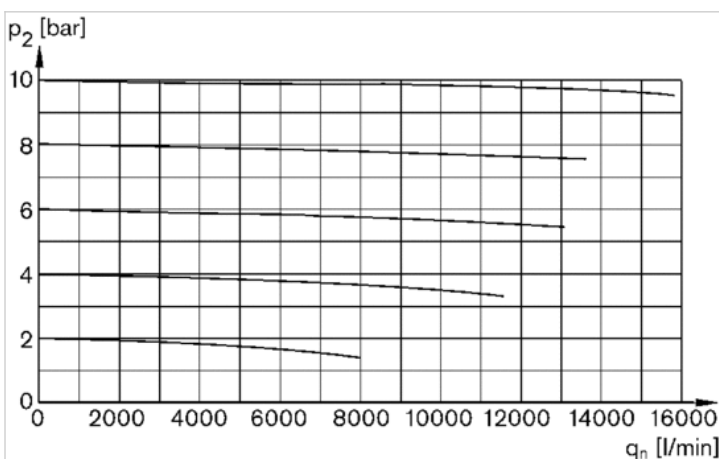
Diagrams

Lubricator activation margin



p1 = working pressure  
qn = nominal flow

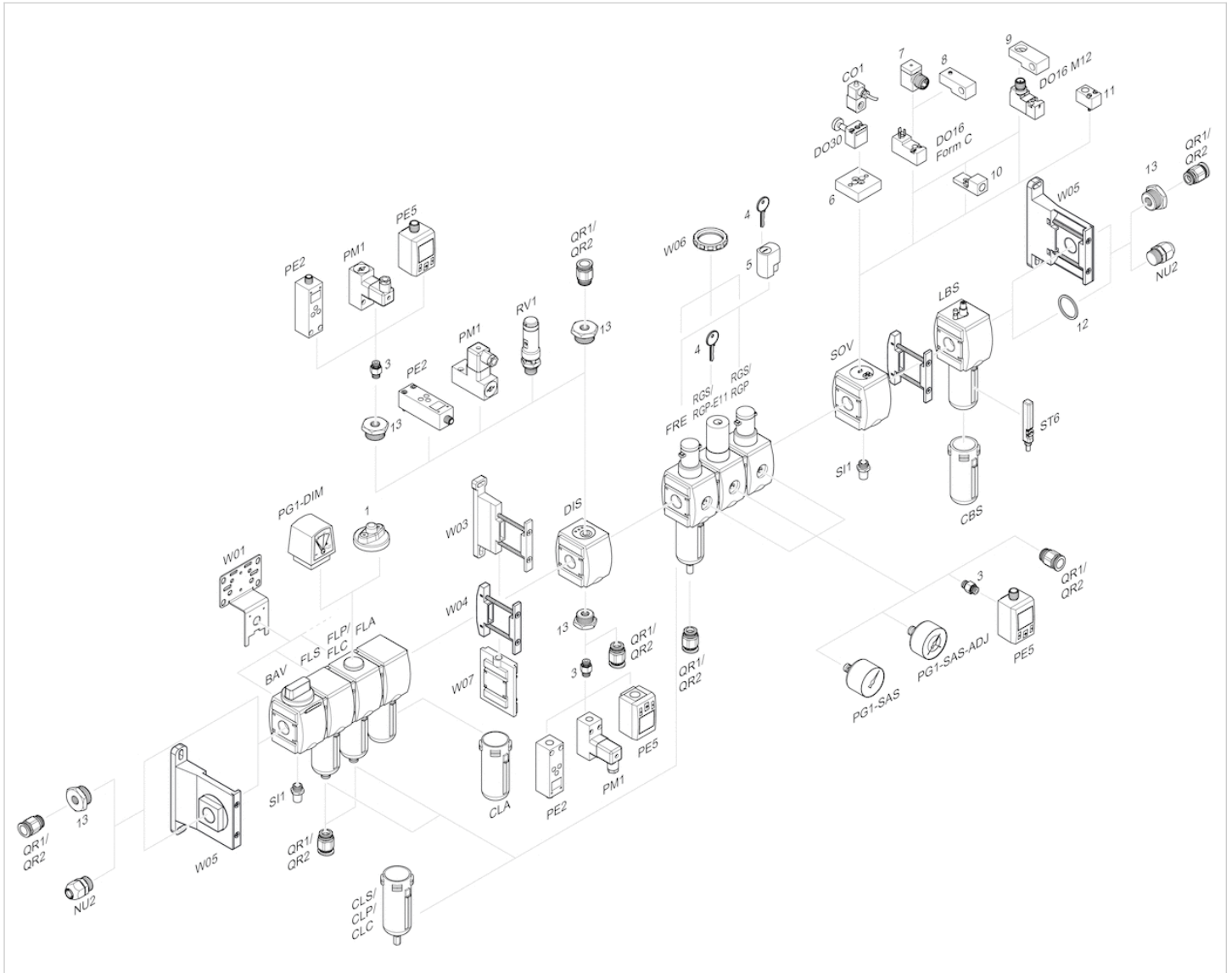
Flow rate characteristic



p2 = secondary pressure

qn = nominal flow

## Accessories overview



- 1 = contamination display
- 3 = Double nipple
- 4 = Key for E11 locking
- 5 = mortise lock
- 6 = Transition plate DO30
- 7 = Adapter, Series CON-VP
- 8 = Mounting aid DO16, form C
- 9 = Mounting aid DO16, M12
- 10 = Adapter for external pilot air
- 11 = Adapter pneumatic operation
- 12 = Sealing ring
- 13 = Reducing nipple














# Filling unit, electrically operated, Series AS5-SSU

- adjustable filling time
- Compressed air connection G 3/4 G 1
- Pipe connection



|  |   |
|--|---|
| Version  | Poppet valve, Can be assembled into blocks                  |
| Parts  | Filling valve, 3/2-directional valve, electrically operated |
| Nominal flow   | 8750 l/min  |
| Nominal flow 1 ▶ 2   | 8750 l/min  |
| Nominal flow 2 ▶ 3   | 3700 l/min  |
| Working pressure min./max.   | 2.5 ... 10 bar  |
| Medium   | Compressed air Neutral gases                                |
| Medium temperature min./max.                                       | -10 ... 50 °C   |
| Ambient temperature min./max.                                      | -10 ... 50 °C   |
| Pilot  | Internal  |
| Sealing principle  | Soft sealing  |
| Max. particle size   | 25 µm   |
| Protection class acc. to DIN EN 61140 with plug                    | IP65  |
| Protection class acc. to DIN EN 61140 Without valve plug connector | See table below   |
| Duty cycle   | 100 %   |
| Weight   | See table below   |

## Technical data

| Part No.   |   |   | Compressed air connection input | Compressed air connection output | Exhaust |
|------------|---|---|---------------------------------|----------------------------------|---------|
| R412009277 |  | —   | G 3/4                           | G 3/4                            | G 1/2   |
| R412009282 |  | —   | G 1                             | G 1                              | G 1/2   |
| R412009287 |  | —   | G 1                             | G 1                              | G 1/2   |
| R412009278 |  |  | G 3/4                           | G 3/4                            | G 1/2   |
| R412009280 |  |  | G 3/4                           | G 3/4                            | G 1/2   |
| R412009378 |  |  | G 1                             | G 1                              | G 1/2   |
| R412009283 |  |  | G 1                             | G 1                              | G 1/2   |
| R412009285 |  |  | G 1                             | G 1                              | G 1/2   |

| Part No.   | Operational voltage | Operational voltage | Operational voltage |
|------------|---------------------|---------------------|---------------------|
|            | DC                  | AC 50 Hz            | AC 60 Hz            |
| R412009277 | -                   | -                   | -                   |
| R412009282 | -                   | -                   | -                   |
| R412009287 | -                   | -                   | -                   |
| R412009278 | 24 V                | -                   | -                   |
| R412009280 | -                   | 220 V               | 230 V               |
| R412009378 | 24 V                | -                   | -                   |
| R412009283 | 24 V                | -                   | -                   |
| R412009285 | -                   | 220 V               | 230 V               |

| Part No.   | Power consumption | Holding power | Holding power | Switch-on power |
|------------|-------------------|---------------|---------------|-----------------|
|            | DC                | AC 50 Hz      | AC 60 Hz      | AC 50 Hz        |
| R412009277 | -                 | -             | -             | -               |
| R412009282 | -                 | -             | -             | -               |
| R412009287 | -                 | -             | -             | -               |
| R412009278 | 2 W               | -             | -             | -               |
| R412009280 | -                 | 1.6 VA        | 1.4 VA        | 2.2 VA          |
| R412009378 | 2 W               | -             | -             | -               |
| R412009283 | 2 W               | -             | -             | -               |
| R412009285 | -                 | 1.6 VA        | 1.4 VA        | 2.2 VA          |

| Part No.   | Switch-on power | Electrical connection       | Connector standard |
|------------|-----------------|-----------------------------|--------------------|
|            | AC 60 Hz        | Pilot valve                 |                    |
| R412009277 | -               | -                           | -                  |
| R412009282 | -               | -                           | -                  |
| R412009287 | -               | -                           | -                  |
| R412009278 | -               | Plug, EN 175301-803, form C | ISO 15217          |
| R412009280 | 1.6 VA          | Plug, EN 175301-803, form C | ISO 15217          |
| R412009378 | -               | Plug, M12x1                 | -                  |
| R412009283 | -               | Plug, EN 175301-803, form C | ISO 15217          |
| R412009285 | 1.6 VA          | Plug, EN 175301-803, form C | ISO 15217          |

| Part No.   | basic valve with electrical connector |
|------------|---------------------------------------|
| R412009277 | Basic valve without pilot valve       |
| R412009282 | Basic valve without pilot valve       |

| Part No.   | basic valve with electrical connector               |
|------------|---|
| R412009287 | Basic valve without pilot valve, with CNOMO subbase |
| R412009278 | Basic valve with pilot valve                        |
| R412009280 | Basic valve with pilot valve                        |
| R412009378 | Basic valve with pilot valve                        |
| R412009283 | Basic valve with pilot valve                        |
| R412009285 | Basic valve with pilot valve                        |

| Part No.   | Reverse polarity protection         | Weight   | Fig.   |    |
|------------|-------------------------------------|----------|--------|----|
| R412009277 | -                                   | 0.889 kg | Fig. 1 |    |
| R412009282 | -                                   | 0.889 kg | Fig. 1 |    |
| R412009287 | -                                   | 0.895 kg | Fig. 2 |    |
| R412009278 | Protected against polarity reversal | 0.924 kg | Fig. 3 |    |
| R412009280 | Protected against polarity reversal | 0.924 kg | Fig. 3 |    |
| R412009378 | -                                   | 0.9 kg   | Fig. 4 | 1) |
| R412009283 | Protected against polarity reversal | 0.924 kg | Fig. 3 |    |
| R412009285 | Protected against polarity reversal | 0.924 kg | Fig. 3 |    |

Nominal flow  $Q_n$  with secondary pressure  $p_2 = 6$  bar at  $\Delta p = 1$  bar

1) With adjustment screw lock

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Do not position filling valves or filling units upstream of open consumers, such as nozzles, air barriers, air curtains, since these may prevent through connection of components.

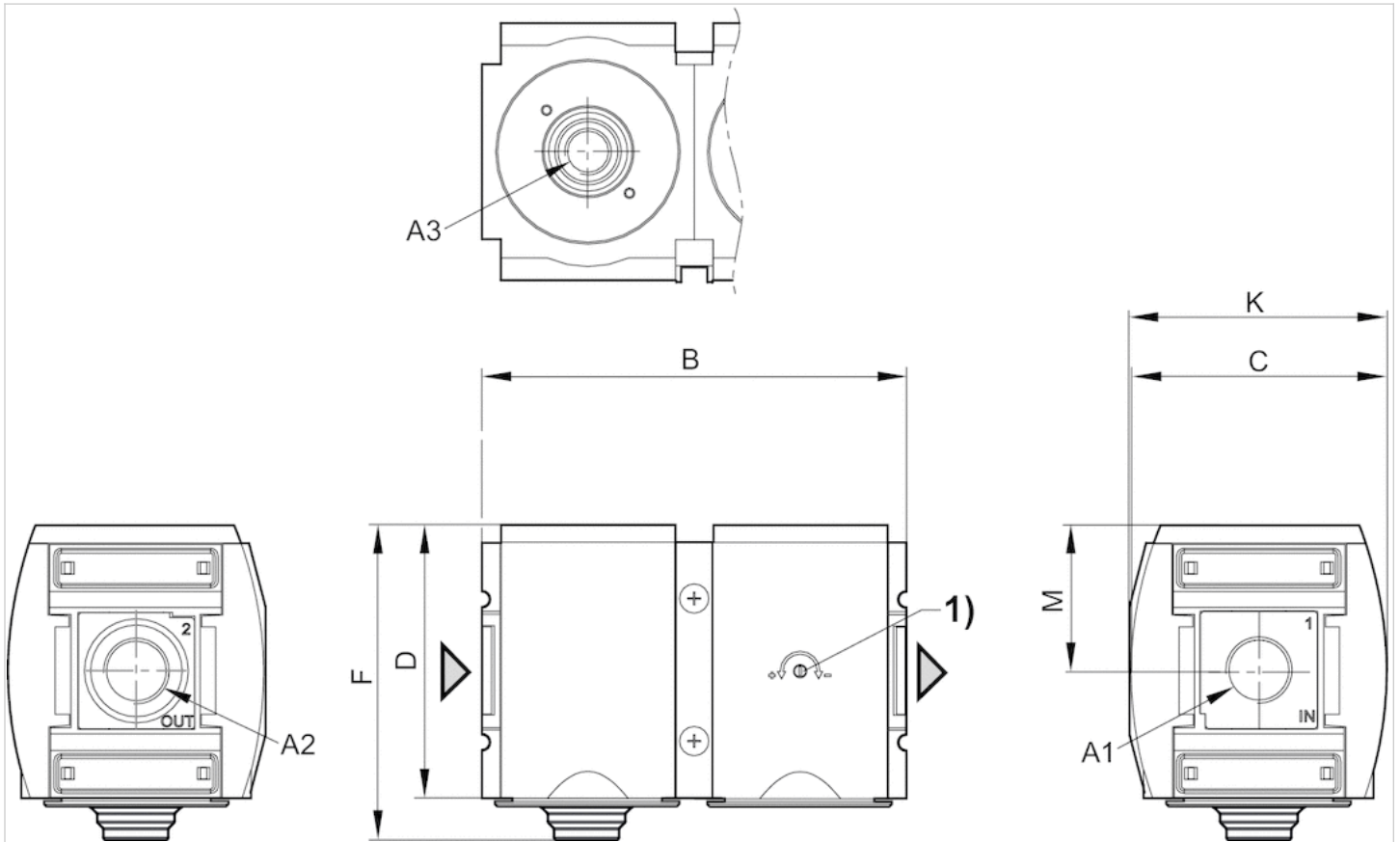
The filling valve builds up pressure slowly in the pneumatic systems, i.e. prevents a sudden pressure build-up during a recommissioning after a mains pressure failure or avoids emergency OFF switching. This allows dangerous abrupt cylinder motions to be avoided.

## Technical information

| Material         |                                 |
|------------------|---------------------------------|
| Housing          | Polyamide                       |
| Front plate      | Acrylonitrile butadiene styrene |
| Seals            | Acrylonitrile butadiene rubber  |
| Threaded bushing | Die cast zinc                   |

## Dimensions

Fig. 1: Filling unit without pilot valve with porting configuration for series DO16



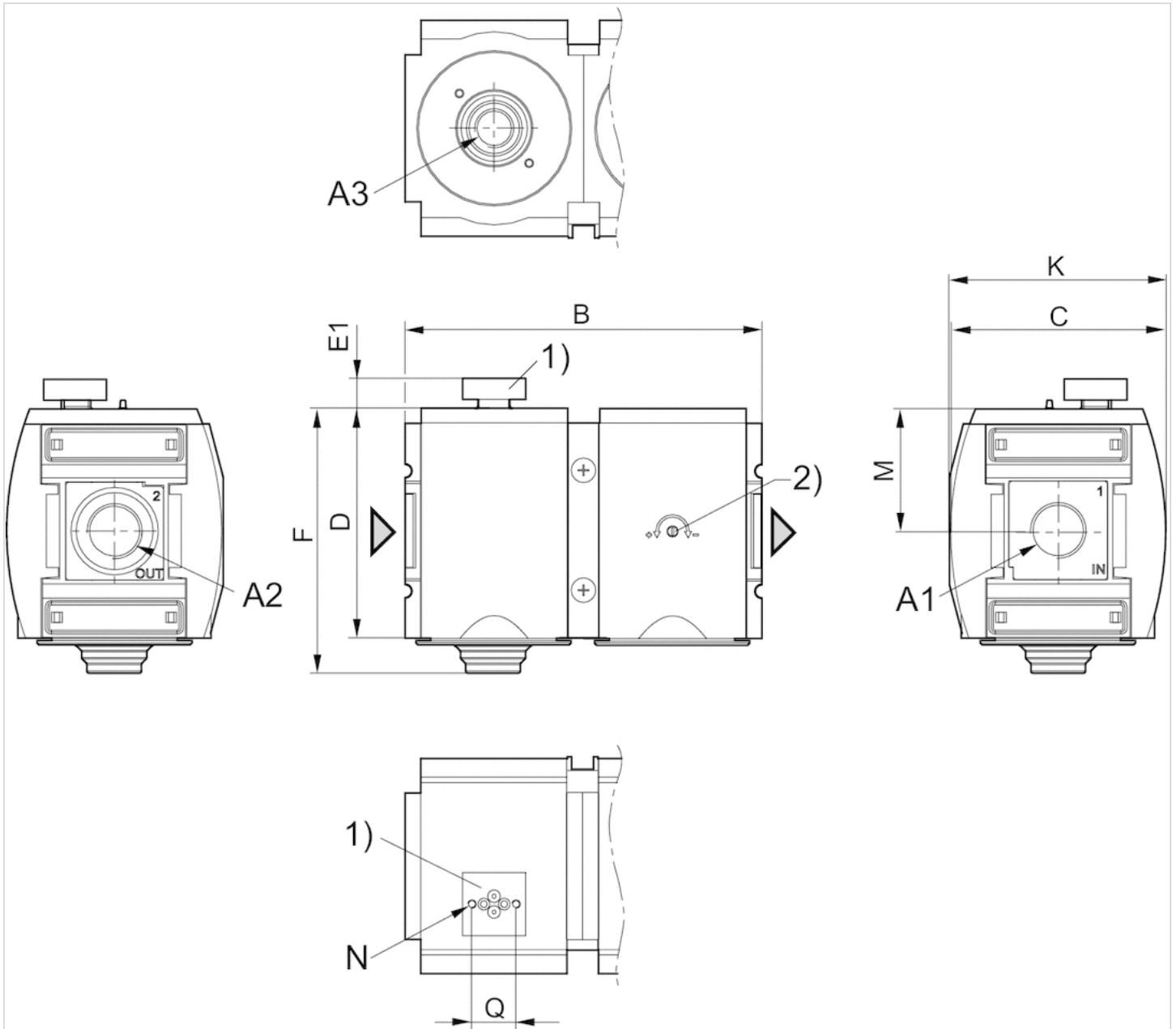
- A1 = input
- A2 = output
- A3 = ventilation port
- 1) Adjustment screw for filling time

### Dimensions in mm

| A2    | A3    | B   | C   | D   | F   | K     | M  |
|-------|-------|-----|-----|-----|-----|-------|----|
| G 3/4 | G 1/2 | 170 | 103 | 109 | 125 | 103.5 | 58 |
| G 1   | G 1/2 | 170 | 103 | 109 | 125 | 103.5 | 58 |

## Dimensions

Fig. 2: Filling unit with transition plate for pilot valve series DO30



A1 = input

A2 = output

A3 = ventilation port

1) Transition plate with CNOMO porting configuration for pilot valve DO30

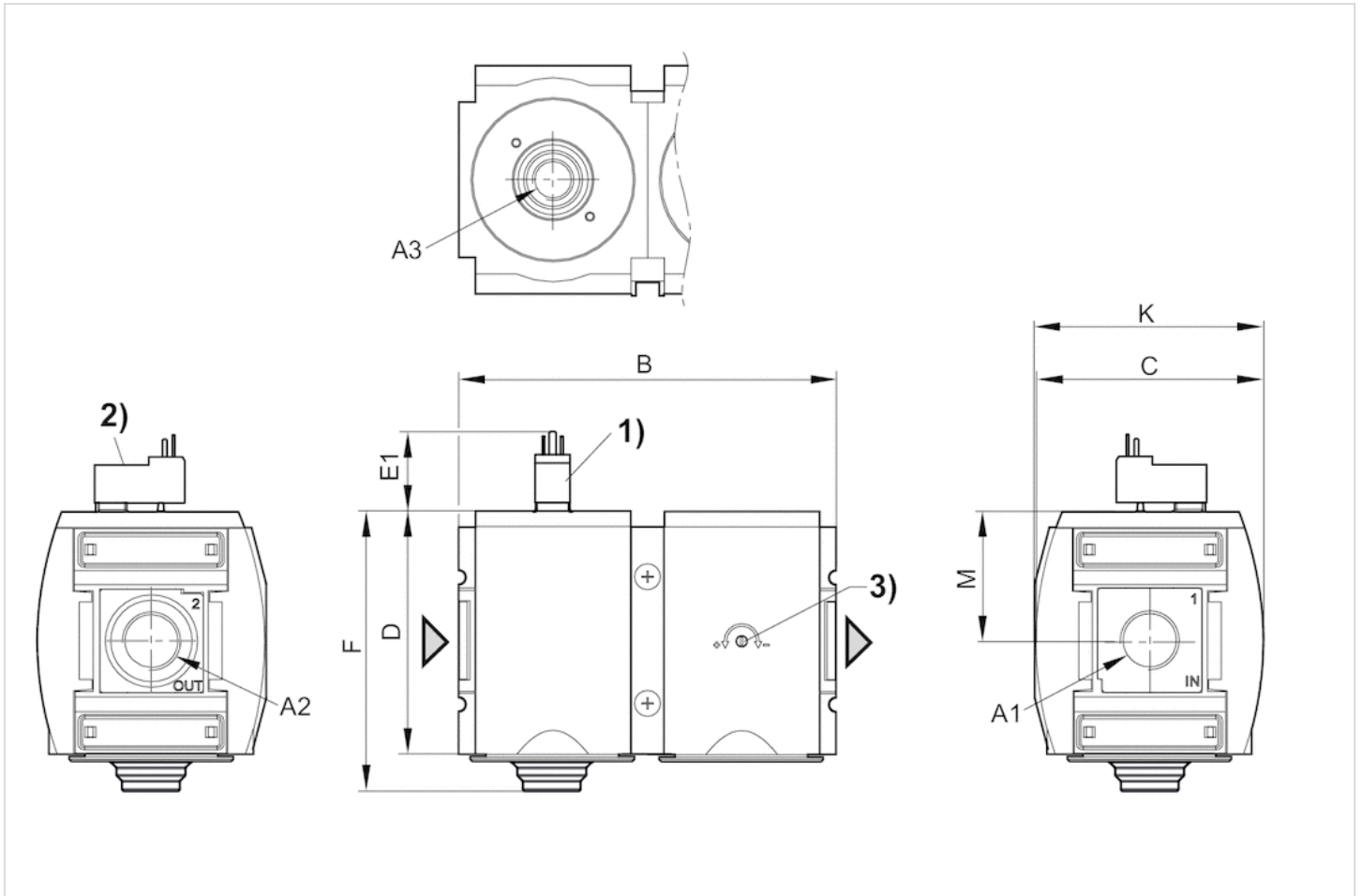
2) Adjustment screw for filling time

## Dimensions in mm

| A1  | A2  | A3    | B   | C   | D   | E1   | F   | K     | M  | N  | Q  |
|-----|-----|-------|-----|-----|-----|------|-----|-------|----|----|----|
| G 1 | G 1 | G 1/2 | 170 | 103 | 109 | 14.2 | 125 | 103.5 | 58 | M4 | 21 |

## Dimensions

Fig. 3: Filling unit with pilot valve and port for electrical connector form C



- A1 = input
- A2 = output
- A3 = ventilation port
- 1) Connection for valve plug connector according to ISO 15217 (form C)
- 2) Manual override
- 3) Adjustment screw for filling time

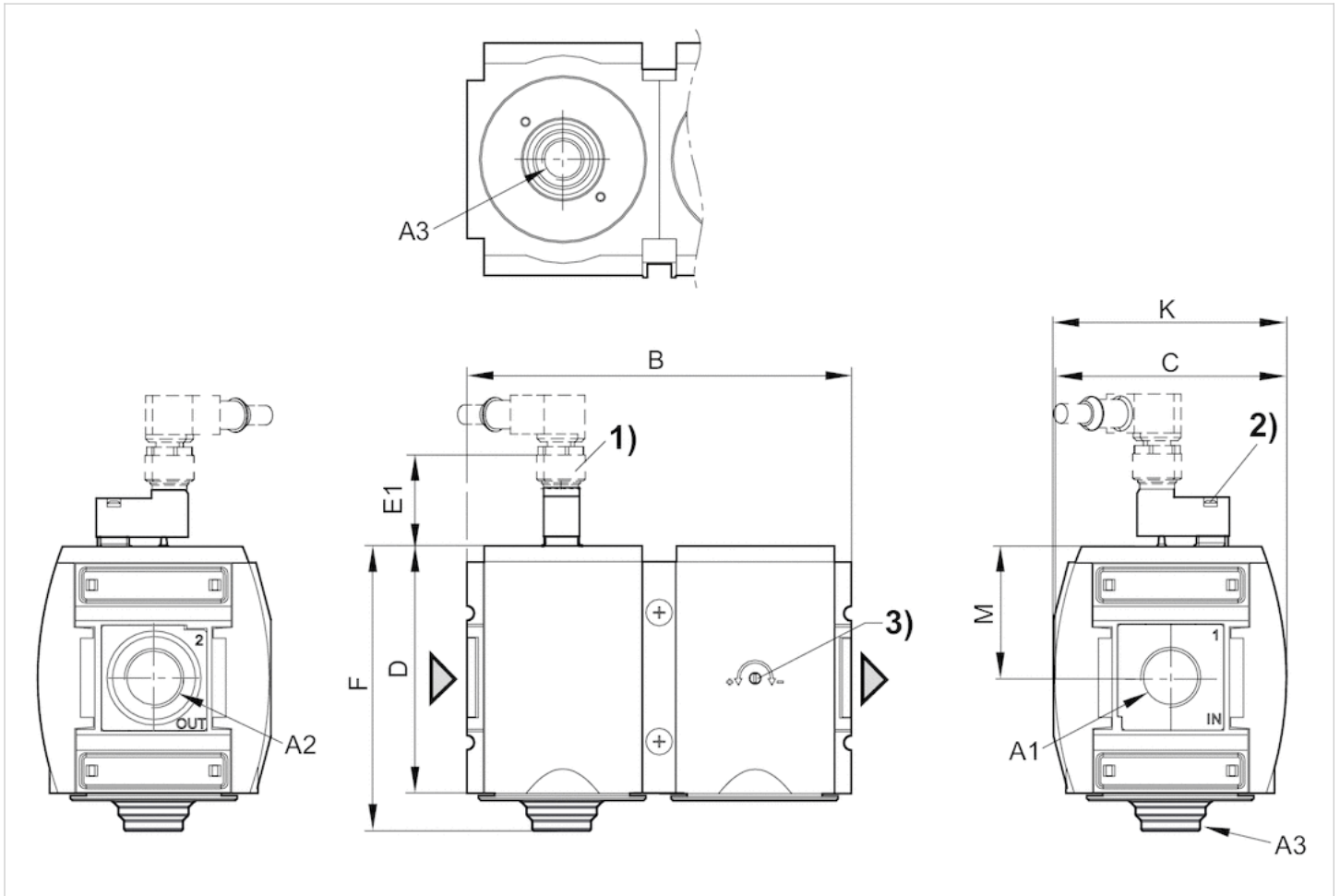
### Dimensions in mm

| A1    | A2    | A3    | B   | C   | D   | E1   | F   | K     | M  |
|-------|-------|-------|-----|-----|-----|------|-----|-------|----|
| G 3/4 | G 3/4 | G 1/2 | 170 | 103 | 109 | 25.1 | 125 | 103.5 | 58 |
| G 1   | G 1   | G 1/2 | 170 | 103 | 109 | 25.1 | 125 | 103.5 | 58 |



## Dimensions

Fig. 4: Filling unit with pilot valve, push-in fitting M12x1



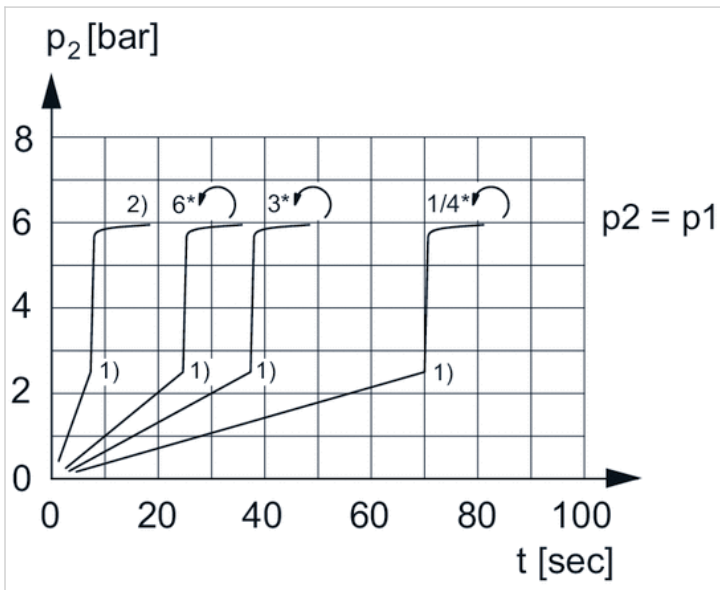
- A1 = input
- A2 = output
- A3 = ventilation port
- 1) plug M12
- 2) Manual override
- 3) Adjustment screw for filling time

### Dimensions in mm

| A1  | A2  | A3    | B   | C   | D   | E1 | F   | M  |
|-----|-----|-------|-----|-----|-----|----|-----|----|
| G 1 | G 1 | G 1/2 | 170 | 103 | 109 | 39 | 125 | 58 |

## Diagrams

### secondary pressure while filling



p1 = working pressure

p2 = secondary pressure

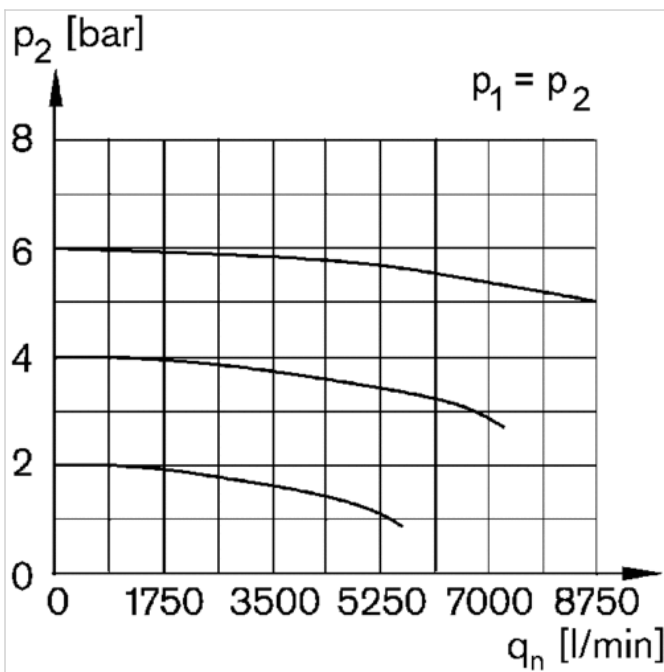
t = filling time, adjustable via adjustment screw (throttle)

1) Switching point: adjustable filling time, fixed change-over pressure  $\approx 0.5 \times p1$  (50%)

2) Throttle fully opened

\* Adjustment screw rotations

### Flow rate characteristic



p1 = Working pressure

p2 = Secondary pressure

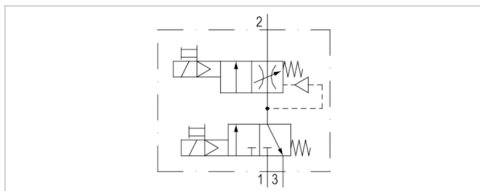
qn = Nominal flow



- 6 = Transition plate DO30
- 7 = Adapter, Series CON-VP
- 8 = Mounting aid DO16, form C
- 9 = Mounting aid DO16, M12
- 10 = Adapter for external pilot air
- 11 = Adapter pneumatic operation
- 12 = Sealing ring
- 13 = Reducing nipple


# Filling unit, electrically operated, Series AS5-SSU

- With electrical priority circuit, adjustable filling time., Increased flow rate 2►3
- Compressed air connection G 1
- Pipe connection
- Electrical connection: Plug, M12x1



|   |   |
|---|---|
| Version   | Poppet valve, Can be assembled into blocks                  |
| Parts   | Filling valve, 3/2-directional valve, electrically operated |
| Nominal flow                                    | 8750 l/min  |
| Nominal flow 1 ► 2                              | 8750 l/min  |
| Nominal flow 2 ► 3                              | 3700 l/min  |
| Working pressure min./max.                      | 2.5 ... 9 bar   |
| Medium  | Compressed air Neutral gases                                |
| Medium temperature min./max.                    | -10 ... 50 °C   |
| Ambient temperature min./max.                   | -10 ... 50 °C   |
| Pilot   | Internal  |
| Sealing principle                               | Soft sealing  |
| Max. particle size                              | 25 µm   |
| Protection class acc. to DIN EN 61140 with plug | IP65  |
| Duty cycle                                      | 100 %   |
| Weight  | 0.924 kg  |

## Technical data

| Part No.   |   | Compressed air connection input | Compressed air connection output | Exhaust |
|------------|---|---------------------------------|----------------------------------|---------|
| R412009381 |  | G 1                             | G 1                              | G 1/2   |

| Part No.   | Operational voltage | Power consumption | Electrical connection |
|------------|---------------------|-------------------|-----------------------|
|            |                     | DC                | Pilot valve           |
| R412009381 | 24 V                | 2 W               | Plug, M12x1           |

Nominal flow Q<sub>n</sub> with secondary pressure p<sub>2</sub> = 6 bar at Δp = 1 bar, MO = Manual override

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

For unthrottled operation, the filling valve must be permanently electrically actuated.

Actuating the electric priority circuit disrupts the slow pressure build-up and pressure p<sub>1</sub> is immediately applied.

The filling valve builds up pressure slowly in the pneumatic systems, i.e. prevents a sudden pressure build-up during a recommissioning after a mains pressure failure or avoids emergency OFF switching. This allows dangerous abrupt cylinder motions to be avoided.

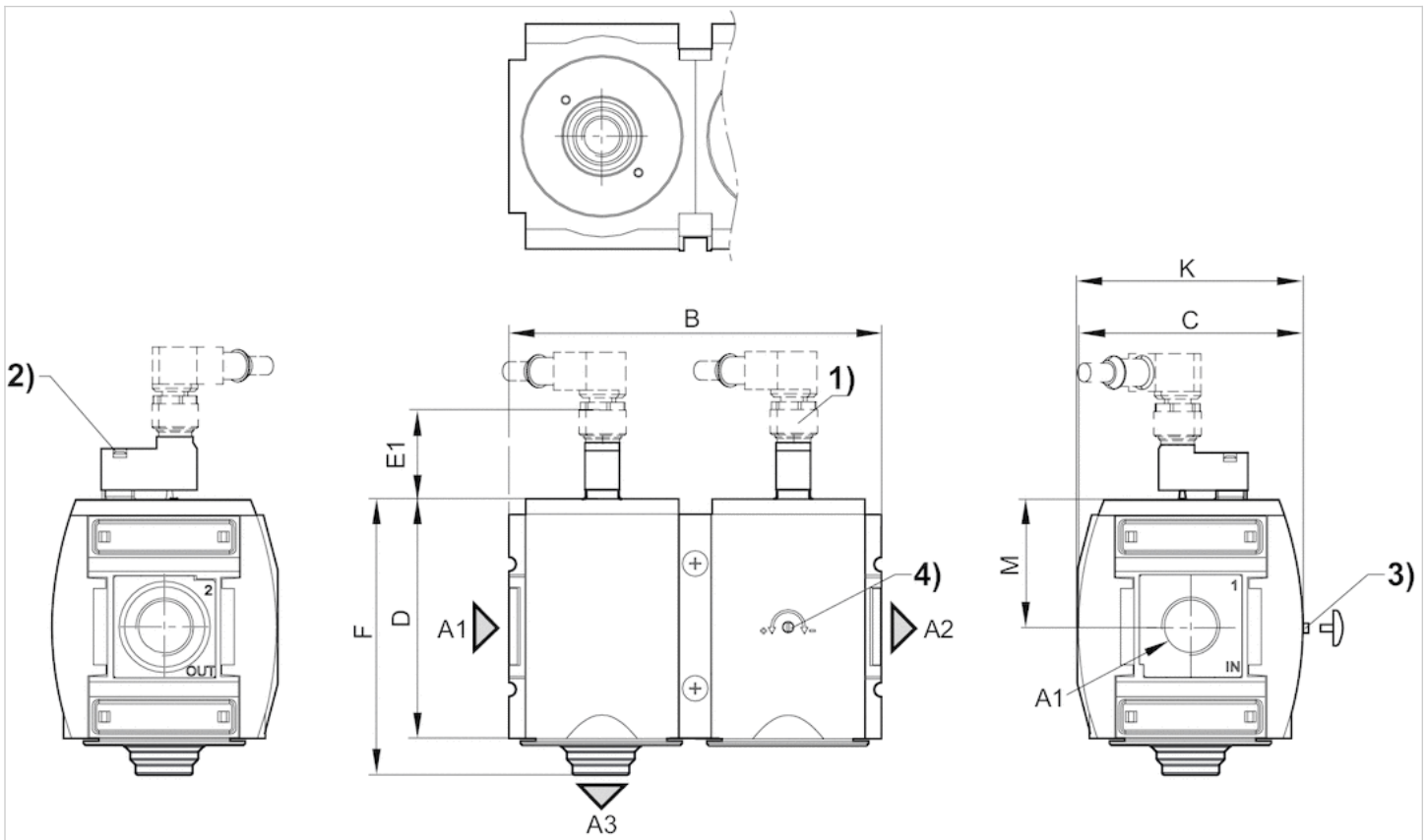
Rear exhaust flow rate 2►3 substantially increased.

## Technical information

| Material         |                                 |
|------------------|---------------------------------|
| Housing          | Polyamide                       |
| Front plate      | Acrylonitrile butadiene styrene |
| Seals            | Acrylonitrile butadiene rubber  |
| Threaded bushing | Die cast zinc                   |

## Dimensions

### Dimensions



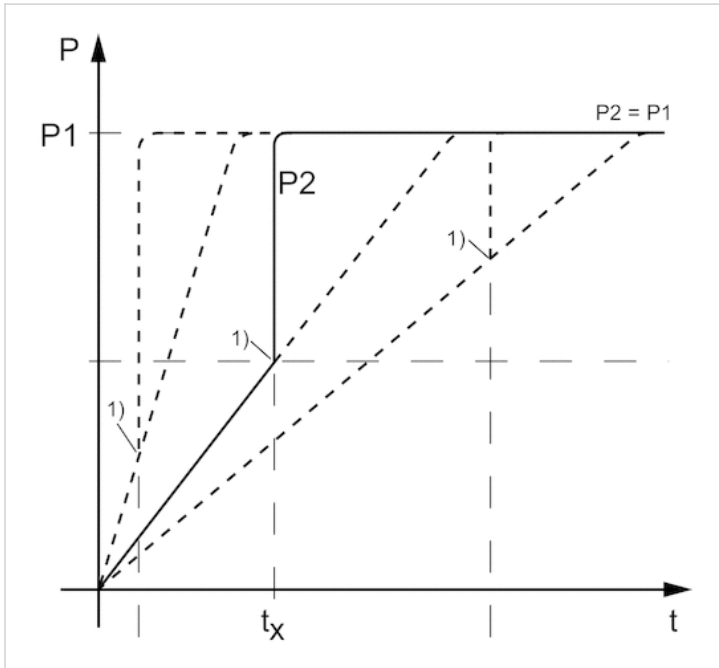
- A1 = input
- A2 = output
- A3 = ventilation port
- 1) plug M12
- 2) Manual override
- 3) Adjustment screw lock
- 4) Adjustment screw for filling time

### Dimensions in mm

| A1  | A2  | A3    | B   | C   | D   | E1 | F   | K     | M  |
|-----|-----|-------|-----|-----|-----|----|-----|-------|----|
| G 1 | G 1 | G 1/2 | 170 | 103 | 109 | 39 | 125 | 103.5 | 58 |

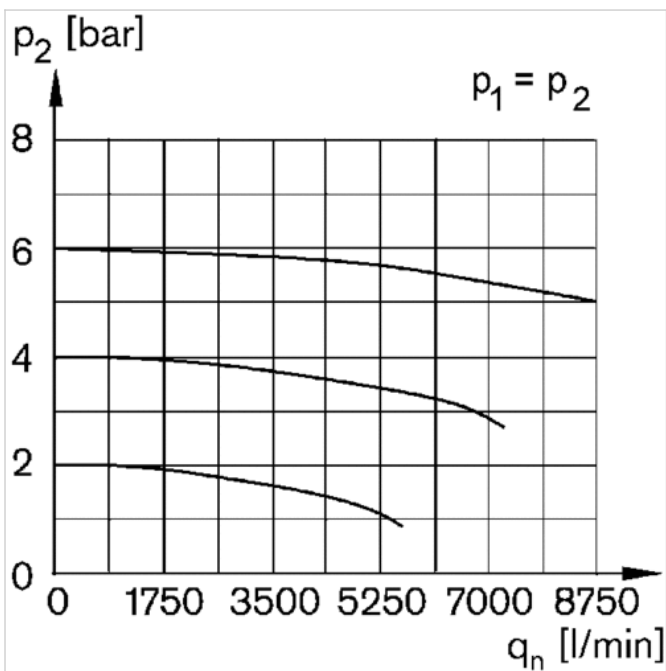
## Diagrams

### secondary pressure while filling



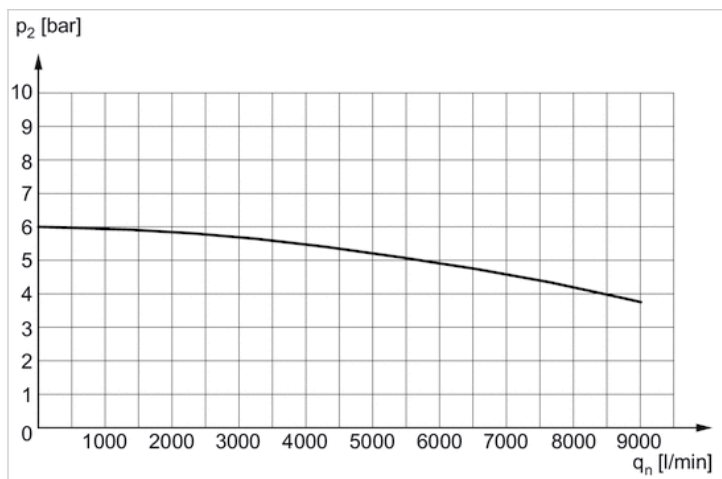
p1 = working pressure  
 p2 = secondary pressure  
 t = filling time  
 tx = switchover time  
 1) Electrically triggered switching point  
 Filling time adjustable via adjustment screw (throttle)

### Flow rate characteristic



p1 = Working pressure  
 p2 = Secondary pressure  
 qn = Nominal flow

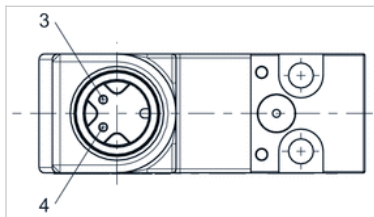
## Rear exhaust, 2 3



p2 = secondary pressure  
qn = nominal flow

## Pin assignments

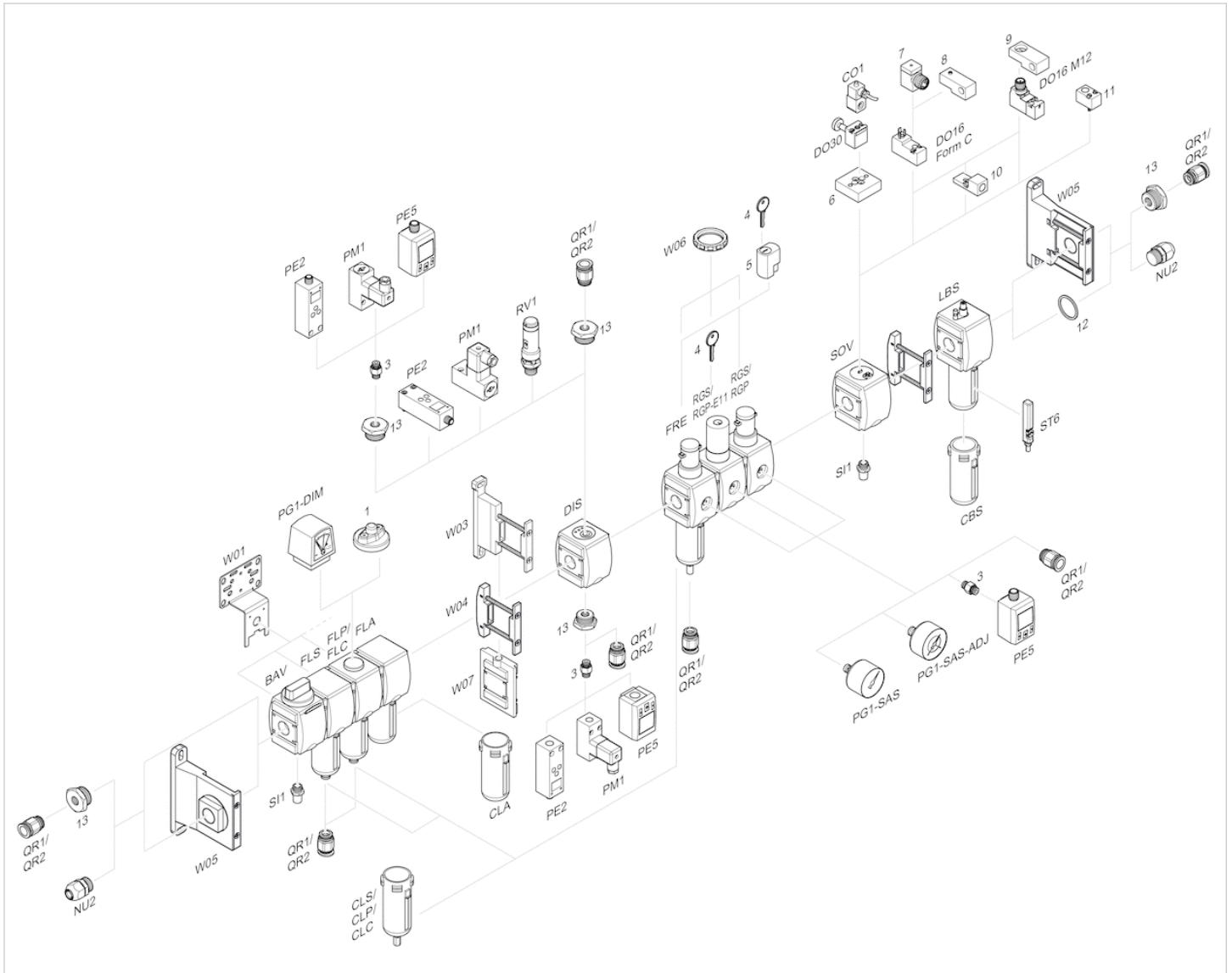
## Pin assignment M12x1



3: +/-  
4: +/-



# Accessories overview



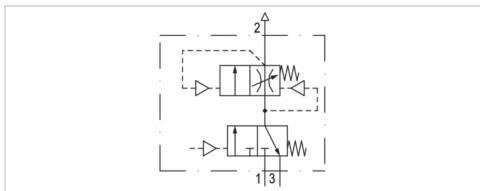
- 1 = contamination display
- 3 = Double nipple
- 4 = Key for E11 locking
- 5 = mortise lock
- 6 = Transition plate DO30
- 7 = Adapter, Series CON-VP
- 8 = Mounting aid DO16, form C
- 9 = Mounting aid DO16, M12
- 10 = Adapter for external pilot air
- 11 = Adapter pneumatic operation
- 12 = Sealing ring
- 13 = Reducing nipple

# Filling unit, pneumatically operated, Series AS5-SSU

- adjustable filling time
- Compressed air connection G 3/4 G 1
- Pipe connection



|                               |  |
|-------------------------------|--|
| Version                       | Poppet valve, Can be assembled into blocks |
| Pilot                         | Internal                                   |
| Sealing principle             | Soft sealing                               |
| Working pressure min./max.    | 0 ... 16 bar                               |
| Control pressure min./max.    | 2.5 ... 16 bar                             |
| Ambient temperature min./max. | -10 ... 50 °C                              |
| Medium temperature min./max.  | -10 ... 50 °C                              |
| Medium                        | Compressed air Neutral gases               |
| Max. particle size            | 40 µm                                      |
| Weight                        | 0.924 kg                                   |



## Technical data

| Part No.   | Port  | Pilot connection | Exhaust | Flow       | Flow       | Flow       |    |
|------------|-------|------------------|---------|------------|------------|------------|----|
|            |       |                  |         | Qn         | Qn 1►2     | Qn 2►3     |    |
| R412009276 | G 3/4 | G 1/8            | G 1/2   | 8750 l/min | 8750 l/min | 3700 l/min | -  |
| R412009281 | G 1   | G 1/8            | G 1/2   | 8750 l/min | 8750 l/min | 3700 l/min | -  |
| R412009289 | G 1   | G 1/8            | G 1/2   | 8750 l/min | 8750 l/min | 3700 l/min | 1) |

Nominal flow Qn with secondary pressure p2 = 6 bar at Δp = 1 bar

1) With adjustment screw lock

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

The filling valve builds up pressure slowly in the pneumatic systems, i.e. prevents a sudden pressure build-up during a recommissioning after a mains pressure failure or avoids emergency OFF switching. This allows dangerous abrupt cylinder motions to be avoided.

Do not position filling valves or filling units upstream of open consumers, such as nozzles, air barriers, air curtains, since these may prevent through connection of components.

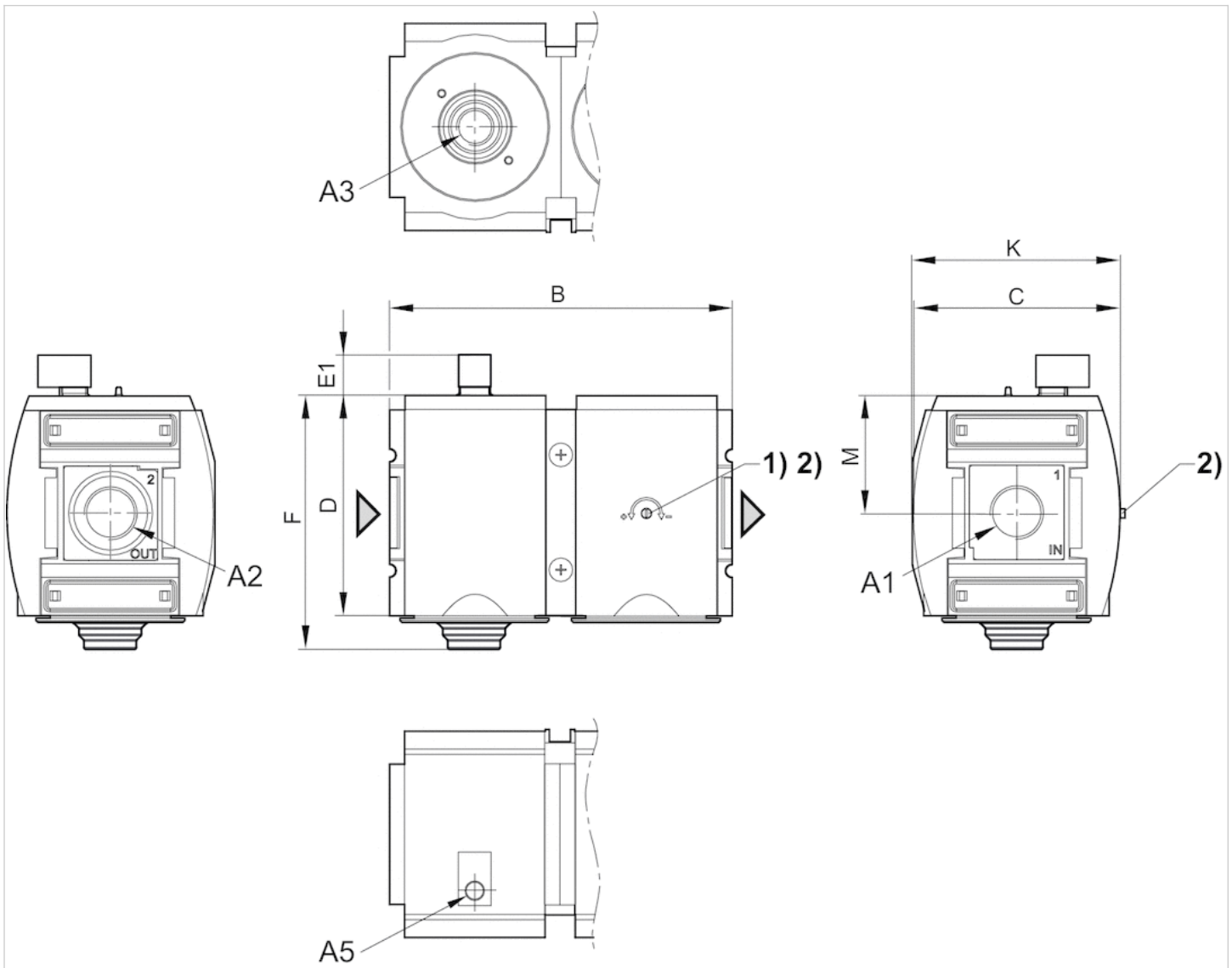
A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

## Technical information

| Material         |                                 |
|------------------|---------------------------------|
| Housing          | Polyamide                       |
| Front plate      | Acrylonitrile butadiene styrene |
| Seals            | Acrylonitrile butadiene rubber  |
| Threaded bushing | Die cast zinc                   |

## Dimensions

### Dimensions



A1 = input

A2 = output

A3 = ventilation port

A5 = control pressure connection

1) Adjustment screw for filling time

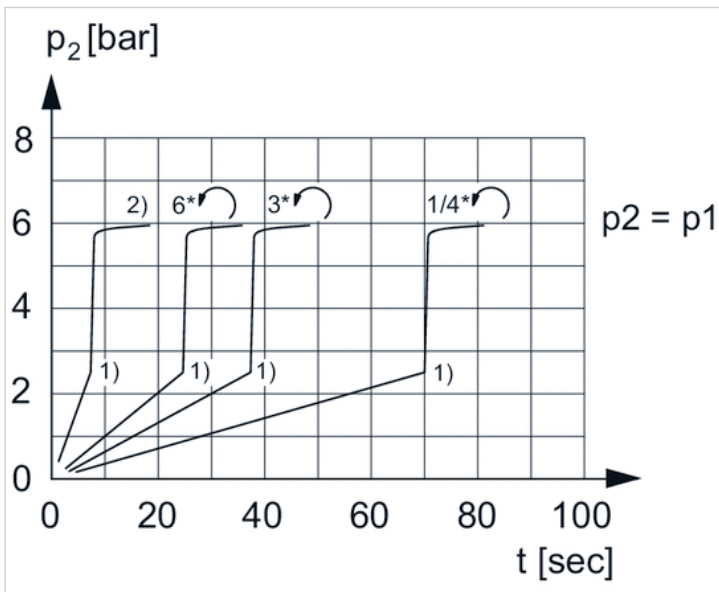
2) Adjustment screw lock

Dimensions in mm

| A1    | A2    | A3    | A5    | B   | C   | D   | E1   | F   | K     | M  |
|-------|-------|-------|-------|-----|-----|-----|------|-----|-------|----|
| G 3/4 | G 3/4 | G 1/2 | G 1/8 | 170 | 103 | 109 | 20.2 | 125 | 103.5 | 58 |
| G 1   | G 1   | G 1/2 | G 1/8 | 170 | 103 | 109 | 20.2 | 125 | 103.5 | 58 |

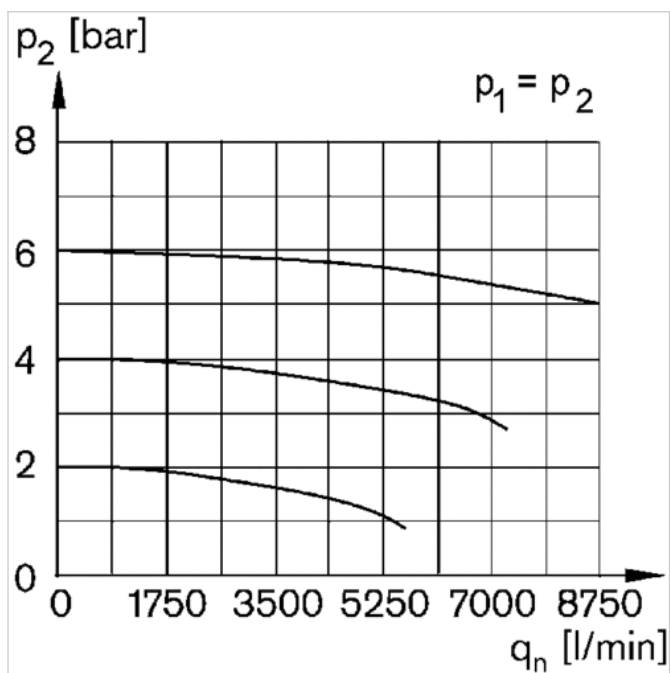
Diagrams

Secondary pressure while filling



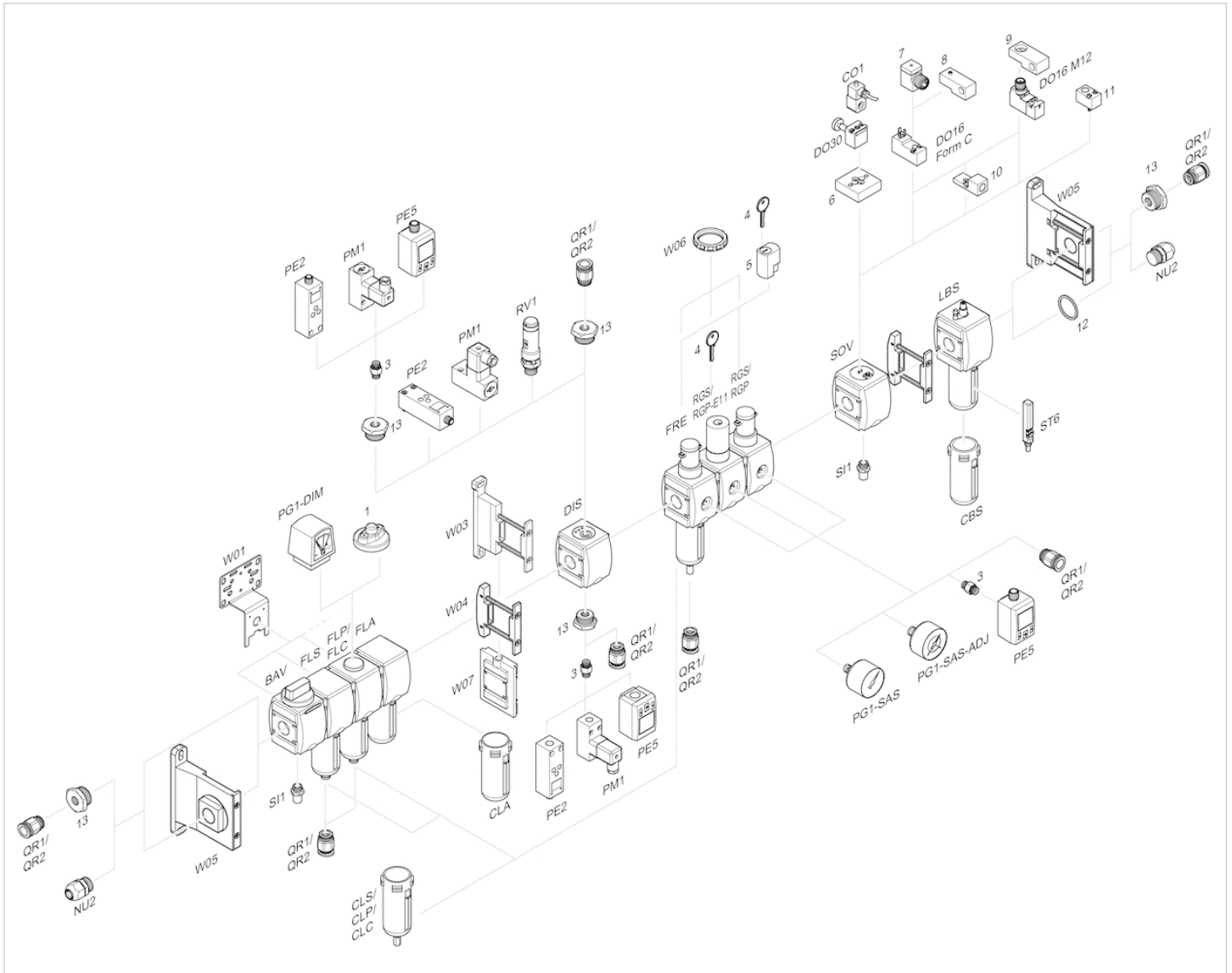
- p1 = working pressure
- p2 = secondary pressure
- t = filling time, adjustable via adjustment screw (throttle)
- 1) Switching point: adjustable filling time, fixed change-over pressure  $\approx 0.5 \times p1$  (50%)
- 2) Throttle fully opened
- \* Adjustment screw rotations

## Flow rate characteristic



$p_1$  = Working pressure  
 $p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

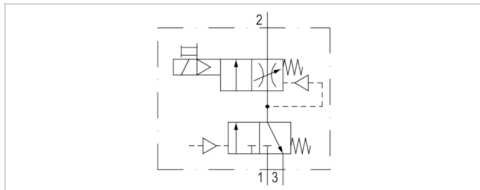
# Accessories overview



- 1 = contamination display
- 3 = Double nipple
- 4 = Key for E11 locking
- 5 = mortise lock
- 6 = Transition plate DO30
- 7 = Adapter, Series CON-VP
- 8 = Mounting aid DO16, form C
- 9 = Mounting aid DO16, M12
- 10 = Adapter for external pilot air
- 11 = Adapter pneumatic operation
- 12 = Sealing ring
- 13 = Reducing nipple

# Filling unit, pneumatically operated, Series AS5-SSU

- With electrical priority circuit, adjustable filling time.
- Compressed air connection G 1
- Pipe connection



|   |  |
|---|--|
| Version   | Poppet valve, Can be assembled into blocks |
| Pilot   | Internal                                   |
| Sealing principle   | Soft sealing                               |
| Working pressure min./max.  | 0 ... 16 bar                               |
| Control pressure min./max.  | 2.5 ... 16 bar                             |
| Ambient temperature min./max.   | -10 ... 50 °C                              |
| Medium temperature min./max.  | -10 ... 50 °C                              |
| Medium  | Compressed air Neutral gases               |
| Max. particle size  | 25 µm                                      |
| Duty cycle  | 100 %                                      |
| Protection class according to EN 60529:2000, without electrical connector | IP65                                       |
| Weight  | 0.924 kg                                   |

## Technical data

| Part No.   | Port | Pilot connection | Exhaust | Flow       | Flow       | Flow       |
|------------|------|------------------|---------|------------|------------|------------|
|            |      |                  |         | Qn         | Qn 1►2     | Qn 2►3     |
| R412009379 | G 1  | G 1/8            | G 1/2   | 8750 l/min | 8750 l/min | 3700 l/min |

Nominal flow Qn with secondary pressure p2 = 6 bar at Δp = 1 bar

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

The filling valve builds up pressure slowly in the pneumatic systems, i.e. prevents a sudden pressure build-up during a recommissioning after a mains pressure failure or avoids emergency OFF switching. This allows dangerous abrupt cylinder motions to be avoided.

Actuating the electric priority circuit disrupts the slow pressure build-up and pressure p1 is immediately applied.

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

## Technical information

| Material    |                                 |
|-------------|---------------------------------|
| Housing     | Polyamide                       |
| Front plate | Acrylonitrile butadiene styrene |
| Seals       | Acrylonitrile butadiene rubber  |

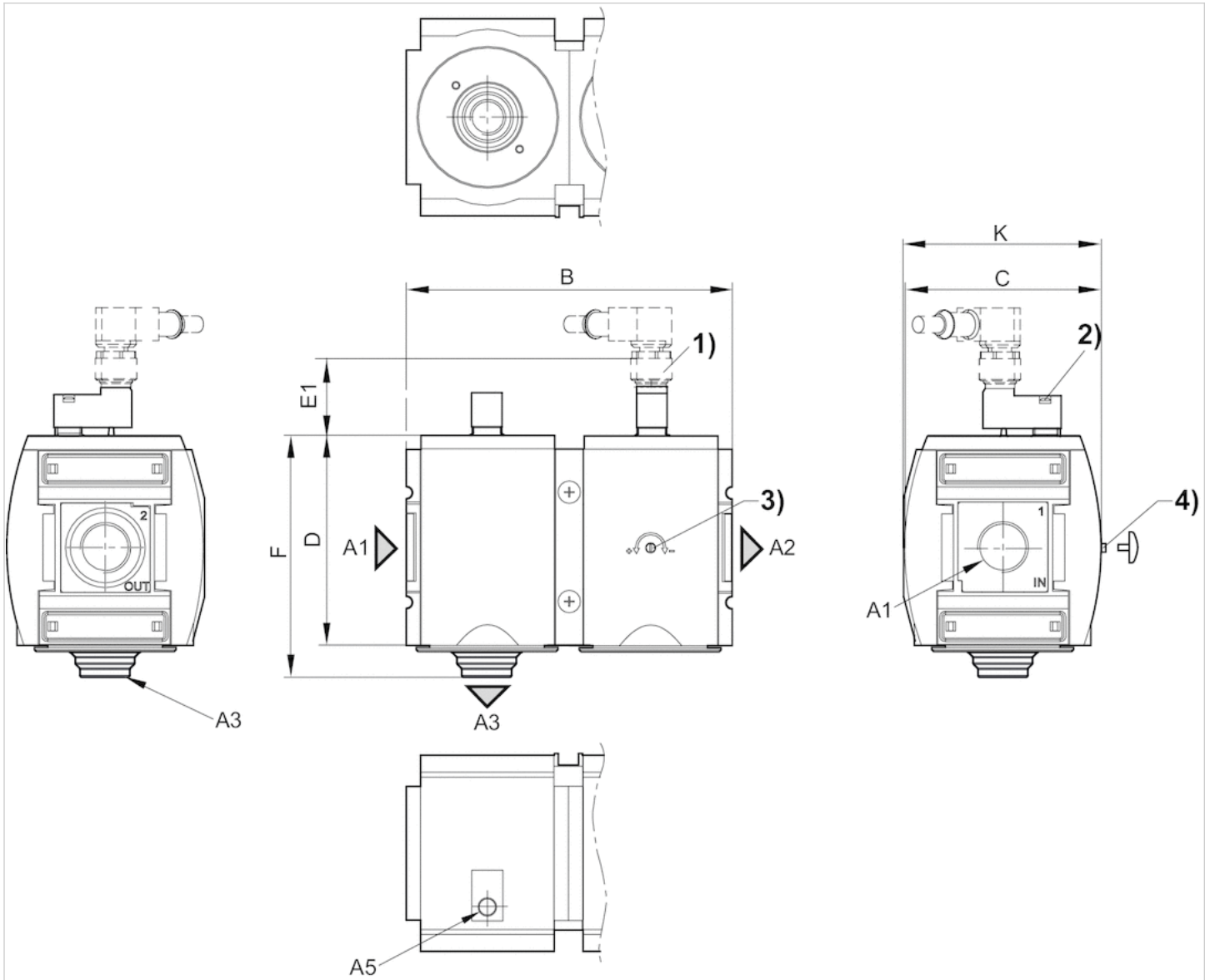
Material

Threaded bushing

Die cast zinc

## Dimensions

## Dimensions



A1 = input

A2 = output

A3 = ventilation port

A5 = control pressure connection

1) plug M12

2) Manual override

3) Adjustment screw for filling time

4) Adjustment screw lock

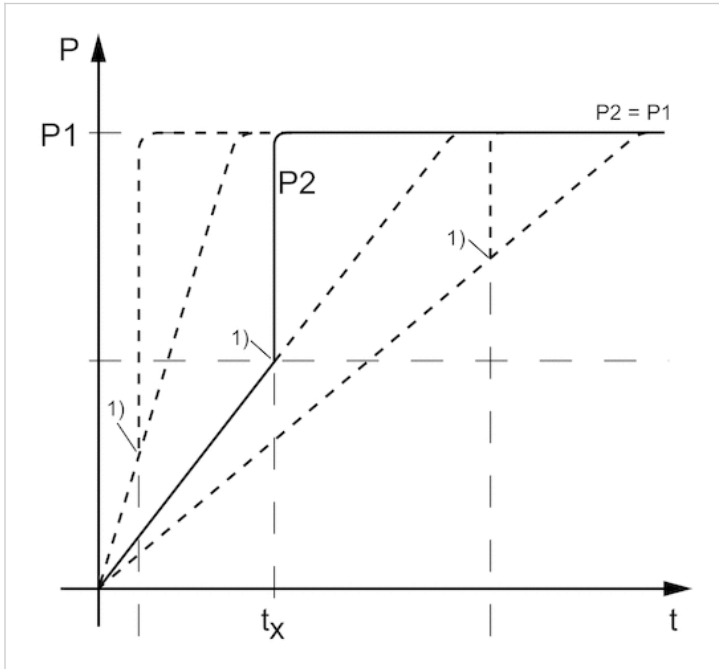


Dimensions in mm

| A1  | A2  | A3    | A5    | B   | C   | D   | E1 | F   | K     |
|-----|-----|-------|-------|-----|-----|-----|----|-----|-------|
| G 1 | G 1 | G 1/2 | G 1/8 | 170 | 103 | 109 | 39 | 125 | 103.5 |

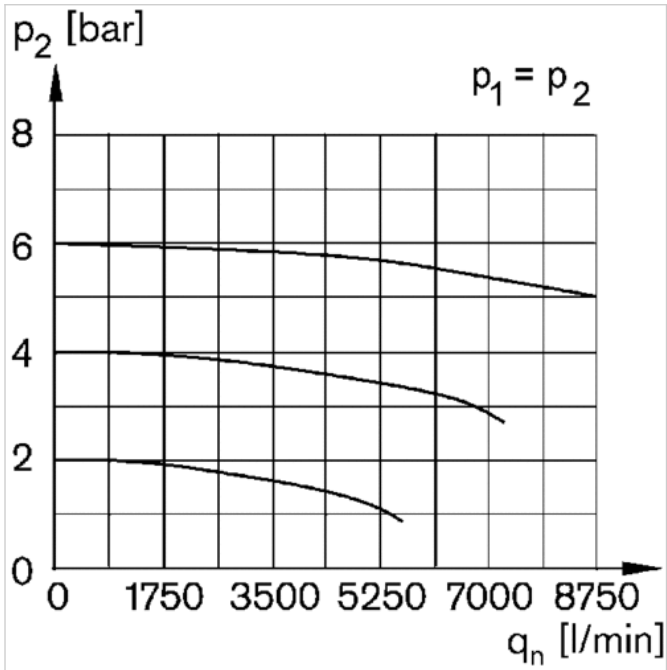
Diagrams

Secondary pressure while filling



- p1 = working pressure
  - p2 = secondary pressure
  - t = filling time
  - tx = switchover time
  - 1) Electrically triggered switching point
- Filling time adjustable via adjustment screw (throttle)

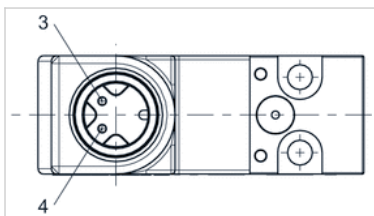
Flow rate characteristic



$p_1$  = Working pressure  
 $p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

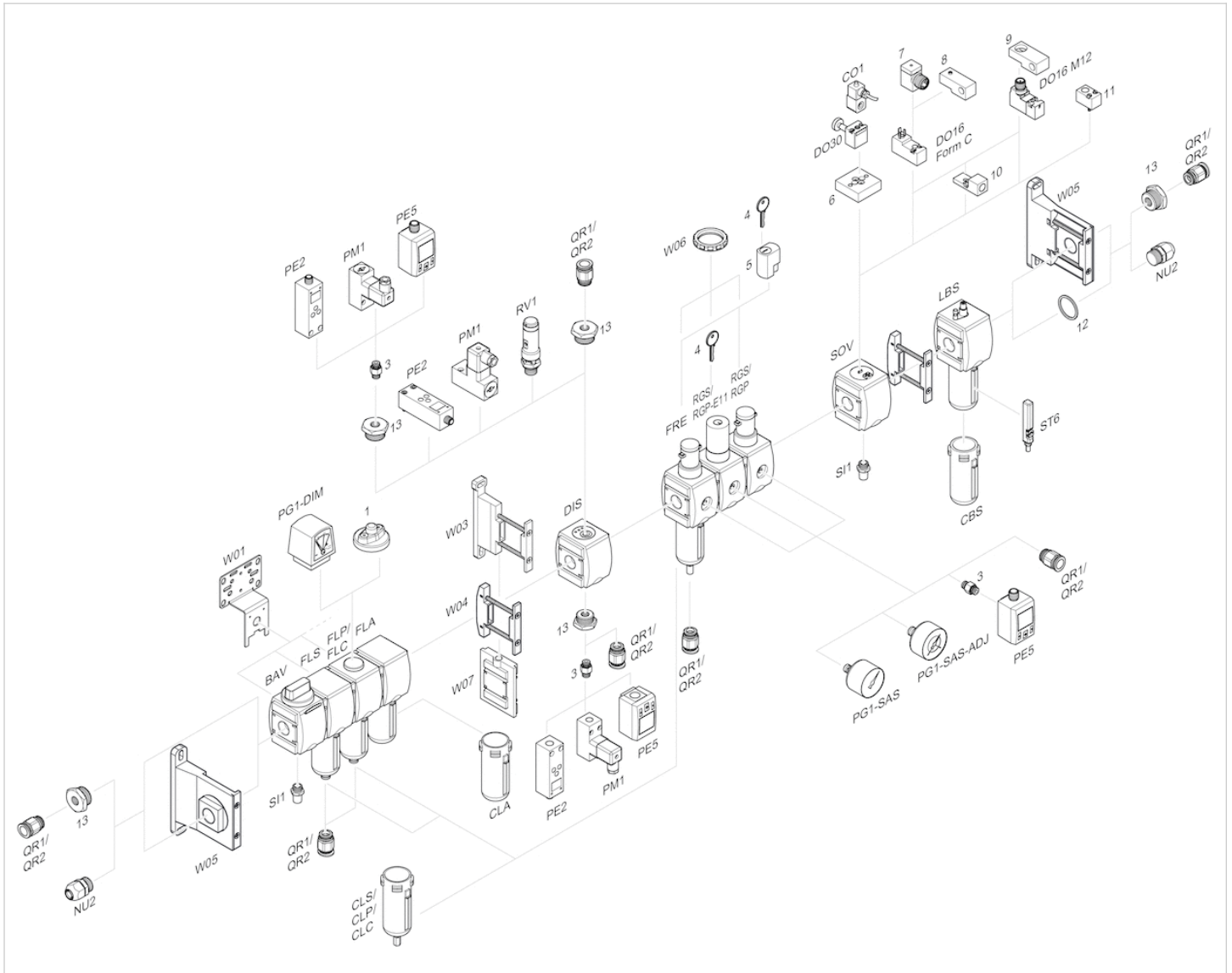
Pin assignments

Pin assignment M12x1



3: +/-  
 4: +/-

# Accessories overview



- 1 = contamination display
- 3 = Double nipple
- 4 = Key for E11 locking
- 5 = mortise lock
- 6 = Transition plate DO30
- 7 = Adapter, Series CON-VP
- 8 = Mounting aid DO16, form C
- 9 = Mounting aid DO16, M12
- 10 = Adapter for external pilot air
- 11 = Adapter pneumatic operation
- 12 = Sealing ring
- 13 = Reducing nipple

# Filling valve, Series AS5-SSV

- adjustable filling time
- Compressed air connection G 3/4 G 1



Version

Poppet valve, Can be assembled into blocks

Sealing principle

Soft sealing

Working pressure min./max.

2.5 ... 16 bar

Ambient temperature min./max.

-10 ... 50 °C

Medium temperature min./max.

-10 ... 50 °C

Medium

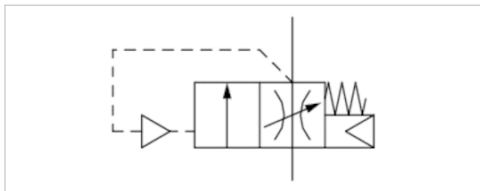
Compressed air Neutral gases

Max. particle size

40 µm

Weight

0.43 kg



## Technical data

| Part No.   | Port  | Flow        |    |
|------------|-------|-------------|----|
|            |       | Qn          |    |
| R412009272 | G 3/4 | 10000 l/min |    |
| R412009273 | G 1   | 10000 l/min |    |
| R412009275 | G 1   | 10000 l/min | 1) |

Nominal flow Qn with secondary pressure p2 = 6 bar at  $\Delta p = 1$  bar

1) With adjustment screw lock

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

The filling valve builds up pressure slowly in the pneumatic systems, i.e. prevents a sudden pressure build-up during a recommissioning after a mains pressure failure or avoids emergency OFF switching. This allows dangerous abrupt cylinder motions to be avoided.

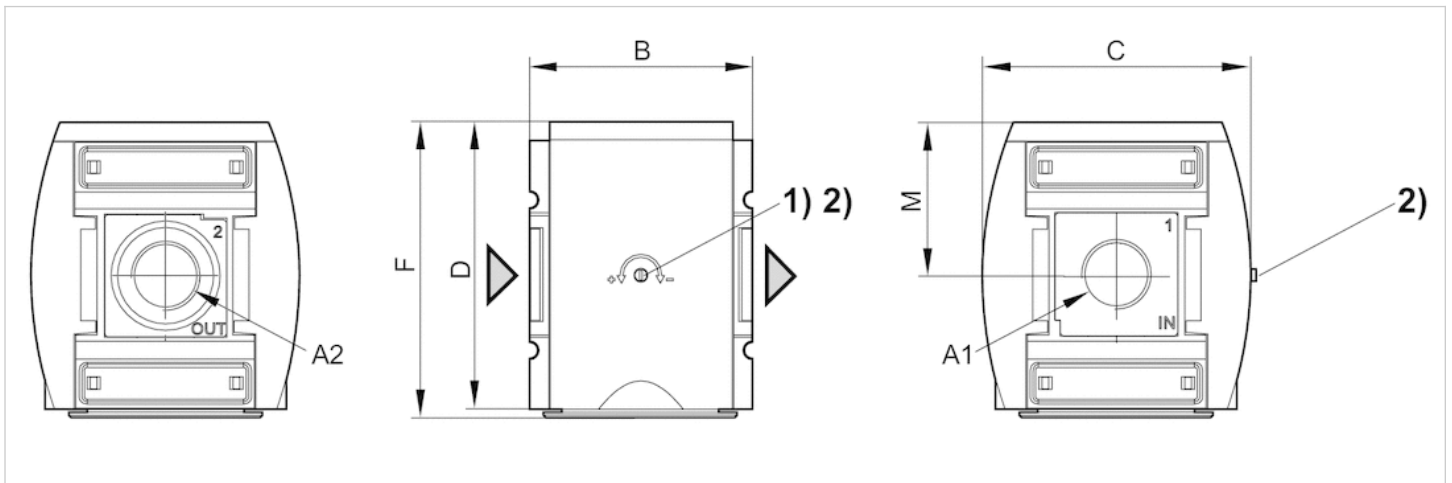
Do not position filling valves or filling units upstream of open consumers, such as nozzles, air barriers, air curtains, since these may prevent through connection of components.

## Technical information

| Material         |                                 |
|------------------|---------------------------------|
| Housing          | Polyamide                       |
| Front plate      | Acrylonitrile butadiene styrene |
| Seals            | Acrylonitrile butadiene rubber  |
| Threaded bushing | Die cast zinc                   |

## Dimensions

### Dimensions



A1 = input

A2 = output

1) Adjustment screw for filling time

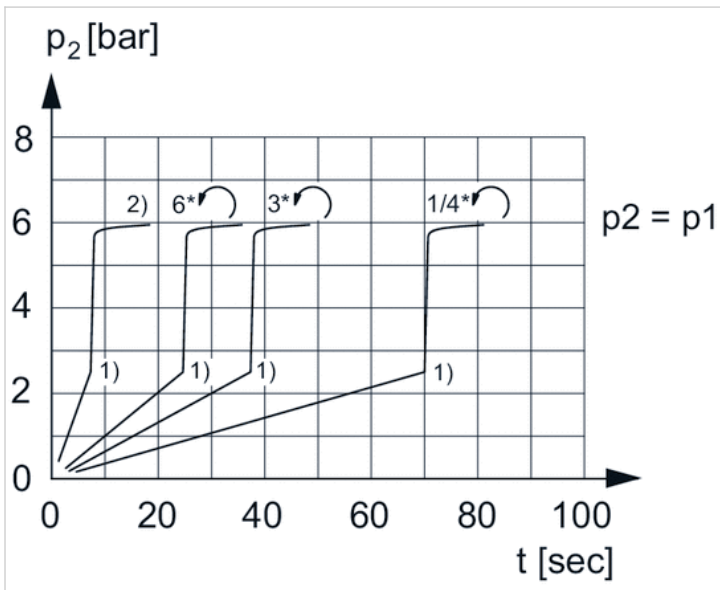
2) Adjustment screw lock

### Dimensions in mm

| A1    | A2    | B  | C   | D   | F   | M  |
|-------|-------|----|-----|-----|-----|----|
| G 3/4 | G 3/4 | 85 | 103 | 109 | 112 | 58 |
| G 1   | G 1   | 85 | 103 | 109 | 112 | 58 |

## Diagrams

### secondary pressure while filling



$p_1$  = working pressure

$p_2$  = secondary pressure

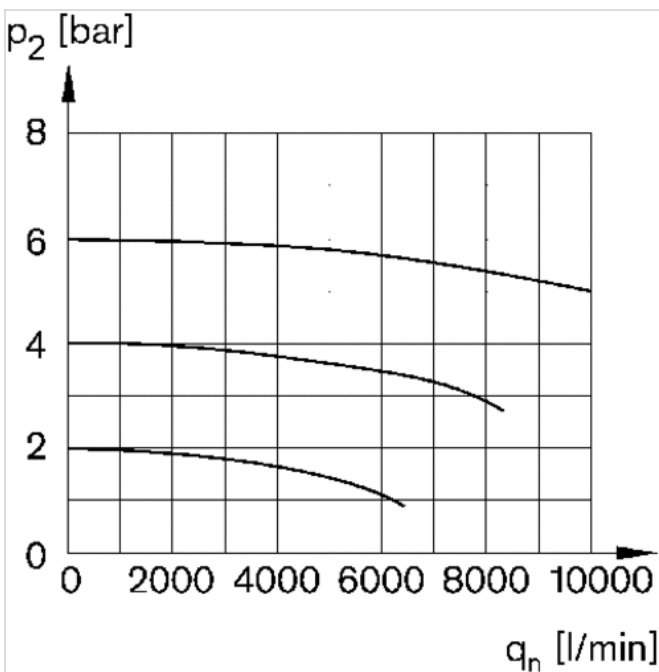
$t$  = filling time, adjustable via adjustment screw (throttle)

1) Switching point: adjustable filling time, fixed change-over pressure  $\approx 0.5 \times p_1$  (50%)

2) Throttle fully opened

\* Adjustment screw rotations

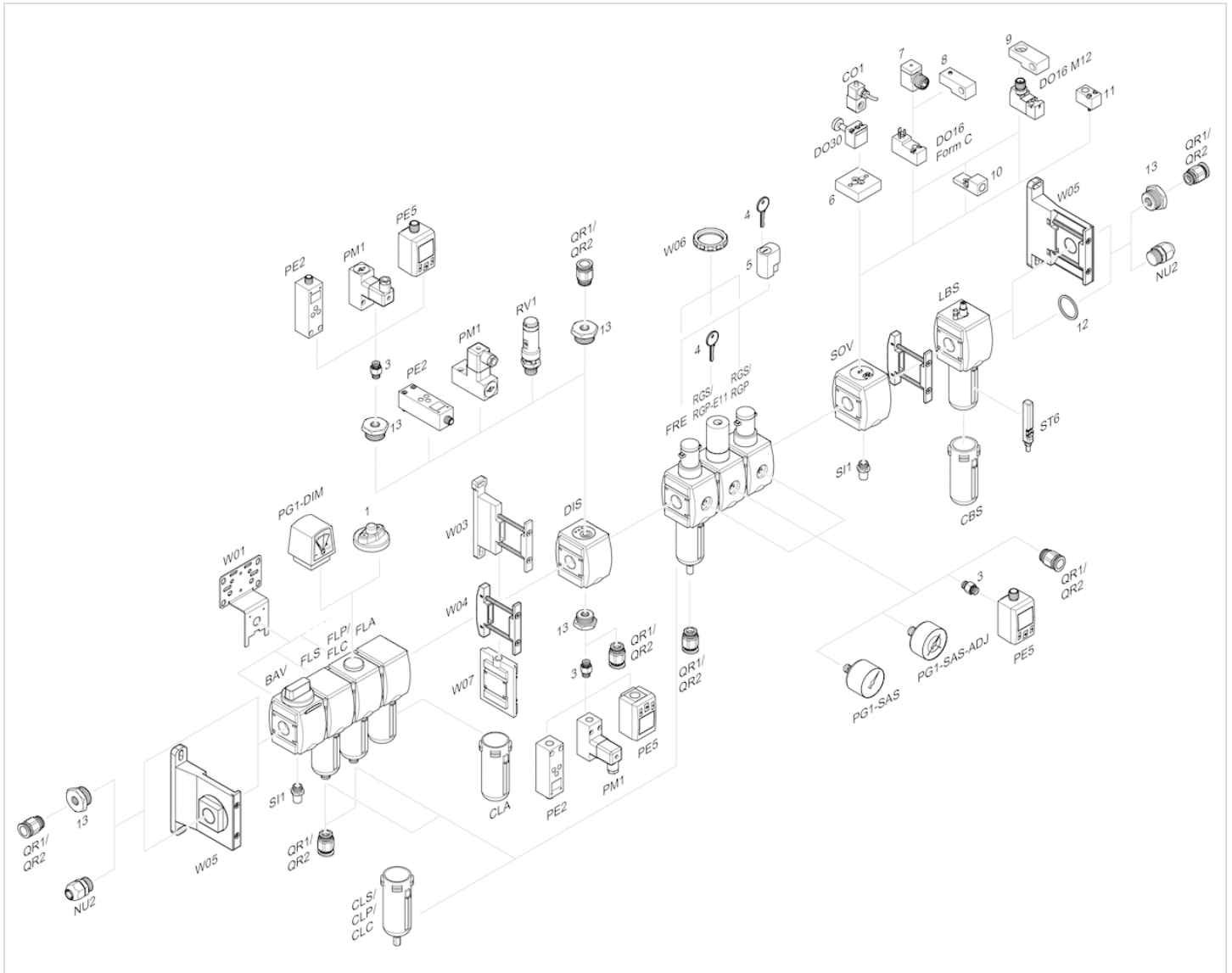
### Flow rate characteristic



$p_2$  = secondary pressure

$q_n$  = nominal flow

## Accessories overview



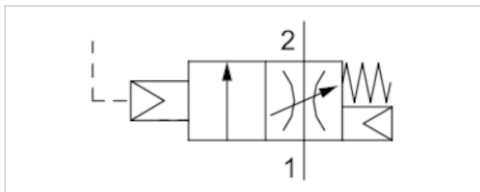
- 1 = contamination display
- 3 = Double nipple
- 4 = Key for E11 locking
- 5 = mortise lock
- 6 = Transition plate DO30
- 7 = Adapter, Series CON-VP
- 8 = Mounting aid DO16, form C
- 9 = Mounting aid DO16, M12
- 10 = Adapter for external pilot air
- 11 = Adapter pneumatic operation
- 12 = Sealing ring
- 13 = Reducing nipple

# Filling valve, pneumatically operated, Series AS5-SSV

- With pneumatic priority circuit, adjustable filling time.
- Compressed air connection G 3/4 G 1
- Pipe connection



|                               |  |
|-------------------------------|--|
| Version                       | Poppet valve, Can be assembled into blocks |
| Sealing principle             | Soft sealing                               |
| Working pressure min./max.    | See table below                            |
| Ambient temperature min./max. | -10 ... 50 °C                              |
| Medium temperature min./max.  | -10 ... 50 °C                              |
| Medium                        | Compressed air Neutral gases               |
| Max. particle size            | 40 µm                                      |
| Weight                        | 1 kg                                       |



## Technical data

| Part No.   | Port  | Pilot connection | Flow        | Working pressure min./max. |
|------------|-------|------------------|-------------|----------------------------|
|            |       |                  | Qn 1→2      |                            |
| R412009311 | G 3/4 | G 1/8            | 10000 l/min | 1 ... 16 bar               |
| R412009312 | G 1   | G 1/8            | 10000 l/min | 2.5 ... 16 bar             |

Nominal flow Qn at p1 = 6.3 bar and Δp = 1 bar

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

The filling valve builds up pressure slowly in the pneumatic systems, i.e. prevents a sudden pressure build-up during a recommissioning after a mains pressure failure or avoids emergency OFF switching. This allows dangerous abrupt cylinder motions to be avoided.

Actuating the electric priority circuit disrupts the slow pressure build-up and pressure p1 is immediately applied.

For unthrottled operation, the filling valve must be permanently electrically actuated.

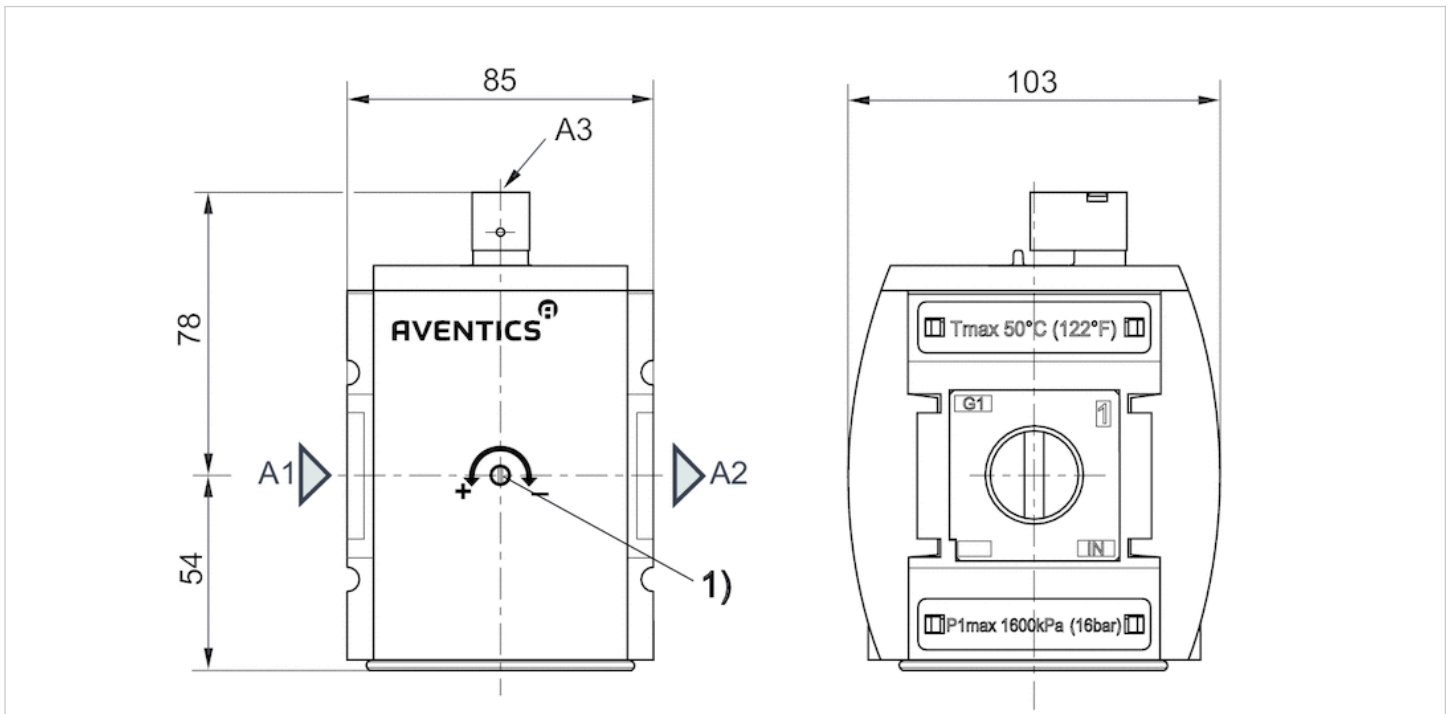


## Technical information

| Material         |                                 |
|------------------|---------------------------------|
| Housing          | Polyamide                       |
| Front plate      | Acrylonitrile butadiene styrene |
| Seals            | Acrylonitrile butadiene rubber  |
| Threaded bushing | Die cast zinc                   |

## Dimensions

### Dimensions



A1 = input

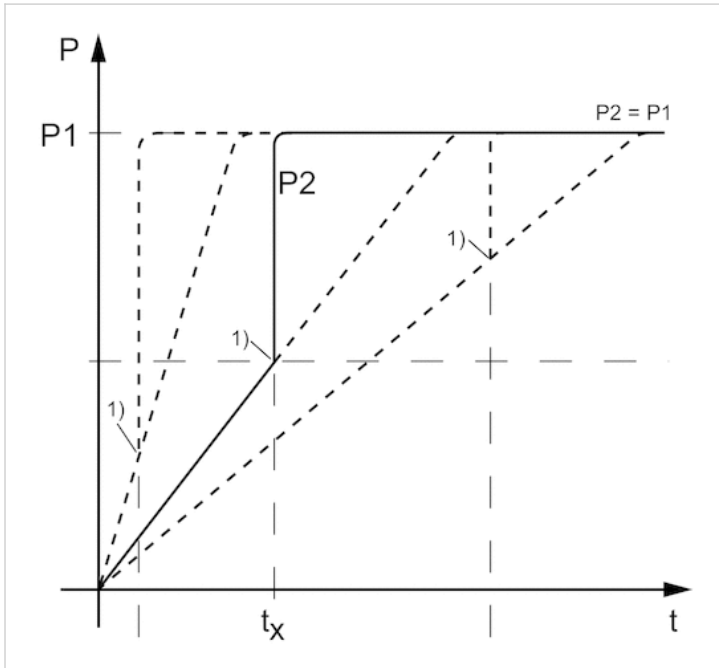
A2 = output

A3 = control pressure connection

1) Adjustment screw for filling time

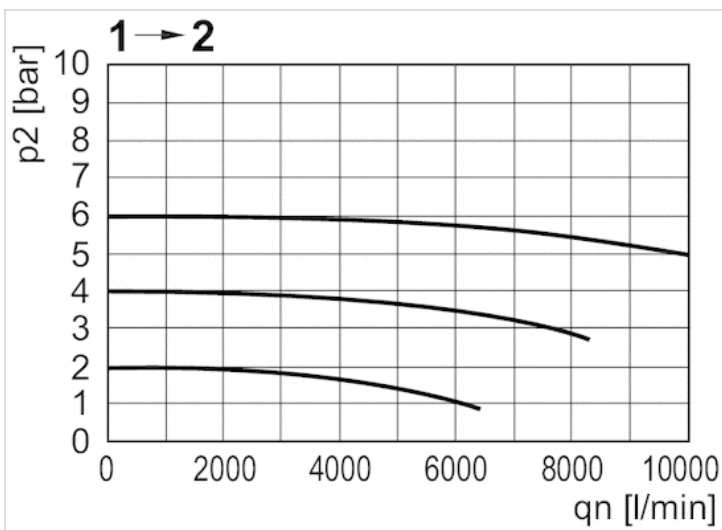
## Diagrams

### secondary pressure while filling



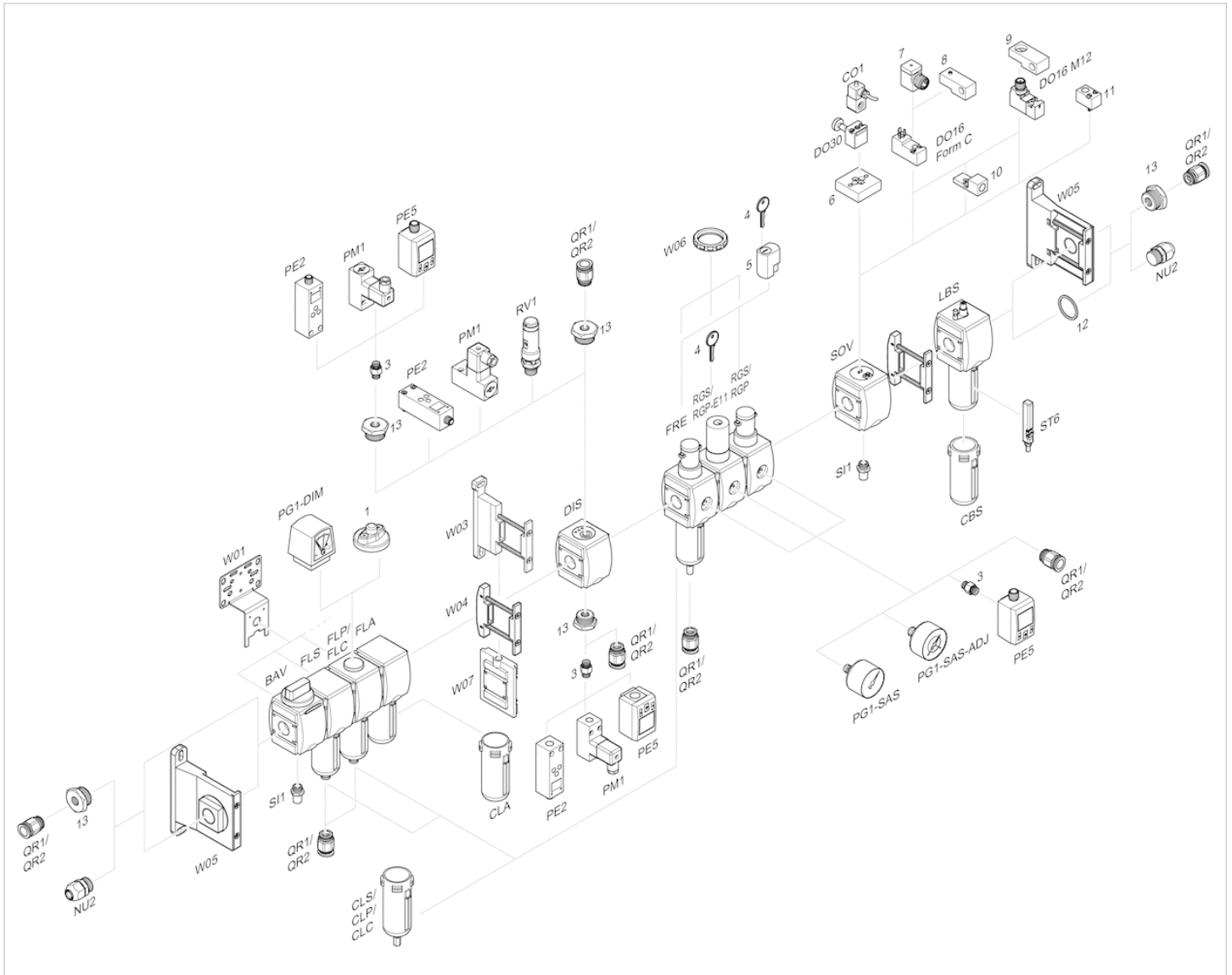
- p1 = working pressure
  - p2 = output pressure
  - t = filling time
  - tx = switchover time
  - 1) Pneumatically triggered switching point
- Filling time adjustable via adjustment screw (throttle)

### Flow rate characteristic



- p2 = secondary pressure
- qn = nominal flow

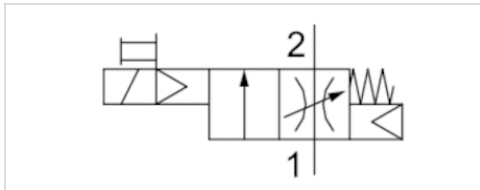
# Accessories overview



- 1 = contamination display
- 3 = Double nipple
- 4 = Key for E11 locking
- 5 = mortise lock
- 6 = Transition plate DO30
- 7 = Adapter, Series CON-VP
- 8 = Mounting aid DO16, form C
- 9 = Mounting aid DO16, M12
- 10 = Adapter for external pilot air
- 11 = Adapter pneumatic operation
- 12 = Sealing ring
- 13 = Reducing nipple



# Filling valve, electrically operated, series AS5-SSV

- With electrical priority circuit, adjustable filling time.
- Compressed air connection G 3/4 G 1
- Electrical connection: Plug, M12x1



|   |  |
|---|--|
| Version   | Poppet valve with elect. priority circuit,<br>Can be assembled into blocks |
| Parts   | Filling valve  |
| Nominal flow                                    | 10000 l/min  |
| Working pressure min./max.                      | 2.5 ... 10 bar   |
| Medium  | Compressed air Neutral gases   |
| Medium temperature min./max.                    | -10 ... 50 °C  |
| Ambient temperature min./max.                   | -10 ... 50 °C  |
| Sealing principle                               | Soft sealing   |
| Max. particle size                              | 25 µm  |
| Protection class acc. to DIN EN 61140 with plug | IP65   |
| Duty cycle                                      | 100 %  |
| Weight  | 0.43 kg  |

## Technical data

| Part No.   |   | Compressed air connection input | Compressed air connection output | Operational voltage |
|------------|---|---------------------------------|----------------------------------|---------------------|
|            |   |                                 |                                  | DC                  |
| R412009373 |  | G 3/4                           | G 3/4                            | 24 V                |
| R412009374 |  | G 1                             | G 1                              | 24 V                |

| Part No.   | Electrical connection |
|------------|-----------------------|
|            | Pilot valve           |
| R412009373 | Plug, M12x1           |
| R412009374 | Plug, M12x1           |

Nominal flow  $Q_n$  with secondary pressure  $p_2 = 6$  bar at  $\Delta p = 1$  bar

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

The filling valve builds up pressure slowly in the pneumatic systems, i.e. prevents a sudden pressure build-up during a recommissioning after a mains pressure failure or avoids emergency OFF switching. This allows dangerous abrupt cylinder motions to be avoided.

Actuating the electric priority circuit disrupts the slow pressure build-up and pressure  $p_1$  is immediately applied.

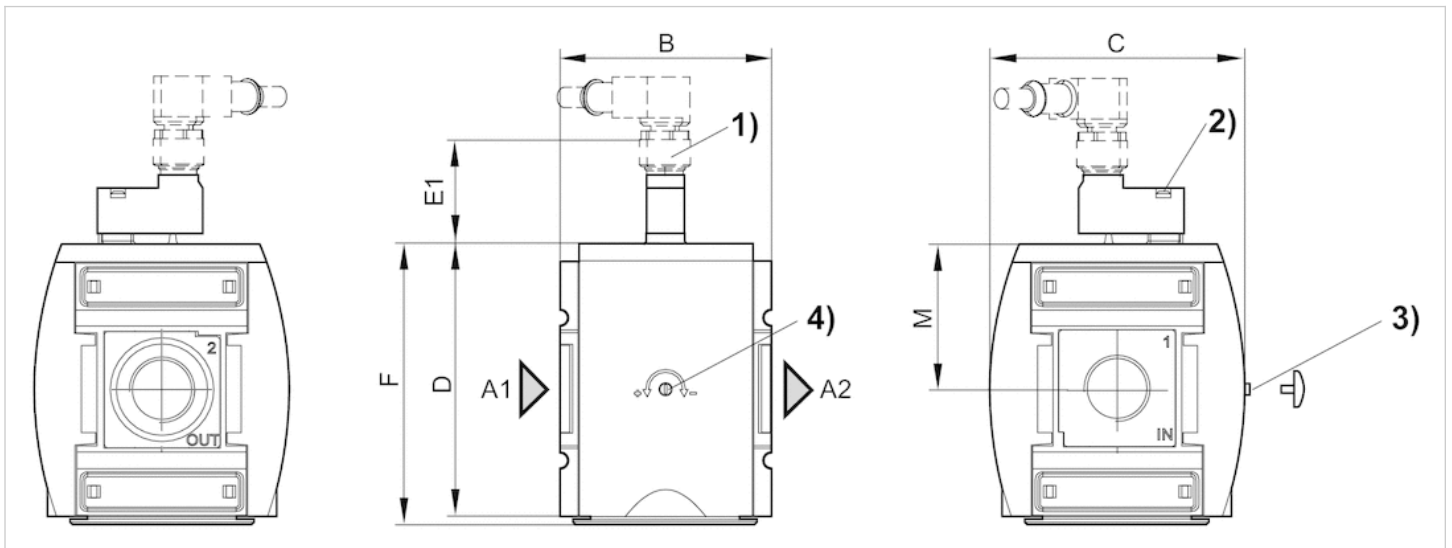
For unthrottled operation, the filling valve must be permanently electrically actuated.

## Technical information

| Material         |                                 |
|------------------|---------------------------------|
| Housing          | Polyamide                       |
| Front plate      | Acrylonitrile butadiene styrene |
| Seals            | Acrylonitrile butadiene rubber  |
| Threaded bushing | Die cast zinc                   |

## Dimensions

### Dimensions



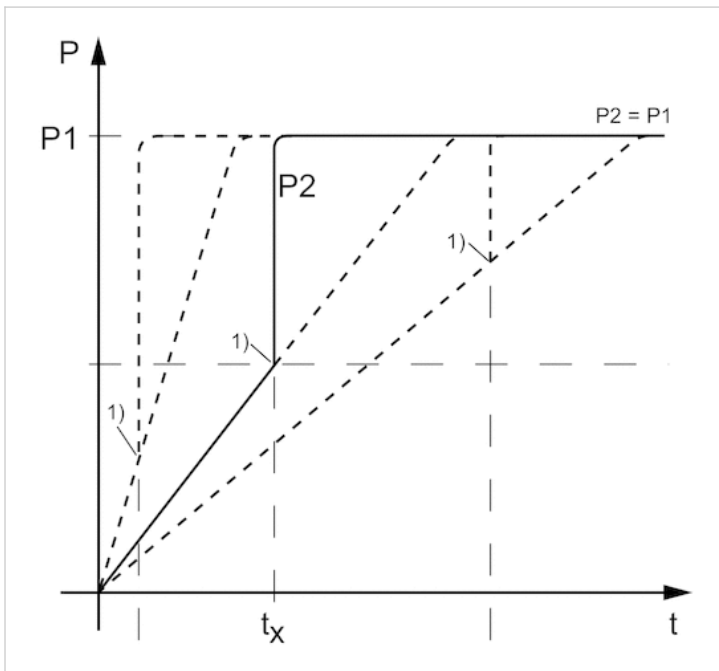
- A1 = input
- A2 = output
- 1) plug M12
- 2) Manual override
- 3) Adjustment screw for filling time
- 4) Adjustment screw lock

### Dimensions in mm

| A1    | A2    | B  | C   | D   | E1 | F   | M  |
|-------|-------|----|-----|-----|----|-----|----|
| G 3/4 | G 3/4 | 85 | 103 | 109 | 39 | 112 | 58 |
| G 1   | G 1   | 85 | 103 | 109 | 39 | 112 | 58 |

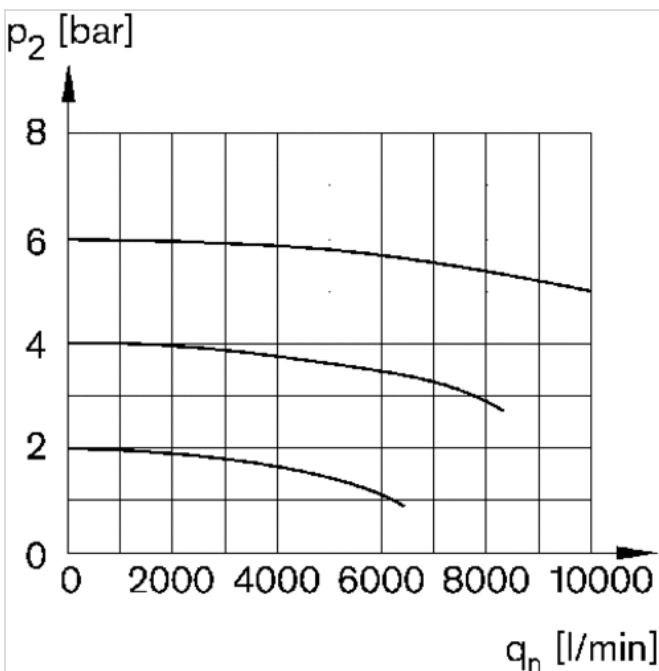
## Diagrams

### secondary pressure while filling



- $p_1$  = working pressure
  - $p_2$  = secondary pressure
  - $t$  = filling time
  - $t_x$  = switchover time
  - 1) Electrically triggered switching point
- Filling time adjustable via adjustment screw (throttle)

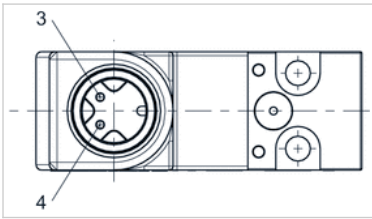
### Flow rate characteristic



- $p_2$  = secondary pressure
- $q_n$  = nominal flow

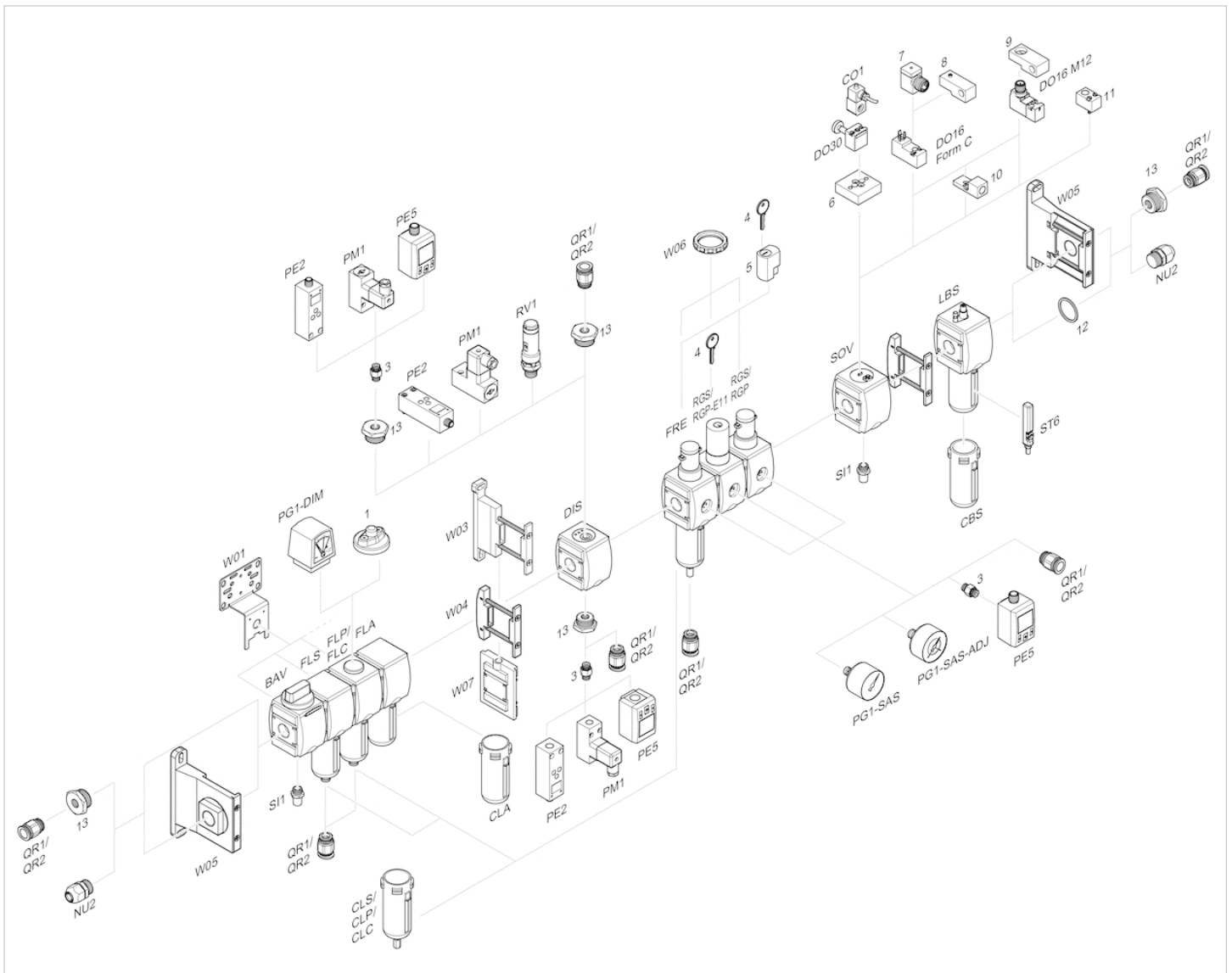
## Pin assignments

### Pin assignment M12x1



- 3: +/-
- 4: +/-

## Accessories overview



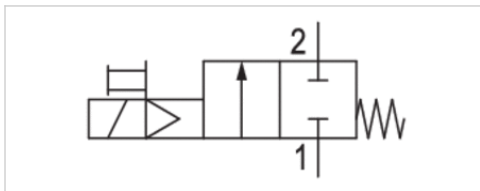
- 1 = contamination display
- 3 = Double nipple
- 4 = Key for E11 locking
- 5 = mortise lock

- 6 = Transition plate DO30
- 7 = Adapter, Series CON-VP
- 8 = Mounting aid DO16, form C
- 9 = Mounting aid DO16, M12
- 10 = Adapter for external pilot air
- 11 = Adapter pneumatic operation
- 12 = Sealing ring
- 13 = Reducing nipple




# 2/2-directional valve, electrically operated, Series AS5-SOV

- Compressed air connection G 1
- Pipe connection
- NC
- Electrical connection: Plug, ISO 15217, form C



|   |  |
|---|--|
| Version   | Poppet valve, Can be assembled into blocks   |
| Parts   | 2/2-directional valve, electrically operated |
| Nominal flow                                    | 12500 l/min                                  |
| Working pressure min./max.                      | 3 ... 10 bar                                 |
| Medium  | Compressed air Neutral gases                 |
| Medium temperature min./max.                    | -10 ... 50 °C                                |
| Ambient temperature min./max.                   | -10 ... 50 °C                                |
| Sealing principle                               | Soft sealing                                 |
| Max. particle size                              | 25 µm  |
| Connector standard                              | ISO 15217                                    |
| Protection class acc. to DIN EN 61140 with plug | IP65   |
| Duty cycle                                      | 100 %  |
| Weight  | 1.14 kg                                      |

## Technical data

| Part No.   |   |    | Compressed air connection input | Compressed air connection output |
|------------|---|----|---------------------------------|----------------------------------|
| R412009301 |  | NC | G 1                             | G 1                              |

| Part No.   | Operational voltage | Power consumption | Electrical connection   |
|------------|---------------------|-------------------|-------------------------|
|            |                     | DC                | Pilot valve             |
| R412009301 | DC<br>24 V          | DC<br>2 W         | Plug, ISO 15217, form C |

| Part No.   | basic valve with electrical connector | Reverse polarity protection         |
|------------|---------------------------------------|-------------------------------------|
| R412009301 | Basic valve with pilot valve          | Protected against polarity reversal |

Nominal flow  $Q_n$  with secondary pressure  $p_2 = 6$  bar at  $\Delta p = 1$  bar, MO = Manual override

## Technical information

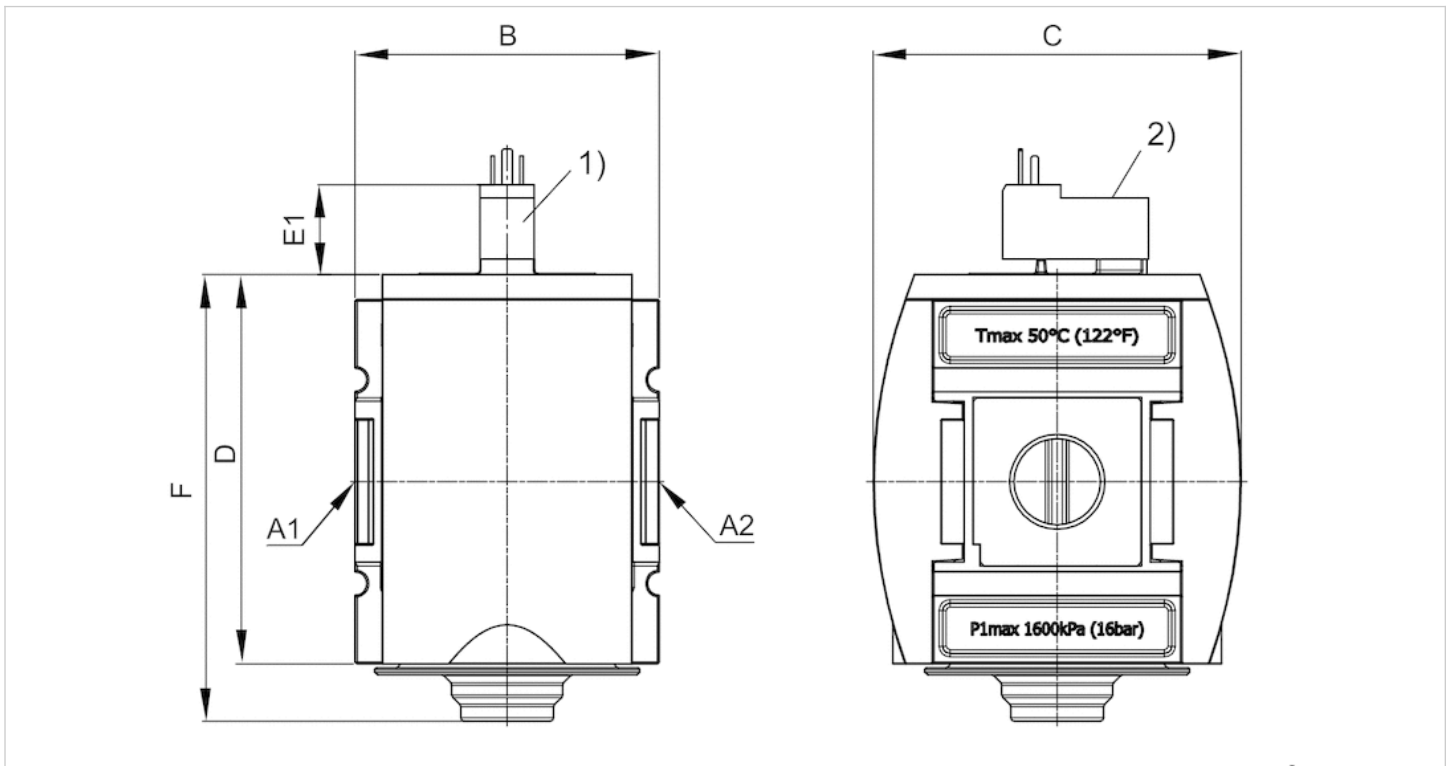
The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .  
A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

## Technical information

| Material         |                                 |
|------------------|---------------------------------|
| Housing          | Polyamide                       |
| Front plate      | Acrylonitrile butadiene styrene |
| Seals            | Acrylonitrile butadiene rubber  |
| Threaded bushing | Die cast zinc                   |

## Dimensions

### Dimensions



A1 = input

A2 = output

1) Connection for valve plug connector according to ISO 15217 (form C)

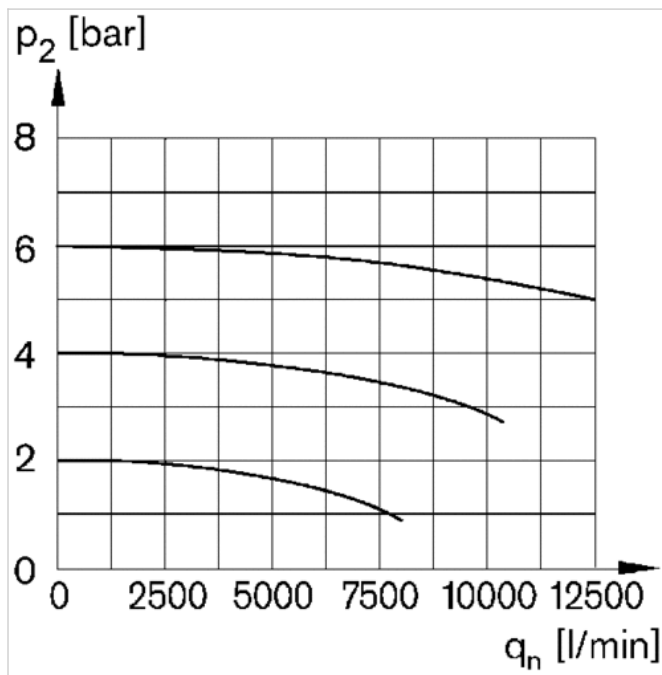
2) Manual override

### Dimensions in mm

| A1  | A2  | B  | C   | D   | E1   | F   |
|-----|-----|----|-----|-----|------|-----|
| G 1 | G 1 | 85 | 103 | 109 | 25.1 | 125 |

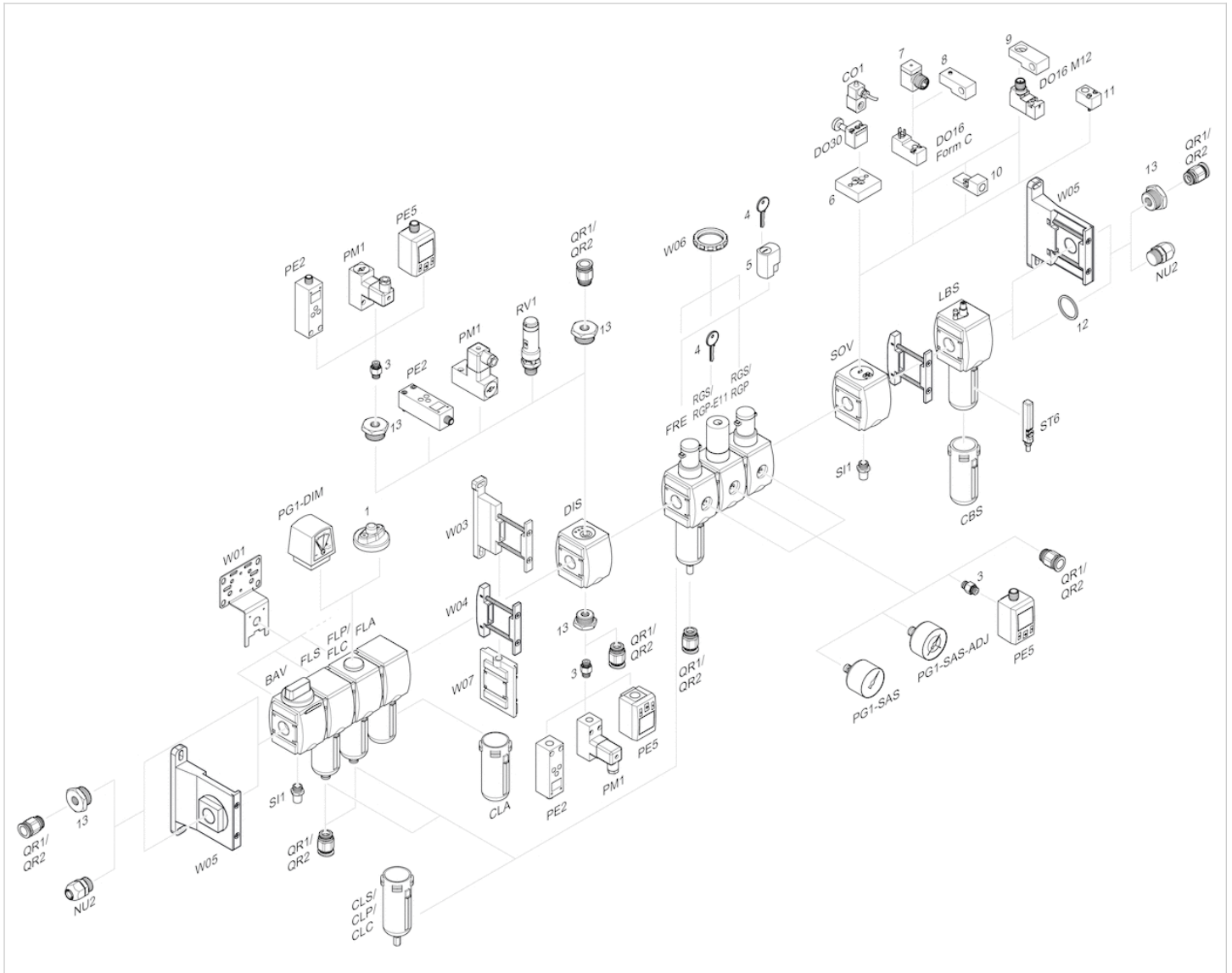
## Diagrams

## Flow rate characteristic, 1 2



$p_2$  = secondary pressure  
 $q_n$  = nominal flow

# Accessories overview



- 1 = contamination display
- 3 = Double nipple
- 4 = Key for E11 locking
- 5 = mortise lock
- 6 = Transition plate DO30
- 7 = Adapter, Series CON-VP
- 8 = Mounting aid DO16, form C
- 9 = Mounting aid DO16, M12
- 10 = Adapter for external pilot air
- 11 = Adapter pneumatic operation
- 12 = Sealing ring
- 13 = Reducing nipple

# 2/2-directional valve, electrically operated, Series AS5-SOV

## R414014102

### Series AS5

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .
- A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.



### Technical data

Industry  
Industrial

Activation  
Electrically

Nominal flow Q<sub>n</sub>  
12500 l/min

Version  
NO

Compressed air connection output  
G 1

Working pressure min.  
2.5 bar

Working pressure max  
8 bar

DC operating voltage  
24 V

Sealing principle  
Soft Seal

Connection type  
Pipe connection

Parts  
2/2-directional valve

Can be assembled into blocks  
Can be assembled into blocks

basic valve with electrical connector  
Basic valve with pilot valve

Type  
Poppet valve

Min. ambient temperature  
-10 °C

Max. ambient temperature  
50 °C

Min. medium temperature  
-10 °C

Max. medium temperature  
50 °C

**Medium**

Compressed air  
 Neutral gases

**Max. particle size**  
 25 µm

**Compressed air connection**  
 G 1

**Compressed air connection input**  
 G 1

**Power consumption DC**  
 2 W

**Protection class**  
 IP65

**Connector standard**  
 ISO 15217, form C

**Dimensions in mm**

**Reverse polarity protection**  
 Protected against polarity reversal

**Weight**  
 0.875 kg

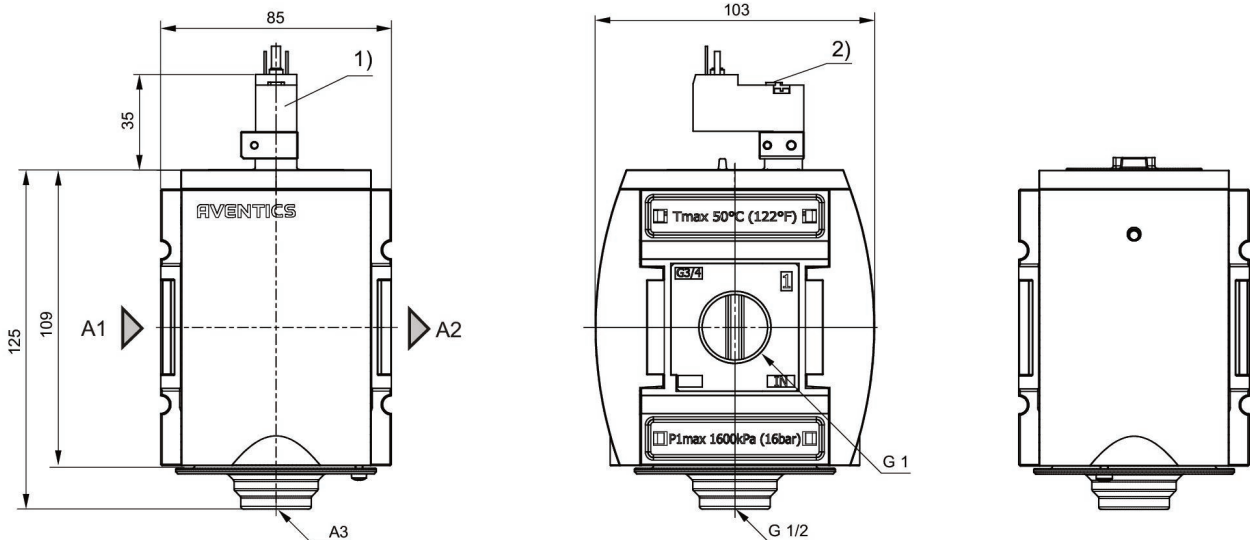
**Housing material**  
 Polyamide

**Seal material**  
 Acrylonitrile butadiene rubber

**Material threaded bushing**  
 Die cast zinc

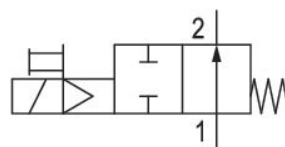
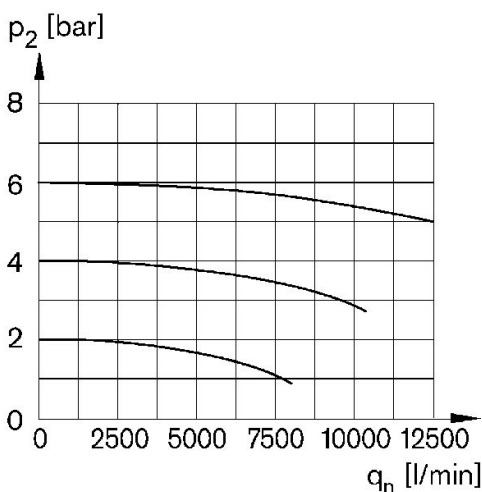
**Material front plate**  
 Acrylonitrile butadiene styrene

**Part No.**  
 R414014102



A1 = input A2 = output A3 = ventilation port  
 1) Connection for valve plug connector according to ISO 15217 (form C)  
 2) Manual override

**Flow rate characteristic**



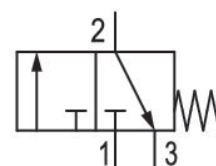
$p_2$  = secondary pressure  
 $q_n$  = nominal flow

# 3/2-directional valve, electrically operated, Series AS5-SOV

R412009258

## General series information Series AS5

- The AVENTICS Series AS5 is a modular, versatile maintenance unit for universal application. This Series offers compact dimensions, is highly efficient, lightweight and easy-to-use. The AVENTICS Series AS guarantees reliability, safety, and efficiency with a simplified assembly and maintenance efforts.



## Technical data

Industry  
Industrial

Activation  
Electrically

Nominal flow Qn  
12500 l/min

Compressed air connection  
G 3/4

Working pressure min.  
2.5 bar

Working pressure max  
16 bar

Sealing principle  
Soft Seal

Connection type  
Pipe connection

## Parts

3/2-directional valve

Can be assembled into blocks

Can be assembled into blocks

basic valve with electrical connector

Basic valve without pilot valve, with CNOMO subbase

## Type

Poppet valve

Min. ambient temperature

-10 °C

Max. ambient temperature

50 °C

## Medium

Compressed air

Neutral gases

Max. particle size  
5 µm

Compressed air connection, exhaust  
G 1/2

Nominal flow Qn 1 to 2  
12500 l/min

Nominal flow Qn 2 to 3  
3700 l/min

Weight  
0.62 kg

## Material

Housing material  
Polyamide

Seal material  
Acrylonitrile butadiene rubber

Material threaded bushing  
Die cast zinc

Material front plate  
Acrylonitrile butadiene styrene

Part No.  
R412009258

## Technical information

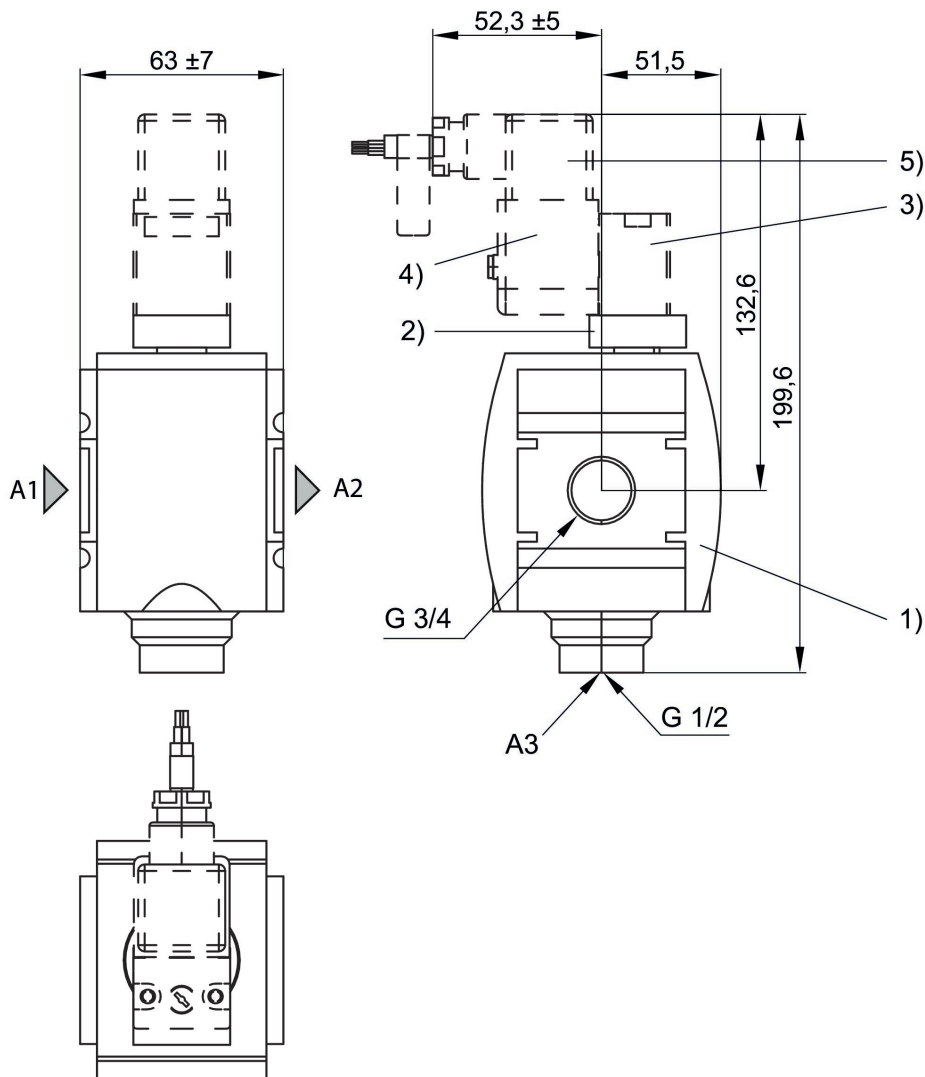
The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Nominal flow Qn with secondary pressure  $p_2 = 6$  bar at  $\Delta p = 1$  bar



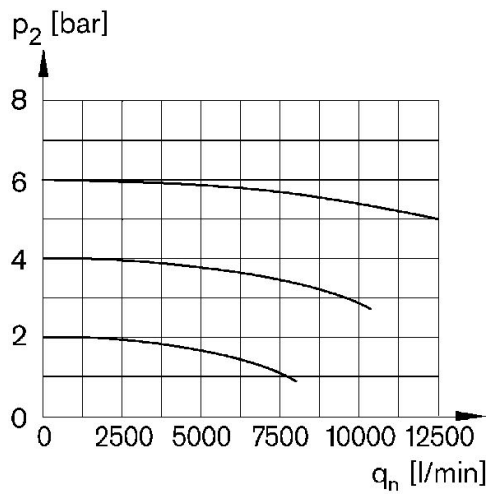
## Dimensions in mm



- A1 = input A2 = output  
A3 = ventilation port  
1) Shut-off valve  
2) Transition plate  
3) Pilot valve  
4) Coil  
5) Valve plug connector  
See accessories for pilot valve and coil

### Flow rate characteristic

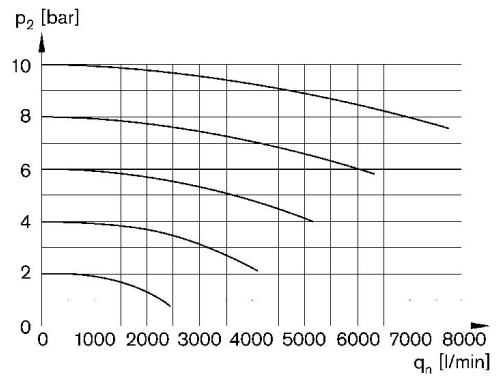
$p_2 = 0,05 - 7 \text{ bar}, 1 > 2$



$p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

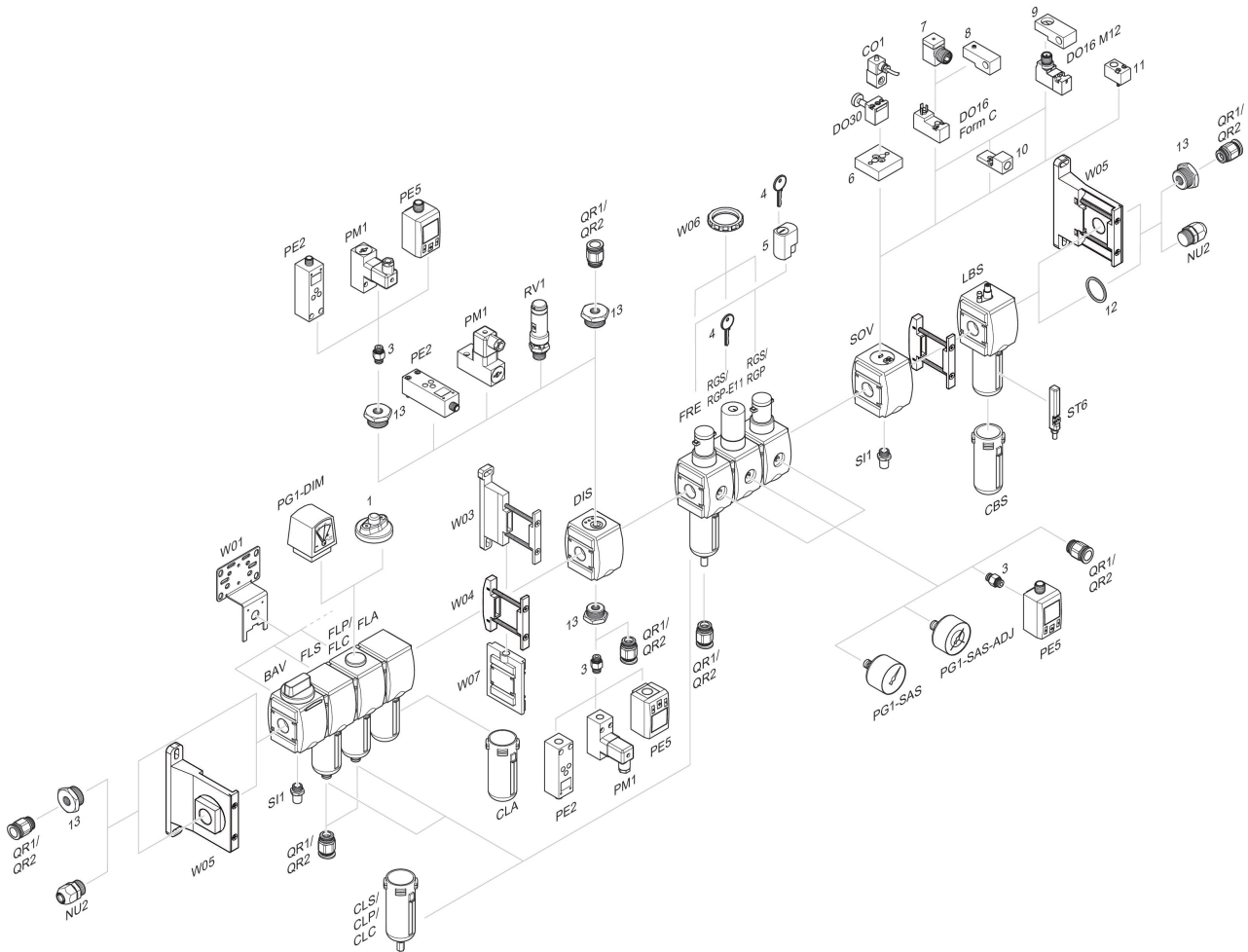
### Rear exhaust

$2 > 3$



$p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

Accessories overview



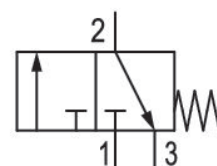
1 = contamination display 3 = Double nipple 4 = Key for E11 locking 5 = mortise lock 6 = Transition plate DO30 7 = Adapter, Series CON-VP 8 = Mounting aid DO16, form C 9 = Mounting aid DO16, M12 10 = Adapter for external pilot air 11 = Adapter pneumatic operation 12 = Sealing ring 13 = Reducing nipple

# 3/2-directional valve, electrically operated, Series AS5-SOV

R412009259

## General series information Series AS5

- The AVENTICS Series AS5 is a modular, versatile maintenance unit for universal application. This Series offers compact dimensions, is highly efficient, lightweight and easy-to-use. The AVENTICS Series AS guarantees reliability, safety, and efficiency with a simplified assembly and maintenance efforts.



## Technical data

Industry  
Industrial

Activation  
Electrically

Nominal flow  $Q_n$   
12500 l/min

Compressed air connection  
G 1

Working pressure min.  
2.5 bar

Working pressure max  
16 bar

Sealing principle  
Soft Seal

Connection type  
Pipe connection

## Parts

3/2-directional valve

Can be assembled into blocks

Can be assembled into blocks

basic valve with electrical connector

Basic valve without pilot valve, with CNOMO subbase

## Type

Poppet valve

Min. ambient temperature

-10 °C

Max. ambient temperature

50 °C

## Medium

Compressed air

Neutral gases

Max. particle size  
5 µm

Compressed air connection, exhaust  
G 1/2

Nominal flow Qn 1 to 2  
12500 l/min

Nominal flow Qn 2 to 3  
3700 l/min

Weight  
0.62 kg

## Material

Housing material  
Polyamide

Seal material  
Acrylonitrile butadiene rubber

Material threaded bushing  
Die cast zinc

Material front plate  
Acrylonitrile butadiene styrene

Part No.  
R412009259

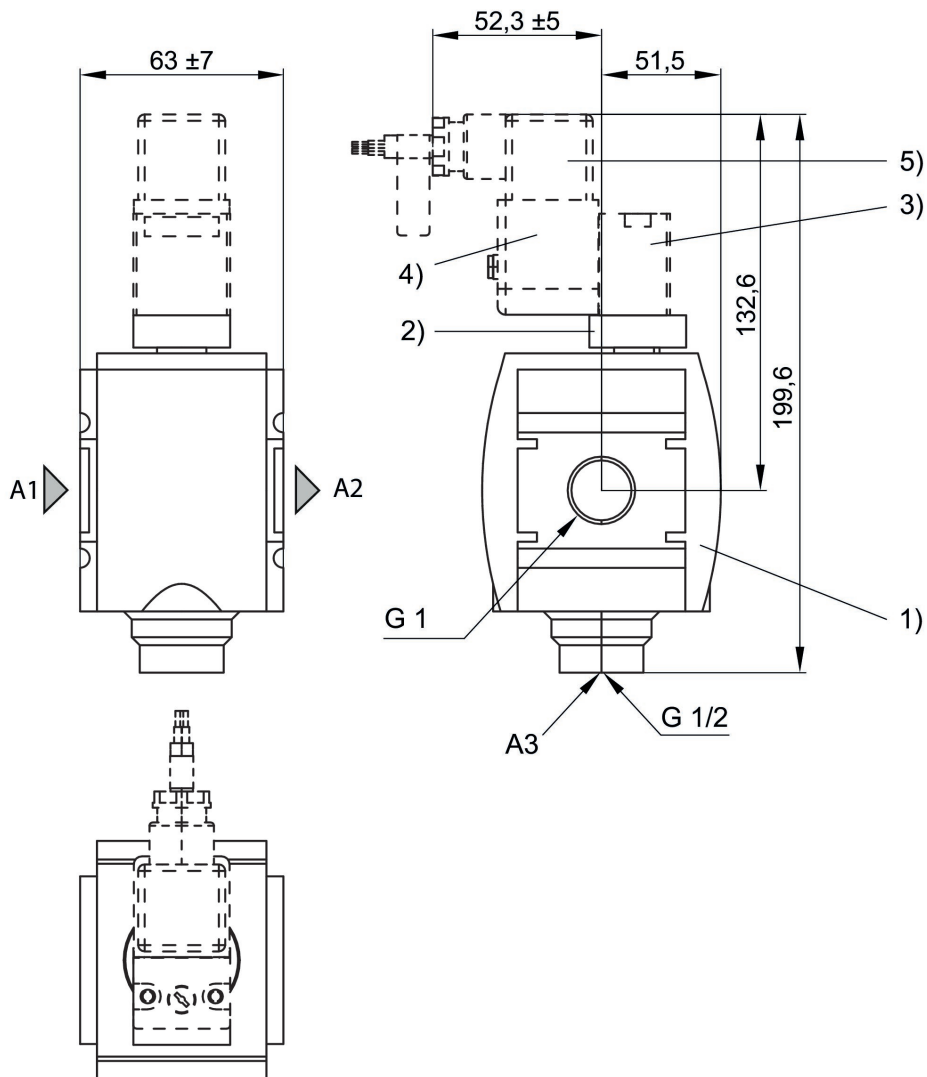
## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Nominal flow Qn with secondary pressure  $p_2 = 6$  bar at  $\Delta p = 1$  bar

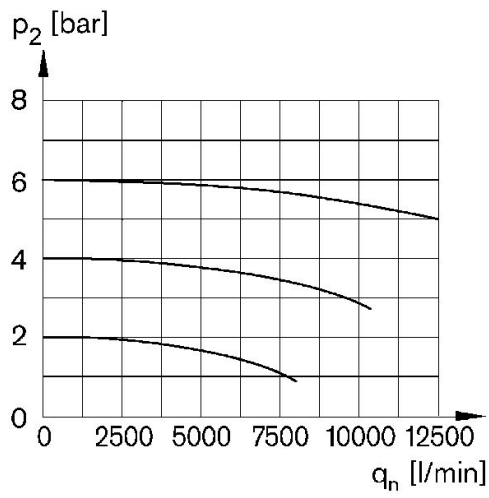
## Dimensions in mm



- A1 = input A2 = output  
A3 = ventilation port  
1) Shut-off valve  
2) Transition plate  
3) Pilot valve  
4) Coil  
5) Valve plug connector  
See accessories for pilot valve and coil

### Flow rate characteristic

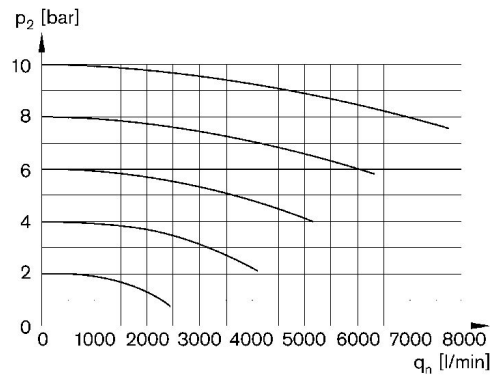
$p_2 = 0,05 - 7 \text{ bar}, 1 > 2$



$p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

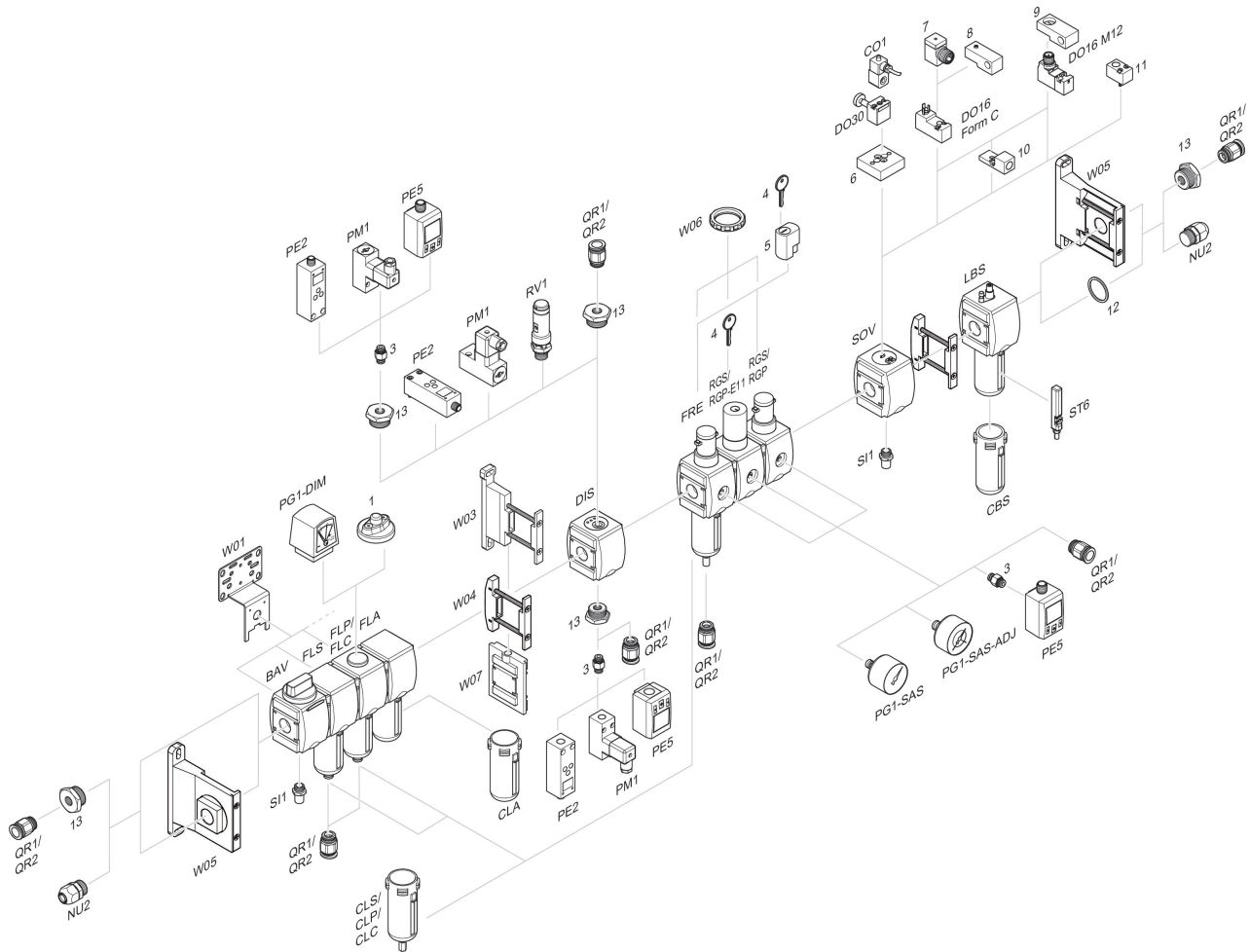
### Rear exhaust

$2 > 3$



$p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

Accessories overview



1 = contamination display 3 = Double nipple 4 = Key for E11 locking 5 = mortise lock 6 = Transition plate DO30 7 = Adapter, Series CON-VP 8 = Mounting aid DO16, form C 9 = Mounting aid DO16, M12 10 = Adapter for external pilot air 11 = Adapter pneumatic operation 12 = Sealing ring 13 = Reducing nipple

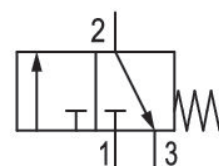


# 3/2-directional valve, electrically operated, Series AS5-SOV

R412009264

## General series information Series AS5

- The AVENTICS Series AS5 is a modular, versatile maintenance unit for universal application. This Series offers compact dimensions, is highly efficient, lightweight and easy-to-use. The AVENTICS Series AS guarantees reliability, safety, and efficiency with a simplified assembly and maintenance efforts.



## Technical data

Industry  
Industrial

Activation  
Electrically

Nominal flow Qn  
12500 l/min

Compressed air connection  
G 3/4

Working pressure min.  
2.5 bar

Working pressure max  
16 bar

Sealing principle  
Soft Seal

Connection type  
Pipe connection

## Parts

3/2-directional valve

Can be assembled into blocks

Can be assembled into blocks

basic valve with electrical connector

Basic valve without pilot valve

## Type

Poppet valve

Min. ambient temperature

-10 °C

Max. ambient temperature

50 °C

## Medium

Compressed air

Neutral gases

Max. particle size  
5 µm

Compressed air connection, exhaust  
G 1/2

Nominal flow Qn 1 to 2  
12500 l/min

Nominal flow Qn 2 to 3  
3700 l/min

Weight  
0.641 kg

## Material

Housing material  
Polyamide

Seal material  
Acrylonitrile butadiene rubber

Material threaded bushing  
Die cast zinc

Material front plate  
Acrylonitrile butadiene styrene

Part No.  
R412009264

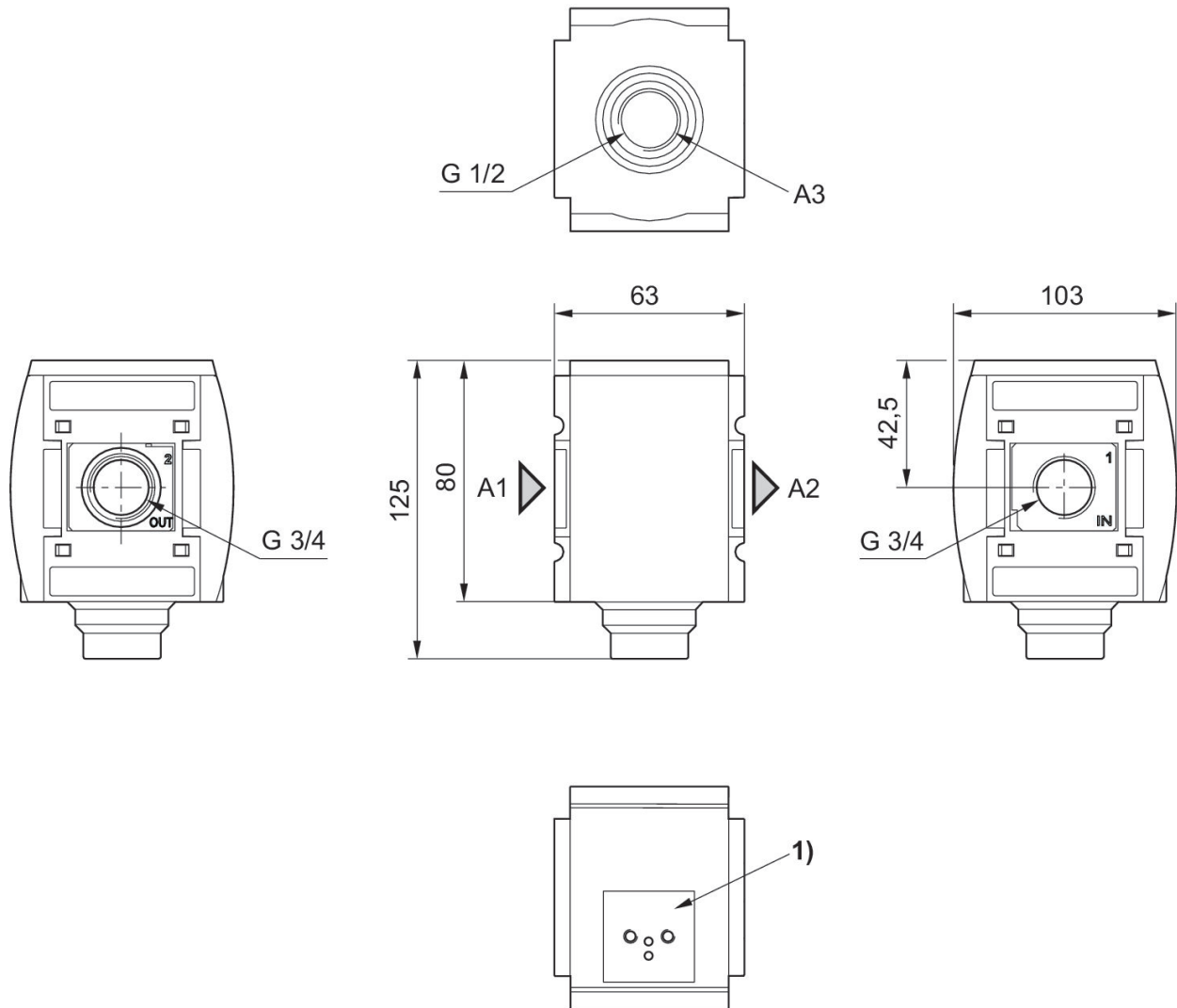
## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Nominal flow Qn with secondary pressure  $p_2 = 6 \text{ bar}$  at  $\Delta p = 1 \text{ bar}$

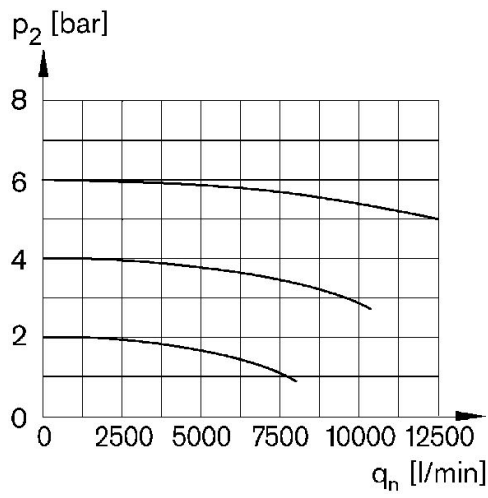
## Dimensions in mm



A1 = input  
A2 = output  
A3 = ventilation port  
1) For pilot valve series DO16

### Flow rate characteristic

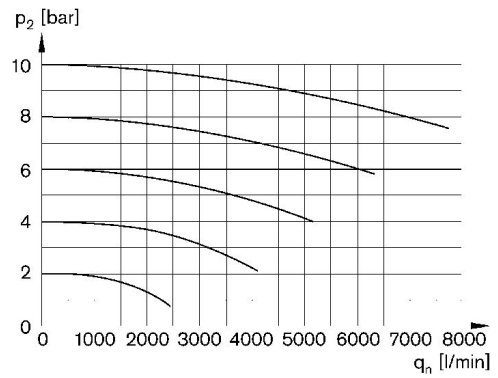
$p_2 = 0,05 - 7 \text{ bar}, 1 > 2$



$p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

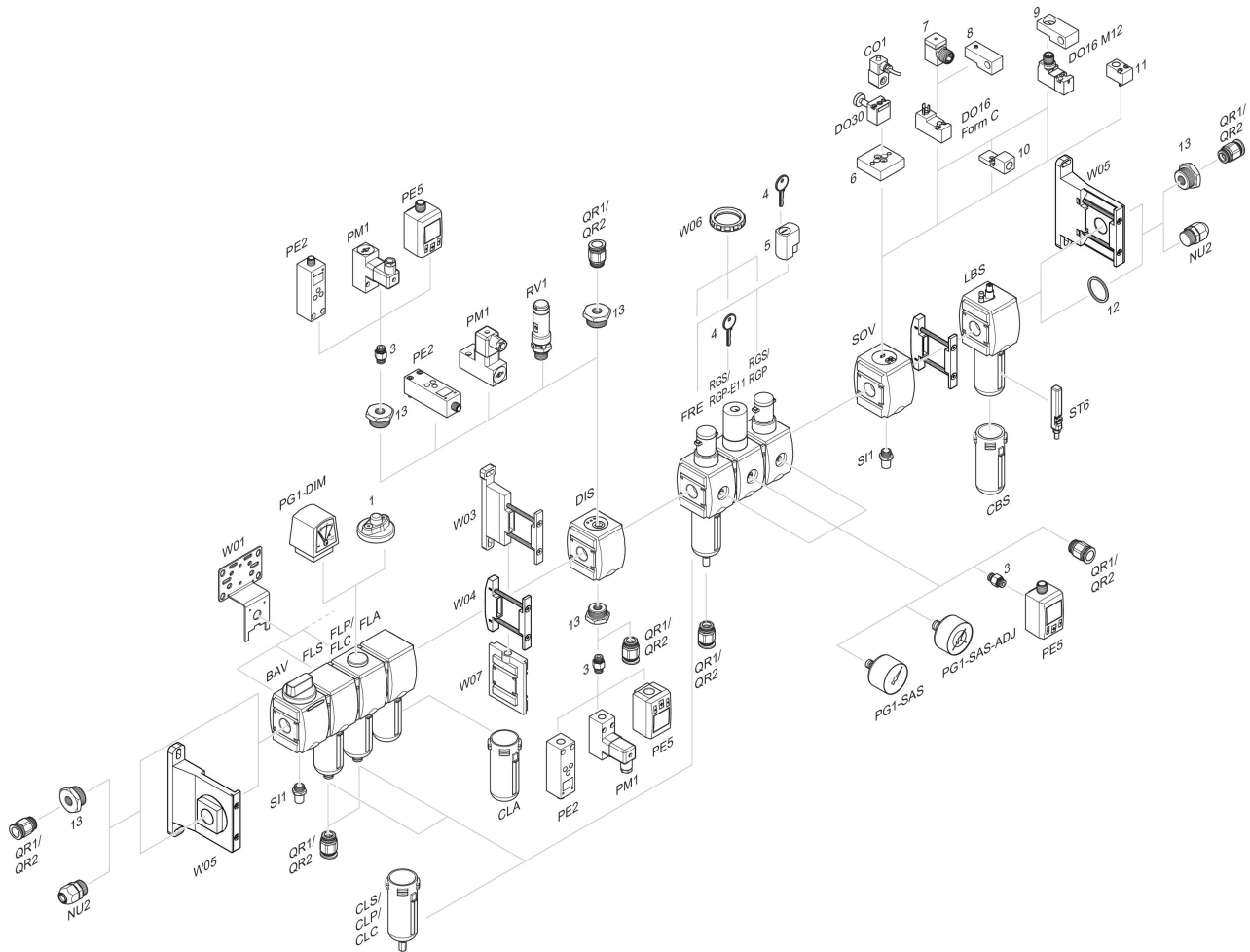
### Rear exhaust

$2 > 3$



$p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

Accessories overview



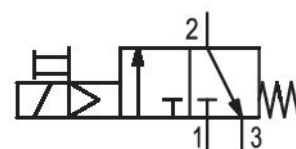
1 = contamination display 3 = Double nipple 4 = Key for E11 locking 5 = mortise lock 6 = Transition plate DO30 7 = Adapter, Series CON-VP 8 = Mounting aid DO16, form C 9 = Mounting aid DO16, M12 10 = Adapter for external pilot air 11 = Adapter pneumatic operation 12 = Sealing ring 13 = Reducing nipple

# 3/2-directional valve, electrically operated, Series AS5-SOV

R412009265

## General series information Series AS5

- The AVENTICS Series AS5 is a modular, versatile maintenance unit for universal application. This Series offers compact dimensions, is highly efficient, lightweight and easy-to-use. The AVENTICS Series AS guarantees reliability, safety, and efficiency with a simplified assembly and maintenance efforts.



## Technical data

Industry  
Industrial

Activation  
Electrically

Nominal flow Qn  
12500 l/min

Compressed air connection  
G 3/4

Working pressure min.  
2.5 bar

Working pressure max  
10 bar

DC operating voltage  
24 V

Sealing principle  
Soft Seal

Connection type  
Pipe connection

Parts  
3/2-directional valve

Can be assembled into blocks  
Can be assembled into blocks  
basic valve with electrical connector  
Basic valve with pilot valve

Type  
Poppet valve  
Min. ambient temperature  
-10 °C

Max. ambient temperature  
50 °C

Medium  
Compressed air

|                                    |                                      |
|------------------------------------|--------------------------------------|
| Neutral gases                      | Connector standard                   |
| Max. particle size                 | ISO 15217                            |
| 5 µm                               | Protection class with connection     |
| Compressed air connection, exhaust | IP65                                 |
| G 1/2                              | Reverse polarity protection          |
| Nominal flow Qn 1 to 2             | Protected against polarity reversal  |
| 12500 l/min                        | Electrical connection type 2         |
| Nominal flow Qn 2 to 3             | Plug                                 |
| 3700 l/min                         | Electrical connection 2, thread size |
| Power consumption DC               | ISO 15217, form C                    |
| 2 W                                | Weight                               |
| Duty cycle                         | 0.677 kg                             |
| 100 %                              |                                      |

## Material

|                                |                                 |
|--------------------------------|---------------------------------|
| Housing material               | Material front plate            |
| Polyamide                      | Acrylonitrile butadiene styrene |
| Seal material                  | Part No.                        |
| Acrylonitrile butadiene rubber | R412009265                      |
| Material threaded bushing      |                                 |
| Die cast zinc                  |                                 |

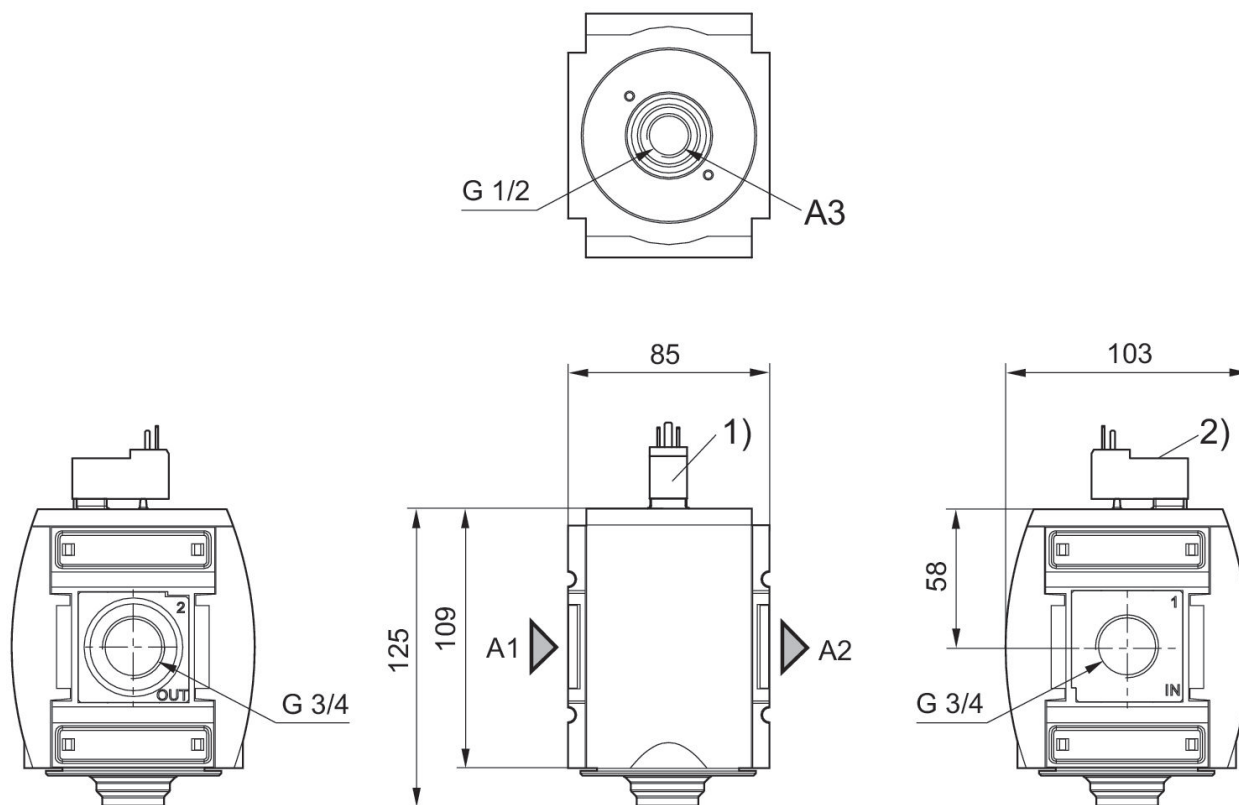
## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Nominal flow Qn with secondary pressure p2 = 6 bar at  $\Delta p = 1$  bar

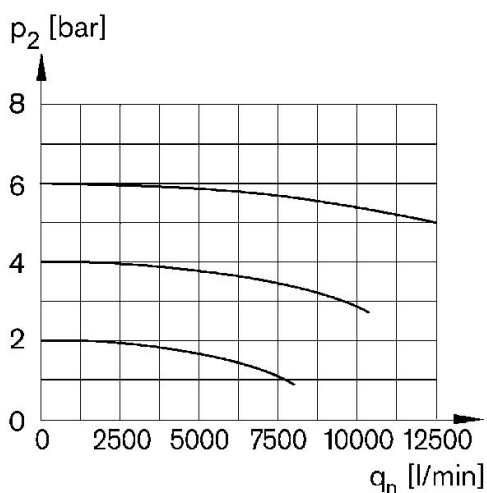
## Dimensions in mm



- A1 = input
- A2 = output
- A3 = ventilation port
- 1) For valve plug connectors according to ISO 15217 (form C)
- 2) Manual override

## Flow rate characteristic

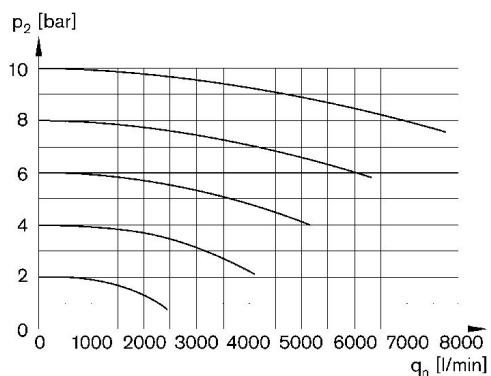
$p_2 = 0,05 - 7 \text{ bar}$ ,  $1 > 2$



$p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

## Rear exhaust

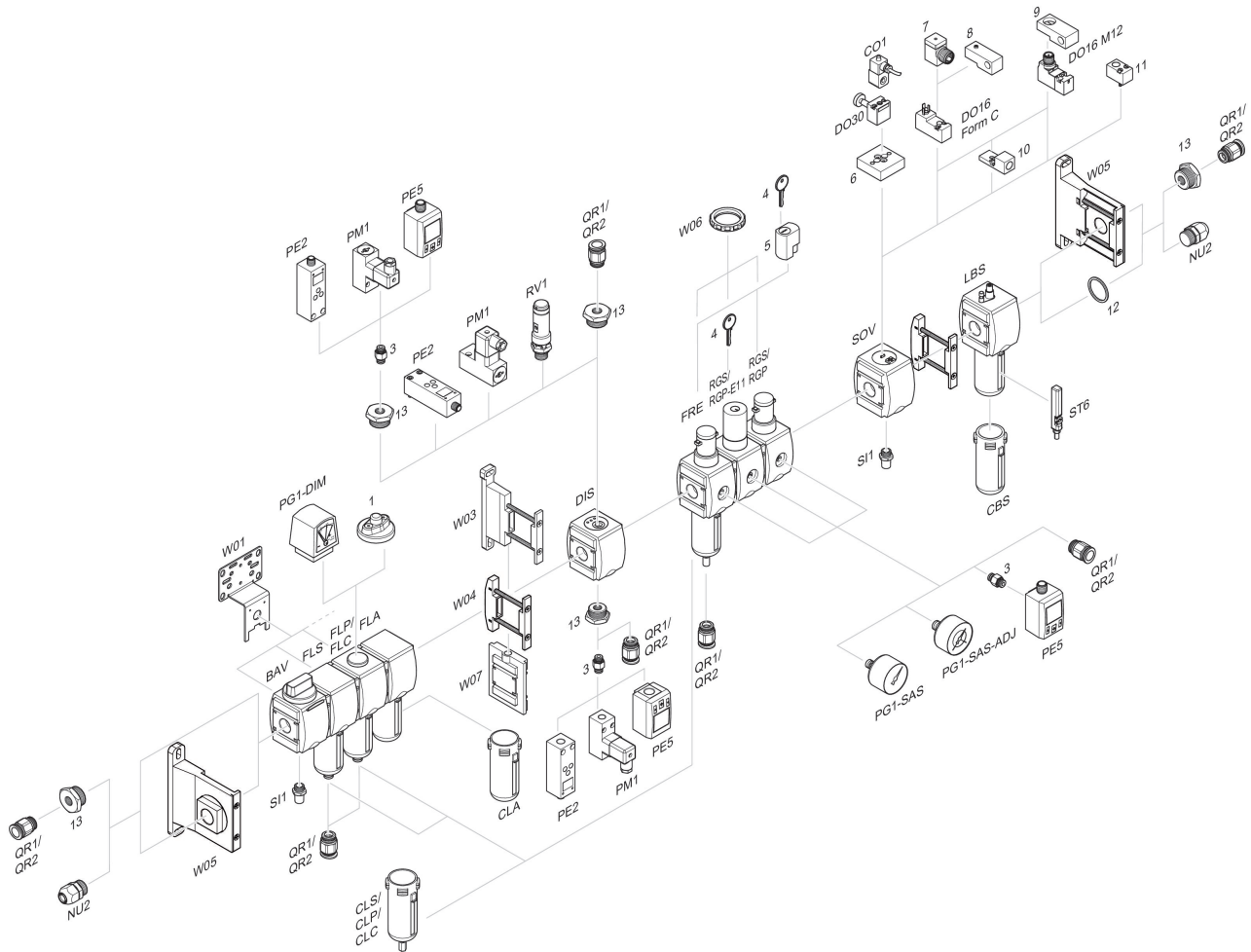
$2 > 3$



$p_2$  = Secondary pressure  
 $q_n$  = Nominal flow



## Accessories overview



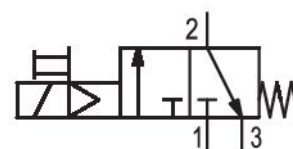
1 = contamination display 3 = Double nipple 4 = Key for E11 locking 5 = mortise lock 6 = Transition plate DO30 7 = Adapter, Series CON-VP 8 = Mounting aid DO16, form C 9 = Mounting aid DO16, M12 10 = Adapter for external pilot air 11 = Adapter pneumatic operation 12 = Sealing ring 13 = Reducing nipple

# 3/2-directional valve, electrically operated, Series AS5-SOV

R412009266

## General series information Series AS5

- The AVENTICS Series AS5 is a modular, versatile maintenance unit for universal application. This Series offers compact dimensions, is highly efficient, lightweight and easy-to-use. The AVENTICS Series AS guarantees reliability, safety, and efficiency with a simplified assembly and maintenance efforts.



## Technical data

Industry  
Industrial

Activation  
Electrically

Nominal flow Qn  
12500 l/min

Compressed air connection  
G 3/4

Working pressure min.  
2.5 bar

Working pressure max  
10 bar

Operational voltage AC at 50 Hz  
110 V

Operational voltage AC at 60 Hz  
110 V

Sealing principle  
Soft Seal

Connection type  
Pipe connection

Parts  
3/2-directional valve

Can be assembled into blocks  
Can be assembled into blocks

basic valve with electrical connector  
Basic valve with pilot valve

Type  
Poppet valve

Min. ambient temperature  
-10 °C

Max. ambient temperature  
50 °C

#### Medium

Compressed air  
Neutral gases

#### Max. particle size

5 µm

Compressed air connection, exhaust  
G 1/2

#### Nominal flow Qn 1 to 2

12500 l/min

#### Nominal flow Qn 2 to 3

3700 l/min

#### Holding power AC 50 Hz

1.6 VA

#### Holding power AC 60 Hz

1.4 VA

#### Switch-on power AC 50 Hz

2.2 VA

#### Switch-on power AC 60 Hz

1.6 VA

#### Duty cycle

100 %

#### Connector standard

ISO 15217

#### Protection class with connection

IP65

#### Reverse polarity protection

Protected against polarity reversal

#### Electrical connection type 2

Plug

#### Electrical connection 2, thread size

ISO 15217, form C

#### Weight

0.677 kg

## Material

#### Housing material

Polyamide

#### Seal material

Acrylonitrile butadiene rubber

#### Material threaded bushing

Die cast zinc

#### Material front plate

Acrylonitrile butadiene styrene

#### Part No.

R412009266

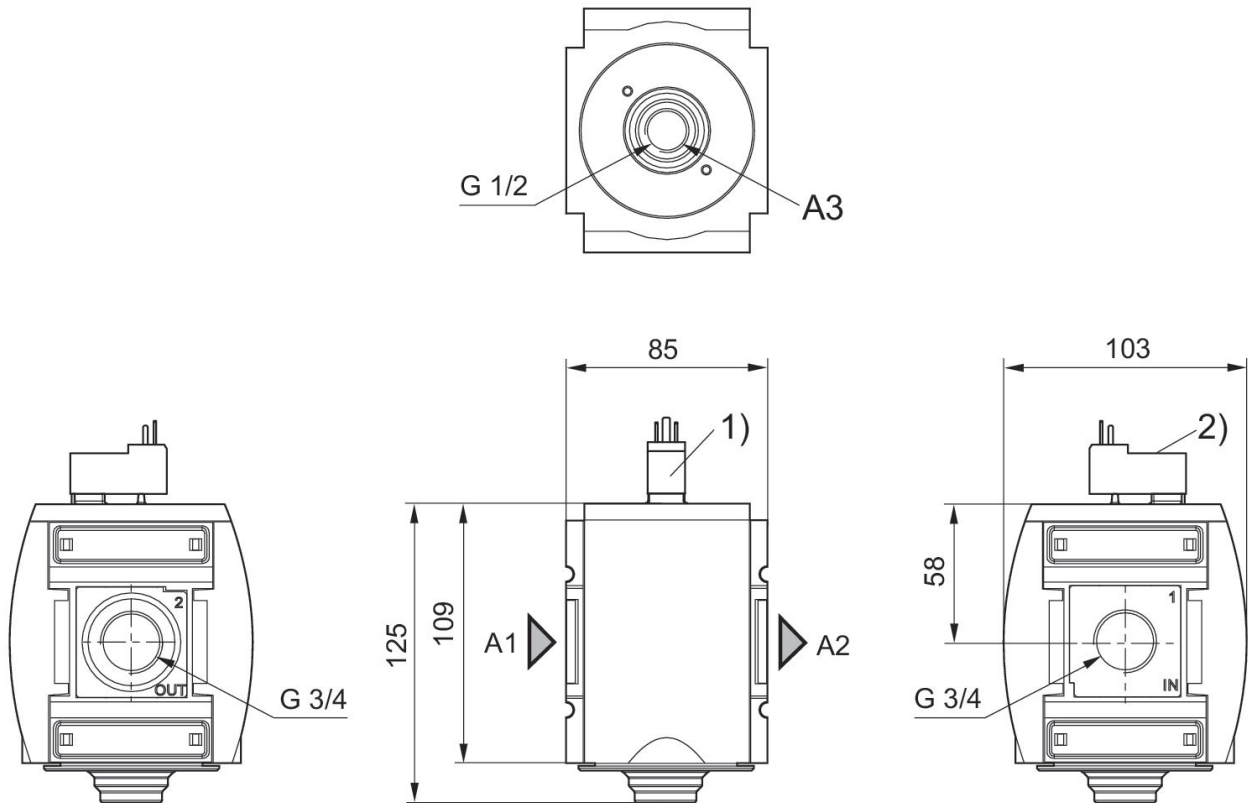
## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Nominal flow Qn with secondary pressure p2 = 6 bar at  $\Delta p = 1$  bar

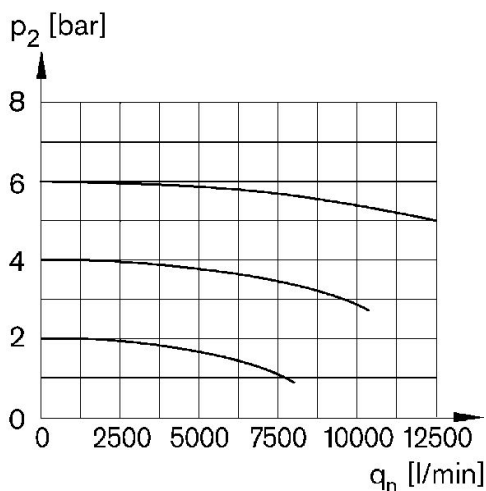
### Dimensions in mm



- A1 = input
- A2 = output
- A3 = ventilation port
- 1) For valve plug connectors according to ISO 15217 (form C)
- 2) Manual override

### Flow rate characteristic

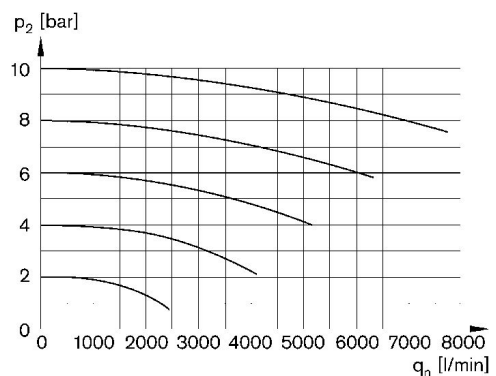
$p_2 = 0,05 - 7 \text{ bar}$ ,  $1 > 2$



$p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

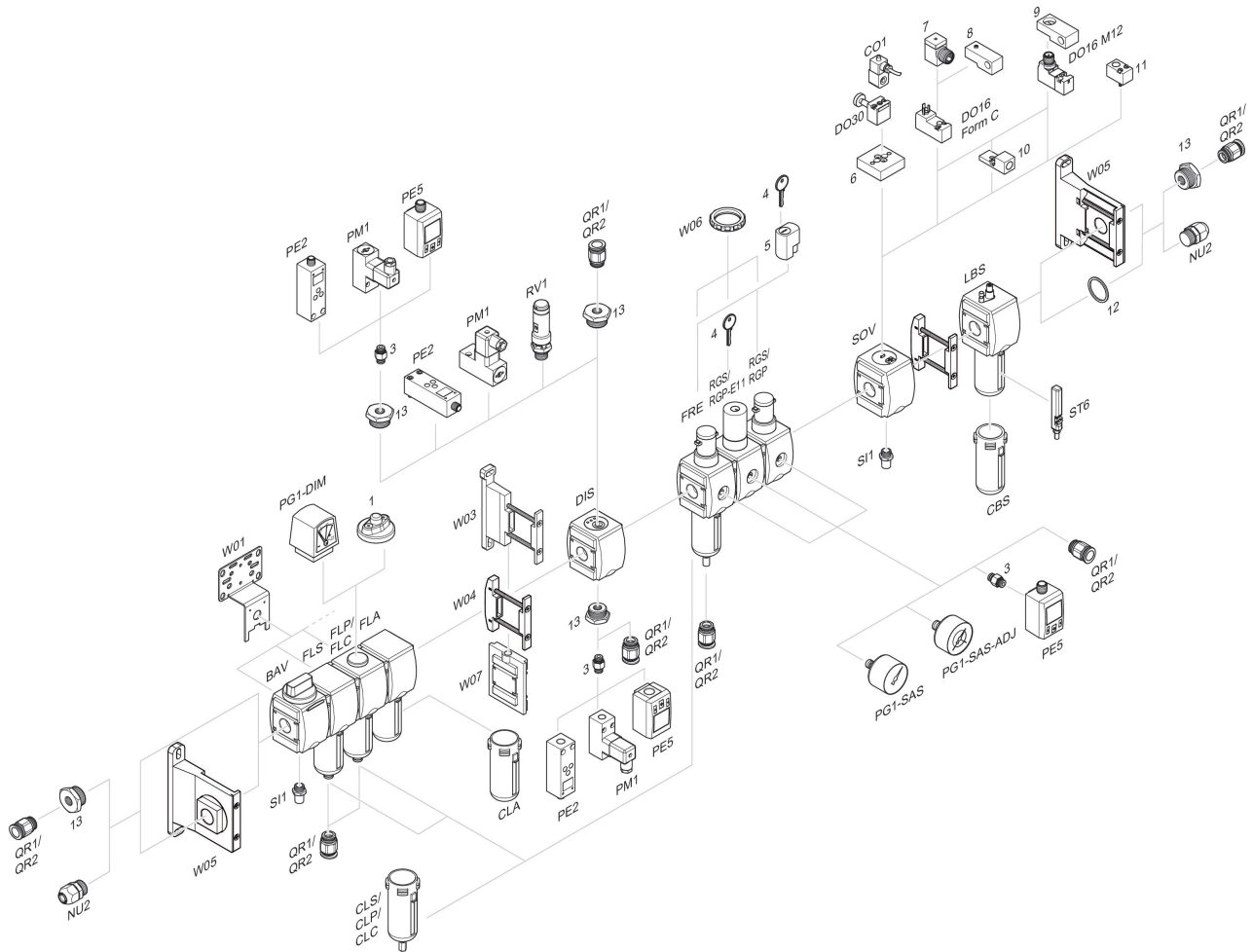
### Rear exhaust

$2 > 3$



$p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

Accessories overview



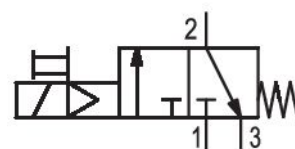
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# 3/2-directional valve, electrically operated, Series AS5-SOV

R412009267

## General series information Series AS5

- The AVENTICS Series AS5 is a modular, versatile maintenance unit for universal application. This Series offers compact dimensions, is highly efficient, lightweight and easy-to-use. The AVENTICS Series AS guarantees reliability, safety, and efficiency with a simplified assembly and maintenance efforts.



## Technical data

Industry  
Industrial

Activation  
Electrically

Nominal flow Qn  
12500 l/min

Compressed air connection  
G 3/4

Working pressure min.  
2.5 bar

Working pressure max  
10 bar

Operational voltage AC at 50 Hz  
220 V

Operational voltage AC at 60 Hz  
230 V

Sealing principle  
Soft Seal

Connection type  
Pipe connection

Parts  
3/2-directional valve

Can be assembled into blocks  
Can be assembled into blocks

basic valve with electrical connector  
Basic valve with pilot valve

Type  
Poppet valve

Min. ambient temperature  
-10 °C

Max. ambient temperature  
50 °C

#### Medium

Compressed air  
Neutral gases

#### Max. particle size

5 µm

Compressed air connection, exhaust  
G 1/2

#### Nominal flow Qn 1 to 2

12500 l/min

#### Nominal flow Qn 2 to 3

3700 l/min

#### Holding power AC 50 Hz

1.6 VA

#### Holding power AC 60 Hz

1.4 VA

#### Switch-on power AC 50 Hz

2.2 VA

#### Switch-on power AC 60 Hz

1.6 VA

#### Duty cycle

100 %

#### Connector standard

ISO 15217

#### Protection class with connection

IP65

#### Reverse polarity protection

Protected against polarity reversal

#### Electrical connection type 2

Plug

#### Electrical connection 2, thread size

ISO 15217, form C

#### Weight

0.677 kg

## Material

#### Housing material

Polyamide

#### Seal material

Acrylonitrile butadiene rubber

#### Material threaded bushing

Die cast zinc

#### Material front plate

Acrylonitrile butadiene styrene

#### Part No.

R412009267

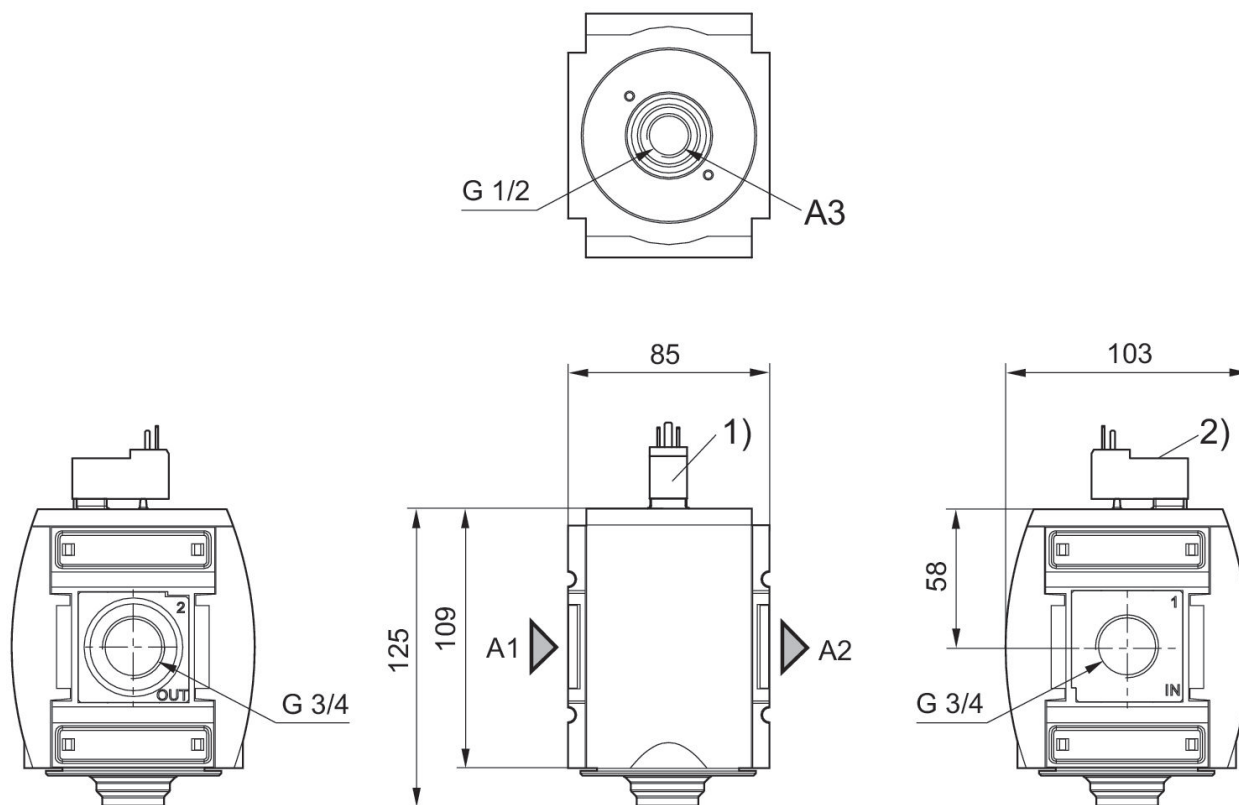
## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Nominal flow Qn with secondary pressure p2 = 6 bar at Δp = 1 bar

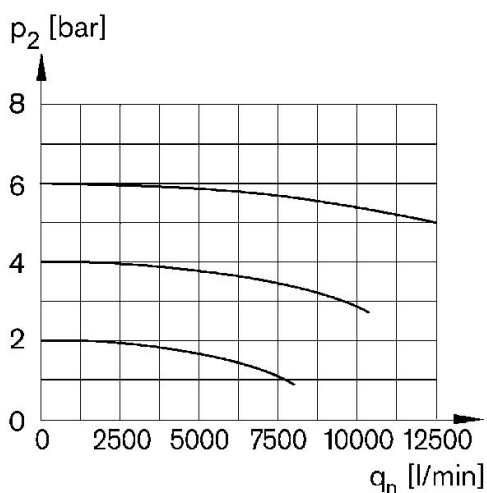
## Dimensions in mm



- A1 = input
- A2 = output
- A3 = ventilation port
- 1) For valve plug connectors according to ISO 15217 (form C)
- 2) Manual override

## Flow rate characteristic

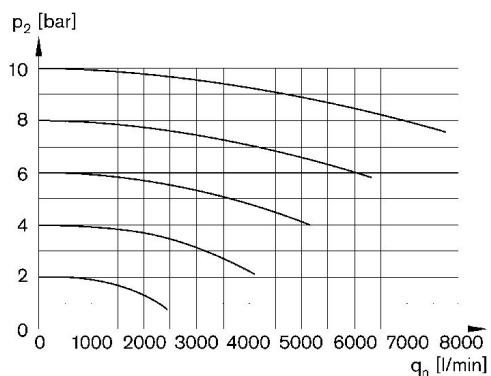
$p_2 = 0,05 - 7 \text{ bar}$ ,  $1 > 2$



$p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

## Rear exhaust

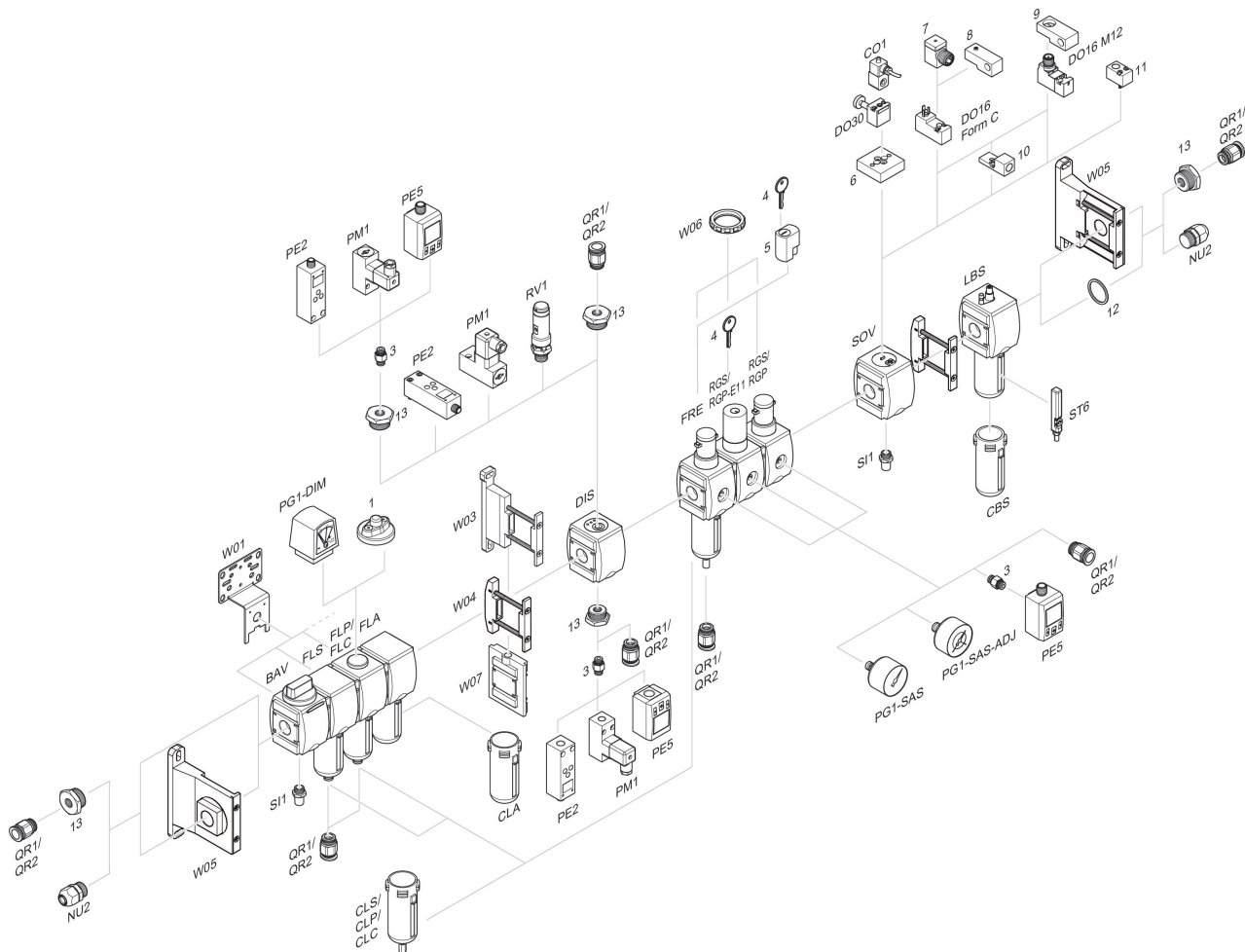
$2 > 3$



$p_2$  = Secondary pressure  
 $q_n$  = Nominal flow



### Accessories overview



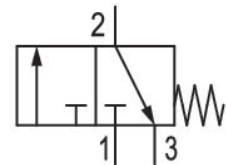
1 = contamination display 3 = Double nipple 4 = Key for E11 locking 5 = mortise lock 6 = Transition plate DO30 7 = Adapter, Series CON-VP 8 = Mounting aid DO16, form C 9 = Mounting aid DO16, M12 10 = Adapter for external pilot air 11 = Adapter pneumatic operation 12 = Sealing ring 13 = Reducing nipple

# 3/2-directional valve, electrically operated, Series AS5-SOV

R412009268

## General series information Series AS5

- The AVENTICS Series AS5 is a modular, versatile maintenance unit for universal application. This Series offers compact dimensions, is highly efficient, lightweight and easy-to-use. The AVENTICS Series AS guarantees reliability, safety, and efficiency with a simplified assembly and maintenance efforts.



## Technical data

Industry  
Industrial

Activation  
Electrically

Nominal flow Qn  
12500 l/min

Compressed air connection  
G 1

Working pressure min.  
2.5 bar

Working pressure max.  
16 bar

Sealing principle  
Soft Seal

Connection type  
Pipe connection

Parts  
3/2-directional valve

Can be assembled into blocks  
Can be assembled into blocks

basic valve with electrical connector  
Basic valve without pilot valve

Type  
Poppet valve

Min. ambient temperature  
-10 °C

Max. ambient temperature  
50 °C

Medium  
Compressed air  
Neutral gases

Max. particle size  
5 µm

Compressed air connection, exhaust  
G 1/2

Nominal flow Qn 1 to 2  
12500 l/min

Nominal flow Qn 2 to 3  
3700 l/min

Weight  
0.641 kg

## Material

Housing material  
Polyamide

Seal material  
Acrylonitrile butadiene rubber

Material threaded bushing  
Die cast zinc

Material front plate  
Acrylonitrile butadiene styrene

Part No.  
R412009268

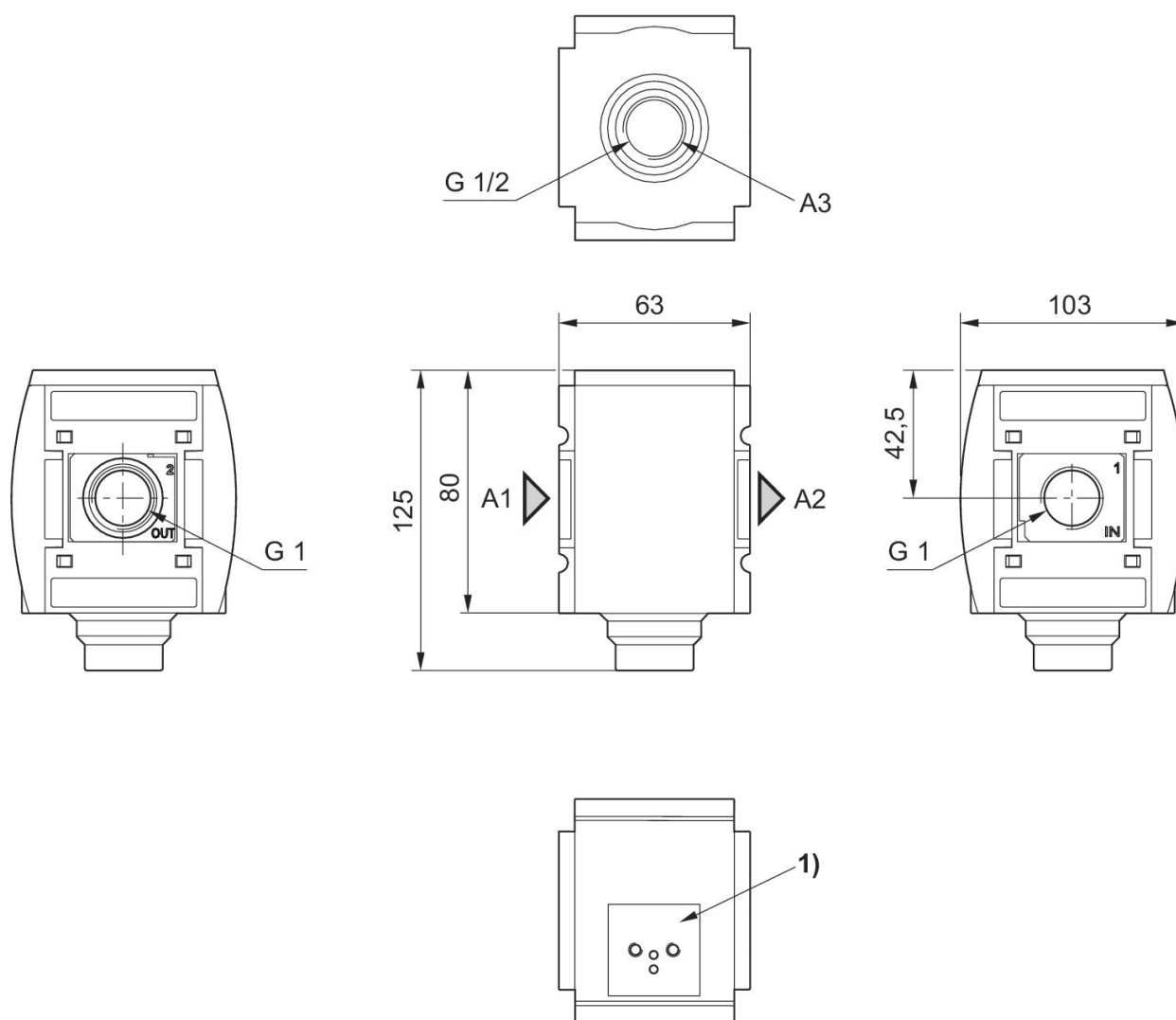
## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Nominal flow  $Q_n$  with secondary pressure  $p_2 = 6$  bar at  $\Delta p = 1$  bar

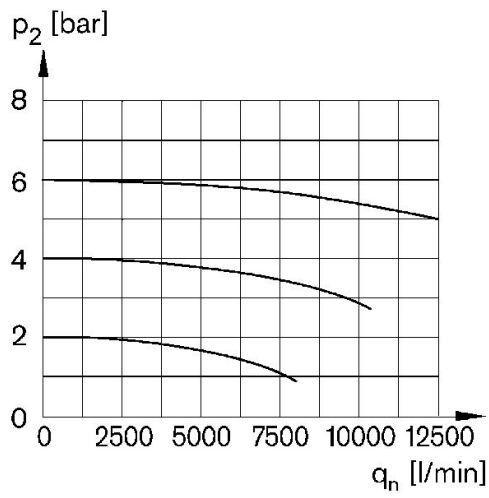
## Dimensions in mm



A1 = input  
A2 = output  
A3 = ventilation port  
1) For pilot valve series DO16

### Flow rate characteristic

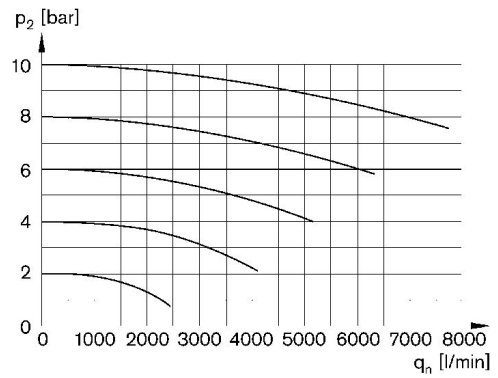
$p_2 = 0,05 - 7 \text{ bar}, 1 > 2$



$p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

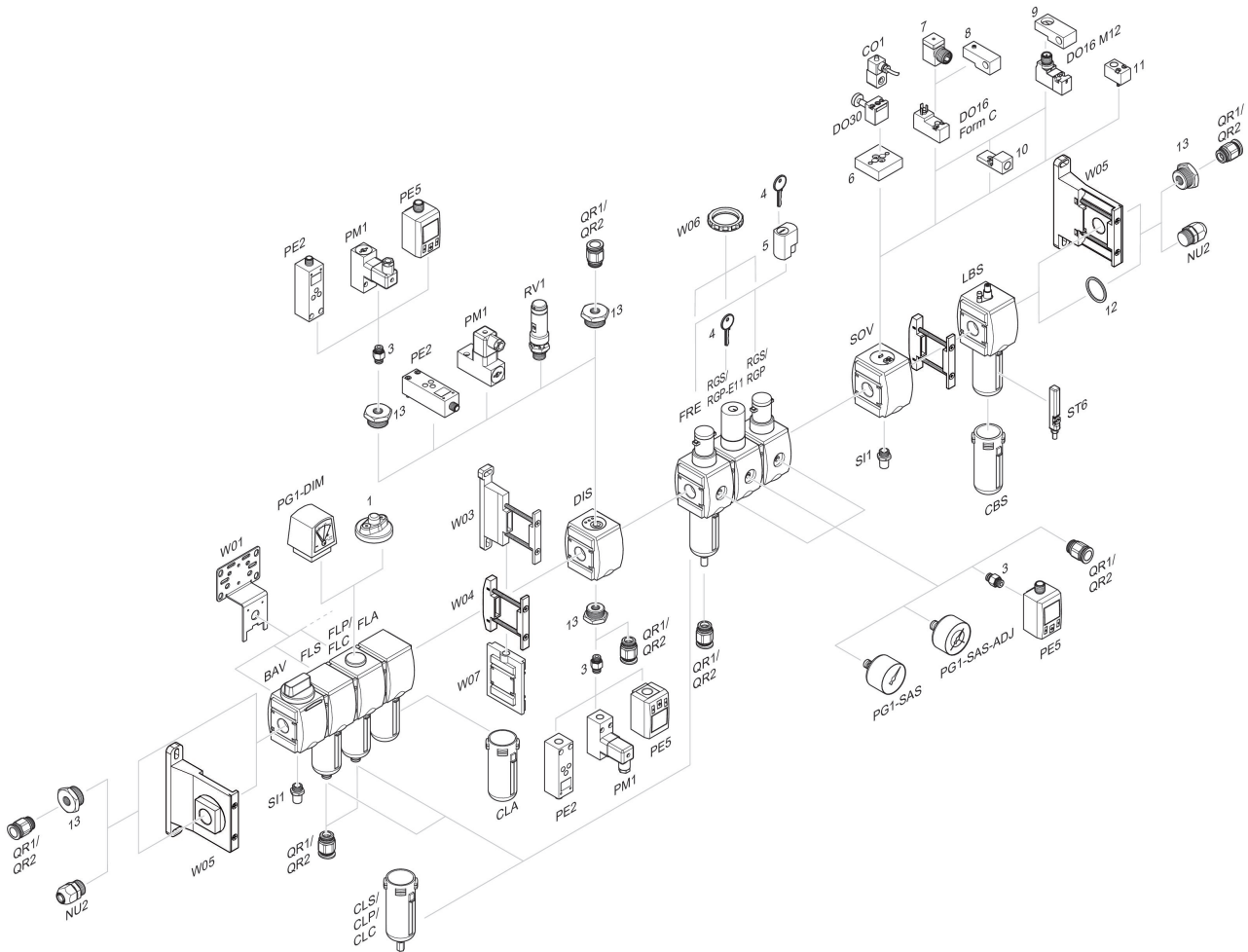
### Rear exhaust

$2 > 3$



$p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

## Accessories overview



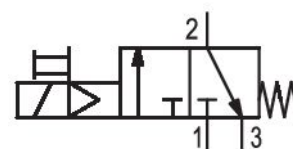
1 = contamination display 3 = Double nipple 4 = Key for E11 locking 5 = mortise lock 6 = Transition plate DO30 7 = Adapter, Series CON-VP 8 = Mounting aid DO16, form C 9 = Mounting aid DO16, M12 10 = Adapter for external pilot air 11 = Adapter pneumatic operation 12 = Sealing ring 13 = Reducing nipple

# 3/2-directional valve, electrically operated, Series AS5-SOV

R412009269

## General series information Series AS5

- The AVENTICS Series AS5 is a modular, versatile maintenance unit for universal application. This Series offers compact dimensions, is highly efficient, lightweight and easy-to-use. The AVENTICS Series AS guarantees reliability, safety, and efficiency with a simplified assembly and maintenance efforts.



## Technical data

Industry  
Industrial

Activation  
Electrically

Nominal flow Qn  
12500 l/min

Compressed air connection  
G 1

Working pressure min.  
2.5 bar

Working pressure max  
10 bar

DC operating voltage  
24 V

Sealing principle  
Soft Seal

Connection type  
Pipe connection

Parts  
3/2-directional valve

Can be assembled into blocks  
Can be assembled into blocks  
basic valve with electrical connector  
Basic valve with pilot valve

Type  
Poppet valve  
Min. ambient temperature  
-10 °C

Max. ambient temperature  
50 °C

Medium  
Compressed air

|                                    |                                      |
|------------------------------------|--------------------------------------|
| Neutral gases                      | Connector standard                   |
| Max. particle size                 | ISO 15217                            |
| 5 µm                               | Protection class with connection     |
| Compressed air connection, exhaust | IP65                                 |
| G 1/2                              | Reverse polarity protection          |
| Nominal flow Qn 1 to 2             | Protected against polarity reversal  |
| 12500 l/min                        | Electrical connection type 2         |
| Nominal flow Qn 2 to 3             | Plug                                 |
| 3700 l/min                         | Electrical connection 2, thread size |
| Power consumption DC               | ISO 15217, form C                    |
| 2 W                                | Weight                               |
| Duty cycle                         | 0.677 kg                             |
| 100 %                              |                                      |

## Material

|                                |                                 |
|--------------------------------|---------------------------------|
| Housing material               | Material front plate            |
| Polyamide                      | Acrylonitrile butadiene styrene |
| Seal material                  | Part No.                        |
| Acrylonitrile butadiene rubber | R412009269                      |
| Material threaded bushing      |                                 |
| Die cast zinc                  |                                 |

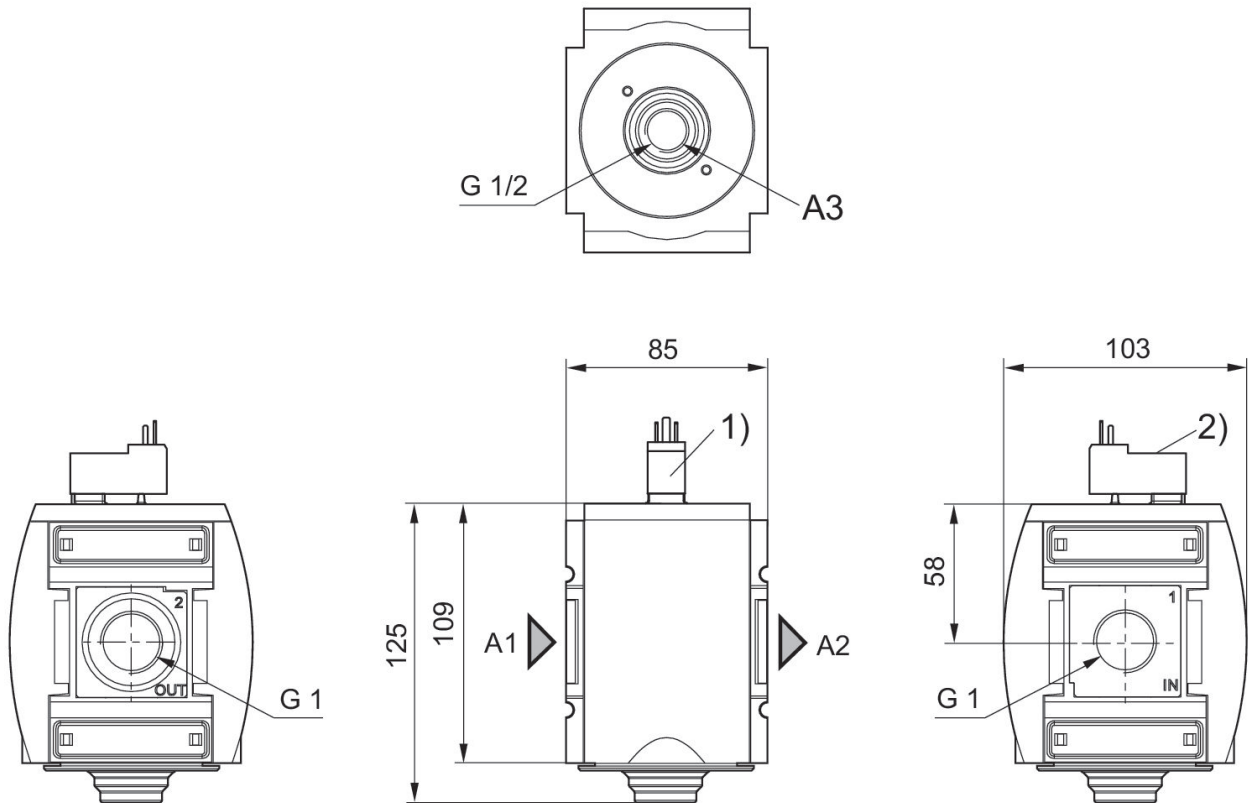
## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

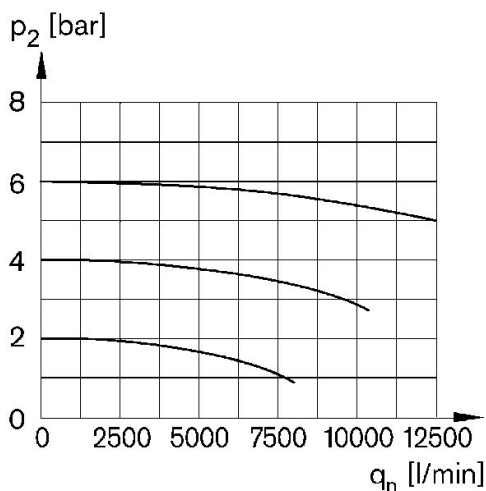
Nominal flow Qn with secondary pressure  $p_2 = 6 \text{ bar}$  at  $\Delta p = 1 \text{ bar}$

Dimensions in mm



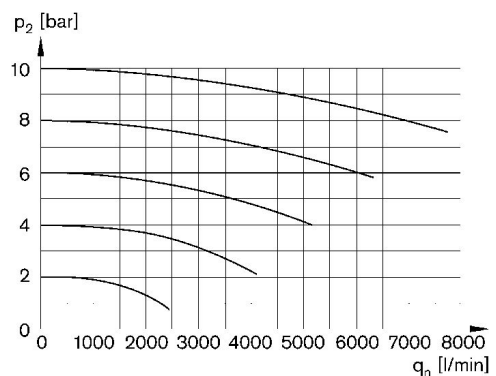
- A1 = input
- A2 = output
- A3 = ventilation port
- 1) For valve plug connectors according to ISO 15217 (form C)
- 2) Manual override

Flow rate characteristic  
 $p_2 = 0,05 - 7 \text{ bar}, 1 > 2$



$p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

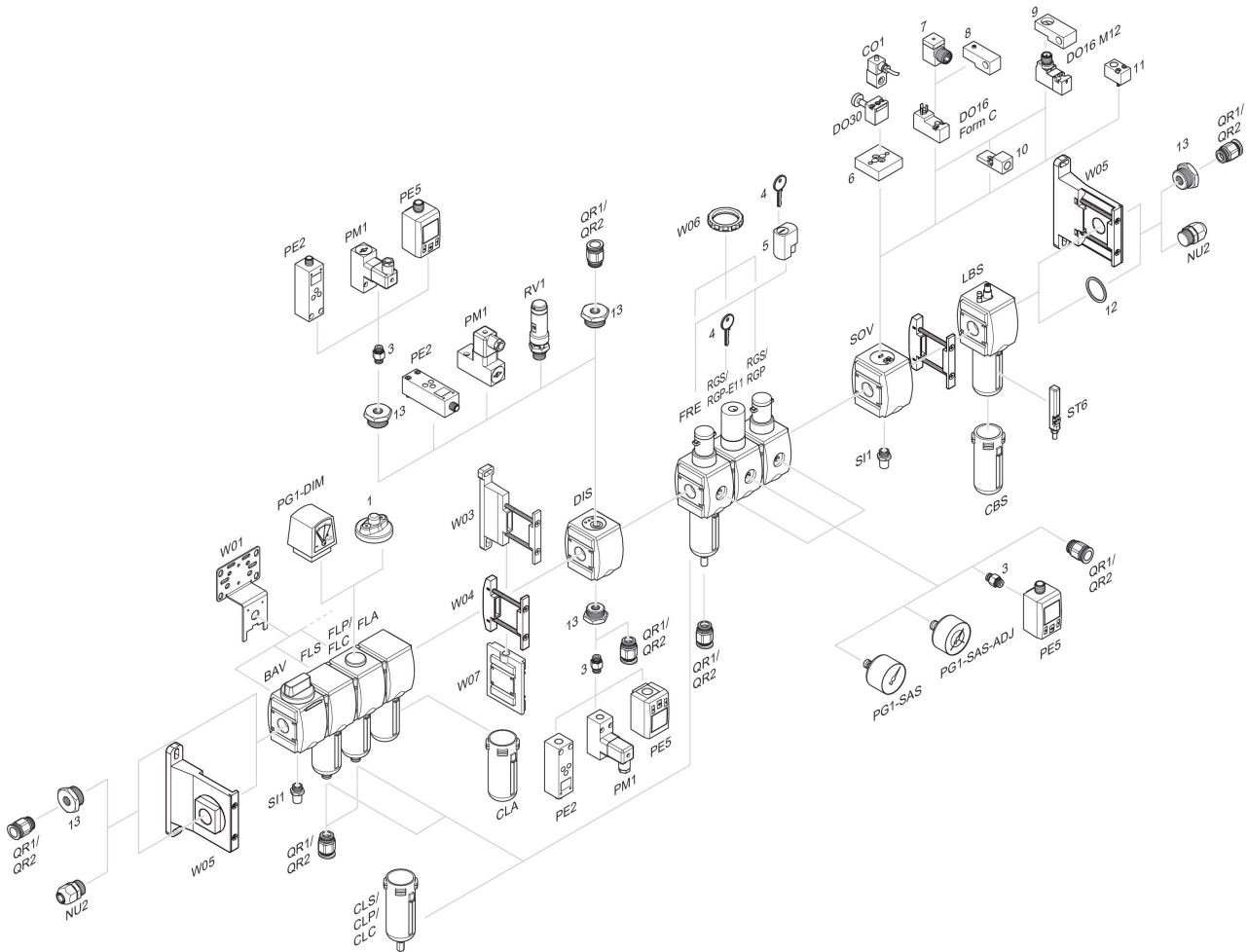
Rear exhaust  
 $2 > 3$



$p_2$  = Secondary pressure  
 $q_n$  = Nominal flow



## Accessories overview



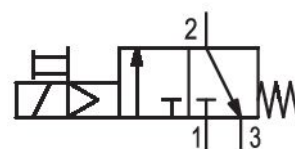
1 = contamination display 3 = Double nipple 4 = Key for E11 locking 5 = mortise lock 6 = Transition plate DO30 7 = Adapter, Series CON-VP 8 = Mounting aid DO16, form C 9 = Mounting aid DO16, M12 10 = Adapter for external pilot air 11 = Adapter pneumatic operation 12 = Sealing ring 13 = Reducing nipple

# 3/2-directional valve, electrically operated, Series AS5-SOV

R412009270

## General series information Series AS5

- The AVENTICS Series AS5 is a modular, versatile maintenance unit for universal application. This Series offers compact dimensions, is highly efficient, lightweight and easy-to-use. The AVENTICS Series AS guarantees reliability, safety, and efficiency with a simplified assembly and maintenance efforts.



## Technical data

Industry  
Industrial

Activation  
Electrically

Nominal flow Qn  
12500 l/min

Compressed air connection  
G 1

Working pressure min.  
2.5 bar

Working pressure max  
10 bar

Operational voltage AC at 50 Hz  
110 V

Operational voltage AC at 60 Hz  
110 V

Sealing principle  
Soft Seal

Connection type  
Pipe connection

Parts  
3/2-directional valve

Can be assembled into blocks  
Can be assembled into blocks

basic valve with electrical connector  
Basic valve with pilot valve

Type  
Poppet valve

Min. ambient temperature  
-10 °C

Max. ambient temperature  
50 °C

**Medium**

Compressed air  
Neutral gases

**Max. particle size**

5 µm

**Compressed air connection, exhaust**  
G 1/2

**Nominal flow Qn 1 to 2**

12500 l/min

**Nominal flow Qn 2 to 3**

3700 l/min

**Holding power AC 50 Hz**

1.6 VA

**Holding power AC 60 Hz**

1.4 VA

**Switch-on power AC 50 Hz**

2.2 VA

**Switch-on power AC 60 Hz**

1.6 VA

**Duty cycle**

100 %

**Connector standard**

ISO 15217

**Protection class with connection**

IP65

**Reverse polarity protection**

Protected against polarity reversal

**Electrical connection type 2**

Plug

**Electrical connection 2, thread size**

ISO 15217, form C

**Weight**

0.677 kg

## Material

**Housing material**

Polyamide

**Seal material**

Acrylonitrile butadiene rubber

**Material threaded bushing**

Die cast zinc

**Material front plate**

Acrylonitrile butadiene styrene

**Part No.**

R412009270

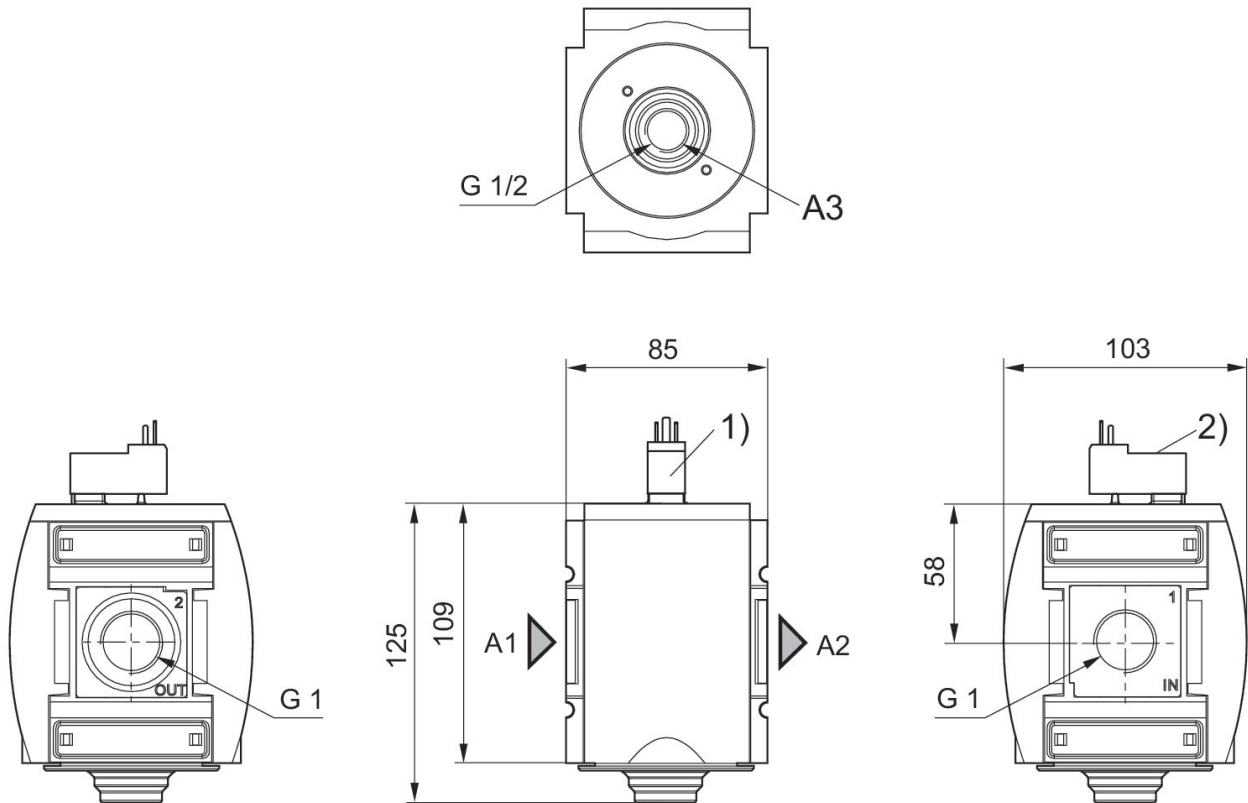
## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Nominal flow Qn with secondary pressure p2 = 6 bar at Δp = 1 bar

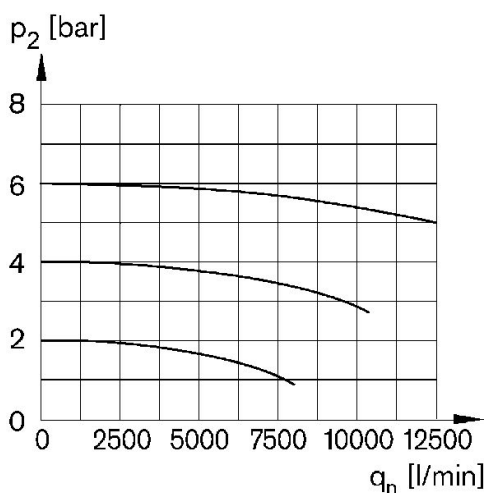
## Dimensions in mm



- A1 = input
- A2 = output
- A3 = ventilation port
- 1) For valve plug connectors according to ISO 15217 (form C)
- 2) Manual override

## Flow rate characteristic

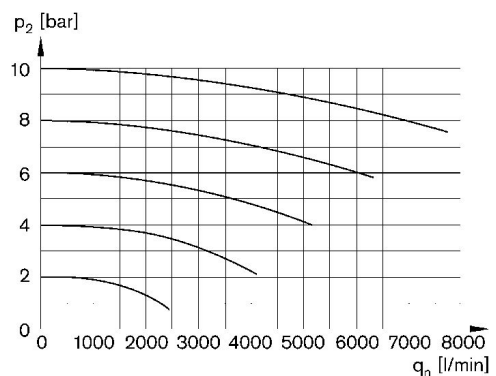
$p_2 = 0,05 - 7 \text{ bar}$ ,  $1 > 2$



$p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

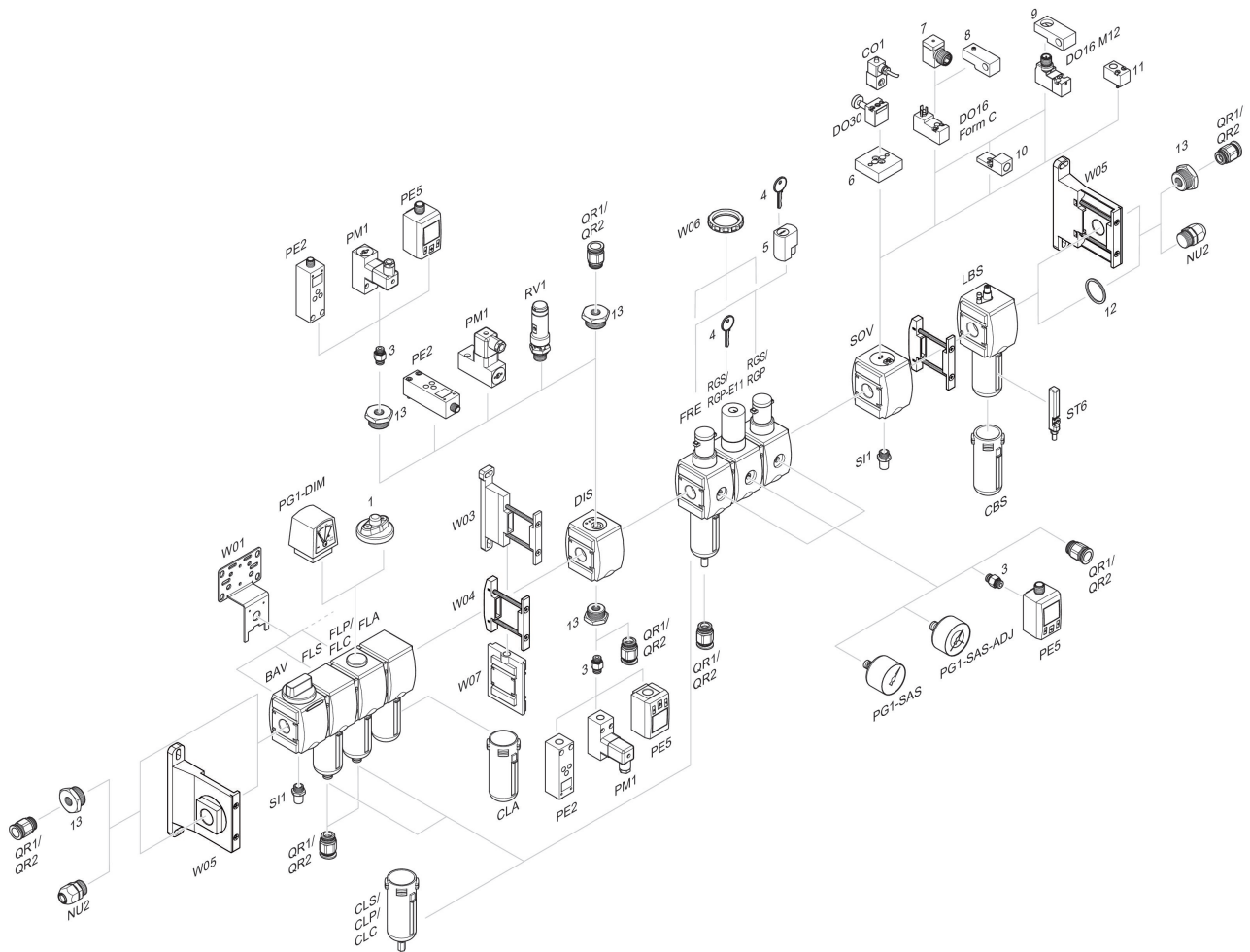
## Rear exhaust

$2 > 3$



$p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

### Accessories overview



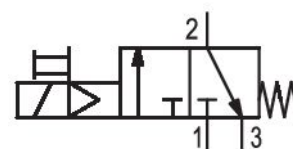
1 = contamination display 3 = Double nipple 4 = Key for E11 locking 5 = mortise lock 6 = Transition plate DO30 7 = Adapter, Series CON-VP 8 = Mounting aid DO16, form C 9 = Mounting aid DO16, M12 10 = Adapter for external pilot air 11 = Adapter pneumatic operation 12 = Sealing ring 13 = Reducing nipple

# 3/2-directional valve, electrically operated, Series AS5-SOV

R412009271

## General series information Series AS5

- The AVENTICS Series AS5 is a modular, versatile maintenance unit for universal application. This Series offers compact dimensions, is highly efficient, lightweight and easy-to-use. The AVENTICS Series AS guarantees reliability, safety, and efficiency with a simplified assembly and maintenance efforts.



## Technical data

Industry  
Industrial

Activation  
Electrically

Nominal flow Qn  
12500 l/min

Compressed air connection  
G 1

Working pressure min.  
2.5 bar

Working pressure max  
10 bar

Operational voltage AC at 50 Hz  
220 V

Operational voltage AC at 60 Hz  
230 V

Sealing principle  
Soft Seal

Connection type  
Pipe connection

Parts  
3/2-directional valve

Can be assembled into blocks  
Can be assembled into blocks

basic valve with electrical connector  
Basic valve with pilot valve

Type  
Poppet valve

Min. ambient temperature  
-10 °C

Max. ambient temperature  
50 °C

#### Medium

Compressed air  
Neutral gases

#### Max. particle size

5 µm

Compressed air connection, exhaust  
G 1/2

#### Nominal flow Qn 1 to 2

12500 l/min

#### Nominal flow Qn 2 to 3

3700 l/min

#### Holding power AC 50 Hz

1.6 VA

#### Holding power AC 60 Hz

1.4 VA

#### Switch-on power AC 50 Hz

2.2 VA

#### Switch-on power AC 60 Hz

1.6 VA

#### Duty cycle

100 %

#### Connector standard

ISO 15217

#### Protection class with connection

IP65

#### Reverse polarity protection

Protected against polarity reversal

#### Electrical connection type 2

Plug

#### Electrical connection 2, thread size

ISO 15217, form C

#### Weight

0.677 kg

## Material

#### Housing material

Polyamide

#### Seal material

Acrylonitrile butadiene rubber

#### Material threaded bushing

Die cast zinc

#### Material front plate

Acrylonitrile butadiene styrene

#### Part No.

R412009271

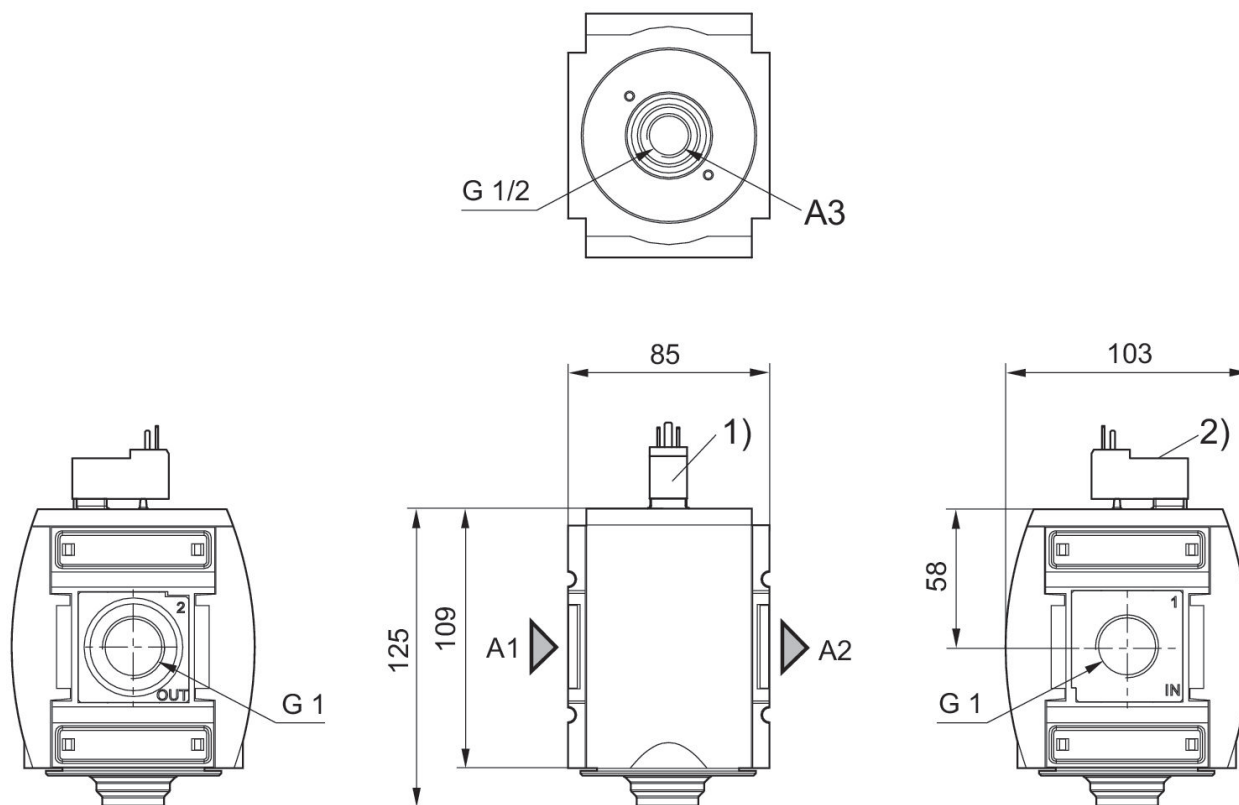
## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Nominal flow Qn with secondary pressure p2 = 6 bar at Δp = 1 bar

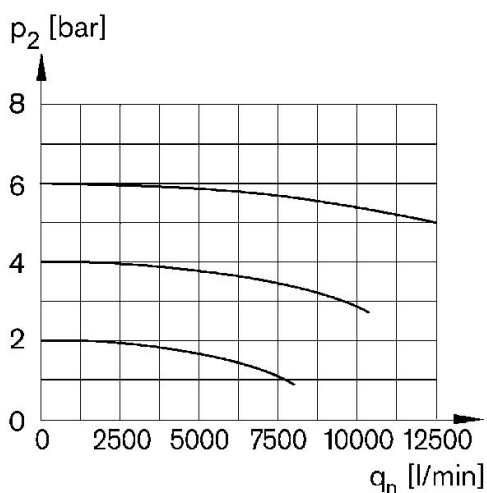
## Dimensions in mm



- A1 = input
- A2 = output
- A3 = ventilation port
- 1) For valve plug connectors according to ISO 15217 (form C)
- 2) Manual override

## Flow rate characteristic

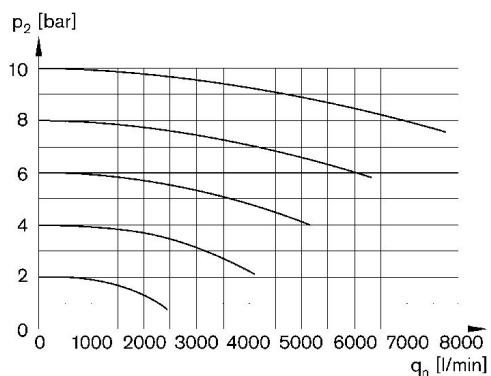
$p_2 = 0,05 - 7 \text{ bar}$ ,  $1 > 2$



$p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

## Rear exhaust

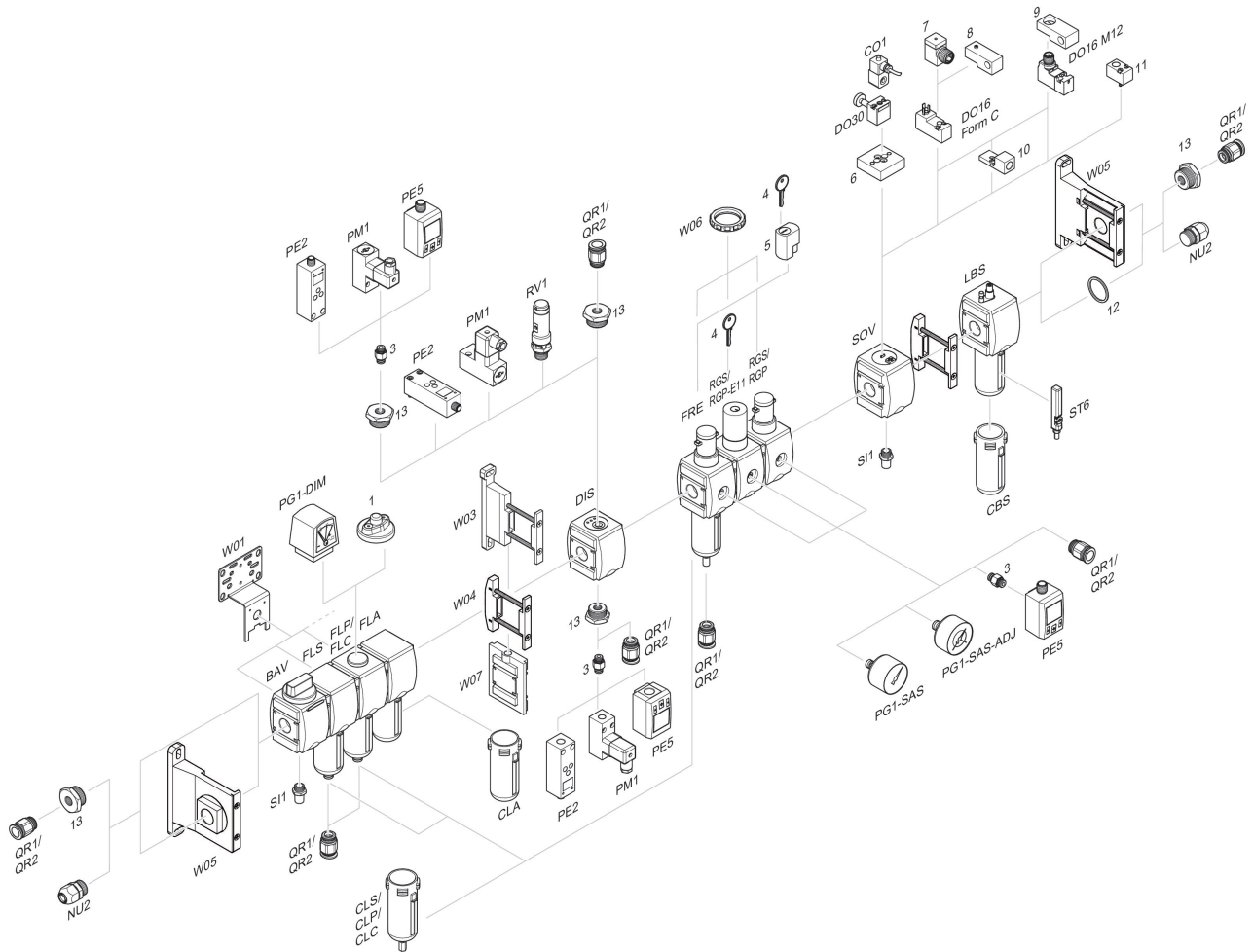
$2 > 3$



$p_2$  = Secondary pressure  
 $q_n$  = Nominal flow



Accessories overview



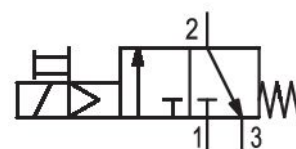
1 = contamination display 3 = Double nipple 4 = Key for E11 locking 5 = mortise lock 6 = Transition plate DO30 7 = Adapter, Series CON-VP 8 = Mounting aid DO16, form C 9 = Mounting aid DO16, M12 10 = Adapter for external pilot air 11 = Adapter pneumatic operation 12 = Sealing ring 13 = Reducing nipple

# 3/2-directional valve, electrically operated, Series AS5-SOV

R412009375

## General series information Series AS5

- The AVENTICS Series AS5 is a modular, versatile maintenance unit for universal application. This Series offers compact dimensions, is highly efficient, lightweight and easy-to-use. The AVENTICS Series AS guarantees reliability, safety, and efficiency with a simplified assembly and maintenance efforts.



## Technical data

Industry  
Industrial

Activation  
Electrically

Nominal flow  $Q_n$   
12500 l/min

Working pressure min.  
2.5 bar

Working pressure max  
10 bar

DC operating voltage  
24 V

Sealing principle  
Soft Seal

Connection type  
Pipe connection

Can be assembled into blocks  
Can be assembled into blocks

basic valve with electrical connector  
Basic valve with pilot valve

Type  
Poppet valve

Min. ambient temperature  
-10 °C

Max. ambient temperature  
50 °C

Min. medium temperature  
-10 °C

Max. medium temperature  
50 °C

#### Medium

Compressed air  
Neutral gases

Max. particle size  
25 µm

Compressed air connection, exhaust  
G 1/2

Nominal flow Qn 1 to 2  
12500 l/min

Nominal flow Qn 2 to 3  
3700 l/min

Power consumption DC  
2 W

Duty cycle  
100 %

Protection class with connection  
IP65

Electrical connection type 2  
Plug

Electrical connection 2, thread size  
M12x1

Weight  
0.65 kg

## Material

Housing material  
Polyamide

Seal material  
Acrylonitrile butadiene rubber

Material threaded bushing  
Die cast zinc

Material front plate  
Acrylonitrile butadiene styrene

Part No.  
R412009375

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

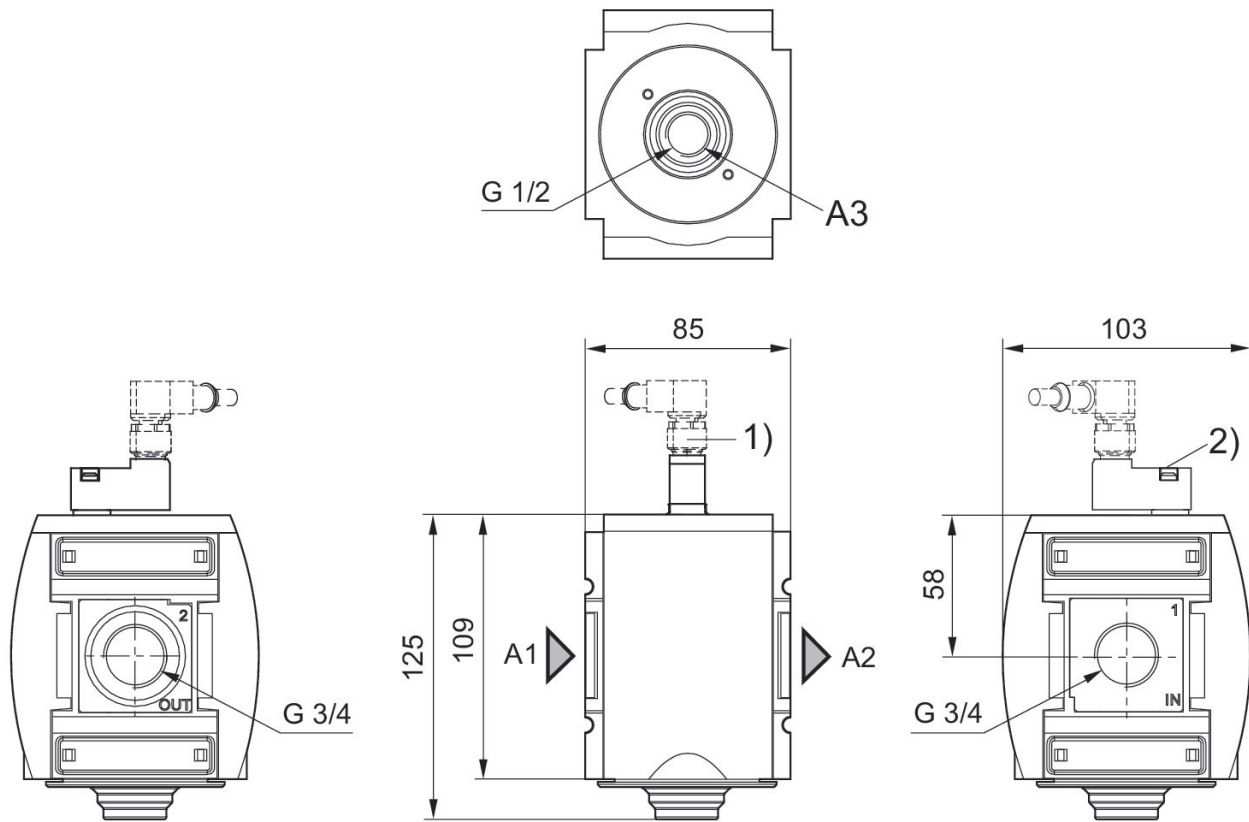
The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

The oil content of compressed air must remain constant during the life cycle.

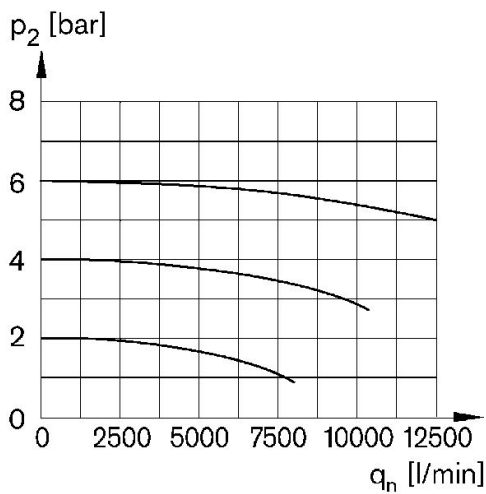
Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in <https://www.emerson.com/en-us/support>).

Dimensions in mm



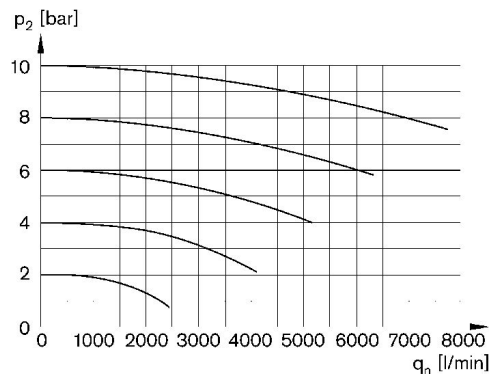
- A1 = input
- A2 = output
- A3 = ventilation port
- 1) plug M12
- 2) Manual override

Flow rate characteristic  
 $p_2 = 0,05 - 7 \text{ bar}, 1 > 2$



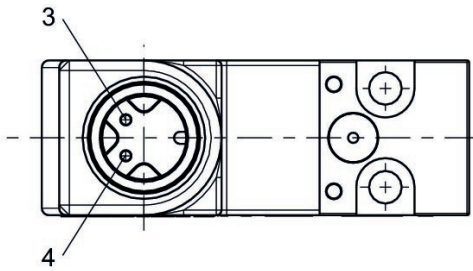
$p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

Rear exhaust  
 $2 > 3$



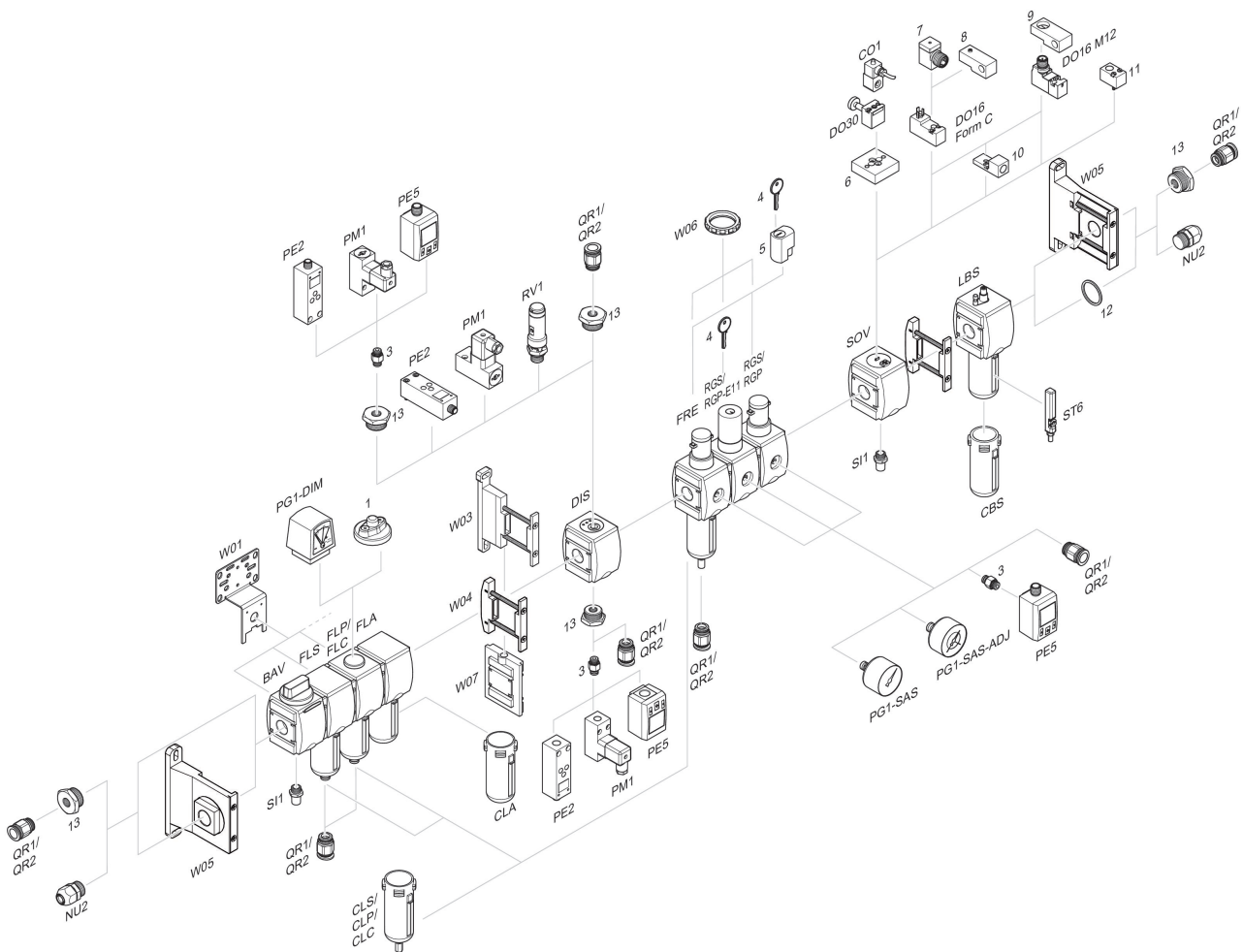
$p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

### Pin assignment M12x1



3: +/-  
 4: +/-

### Accessories overview



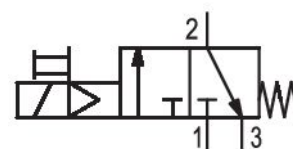
1 = contamination display 3 = Double nipple 4 = Key for E11 locking 5 = mortise lock 6 = Transition plate DO30 7 = Adapter, Series CON-VP 8 = Mounting aid DO16, form C 9 = Mounting aid DO16, M12 10 = Adapter for external pilot air 11 = Adapter pneumatic operation 12 = Sealing ring 13 = Reducing nipple

# 3/2-directional valve, electrically operated, Series AS5-SOV

R412009376

## General series information Series AS5

- The AVENTICS Series AS5 is a modular, versatile maintenance unit for universal application. This Series offers compact dimensions, is highly efficient, lightweight and easy-to-use. The AVENTICS Series AS guarantees reliability, safety, and efficiency with a simplified assembly and maintenance efforts.



## Technical data

Industry  
Industrial

Activation  
Electrically

Nominal flow Qn  
12500 l/min

Compressed air connection  
G 1

Working pressure min.  
2.5 bar

Working pressure max  
10 bar

DC operating voltage  
24 V

Sealing principle  
Soft Seal

Connection type  
Pipe connection

Parts  
3/2-directional valve

Can be assembled into blocks  
Can be assembled into blocks  
basic valve with electrical connector  
Basic valve with pilot valve

Type  
Poppet valve  
Min. ambient temperature  
-10 °C

Max. ambient temperature  
50 °C

Medium  
Compressed air

|                                    |                                      |
|------------------------------------|--------------------------------------|
| Neutral gases                      | Power consumption DC                 |
| Max. particle size                 | 2 W                                  |
| 5 µm                               | Protection class with connection     |
| Compressed air connection, exhaust | IP65                                 |
| G 1/2                              | Electrical connection type 2         |
| Nominal flow Qn 1 to 2             | Plug                                 |
| 12500 l/min                        | Electrical connection 2, thread size |
| Nominal flow Qn 2 to 3             | M12x1                                |
| 3700 l/min                         | Weight                               |
|                                    | 0.65 kg                              |

## Material

|                                |                                 |
|--------------------------------|---------------------------------|
| Housing material               | Material front plate            |
| Polyamide                      | Acrylonitrile butadiene styrene |
| Seal material                  | Part No.                        |
| Acrylonitrile butadiene rubber | R412009376                      |
| Material threaded bushing      |                                 |
| Die cast zinc                  |                                 |

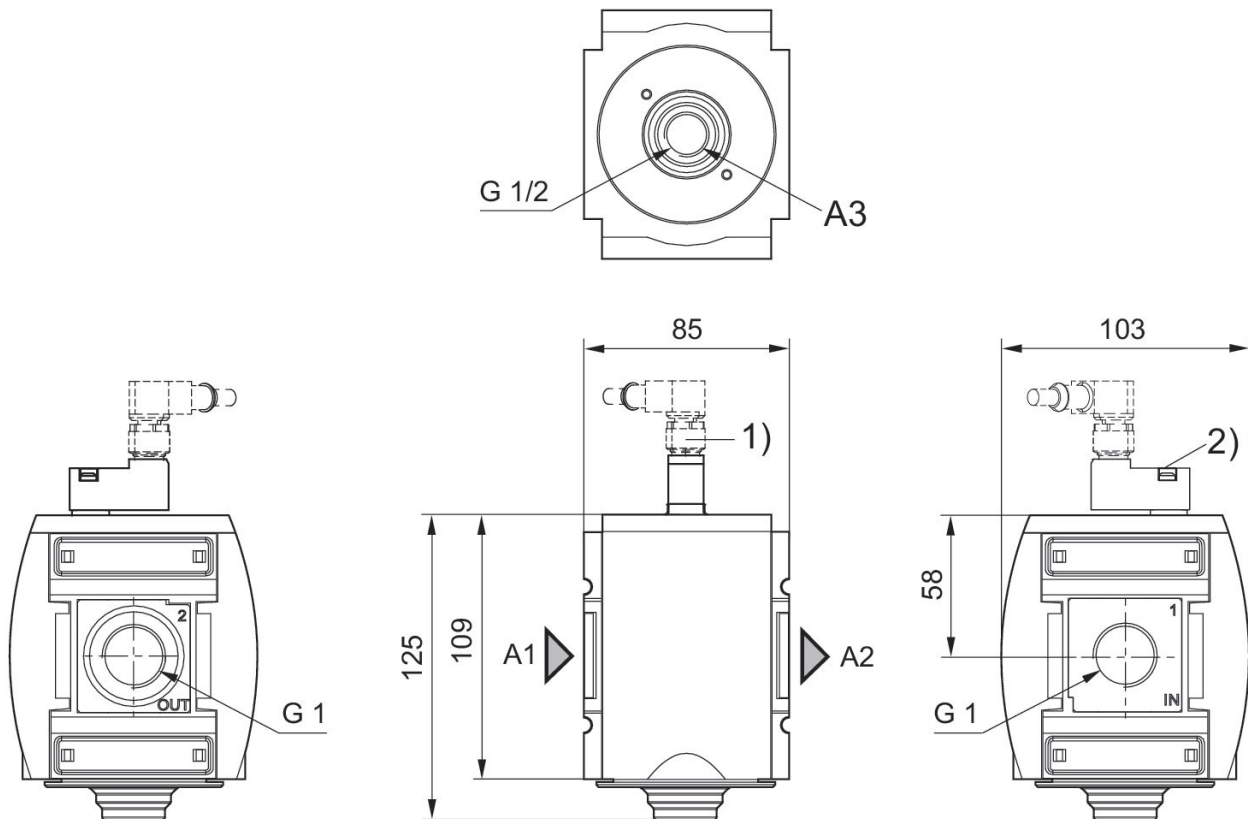
## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Nominal flow Qn with secondary pressure  $p_2 = 6$  bar at  $\Delta p = 1$  bar

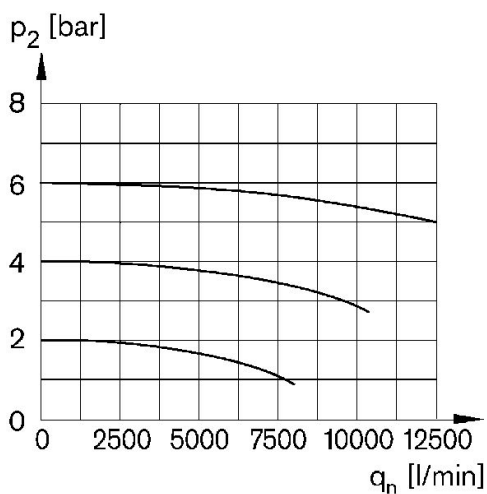
### Dimensions in mm



- A1 = input
- A2 = output
- A3 = ventilation port
- 1) plug M12
- 2) Manual override

### Flow rate characteristic

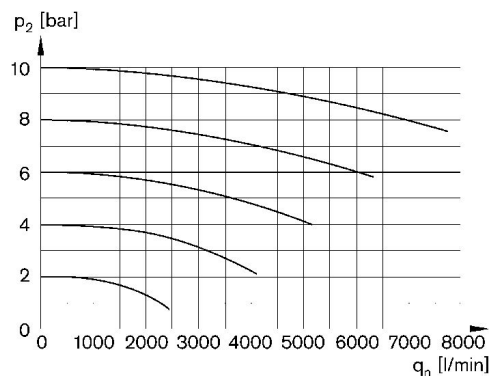
$p_2 = 0,05 - 7 \text{ bar}, 1 > 2$



$p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

### Rear exhaust

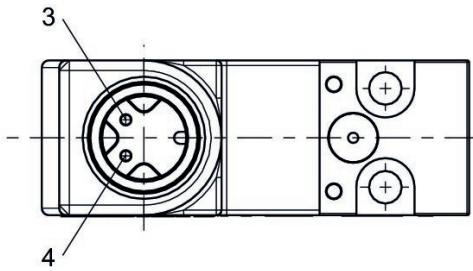
$2 > 3$



$p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

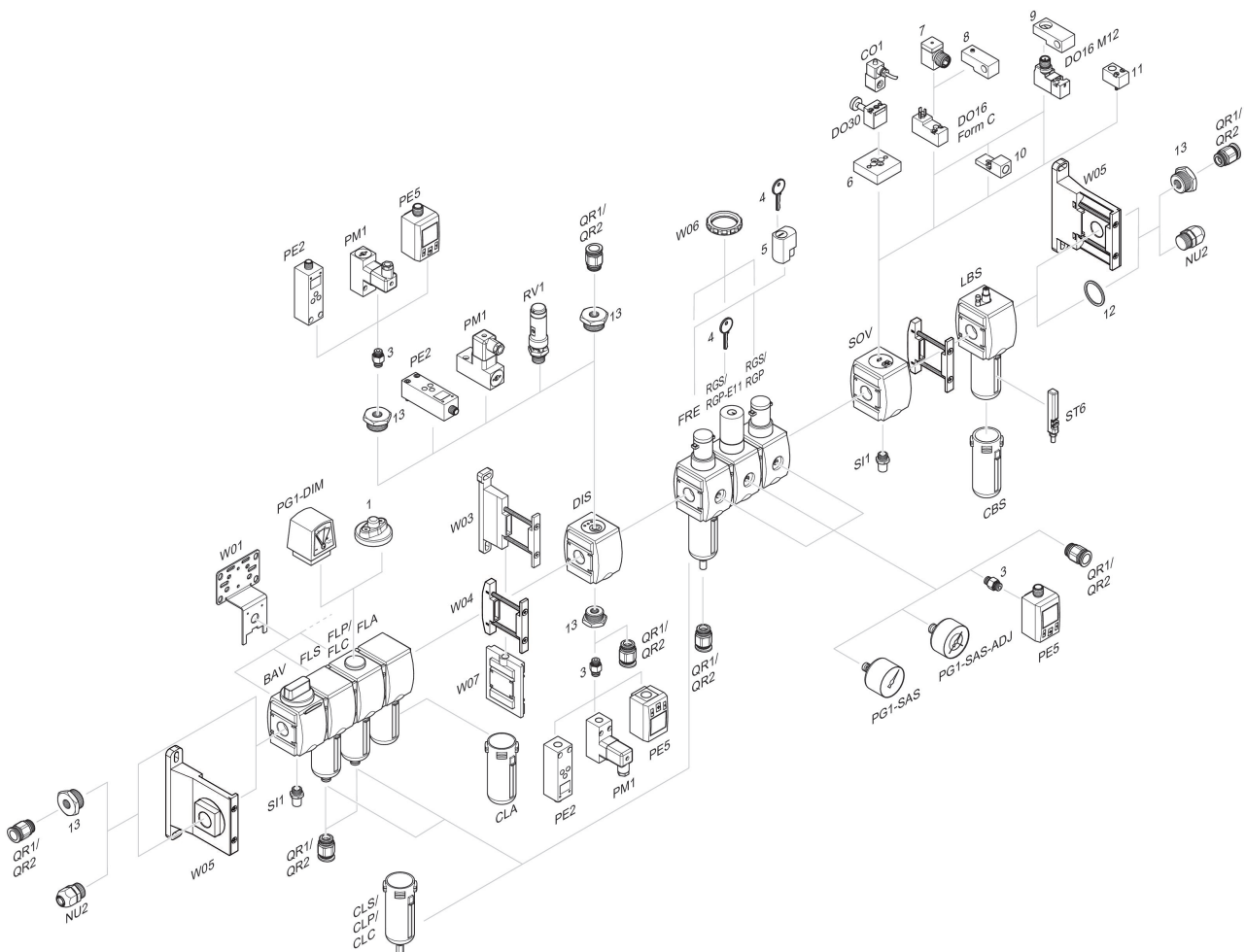


### Pin assignment M12x1



3: +/-  
 4: +/-

### Accessories overview



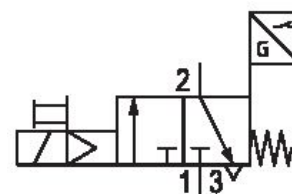
1 = contamination display 3 = Double nipple 4 = Key for E11 locking 5 = mortise lock 6 = Transition plate DO30 7 = Adapter, Series CON-VP 8 = Mounting aid DO16, form C 9 = Mounting aid DO16, M12 10 = Adapter for external pilot air 11 = Adapter pneumatic operation 12 = Sealing ring 13 = Reducing nipple

# 3/2-directional valve, electrically operated, Series AS5-SOV-...-POS

R412009382

## General series information Series AS5

- The AVENTICS Series AS5 is a modular, versatile maintenance unit for universal application. This Series offers compact dimensions, is highly efficient, lightweight and easy-to-use. The AVENTICS Series AS guarantees reliability, safety, and efficiency with a simplified assembly and maintenance efforts.



## Technical data

|                              |   |
|------------------------------|---|
| Industry                     | Industrial                                    |
| Type                         | With position inquiry, with integrated sensor |
| Activation                   | Electrically                                  |
| Nominal flow Qn              | 12500 l/min                                   |
| Compressed air connection    | G 3/4   |
| Working pressure min.        | 2.5 bar                                       |
| Working pressure max         | 10 bar  |
| DC operating voltage         | 24 V  |
| Sealing principle            | soft seal                                     |
| Parts                        | 3/2-directional valve                         |
| Can be assembled into blocks | Can be assembled into blocks                  |
| Type                         | Poppet valve                                  |
| Min. ambient temperature     | -10 °C  |

|                                      |                                      |
|--------------------------------------|--------------------------------------|
| Max. ambient temperature             | 50 °C                                |
| Medium                               | Compressed air<br>Neutral gases      |
| Max. particle size                   | 25 µm                                |
| Compressed air connection, exhaust   | G 1/2                                |
| Nominal flow Qn 1 to 2               | 12500 l/min                          |
| Nominal flow Qn 2 to 3               | 3700 l/min                           |
| Power consumption DC                 | 2 W                                  |
| Protection class with connection     | IP65                                 |
| Electrical connection type 2         | Plug                                 |
| Electrical connection 2, thread size | ISO 15217, form C                    |
| Electrical connection for sensor     | without wire end ferrule, tin-plated |
| Cable length sensor                  | 3 m                                  |
| Weight                               | 0.459 kg                             |

## Material

|                           |                                 |
|---------------------------|---------------------------------|
| Housing material          | Polyamide                       |
| Seal material             | Acrylonitrile butadiene rubber  |
| Material threaded bushing | Die cast zinc                   |
| Material front plate      | Acrylonitrile butadiene styrene |
| Part No.                  | R412009382                      |

## Technical information

The pressure dew point must be at least 15 °C less than ambient and medium temperature and may not exceed 3 °C.

Nominal flow Qn with secondary pressure  $p_2 = 6$  bar at  $\Delta p = 1$  bar

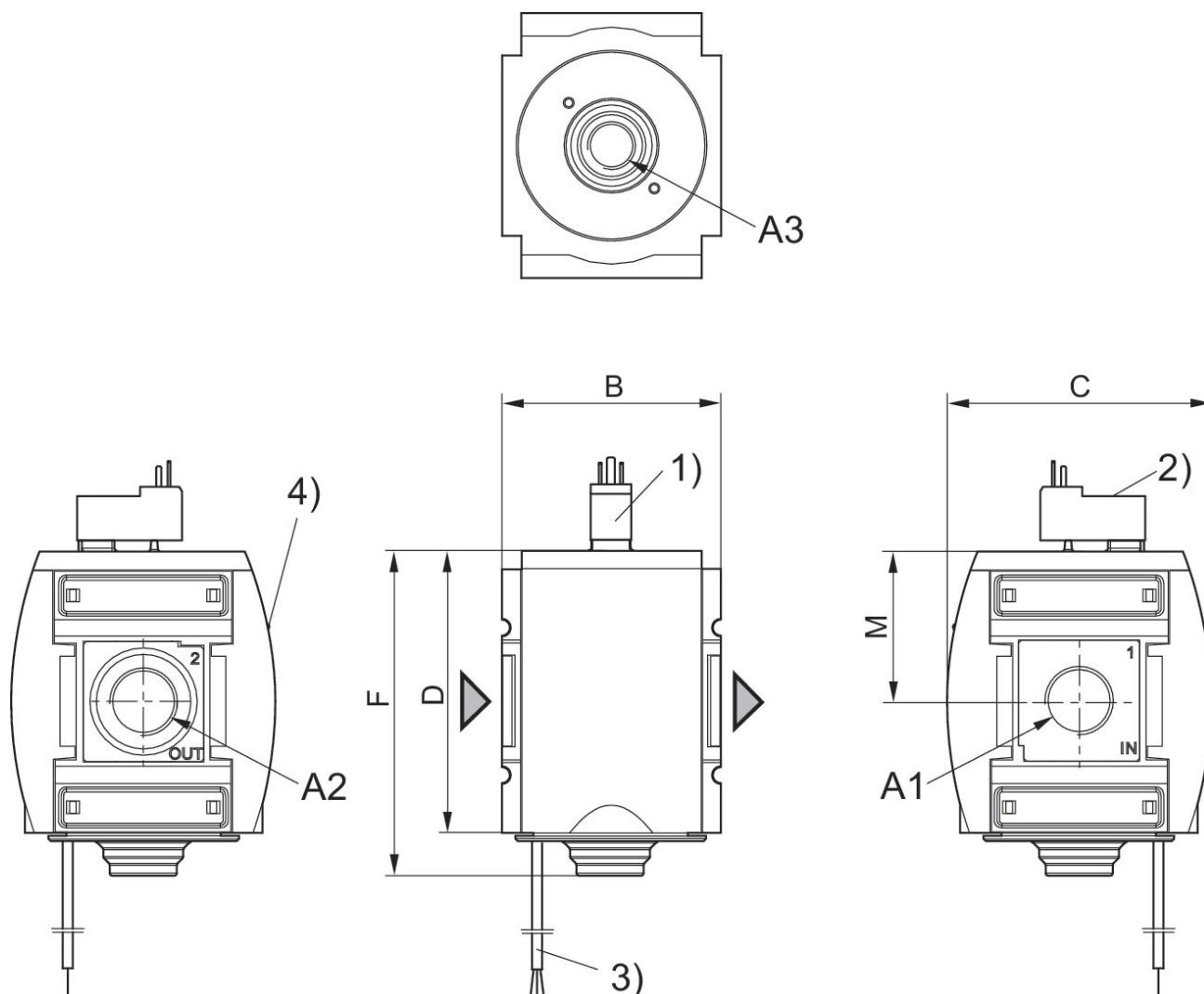
A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

The sensor signal is visible on the front of the cover.

Electronic sensor R412003658 included in scope of delivery (assembled).

An ST6 sensor (contactless) is used to detect the switching position in the non-actuated state (position: exhaust).

### 3/2-directional valve with pilot valve and port for electrical connector form C



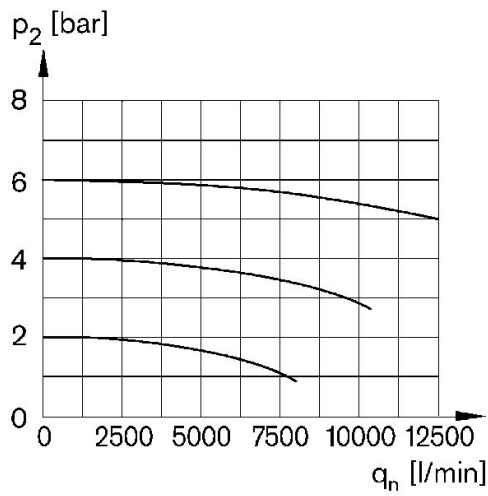
- A1 = input A2 = output A3 = ventilation port  
 1) Electr. connection: valve plug connector form C, ISO 15217  
 2) Manual override  
 3) For version with sensor: cable length 3 m PUR.  
 4) Optical switch status indicator

### Dimensions in mm

| Part No.   | A1    | A2    | A3    | B  | C   | D   | F   | M  |
|------------|-------|-------|-------|----|-----|-----|-----|----|
| R412009382 | G 3/4 | G 3/4 | G 1/2 | 85 | 103 | 109 | 125 | 58 |
| R412009388 | G 1   | G 1   | G 1/2 | 85 | 103 | 109 | 125 | 58 |

### Flow rate characteristic

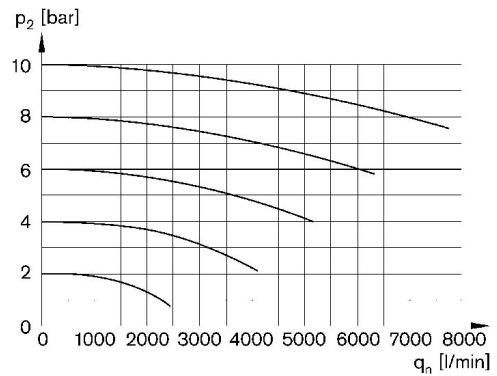
$p_2 = 0,05 - 7 \text{ bar}, 1 > 2$



$p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

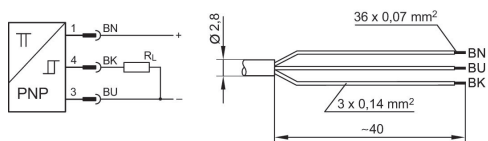
### Rear exhaust

$2 > 3$



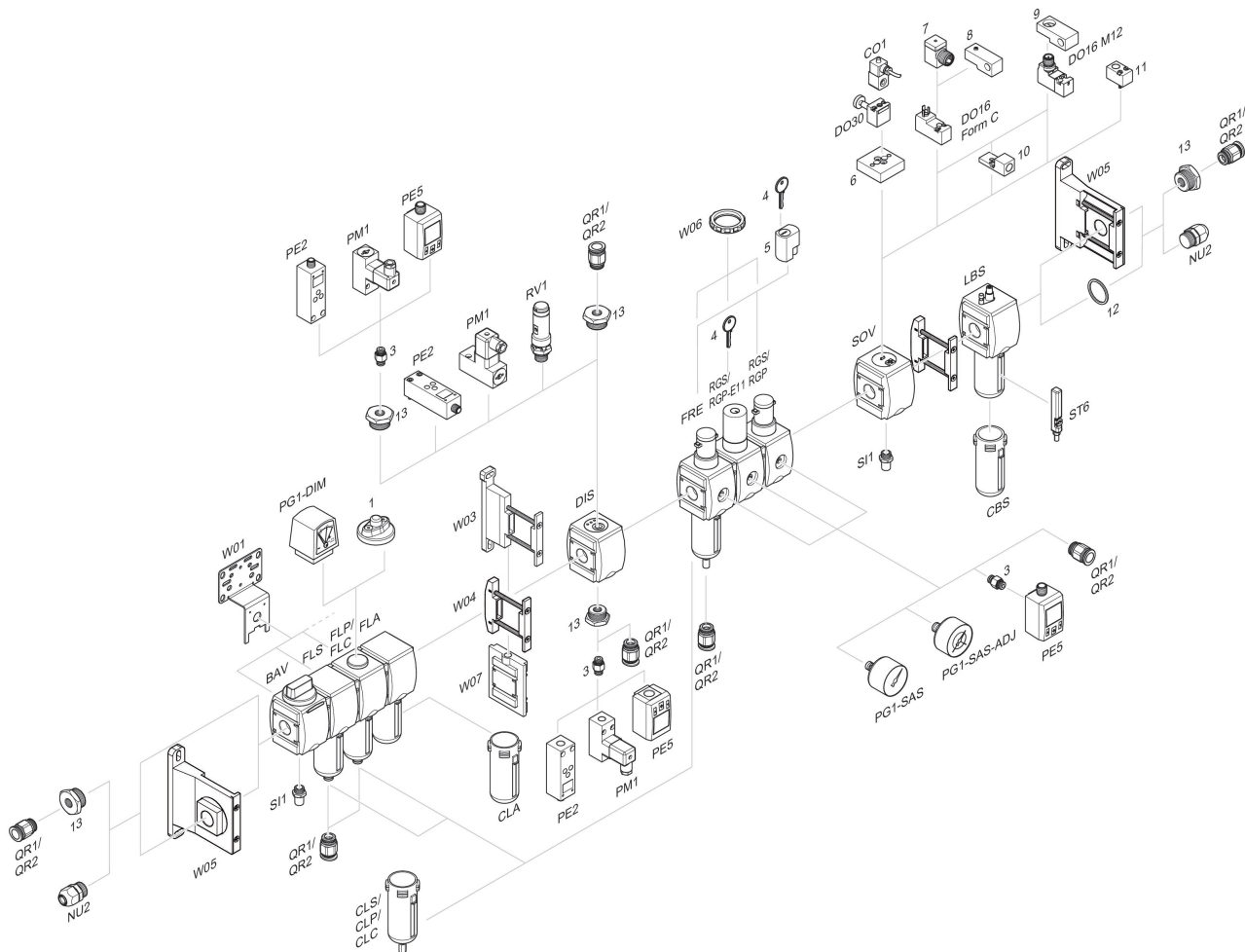
$p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

### Sensor pin assignment, tin-plated wire ends



BN = brown  
 BK = black  
 BU = blue

## Accessories overview



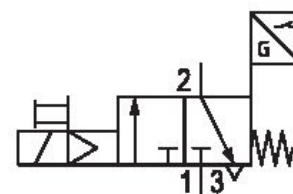
1 = contamination display 3 = Double nipple 4 = Key for E11 locking 5 = mortise lock 6 = Transition plate DO30 7 = Adapter, Series CON-VP 8 = Mounting aid DO16, form C 9 = Mounting aid DO16, M12 10 = Adapter for external pilot air 11 = Adapter pneumatic operation 12 = Sealing ring 13 = Reducing nipple

# 3/2-directional valve, electrically operated, Series AS5-SOV-...-POS

R412009388

## General series information Series AS5

- The AVENTICS Series AS5 is a modular, versatile maintenance unit for universal application. This Series offers compact dimensions, is highly efficient, lightweight and easy-to-use. The AVENTICS Series AS guarantees reliability, safety, and efficiency with a simplified assembly and maintenance efforts.



## Technical data

|                              |   |
|------------------------------|---|
| Industry                     | Industrial                                    |
| Type                         | With position inquiry, with integrated sensor |
| Activation                   | Electrically                                  |
| Nominal flow Qn              | 12500 l/min                                   |
| Compressed air connection    | G 1   |
| Working pressure min.        | 2.5 bar                                       |
| Working pressure max         | 10 bar  |
| DC operating voltage         | 24 V  |
| Sealing principle            | soft seal                                     |
| Parts                        | 3/2-directional valve                         |
| Can be assembled into blocks | Can be assembled into blocks                  |
| Type                         | Poppet valve                                  |
| Min. ambient temperature     | -10 °C  |

|                                      |                                      |
|--------------------------------------|--------------------------------------|
| Max. ambient temperature             | 50 °C                                |
| Medium                               | Compressed air<br>Neutral gases      |
| Max. particle size                   | 25 µm                                |
| Compressed air connection, exhaust   | G 1/2                                |
| Nominal flow Qn 1 to 2               | 12500 l/min                          |
| Nominal flow Qn 2 to 3               | 3700 l/min                           |
| Power consumption DC                 | 2 W                                  |
| Protection class with connection     | IP65                                 |
| Electrical connection type 2         | Plug                                 |
| Electrical connection 2, thread size | ISO 15217, form C                    |
| Electrical connection for sensor     | without wire end ferrule, tin-plated |
| Cable length sensor                  | 3 m                                  |
| Weight                               | 0.459 kg                             |

## Material

|                           |                                 |
|---------------------------|---------------------------------|
| Housing material          | Polyamide                       |
| Seal material             | Acrylonitrile butadiene rubber  |
| Material threaded bushing | Die cast zinc                   |
| Material front plate      | Acrylonitrile butadiene styrene |
| Part No.                  | R412009388                      |

## Technical information

The pressure dew point must be at least 15 °C less than ambient and medium temperature and may not exceed 3 °C.

Nominal flow Qn with secondary pressure  $p_2 = 6$  bar at  $\Delta p = 1$  bar

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

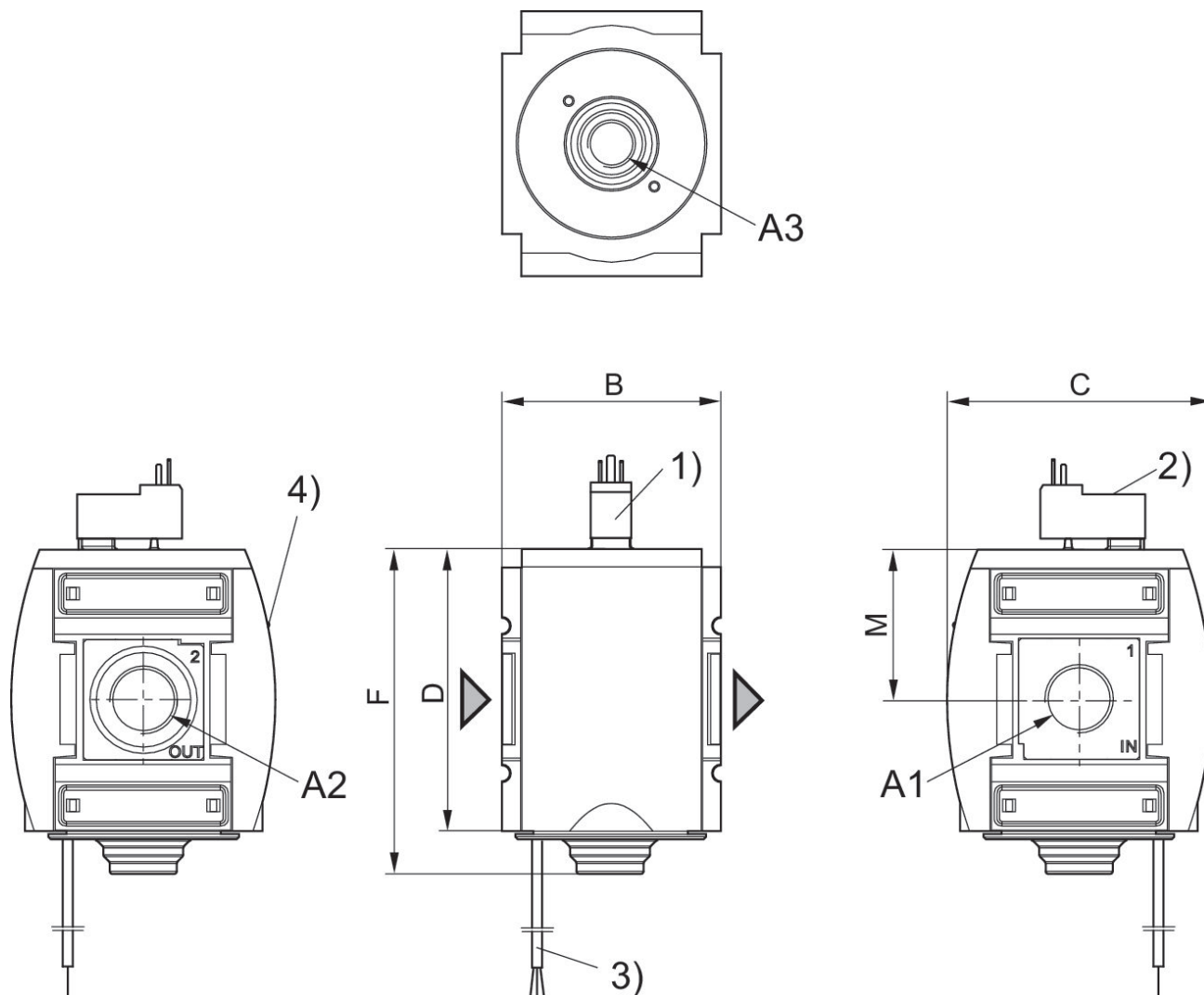
The sensor signal is visible on the front of the cover.

Electronic sensor R412003658 included in scope of delivery (assembled).

An ST6 sensor (contactless) is used to detect the switching position in the non-actuated state (position: exhaust).



### 3/2-directional valve with pilot valve and port for electrical connector form C



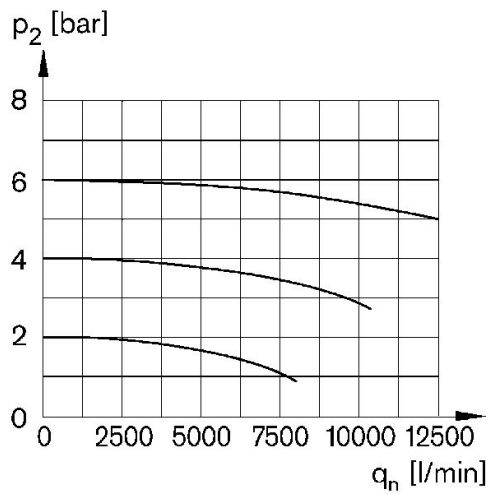
- A1 = input A2 = output A3 = ventilation port  
 1) Electr. connection: valve plug connector form C, ISO 15217  
 2) Manual override  
 3) For version with sensor: cable length 3 m PUR.  
 4) Optical switch status indicator

### Dimensions in mm

| Part No.   | A1    | A2    | A3    | B  | C   | D   | F   | M  |
|------------|-------|-------|-------|----|-----|-----|-----|----|
| R412009382 | G 3/4 | G 3/4 | G 1/2 | 85 | 103 | 109 | 125 | 58 |
| R412009388 | G 1   | G 1   | G 1/2 | 85 | 103 | 109 | 125 | 58 |

### Flow rate characteristic

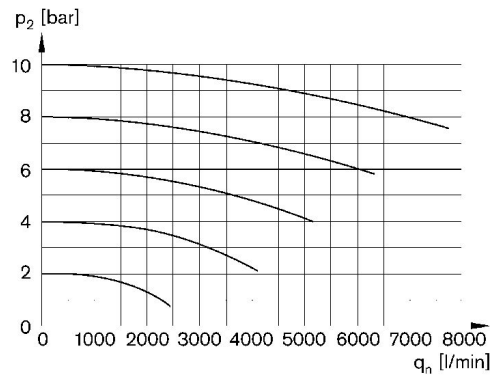
$p_2 = 0,05 - 7 \text{ bar}$ ,  $1 > 2$



$p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

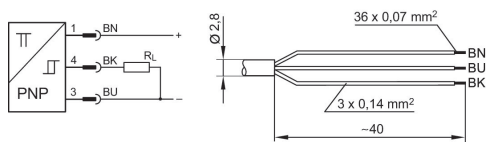
### Rear exhaust

$2 > 3$



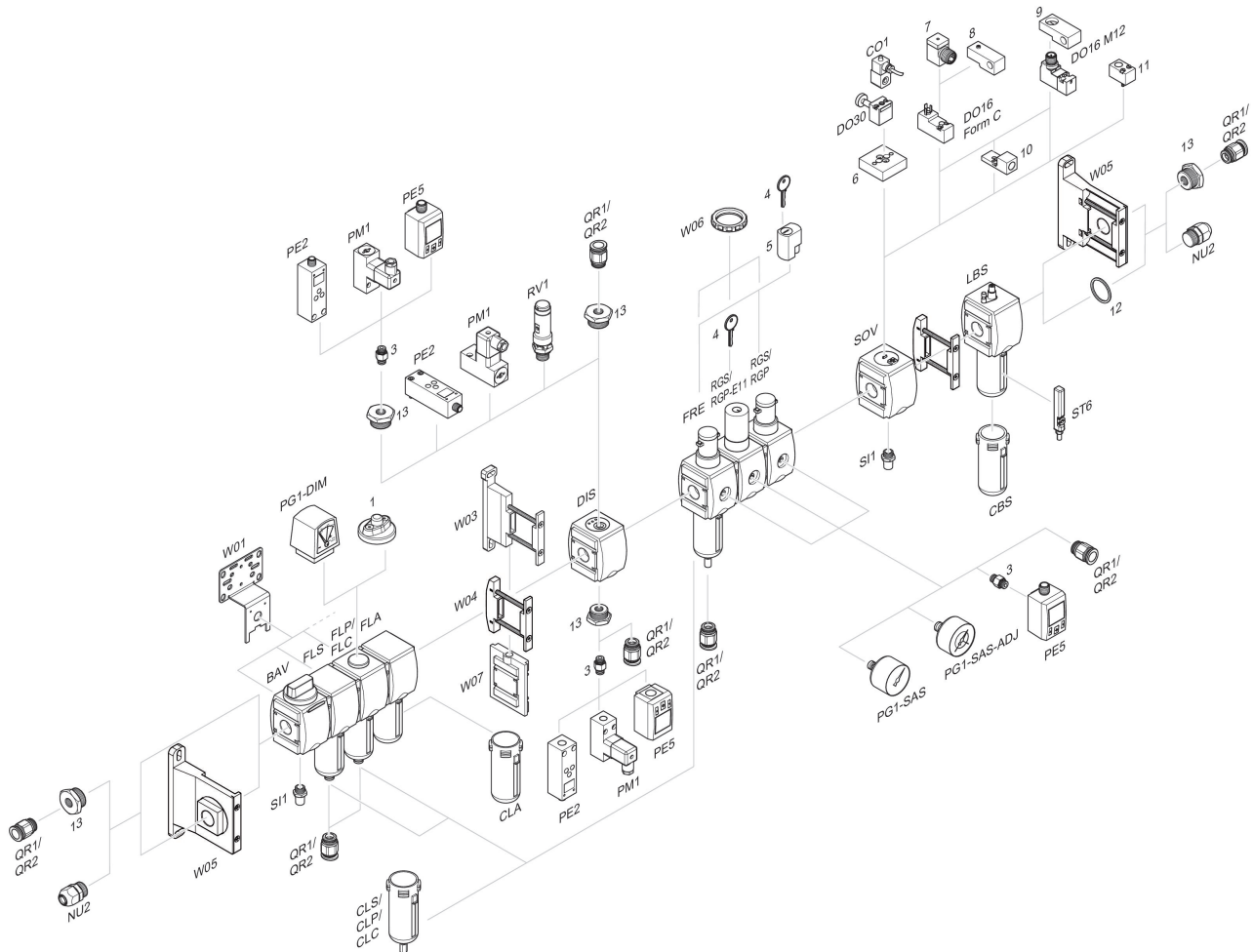
$p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

### Sensor pin assignment, tin-plated wire ends



BN = brown  
 BK = black  
 BU = blue

## Accessories overview



1 = contamination display 3 = Double nipple 4 = Key for E11 locking 5 = mortise lock 6 = Transition plate DO30 7 = Adapter, Series CON-VP 8 = Mounting aid DO16, form C 9 = Mounting aid DO16, M12 10 = Adapter for external pilot air 11 = Adapter pneumatic operation 12 = Sealing ring 13 = Reducing nipple

# 3/2-directional valve, pneumatically operated, Series AS5-SOV

- Compressed air connection G 3/4 G 1
- Pipe connection



Version

Sealing principle

Working pressure min./max.

Control pressure min./max.

Ambient temperature min./max.

Medium temperature min./max.

Medium

Weight

Poppet valve, Can be assembled into blocks

Soft sealing

0 ... 16 bar

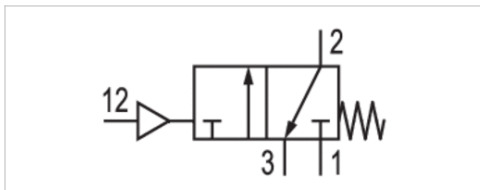
2.5 ... 16 bar

-10 ... 50 °C

-10 ... 50 °C

Compressed air Neutral gases

0.459 kg



## Technical data

| Part No.   | Port  | Pilot connection | Exhaust | Flow        | Flow        | Flow       |
|------------|-------|------------------|---------|-------------|-------------|------------|
|            |       |                  |         | Qn          | Qn 1→2      | Qn 2→3     |
| R412009262 | G 3/4 | G 1/8            | G 1/2   | 12500 l/min | 12500 l/min | 3700 l/min |
| R412009263 | G 1   | G 1/8            | G 1/2   | 12500 l/min | 12500 l/min | 3700 l/min |

Nominal flow Qn with secondary pressure p2 = 6 bar at Δp = 1 bar

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

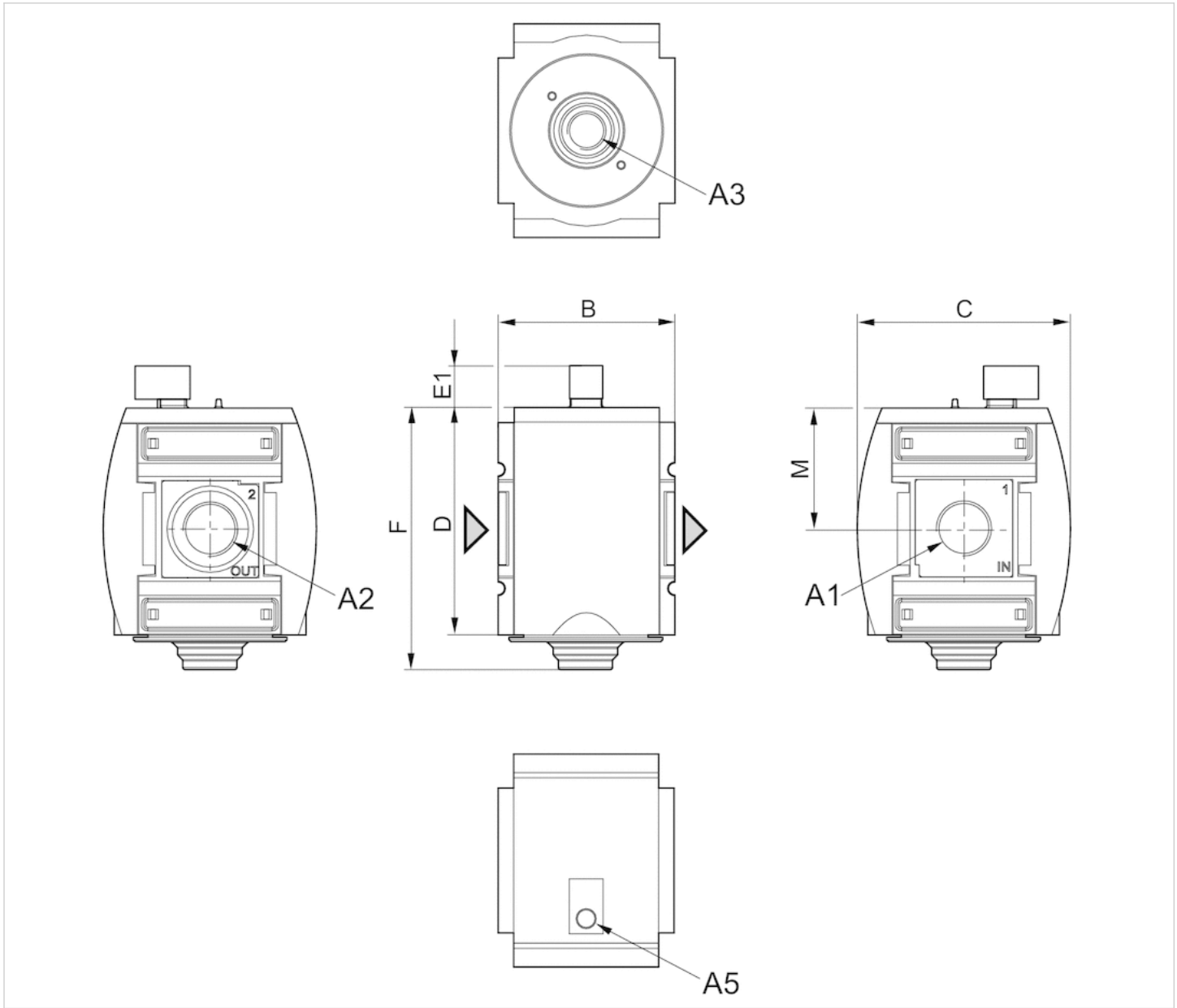
## Technical information

| Material    |                                 |
|-------------|---------------------------------|
| Housing     | Polyamide                       |
| Front plate | Acrylonitrile butadiene styrene |
| Seals       | Acrylonitrile butadiene rubber  |

|                  |               |
|------------------|---------------|
| Material         |               |
| Threaded bushing | Die cast zinc |

## Dimensions

### Dimensions



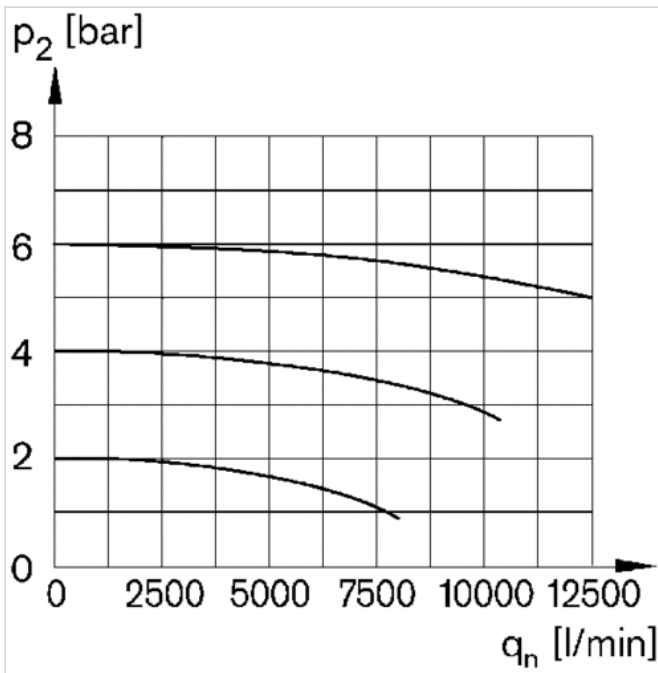
- A1 = input
- A2 = output
- A3 = ventilation port
- A5 = control pressure connection

### Dimensions in mm

| A1    | A2    | A3    | A5    | B  | C   | D   | E1   | F   | M  |
|-------|-------|-------|-------|----|-----|-----|------|-----|----|
| G 3/4 | G 3/4 | G 1/2 | G 1/8 | 85 | 103 | 109 | 20.2 | 125 | 58 |
| G 1   | G 1   | G 1/2 | G 1/8 | 85 | 103 | 109 | 20.2 | 125 | 58 |

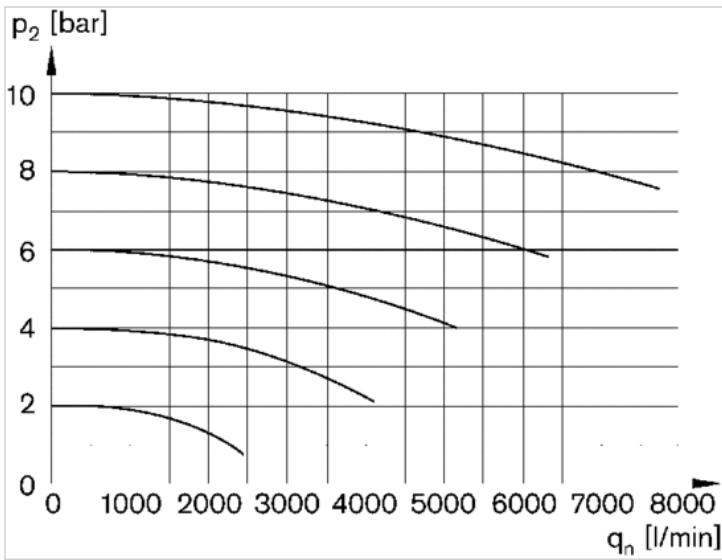
## Diagrams

### Flow rate characteristic, 1 2



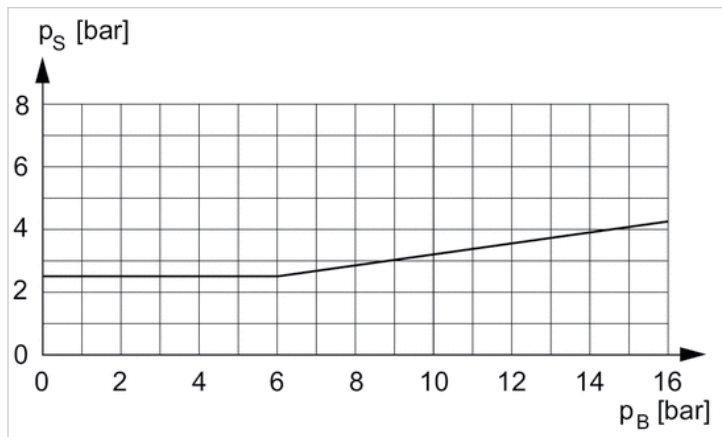
p2 = secondary pressure  
qn = nominal flow

### Rear exhaust, 2 3



p2 = secondary pressure  
qn = nominal flow

## control pressure characteristic

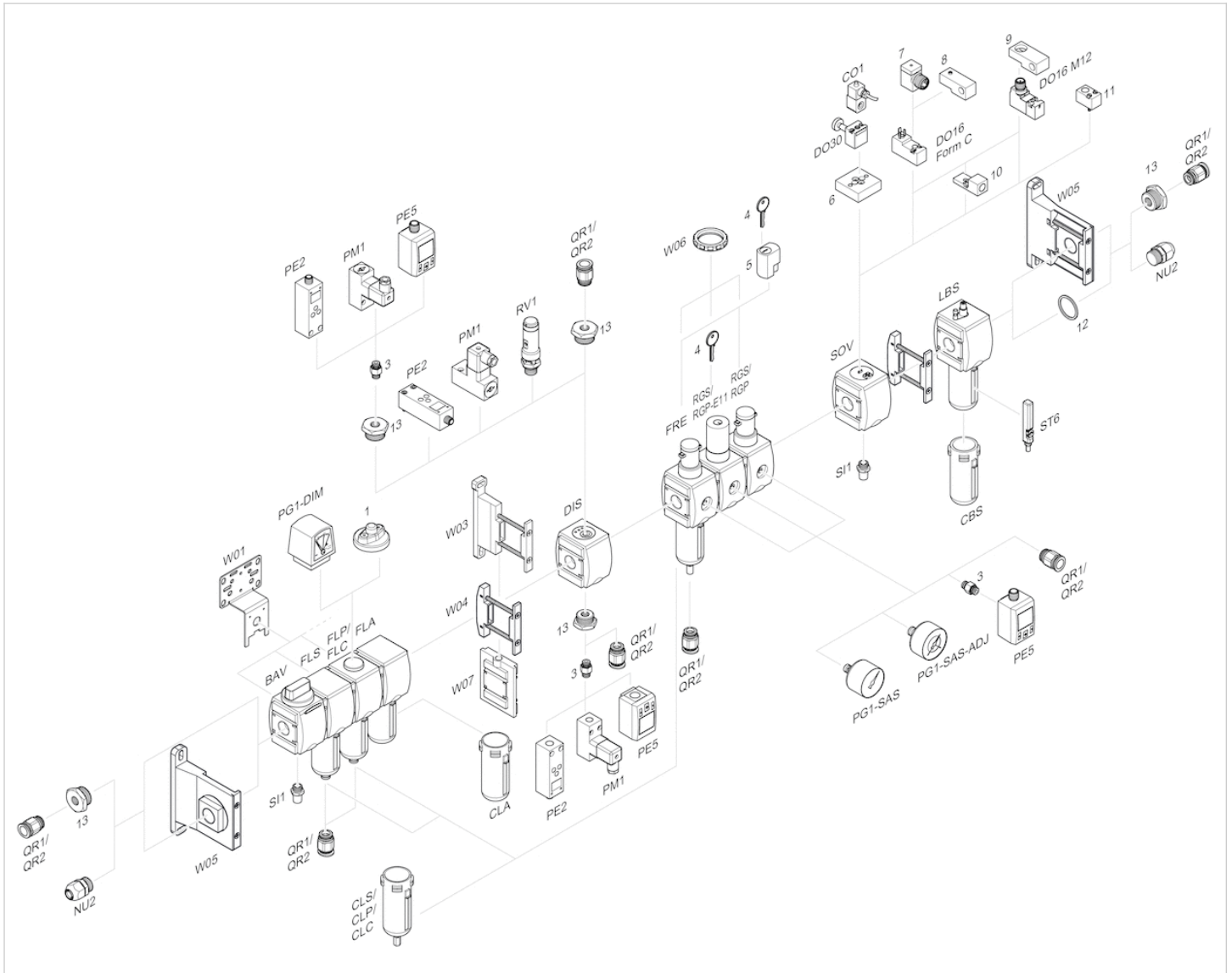


minimum pilot pressure depending on working pressure

PS = control pressure

PB= Working pressure

# Accessories overview



- 1 = contamination display
- 3 = Double nipple
- 4 = Key for E11 locking
- 5 = mortise lock
- 6 = Transition plate DO30
- 7 = Adapter, Series CON-VP
- 8 = Mounting aid DO16, form C
- 9 = Mounting aid DO16, M12
- 10 = Adapter for external pilot air
- 11 = Adapter pneumatic operation
- 12 = Sealing ring
- 13 = Reducing nipple

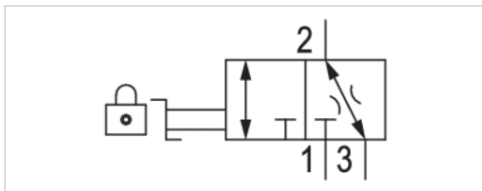


# 3/2-shut-off valve, mechanically operated, Series AS5-BAV

- Qn 1►2 = 30000 l/min
- Qn 2►3 = 130 l/min
- Compressed air connection output G 3/4 G 1



|                               |                              |
|-------------------------------|------------------------------|
| Version                       | Ball valve                   |
| Activation                    | Mechanical                   |
| Lock type                     | lockable                     |
| Actuating element             | rotary switch                |
| Sealing principle             | metal/metal sealing          |
| Working pressure min./max.    | 0 ... 16 bar                 |
| Ambient temperature min./max. | -10 ... 50 °C                |
| Medium temperature min./max.  | -10 ... 50 °C                |
| Medium                        | Compressed air Neutral gases |
| Max. particle size            | 25 µm                        |
| Weight                        | 0.825 kg                     |



## Technical data

| Part No.   | Compressed air connection type | Compressed air connection Input | Compressed air connection Output |
|------------|--------------------------------|---------------------------------|----------------------------------|
| R412009260 | Internal thread                | G 3/4                           | G 3/4                            |
| R412009261 | Internal thread                | G 1                             | G 1                              |

| Part No.   | Compressed air connection Exhaust | Flow        | Flow      | Lock type    | Locking base     |
|------------|-----------------------------------|-------------|-----------|--------------|------------------|
|            |                                   | Qn 1 ► 2    | Qn 2 ► 3  |              |                  |
| R412009260 | G 3/4                             | 30000 l/min | 130 l/min | for padlocks | Steel galvanized |
| R412009261 | G 3/4                             | 30000 l/min | 130 l/min | for padlocks | Steel galvanized |

Nominal flow Qn with secondary pressure p2 = 6 bar at Δp = 1 bar

## Technical information

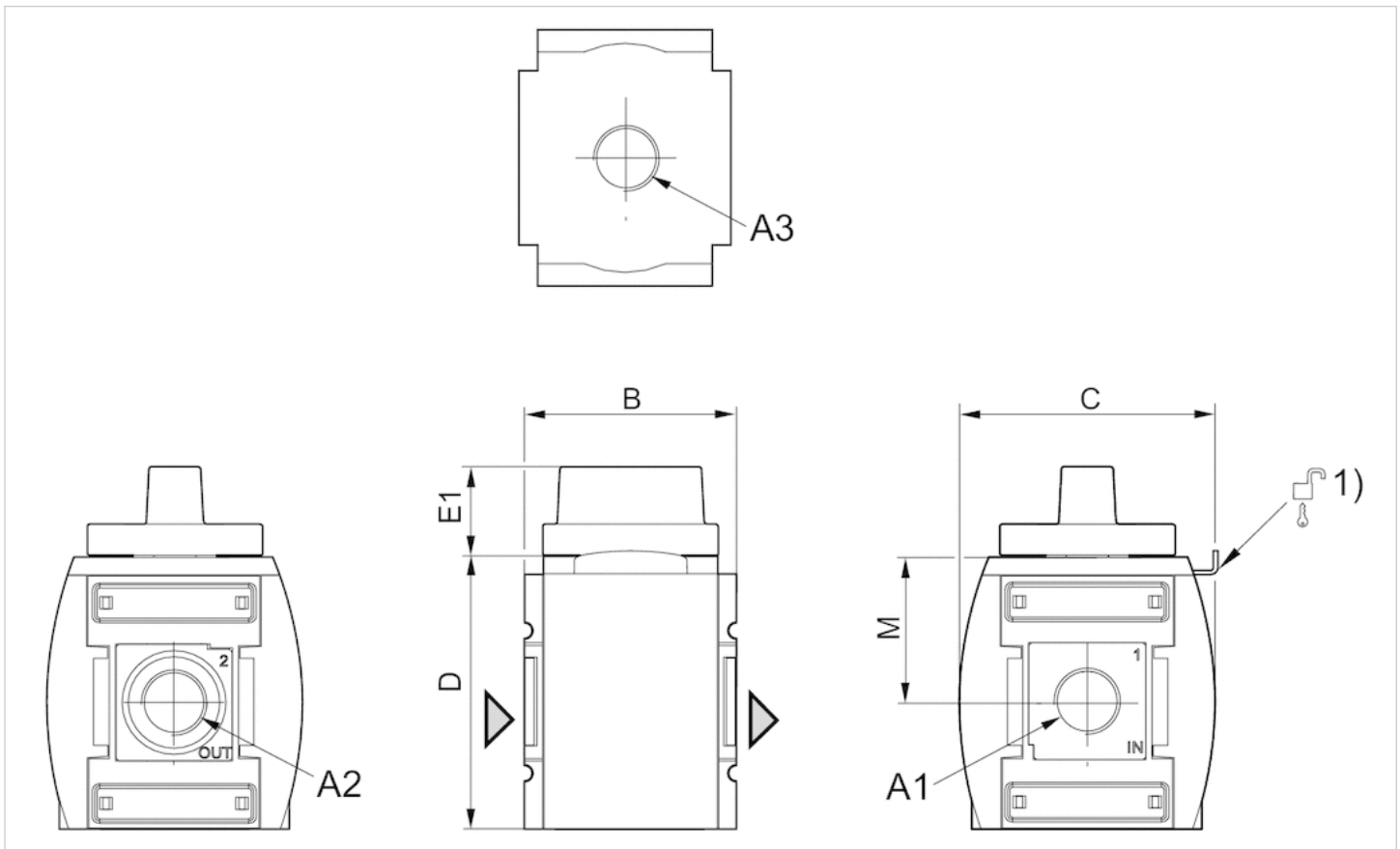
The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .  
A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

## Technical information

| Material          |                                 |
|-------------------|---------------------------------|
| Housing           | Polyamide                       |
| Front plate       | Acrylonitrile butadiene styrene |
| Seals             | Polytetrafluorethylene          |
| Threaded bushing  | Die cast zinc                   |
| Actuating element | Polyoxymethylene                |
| Locking base      | Steel, galvanized               |

## Dimensions

### Dimensions



A1 = input

A2 = output

A3 = ventilation port

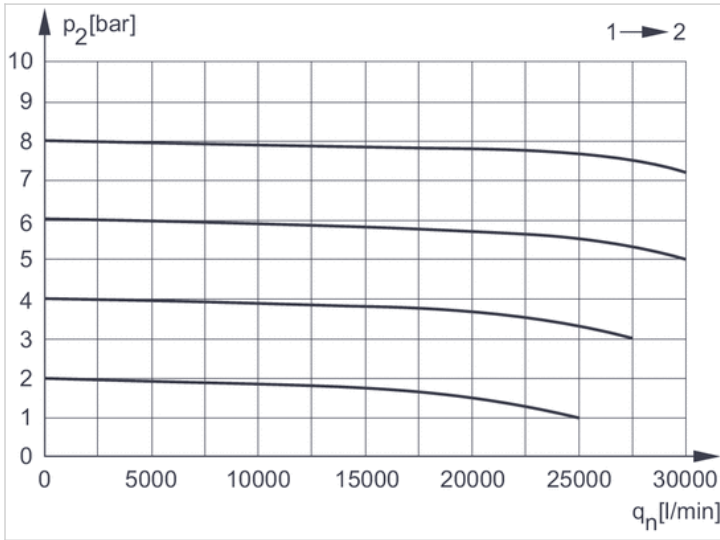
1) Mounting option for padlocks, max. shackle Ø 8

### Dimensions in mm

| A2    | A3    | B  | C   | D   | E1 | M  |
|-------|-------|----|-----|-----|----|----|
| G 3/4 | G 3/4 | 85 | 103 | 109 | 36 | 58 |
| G 1   | G 3/4 | 85 | 103 | 109 | 36 | 58 |

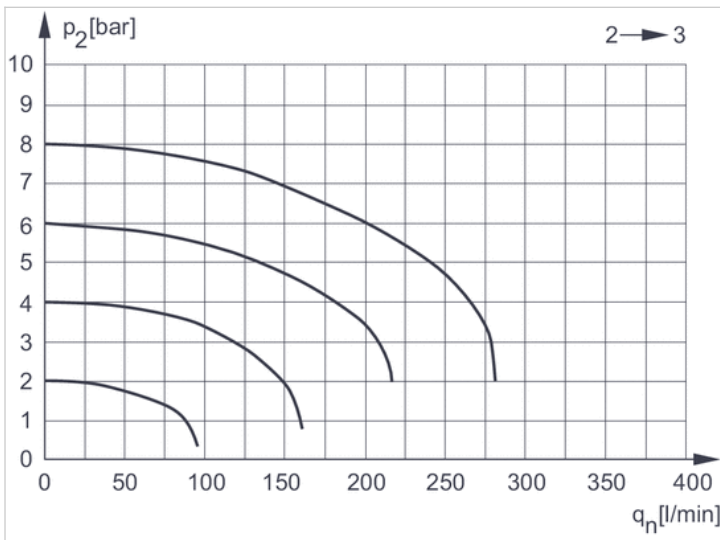
## Diagrams

### Flow rate characteristic



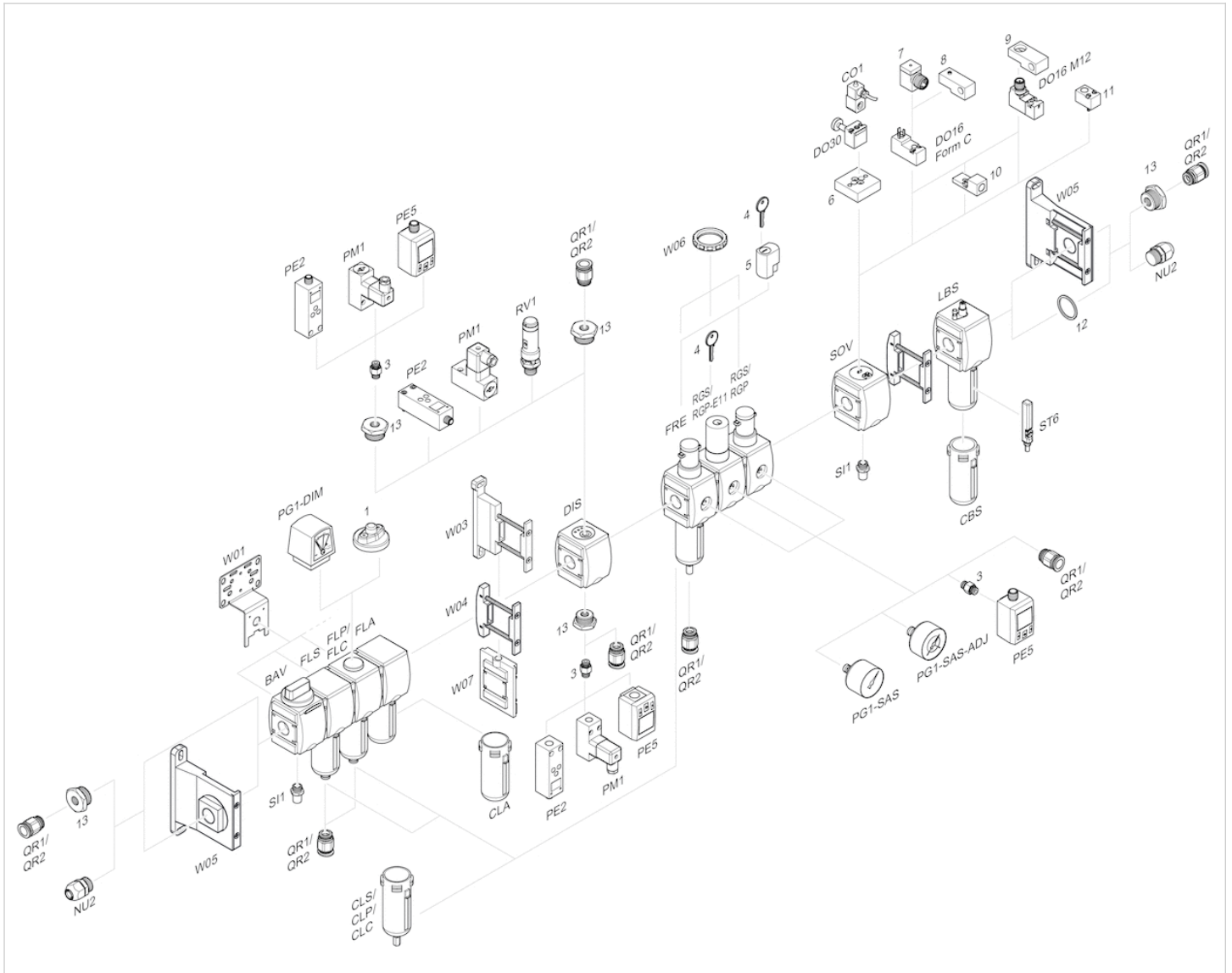
p2 = secondary pressure  
qn = nominal flow

### Rear exhaust



p2 = secondary pressure  
qn = nominal flow

# Accessories overview



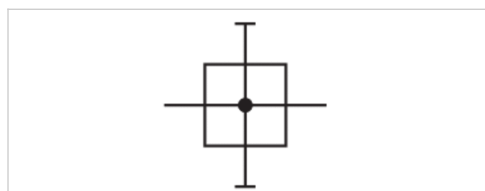
- 1 = contamination display
- 3 = Double nipple
- 4 = Key for E11 locking
- 5 = mortise lock
- 6 = Transition plate DO30
- 7 = Adapter, Series CON-VP
- 8 = Mounting aid DO16, form C
- 9 = Mounting aid DO16, M12
- 10 = Adapter for external pilot air
- 11 = Adapter pneumatic operation
- 12 = Sealing ring
- 13 = Reducing nipple

# Distributor, Series AS5-DIS

- G 3/4 G 1
- Distributor 2x
- Distributor



|                               |   |
|-------------------------------|---|
| Version                       | Distributor, Can be assembled into blocks |
| Parts                         | Distributor                               |
| Mounting orientation          | Any                                       |
| Working pressure min./max.    | 0 ... 16 bar                              |
| Ambient temperature min./max. | -10 ... 50 °C                             |
| Medium temperature min./max.  | -10 ... 50 °C                             |
| Medium                        | Compressed air Neutral gases              |
| Weight                        | 0.648 kg                                  |



## Technical data

| Part No.   | Port  | Nominal flow |            |             |
|------------|-------|--------------|------------|-------------|
|            |       | Qn 1►2       | Qn 1►3     | Qn 1►5      |
| R412009250 | G 3/4 | 18000 l/min  | 8500 l/min | 12000 l/min |
| R412009251 | G 1   | 18000 l/min  | 8500 l/min | 12000 l/min |

Nominal flow Qn with secondary pressure p2 = 6 bar at Δp = 1 bar

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .  
 A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.  
 Suitable for direct mounting of a PE2 and PM1 series pressure sensor (flange version).

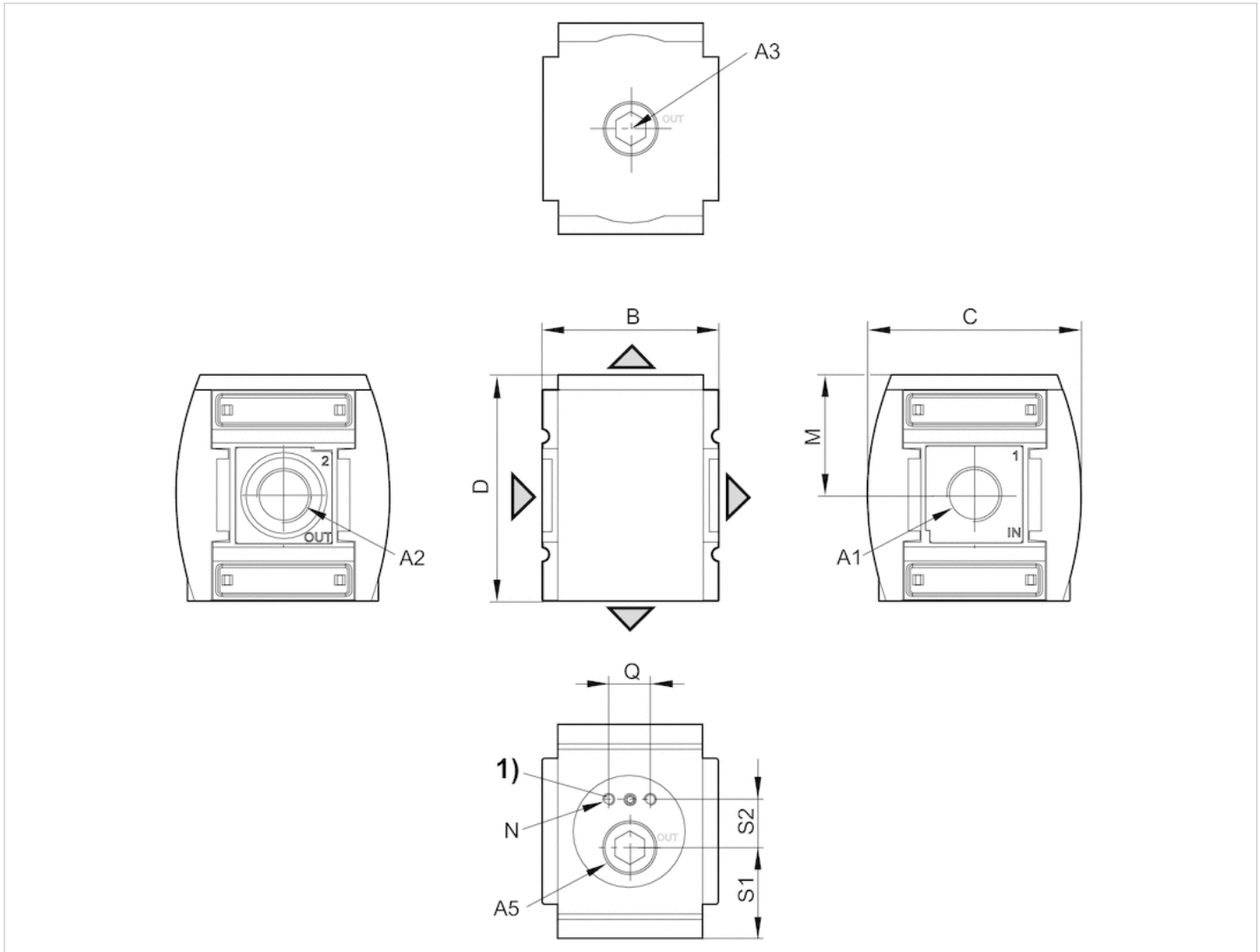
## Technical information

| Material    |                                 |
|-------------|---------------------------------|
| Housing     | Polyamide                       |
| Front plate | Acrylonitrile butadiene styrene |
| Seals       | Acrylonitrile butadiene rubber  |

|                  |               |
|------------------|---------------|
| Material         |               |
| Threaded bushing | Die cast zinc |

## Dimensions

### Dimensions

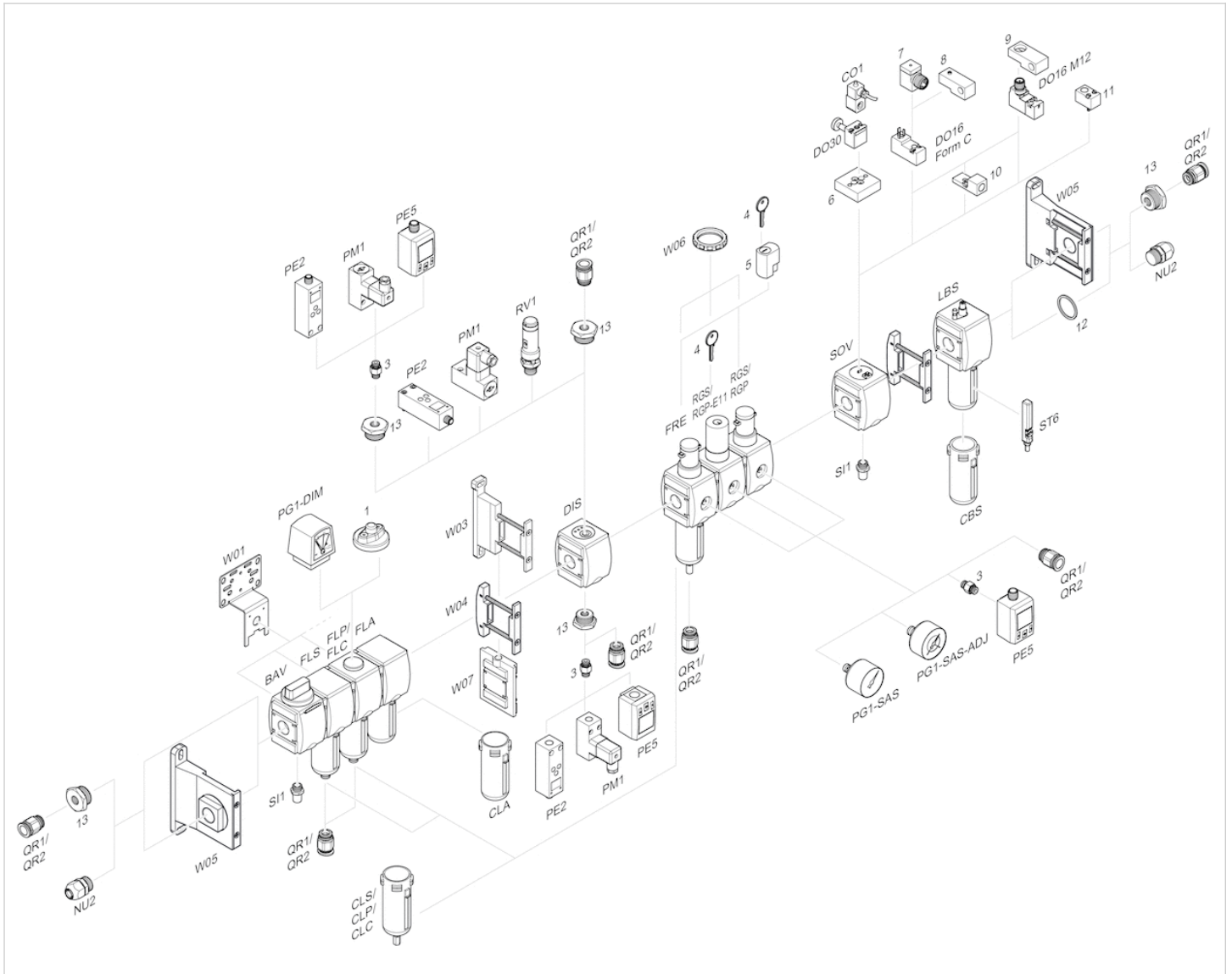


- A1 = input
- A2 = output
- A3 = output
- A5 = output
- 1) Mounting thread for pressure sensor

### Dimensions in mm

| A1    | A2    | A3    | A5    | B  | C   | D   | M  | N  | Q  | S1   | S2 |
|-------|-------|-------|-------|----|-----|-----|----|----|----|------|----|
| G 3/4 | G 3/4 | G 3/4 | G 3/4 | 85 | 103 | 109 | 58 | M5 | 20 | 44.5 | 22 |
| G 1   | G 1   | G 3/4 | G 3/4 | 85 | 103 | 109 | 58 | M5 | 20 | 44.5 | 22 |

# Accessories overview



- 1 = contamination display
- 3 = Double nipple
- 4 = Key for E11 locking
- 5 = mortise lock
- 6 = Transition plate DO30
- 7 = Adapter, Series CON-VP
- 8 = Mounting aid DO16, form C
- 9 = Mounting aid DO16, M12
- 10 = Adapter for external pilot air
- 11 = Adapter pneumatic operation
- 12 = Sealing ring
- 13 = Reducing nipple

# Distributor, Series AS5-DIN

- G 3/4 G 1
- Non-return valve



Version

Non-return valve, Can be assembled into blocks

Parts

Distributor

Mounting orientation

Any

Working pressure min./max.

0.4 ... 16 bar

Ambient temperature min./max.

-10 ... 50 °C

Medium temperature min./max.

-10 ... 50 °C

Medium

Compressed air Neutral gases



## Technical data

| Part No.   | Port  | Nominal flow |
|------------|-------|--------------|
|            |       | Qn 1→2       |
| R412009252 | G 3/4 | 16000 l/min  |
| R412009253 | G 1   | 16000 l/min  |

Nominal flow Qn with secondary pressure p2 = 6 bar at Δp = 1 bar

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .  
A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

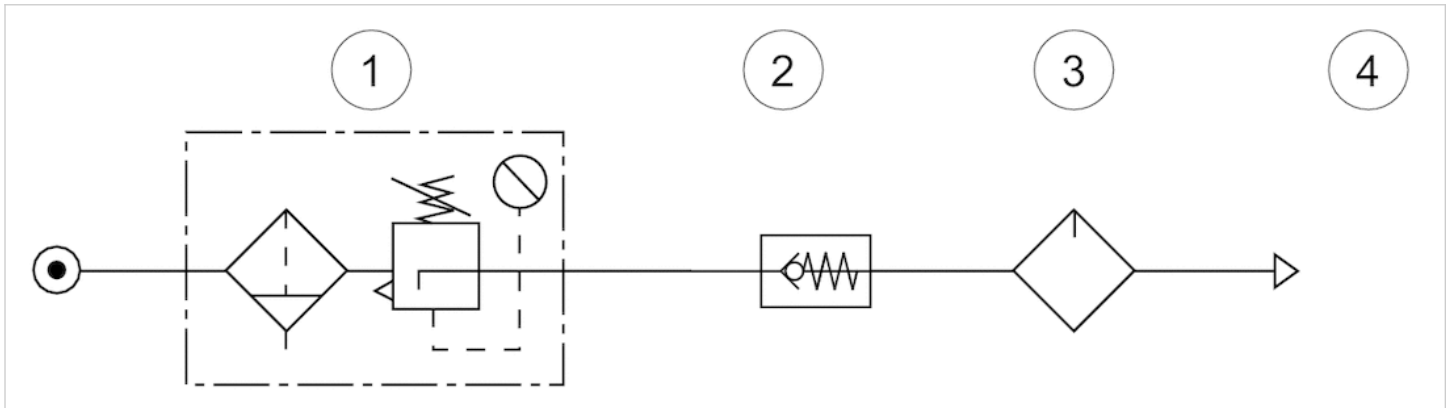
## Technical information

| Material         |                                 |
|------------------|---------------------------------|
| Housing          | Polyamide                       |
| Front plate      | Acrylonitrile butadiene styrene |
| Seals            | Acrylonitrile butadiene rubber  |
| Threaded bushing | Die cast zinc                   |



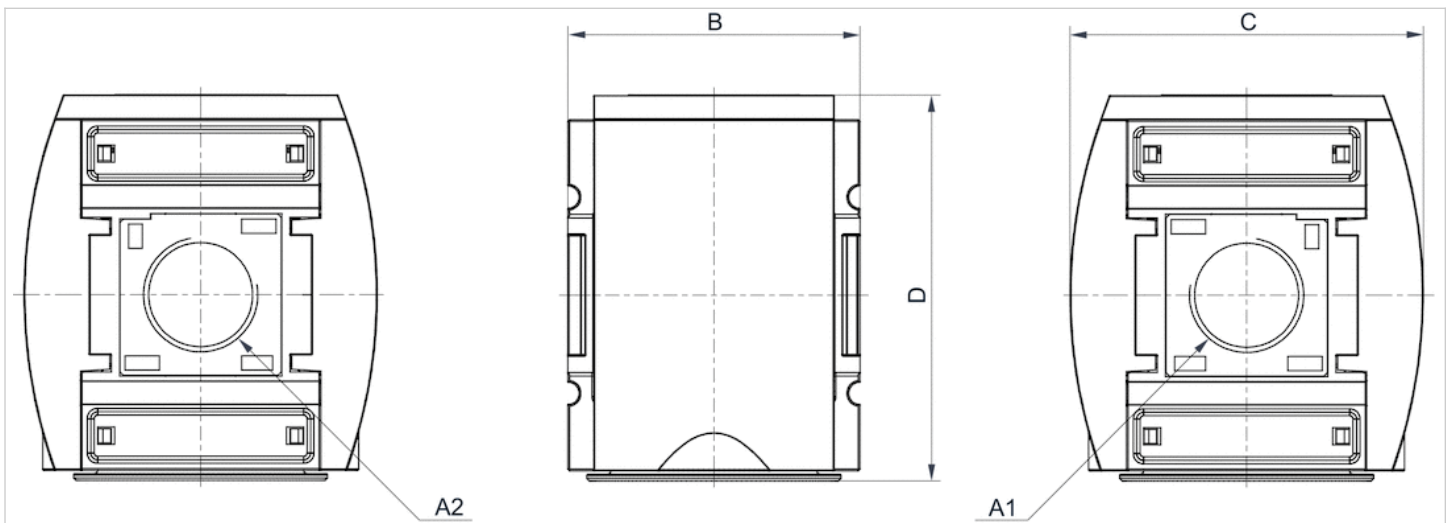
## Dimensions

### usage



- 1) Filter pressure regulator
- 2) Non-return valve
- 3) Lubricator
- 4) Compressed air

## Dimensions



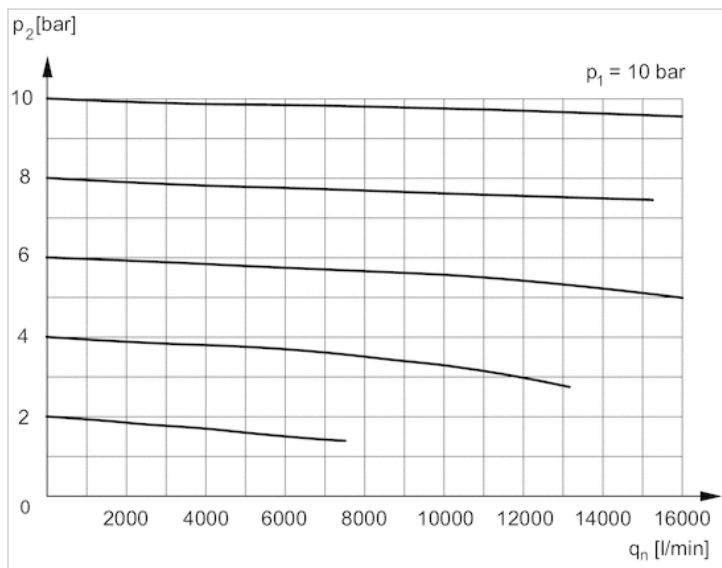
- A1 = input
- A2 = output

## Dimensions in mm

| A1    | A2    | B  | C   | D   |
|-------|-------|----|-----|-----|
| G 3/4 | G 3/4 | 85 | 103 | 112 |
| G 1   | G 1   | 85 | 103 | 112 |

## Diagrams

### Flow rate characteristic

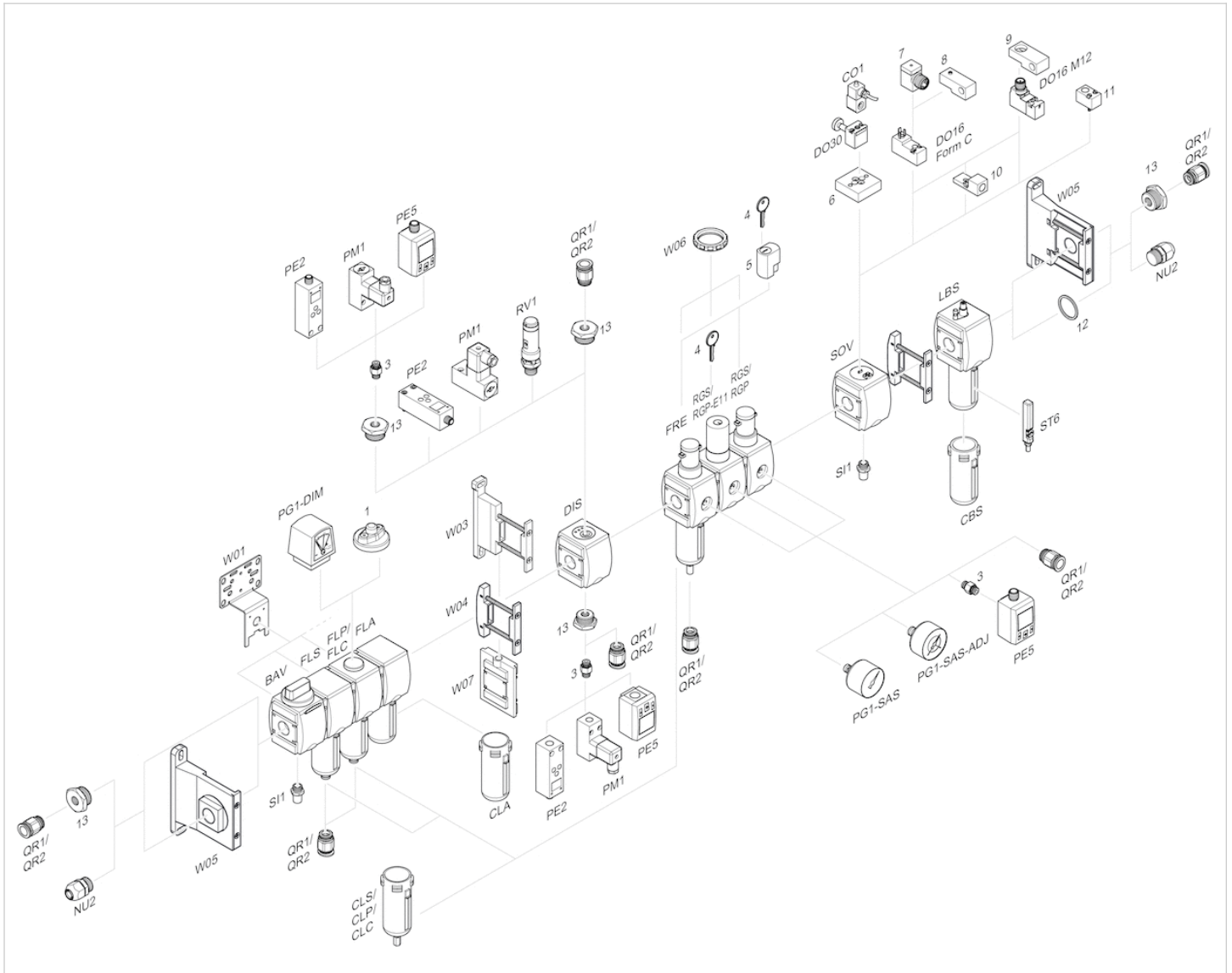


$p_1$  = Working pressure

$p_2$  = Secondary pressure

$q_n$  = Nominal flow

# Accessories overview



- 1 = contamination display
- 3 = Double nipple
- 4 = Key for E11 locking
- 5 = mortise lock
- 6 = Transition plate DO30
- 7 = Adapter, Series CON-VP
- 8 = Mounting aid DO16, form C
- 9 = Mounting aid DO16, M12
- 10 = Adapter for external pilot air
- 11 = Adapter pneumatic operation
- 12 = Sealing ring
- 13 = Reducing nipple

# Reservoir, Series AS5-CLS/ -CLP/ -CLC

- for filters, pre-filters and microfilters
- Material Polycarbonate Die cast zinc



|                               |                    |
|-------------------------------|--------------------|
| Version                       | Reservoir          |
| Working pressure min./max.    | 16 bar             |
| Ambient temperature min./max. | -10 ... 50 °C      |
| Medium temperature min./max.  | -10 ... 50 °C      |
| Medium                        | Compressed air     |
| Filter reservoir volume       | 87 cm <sup>3</sup> |
| Weight                        | See table below    |

## Technical data

| Part No.   | Condensate drain                         | Reservoir                  |
|------------|--|----------------------------|
| R412009338 | semi-automatic, open without pressure    | Polycarbonate              |
| R412009339 | fully automatic, open without pressure   | Polycarbonate              |
| R412009340 | fully automatic, closed without pressure | Polycarbonate              |
| R412009344 | semi-automatic, open without pressure    | Die cast zinc, with window |
| R412009345 | fully automatic, open without pressure   | Die cast zinc, with window |
| R412009346 | fully automatic, closed without pressure | Die cast zinc, with window |

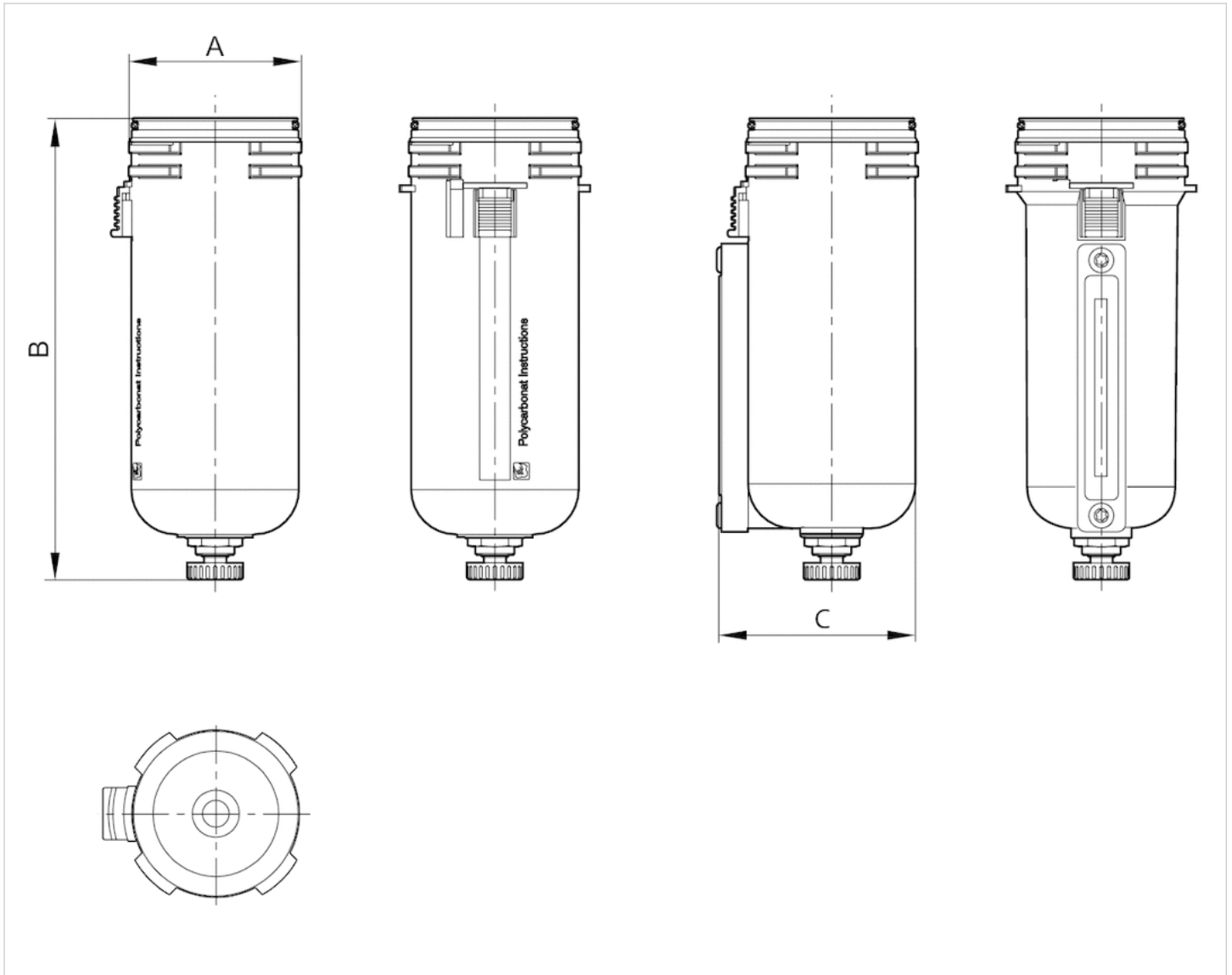
| Part No.   | Protective guard | Weight   | Fig.   |
|------------|------------------|----------|--------|
| R412009338 | Polyamide        | 0.086 kg | Fig. 1 |
| R412009339 | Polyamide        | 0.116 kg | Fig. 2 |
| R412009340 | Polyamide        | 0.116 kg | Fig. 2 |
| R412009344 | -                | 0.68 kg  | Fig. 1 |
| R412009345 | -                | 0.74 kg  | Fig. 2 |
| R412009346 | -                | 0.74 kg  | Fig. 2 |

## Technical information

| Material         |                                |
|------------------|--------------------------------|
| Reservoir        | Polycarbonate Die cast zinc    |
| Protective guard | Polyamide                      |
| Seal             | Acrylonitrile butadiene rubber |

## Dimensions

Fig. 1

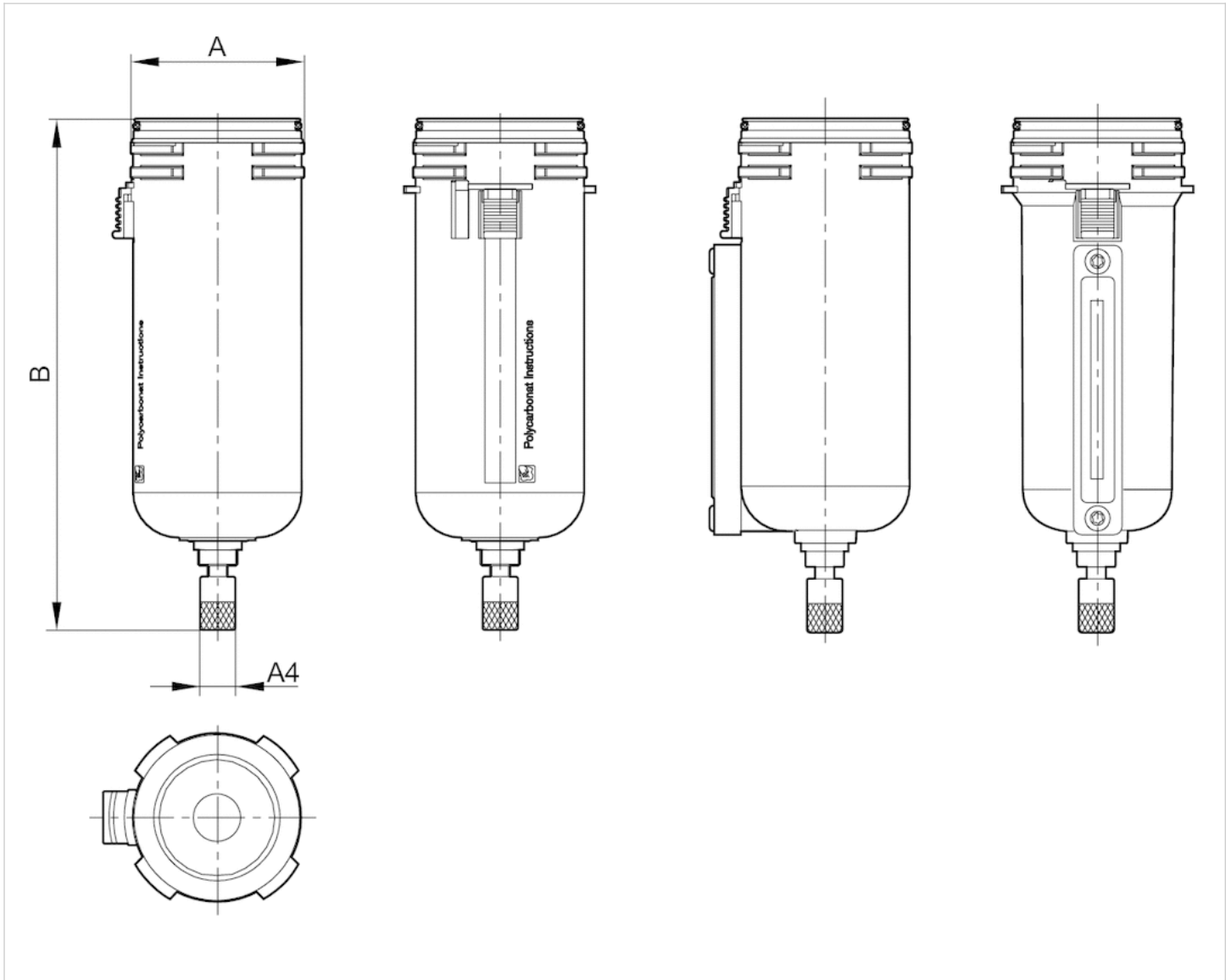


## Dimensions

| Part No.   | A  | B     | C    |
|------------|----|-------|------|
| R412009338 | 60 | 165.3 | 64.7 |
| R412009344 | 60 | 165.3 | 64.7 |

## Dimensions

Fig. 2



## Dimensions

| Part No.   | A4    | A  | B   |
|------------|-------|----|-----|
| R412009339 | G 1/8 | 60 | 182 |
| R412009340 | G 1/8 | 60 | 182 |
| R412009345 | G 1/8 | 60 | 182 |
| R412009346 | G 1/8 | 60 | 182 |

# Reservoir, Series AS5-CLA

- for active carbon filter

- Material Polycarbonate Die cast zinc



|                               |                    |
|-------------------------------|--------------------|
| Version                       | Reservoir          |
| Working pressure min./max.    | 0 ... 16 bar       |
| Ambient temperature min./max. | -10 ... 50 °C      |
| Medium temperature min./max.  | -10 ... 50 °C      |
| Medium                        | Compressed air     |
| Filter reservoir volume       | 87 cm <sup>3</sup> |
| Weight                        | See table below    |

## Technical data

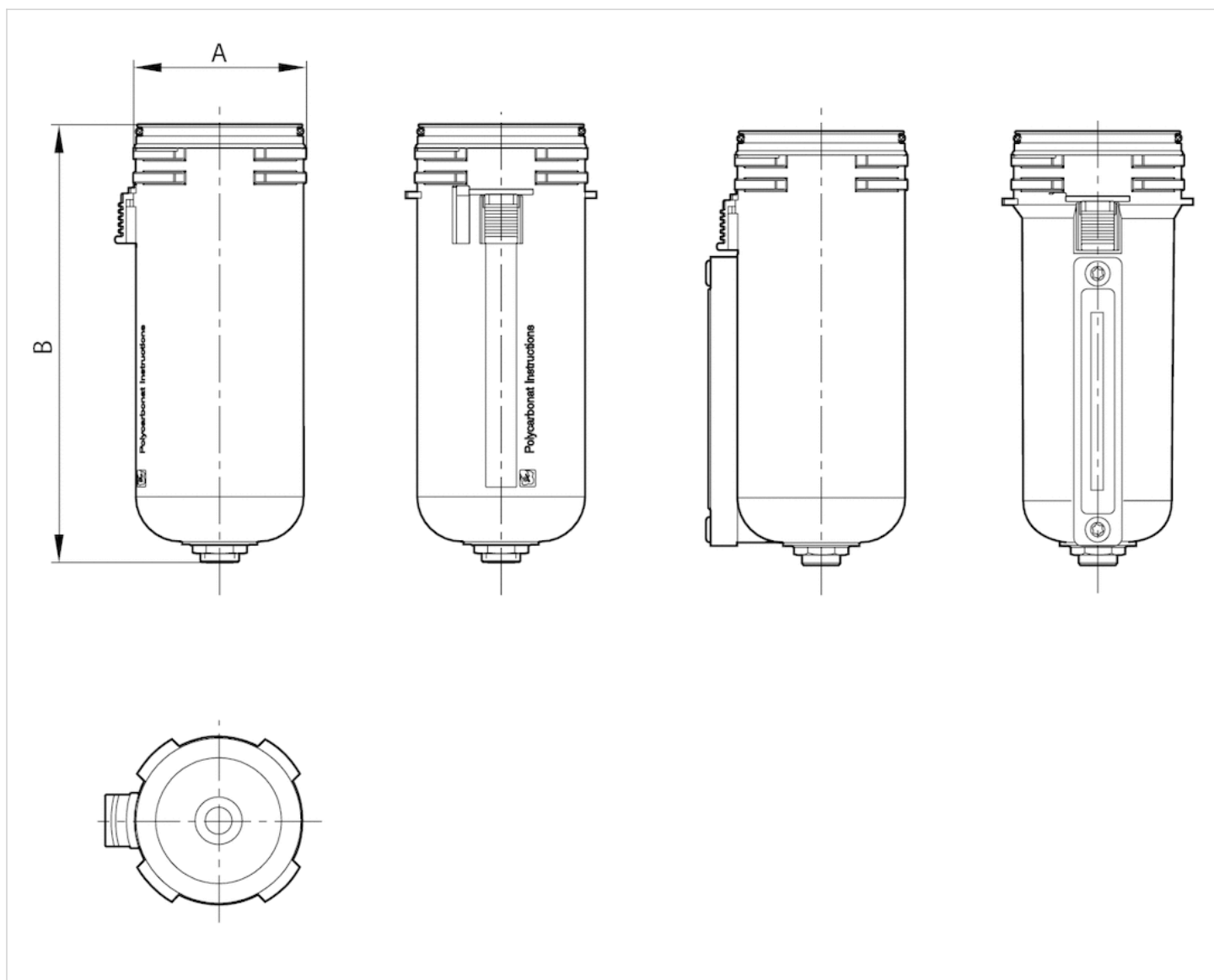
| Part No.   | Reservoir                  | Protective guard | Weight   |
|------------|----------------------------|------------------|----------|
| R412009347 | Polycarbonate              | Polyamide        | 0.086 kg |
| R412009349 | Die cast zinc, with window | -                | 0.77 kg  |

## Technical information

| Material         |                                |
|------------------|--------------------------------|
| Reservoir        | Polycarbonate Die cast zinc    |
| Protective guard | Polyamide                      |
| Seal             | Acrylonitrile butadiene rubber |

## Dimensions

### Dimensions



## Dimensions

| Part No.   | A  | B     |
|------------|----|-------|
| R412009347 | 60 | 157.5 |
| R412009349 | 60 | 157.5 |



# Reservoir, Series AS5-CBS

- for lubricator

- Material Polycarbonate Die cast zinc



Version

Working pressure min./max.

Ambient temperature min./max.

Medium temperature min./max.

Medium

Lubricator reservoir volume

Weight

Reservoir

0 ... 16 bar

-10 ... 50 °C

-10 ... 50 °C

Compressed air Oil

181 cm<sup>3</sup>

See table below

## Technical data

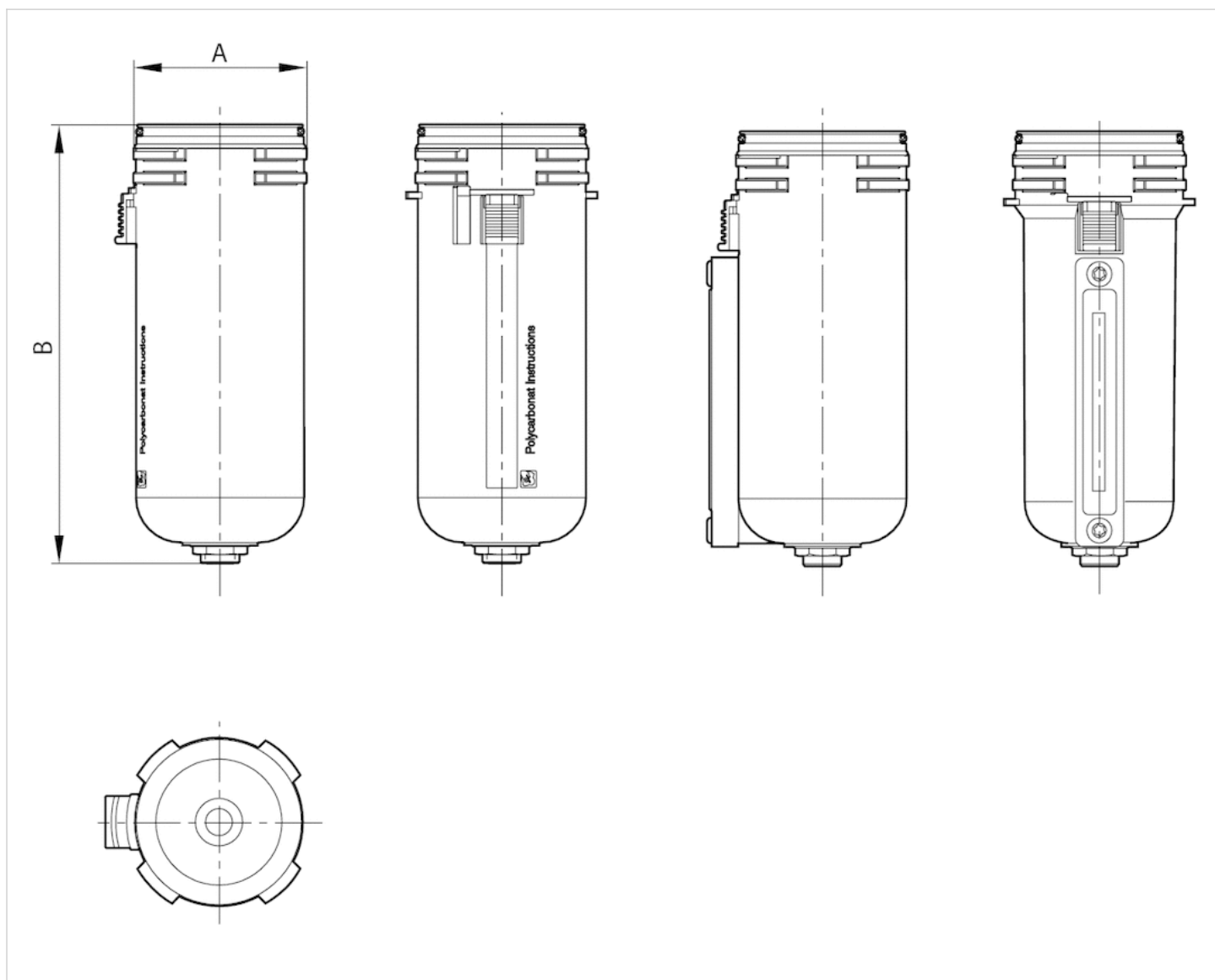
| Part No.   | Electrical level indicator | Reservoir                  | Protective guard | Weight   |
|------------|----------------------------|----------------------------|------------------|----------|
| R412009351 | with external query        | Polycarbonate              | Polyamide        | 0.086 kg |
| R412009352 | -                          | Polycarbonate              | Polyamide        | 0.335 kg |
| R412009358 | -                          | Die cast zinc, with window | -                | 0.68 kg  |

## Technical information

| Material         |                                |
|------------------|--------------------------------|
| Reservoir        | Polycarbonate Die cast zinc    |
| Protective guard | Polyamide                      |
| Seal             | Acrylonitrile butadiene rubber |

## Dimensions

### Dimensions



## Dimensions

| Part No.   | A  | B     |
|------------|----|-------|
| R412009351 | 60 | 154.8 |
| R412009352 | 60 | 154.8 |
| R412009358 | 60 | 154.8 |

# Mounting plate, Series AS5-MBR-...-



Ambient temperature min./max. -10 ... 50 °C  
 Weight 0.394 kg

## Technical data

| Part No.   |
|------------|
| R412009368 |

Scope of delivery incl. 2 mounting screws 3x10 (Torx 10 IP) DIN EN ISO 10664

## Technical information

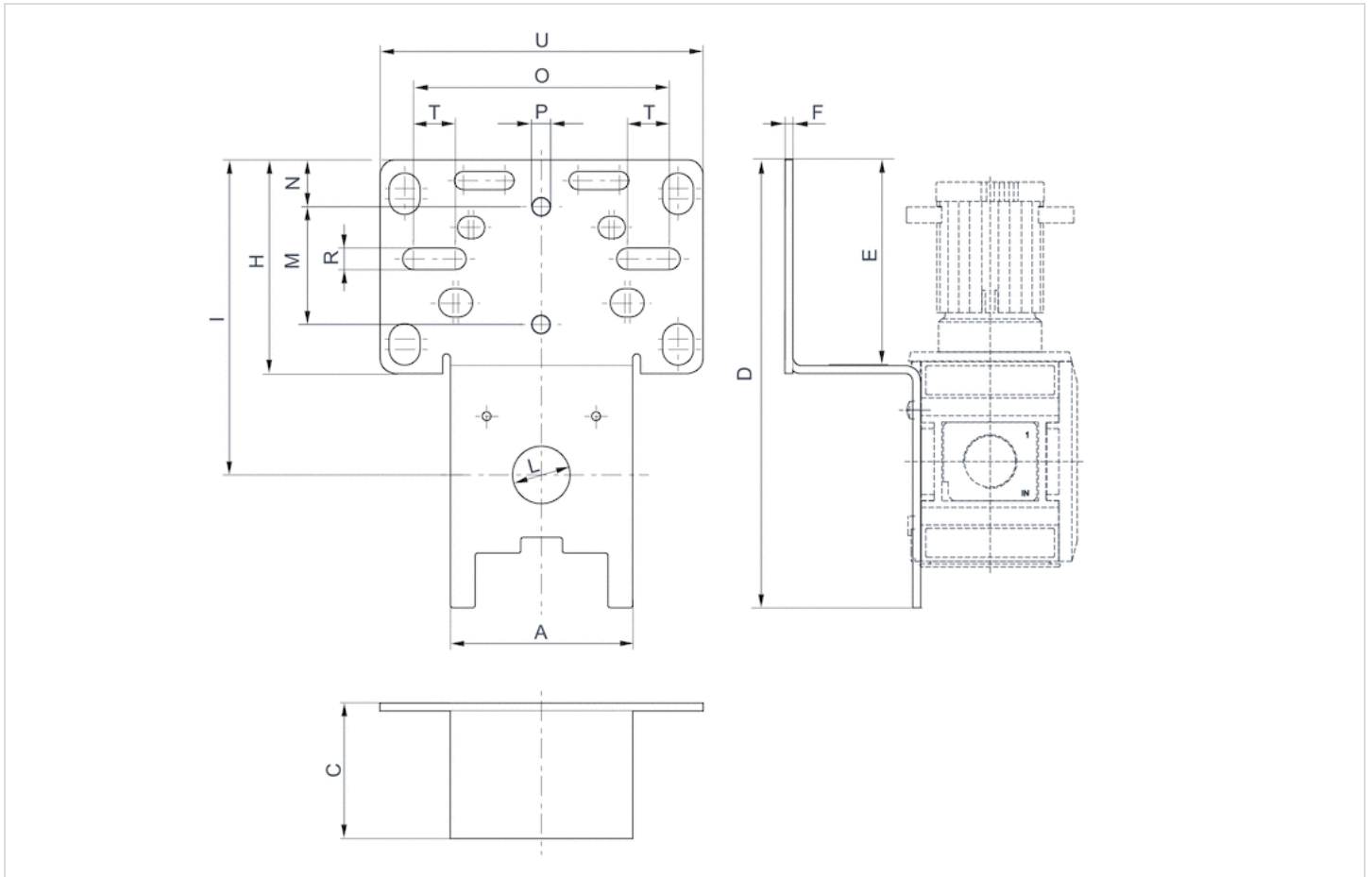
For assembly of the W01 mounting plate, the rear cover of the air preparation unit must be removed.

## Technical information

| Material |                                |
|----------|--------------------------------|
| Housing  | Steel, galvanized              |
| Seal     | Acrylonitrile butadiene rubber |

## Dimensions

### Dimensions



## Dimensions

| Part No.   | A  | C  | D   | E  | F | H  | I   | L  | M  | N    | O  | P   | R | T  | U   |
|------------|----|----|-----|----|---|----|-----|----|----|------|----|-----|---|----|-----|
| R412009368 | 70 | 52 | 172 | 79 | 3 | 82 | 121 | 22 | 45 | 18.5 | 98 | 6.5 | 7 | 16 | 124 |

# Mounting clip, Series AS5-MBR-...-W03



Ambient temperature min./max.

-10 ... 50 °C

Weight

0.12 kg

## Technical data

Part No.

R412009370

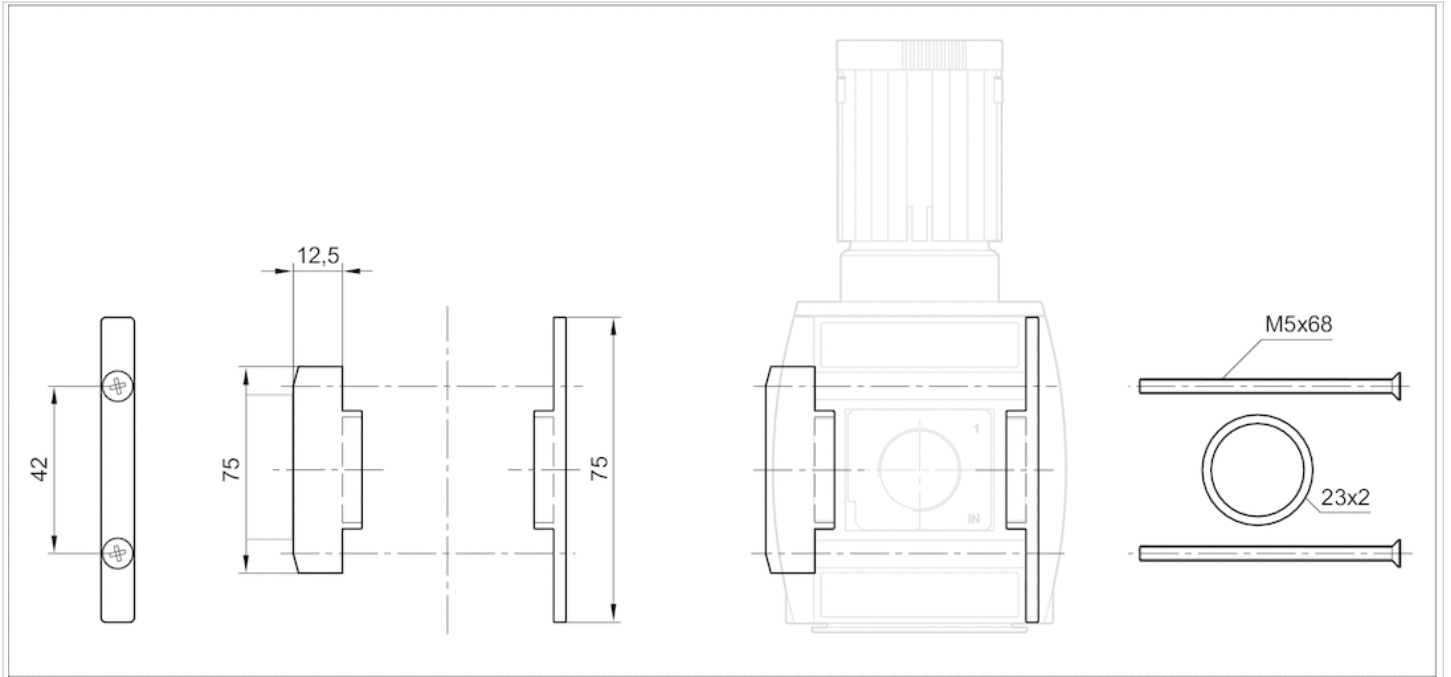
Scope of delivery incl. 2 mounting screws M6x90-4.8-A2R according to EN ISO 7046-1 (countersunk screw with type H X-slot), 1x O-ring

## Technical information

### Material

|         |                                |
|---------|--------------------------------|
| Housing | Polyamide                      |
| Seal    | Acrylonitrile butadiene rubber |

# Dimensions



# Block assembly kit, Series AS5-MBR-...-W04



Ambient temperature min./max.

-10 ... 50 °C

Weight

0.075 kg

## Technical data

Part No.

R412009371

Scope of delivery incl. 2 mounting screws M6x90-4.8-A2R according to EN ISO 7046-1 (countersunk screw with type H X-slot), 1x O-ring

## Technical information

### Material

Housing

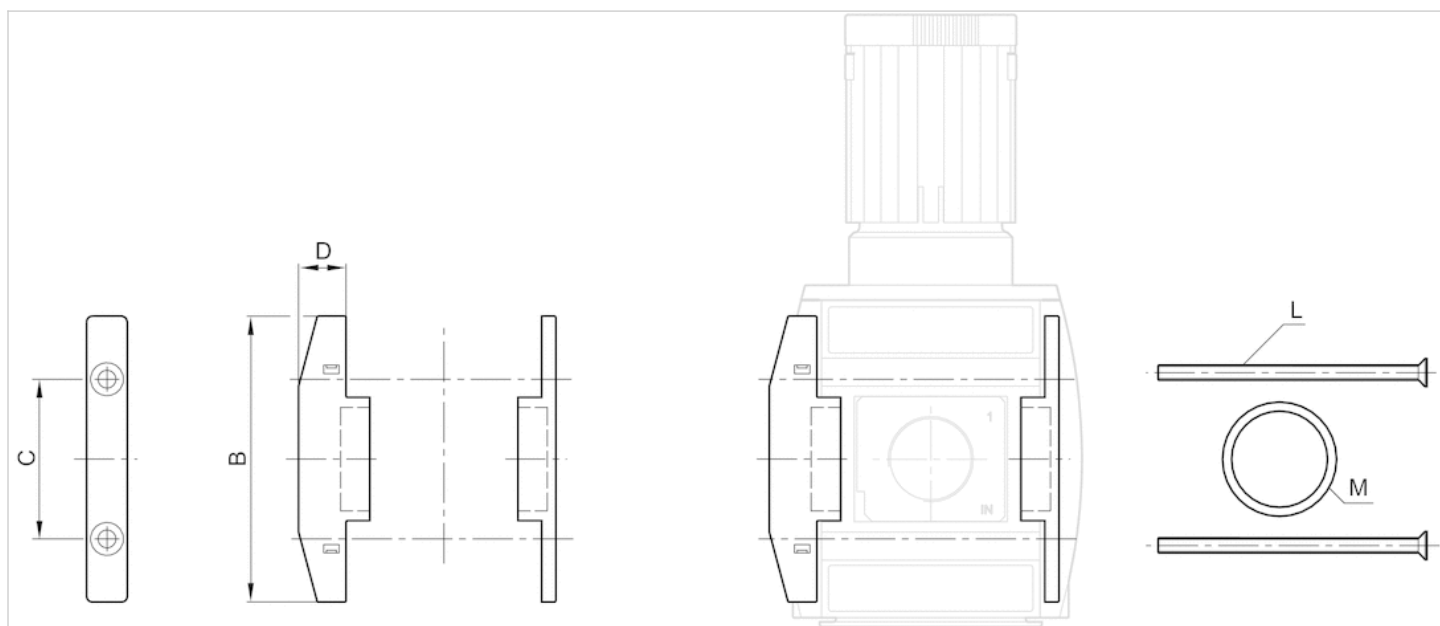
Polyamide

Seal

Acrylonitrile butadiene rubber

## Dimensions

### Dimensions



## Dimensions

| Part No.   | B   | C  | D  | L     | M      |
|------------|-----|----|----|-------|--------|
| R412009371 | 102 | 57 | 17 | M6x90 | 37x2,3 |



# Block assembly kit, Series AS5-MBR-...-W05

- G 3/4 - G 1



Ambient temperature min./max.

-10 ... 50 °C

Weight

0.68 kg

## Technical data

| Part No.   | Port  |
|------------|-------|
| R412009366 | G 3/4 |
| R412009367 | G 1   |

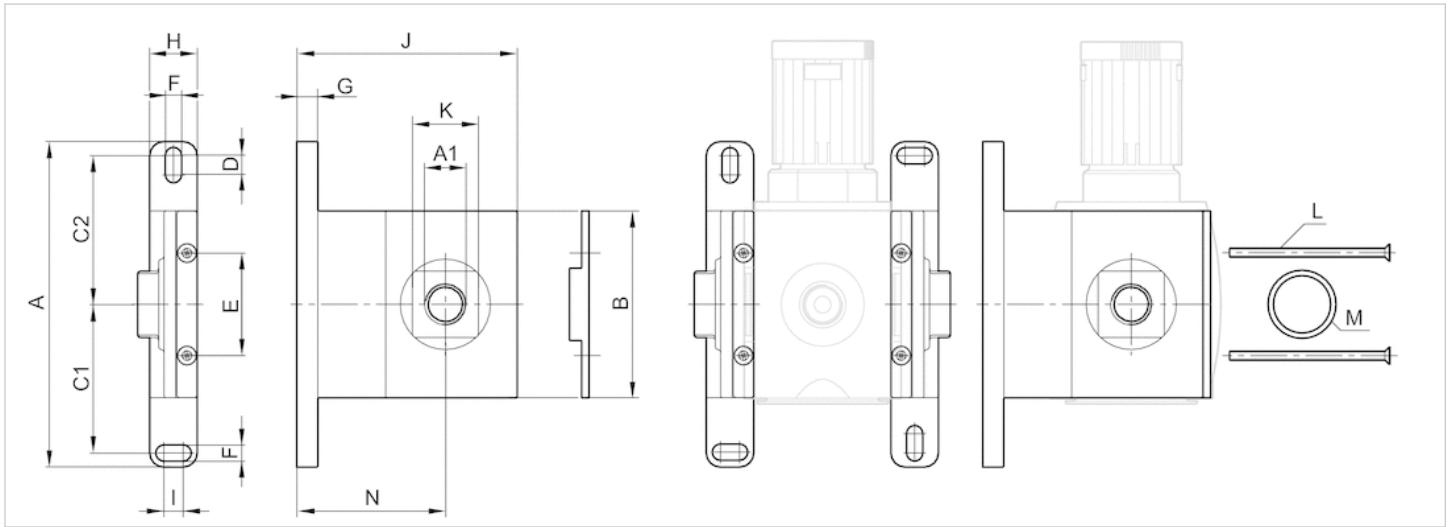
Scope of delivery incl. 4 mounting screws M6x90-4.8-A2R according to EN ISO 7046-1 (countersunk screw with type H X-slot), 2x O-ring

## Technical information

| Material |                                |
|----------|--------------------------------|
| Housing  | Die cast zinc, painted         |
| Seal     | Acrylonitrile butadiene rubber |

## Dimensions

### Dimensions



## Dimensions

| Part No.   | A1    | A   | B   | C1   | C2   | D  | E  | F   | G  | H  | I  | J   | K  | L     | M      | N  |
|------------|-------|-----|-----|------|------|----|----|-----|----|----|----|-----|----|-------|--------|----|
| R412009366 | G 3/4 | 160 | 102 | 72.5 | 72.5 | 10 | 57 | 8.4 | 10 | 30 | 10 | 127 | 41 | M6x90 | 37x2,3 | 87 |
| R412009367 | G 1   | 160 | 102 | 72.5 | 72.5 | 10 | 57 | 8.4 | 10 | 30 | 10 | 127 | 41 | M6x90 | 37x2,3 | 87 |

# Block assembly kit, Series AS3/AS5- MBR-...-W07



Ambient temperature min./max.

-10 ... 50 °C

## Technical data

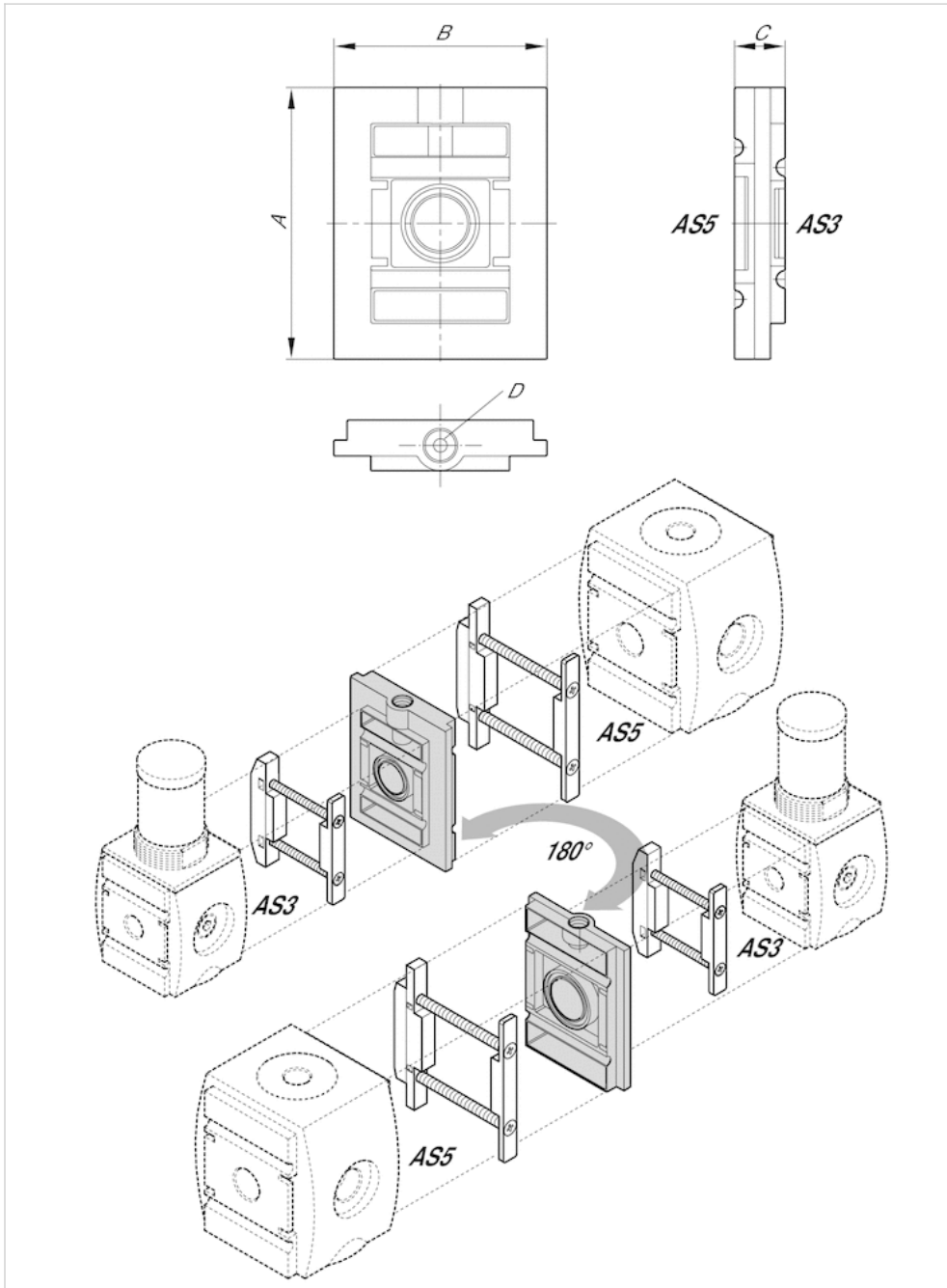
| Part No.   | Port  |
|------------|-------|
| R412010122 | G 1/4 |

scope of delivery incl. seal

## Technical information

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

# Dimensions



## Dimensions in mm

| Part No.   | A   | B  | C  | D     |
|------------|-----|----|----|-------|
| R412010122 | 102 | 80 | 18 | G 1/4 |

# Panel nut, Series AS-MBR-...-W06

- M50x1.5
- for AS5 NL4



Weight

0.009 kg

The delivered product may vary from that in the illustration.

## Technical data

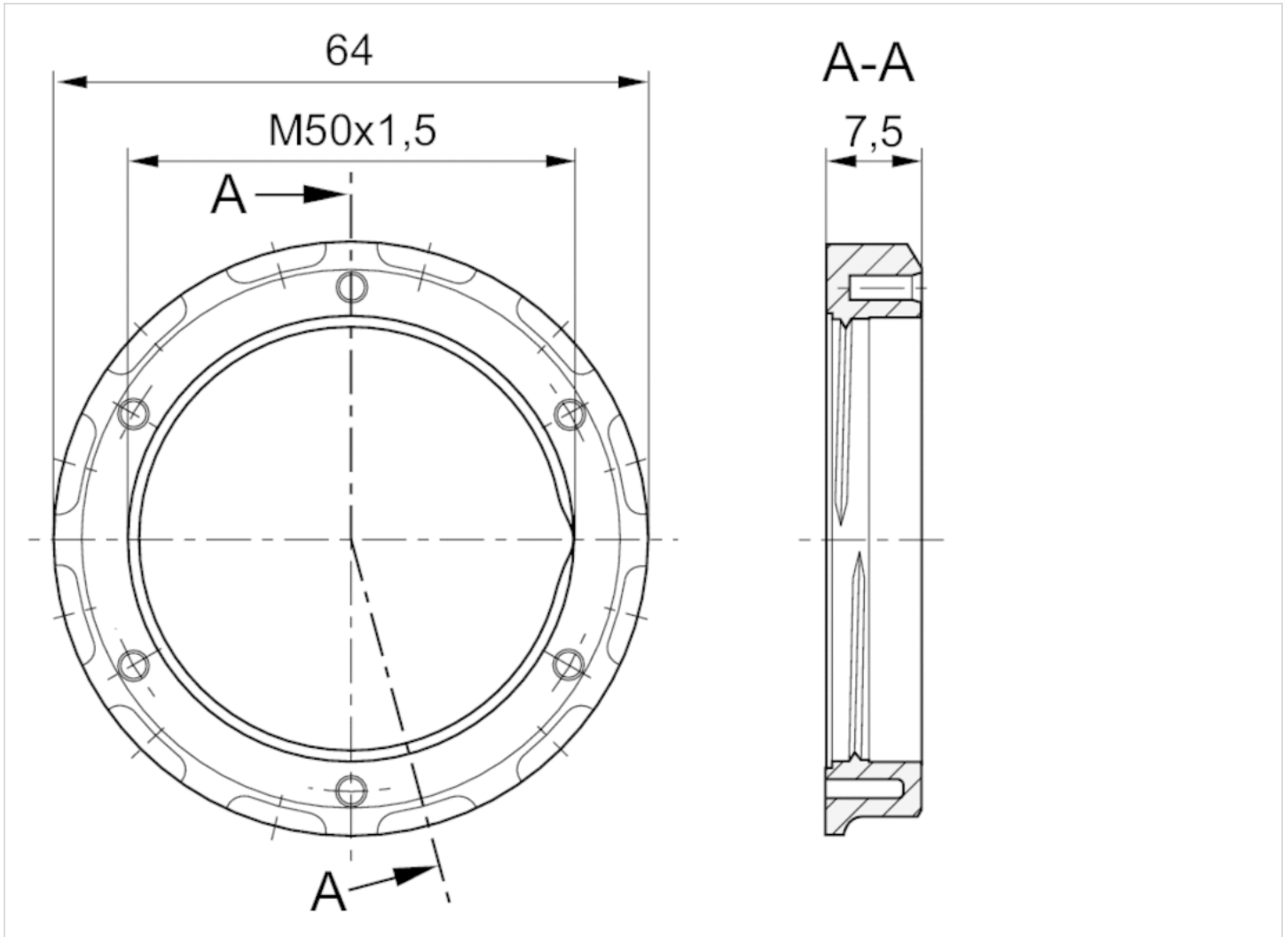
| Part No.   | Port    | for     | Scope of delivery |
|------------|---------|---------|-------------------|
| 1829234071 | M50x1.5 | AS5 NL4 | 2 piece           |

## Technical information

| Material |         |
|----------|---------|
| Housing  | Plastic |

## Dimensions

Dimensions in mm

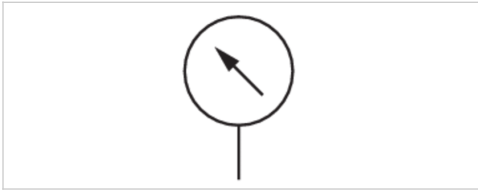


# Pressure gauge, Series PG1-SAS

- Back port
- Background color Black
- Scale color White, Grey
- Viewing window Polystyrene
- Units bar
- Units psi



|                                |                             |
|--------------------------------|-----------------------------|
| Version                        | Bourdon tube pressure gauge |
| Standardization                | EN 837-1                    |
| Class                          | 2,5                         |
| Ambient temperature min./max.  | -40 ... 60 °C               |
| Medium                         | Compressed air              |
| Main scale unit (outside)      | bar                         |
| Main scale color (outside)     | White                       |
| Secondary scale unit (inside)  | psi                         |
| Secondary scale color (inside) | Grey                        |
| Background color               | Black                       |
| Pointer color                  | White                       |
| Weight                         | See table below             |



## Technical data

| Part No.   | Compressed air connection | Nominal diameter | Range of application | Display range    | Operating pressure | Scale value |
|------------|---------------------------|------------------|----------------------|------------------|--------------------|-------------|
| R412004407 | G 1/4                     | 40 mm            | 0 bar ... 1.2        | 0 bar ... 1.6    | 0 ... 1.6 bar      | 0.05        |
| R412004408 | G 1/4                     | 40 mm            | 0 bar ... 2          | 0 bar ... 2.5    | 0 ... 2.5 bar      | 0.1         |
| R412004409 | G 1/4                     | 40 mm            | 0 bar ... 3.2        | 0 bar ... 4      | 0 ... 4 bar        | 0.1         |
| R412004410 | G 1/4                     | 40 mm            | 0 bar ... 4          | 0 bar ... 6      | 0 ... 6 bar        | 0.2         |
| R412004411 | G 1/4                     | 40 mm            | 0 bar ... 8          | 0 bar ... 10     | 0 ... 10 bar       | 0.2         |
| R412004412 | G 1/4                     | 40 mm            | 0 bar ... 12         | 0 bar ... 16     | 0 ... 16 bar       | 0.5         |
| R412004413 | G 1/4                     | 50 mm            | 0 bar ... 1.2        | 0 bar ... 1.6    | 0 ... 1.6 bar      | 0.05        |
| R412004414 | G 1/4                     | 50 mm            | 0 bar ... 2          | 0 bar ... 2.5    | 0 ... 2.5 bar      | 0.1         |
| R412004415 | G 1/4                     | 50 mm            | 0 bar ... 3.2        | 0 bar ... 4      | 0 ... 4 bar        | 0.1         |
| R412004416 | G 1/4                     | 50 mm            | 0 bar ... 4          | 0 bar ... 6      | 0 ... 6 bar        | 0.2         |
| R412004417 | G 1/4                     | 50 mm            | 0 bar ... 8 bar      | 0 bar ... 10 bar | 0 ... 10 bar       | 0.2         |
| R412004418 | G 1/4                     | 50 mm            | 0 bar ... 12         | 0 bar ... 16     | 0 ... 16 bar       | 0.5         |
| R412007898 | G 1/4                     | 50 mm            | 0 bar ... 20         | 0 bar ... 25     | 0 ... 25 bar       | 1           |
| R412004419 | G 1/4                     | 63 mm            | 0 bar ... 1.2        | 0 bar ... 1.6    | 0 ... 1.6 bar      | 0.05        |
| R412004420 | G 1/4                     | 63 mm            | 0 bar ... 2          | 0 bar ... 2.5    | 0 ... 2.5 bar      | 0.1         |
| R412004421 | G 1/4                     | 63 mm            | 0 bar ... 3.2        | 0 bar ... 4      | 0 ... 4 bar        | 0.1         |
| R412004422 | G 1/4                     | 63 mm            | 0 bar ... 4          | 0 bar ... 6      | 0 ... 6 bar        | 0.2         |
| R412004423 | G 1/4                     | 63 mm            | 0 bar ... 8          | 0 bar ... 10     | 0 ... 10 bar       | 0.2         |
| R412004424 | G 1/4                     | 63 mm            | 0 bar ... 12         | 0 bar ... 16     | 0 ... 16 bar       | 0.5         |

| Part No.   | Weight  | Fig.   |    |
|------------|---------|--------|----|
| R412004407 | 0.08 kg | Fig. 1 | -  |
| R412004408 | 0.08 kg | Fig. 1 | -  |
| R412004409 | 0.08 kg | Fig. 1 | -  |
| R412004410 | 0.08 kg | Fig. 1 | -  |
| R412004411 | 0.08 kg | Fig. 1 | -  |
| R412004412 | 0.08 kg | Fig. 1 | -  |
| R412004413 | 0.09 kg | Fig. 2 | -  |
| R412004414 | 0.09 kg | Fig. 2 | -  |
| R412004415 | 0.09 kg | Fig. 2 | -  |
| R412004416 | 0.09 kg | Fig. 2 | -  |
| R412004417 | 0.09 kg | Fig. 2 | 1) |
| R412004418 | 0.09 kg | Fig. 2 | 1) |
| R412007898 | 0.09 kg | Fig. 2 | -  |
| R412004419 | 0.1 kg  | Fig. 3 | -  |
| R412004420 | 0.1 kg  | Fig. 3 | -  |
| R412004421 | 0.1 kg  | Fig. 3 | -  |
| R412004422 | 0.1 kg  | Fig. 3 | -  |
| R412004423 | 0.1 kg  | Fig. 3 | -  |
| R412004424 | 0.1 kg  | Fig. 3 | -  |

1) Suitable for use in Ex zones 1, 2, 21, 22.

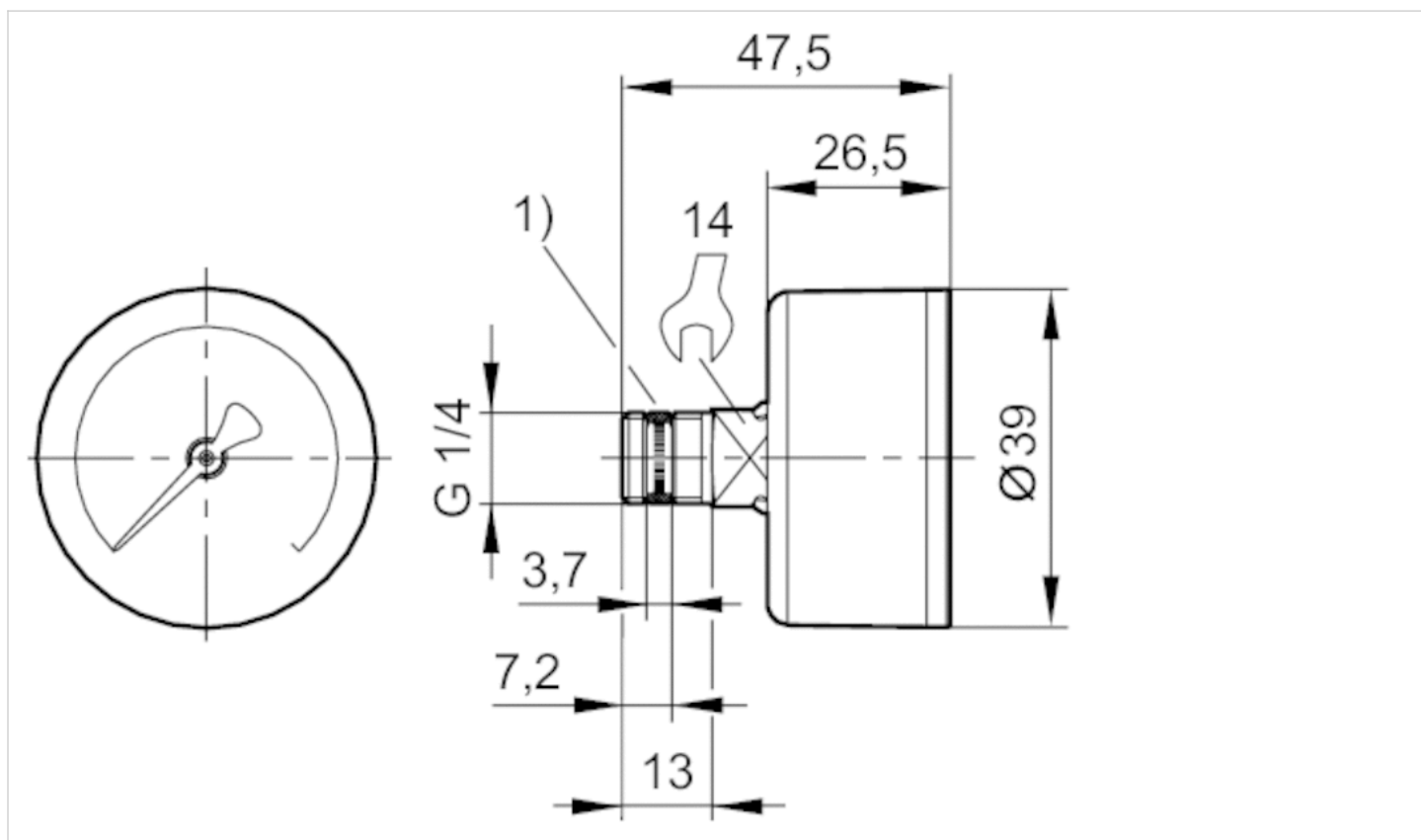
## Technical information

| Material       |                                 |
|----------------|---------------------------------|
| Housing        | Acrylonitrile butadiene styrene |
| Thread         | Brass                           |
| Viewing window | Polystyrene                     |
| Seal           | Polytetrafluorethylene          |



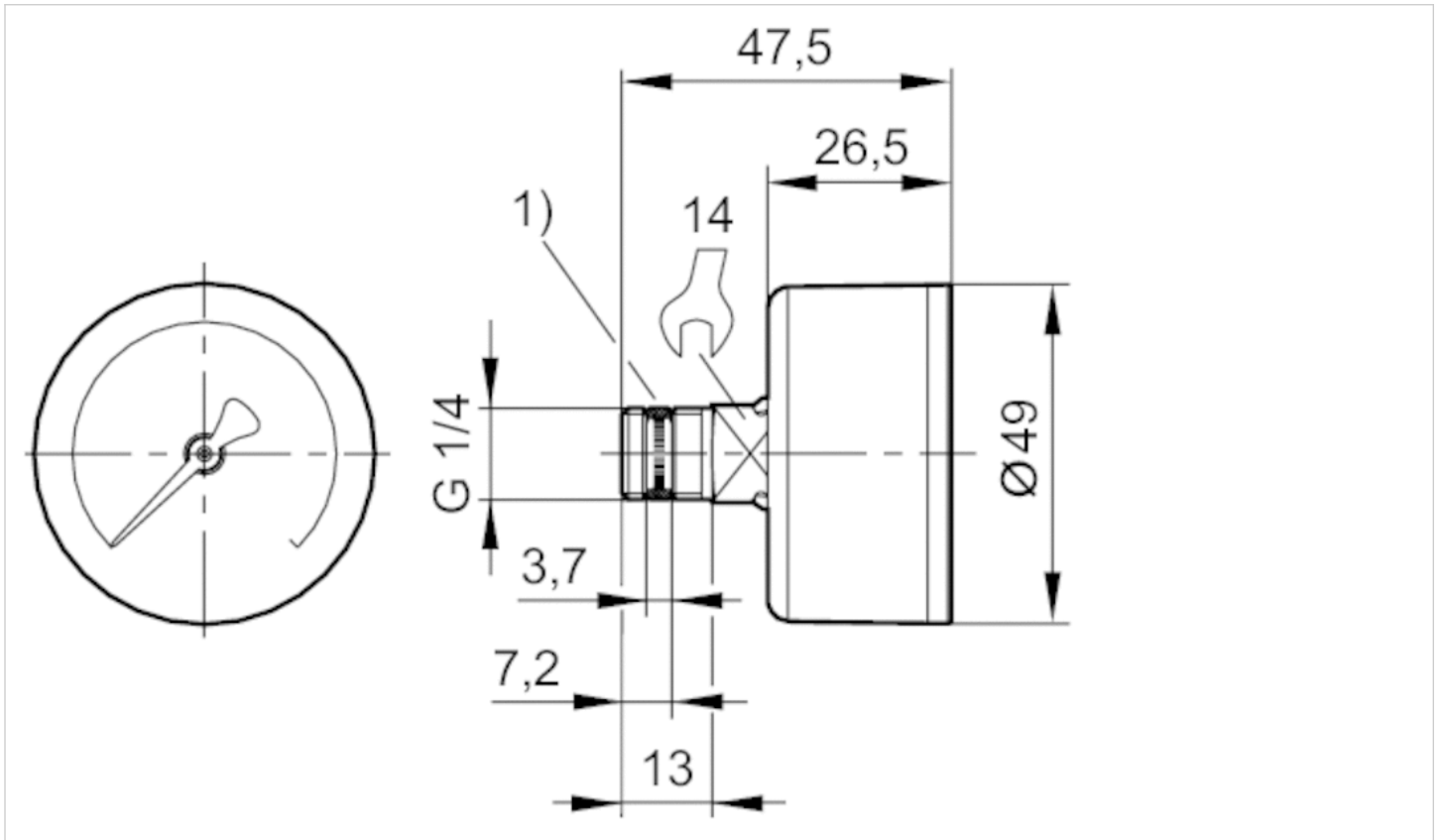
## Dimensions

Dimensions in mm, Fig. 1



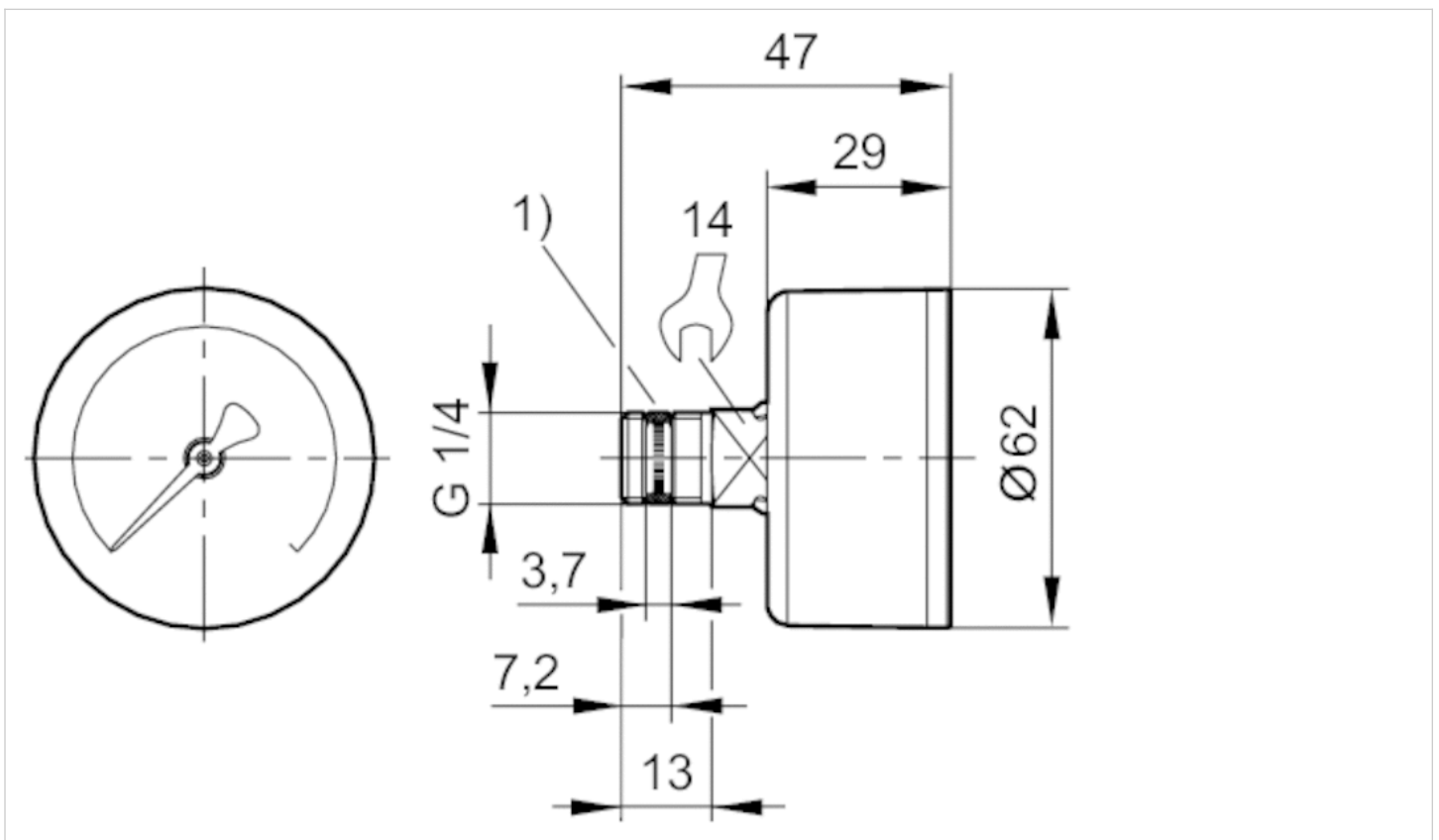
1) Gasket thread

Dimensions in mm, Fig. 2



1) Gasket thread

Dimensions in mm, Fig. 3

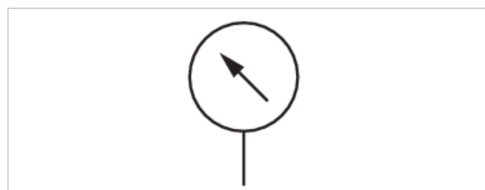


1) Gasket thread



# Pressure gauge, Series PG1-SAS-ADJ

- Back port
- with adjustable work area display
- Background color Black
- Scale color White, Grey
- Viewing window Polystyrene
- Units bar
- Units psi



|                                |                                   |
|--------------------------------|-----------------------------------|
| Version                        | Bourdon tube pressure gauge       |
| Version                        | with adjustable work area display |
| Standardization                | EN 837-1                          |
| Class                          | 2,5                               |
| Ambient temperature min./max.  | -40 ... 60 °C                     |
| Medium                         | Compressed air                    |
| Work area                      | adjustable work area display      |
| Work Area Display, Color       | Red Green                         |
| Main scale unit (outside)      | bar                               |
| Main scale color (outside)     | White                             |
| Secondary scale unit (inside)  | psi                               |
| Secondary scale color (inside) | Grey                              |
| Background color               | Black                             |
| Pointer color                  | White                             |
| Weight                         | 0.1 kg                            |

## Technical data

| Part No.   | Compressed air connection | Nominal diameter | Range of application | Display range | Operating pressure | Scale value |
|------------|---------------------------|------------------|----------------------|---------------|--------------------|-------------|
| R412007867 | G 1/4                     | 50 mm            | 0 bar ... 1.2        | 0 bar ... 1.6 | 0 ... 1.6 bar      | 0.05        |
| R412007868 | G 1/4                     | 50 mm            | 0 bar ... 2          | 0 bar ... 2.5 | 0 ... 2.5 bar      | 0.1         |
| R412007869 | G 1/4                     | 50 mm            | 0 bar ... 3.2        | 0 bar ... 4   | 0 ... 4 bar        | 0.1         |
| R412007870 | G 1/4                     | 50 mm            | 0 bar ... 4          | 0 bar ... 6   | 0 ... 6 bar        | 0.2         |
| R412007871 | G 1/4                     | 50 mm            | 0 bar ... 8          | 0 bar ... 10  | 0 ... 10 bar       | 0.2         |
| R412007872 | G 1/4                     | 50 mm            | 0 bar ... 12         | 0 bar ... 16  | 0 ... 16 bar       | 0.5         |

## Technical information

To set the operating range, the cover (inspection glass) must be removed. To do this, carefully lift the inspection glass by inserting a pointed or flat object in the slot provided for this purpose on the housing circumference.

## Technical information

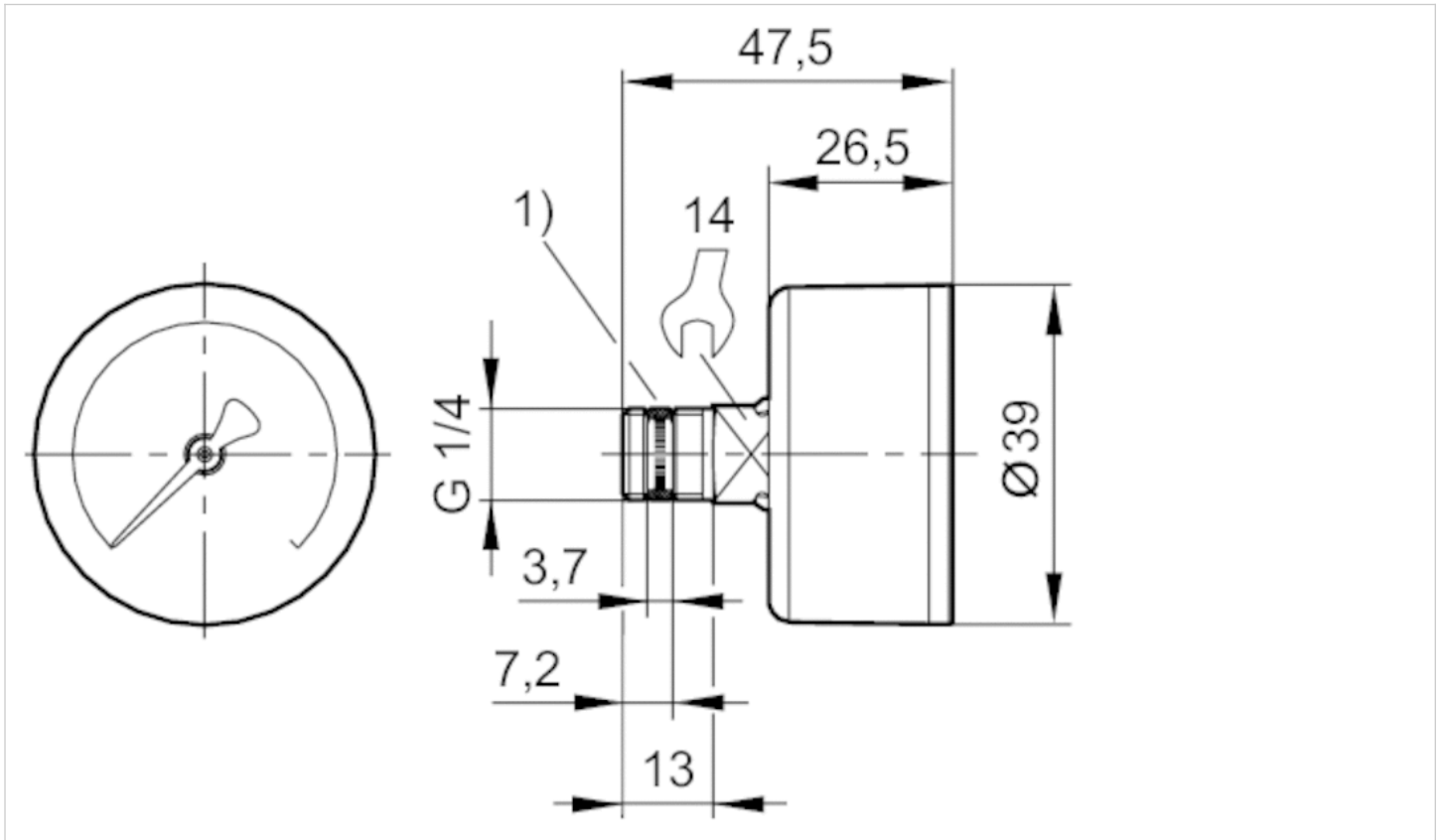
### Material

|         |                                 |
|---------|---------------------------------|
| Housing | Acrylonitrile butadiene styrene |
| Thread  | Brass                           |

|                |                        |
|----------------|------------------------|
| Material       |                        |
| Viewing window | Polystyrene            |
| Seal           | Polytetrafluorethylene |

## Dimensions

Dimensions in mm, Fig. 1



1) Gasket thread

Dimensions in mm

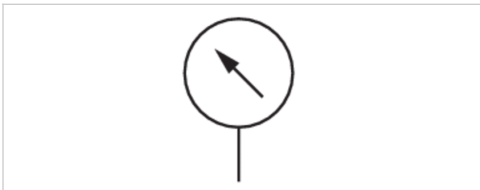
| Compressed air connection | Nominal diameter | Ø A | B    | C    | D  | E   | F   | SW |
|---------------------------|------------------|-----|------|------|----|-----|-----|----|
| G 1/4                     | 50 mm            | 49  | 47.5 | 26.5 | 13 | 7.2 | 3.7 | 14 |

# Pressure gauge, Series PG1-DIM

- for differential pressure measurement for prefilters and microfilters
- flange version
- Background color White
- Scale color Black
- Viewing window Polystyrene
- Units bar
- suitable for ATEX



|                                       |                          |
|---------------------------------------|--------------------------|
| Version                               | Diaphragm pressure gauge |
| Mounting orientation                  | vertical                 |
| Ambient temperature min./max.         | 0 ... 60 °C              |
| Medium                                | Compressed air           |
| Color for differential pressure range | Green Red                |
| Main scale unit (outside)             | bar                      |
| Main scale color (outside)            | Black                    |
| Background color                      | White                    |
| Pointer color                         | Black                    |
| Weight                                | 0.127 kg                 |



## Technical data

| Part No.   | Range of application | Display range | Operating pressure | Scale value |
|------------|----------------------|---------------|--------------------|-------------|
| 1827231072 | 0 ... 0.5 bar        | 0 ... 0.5 bar | 0 ... 16 bar       | 0.1         |

Suitable for use in Ex zones 1, 2, 21, 22.

## Technical information

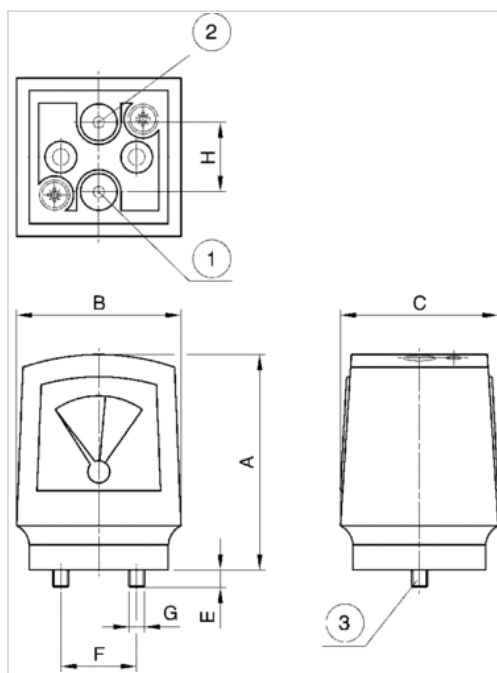
Suitable for use in Ex zones 1, 2, 21, 22.

## Technical information

| Material       |                                  |
|----------------|----------------------------------|
| Housing        | Polyamide fiber-glass reinforced |
| Viewing window | Polystyrene                      |
| Seal           | Acrylonitrile butadiene styrene  |

## Dimensions

### Dimensions



- 1) Input pressure  $p_1$
- 2) Output pressure  $p_2$
- 3) Mounting screw and 2 O-rings included in scope of delivery

### Dimensions in mm

| A  | B  | C  | E | F  | G  | H  |
|----|----|----|---|----|----|----|
| 68 | 52 | 50 | 6 | 24 | M5 | 22 |

# contamination display

- for prefilters and microfilters



Weight

0.025 kg

## Technical data

Part No.

R412006363

2 mounting screws and 2 O-rings supplied loose.

## Technical information

Material

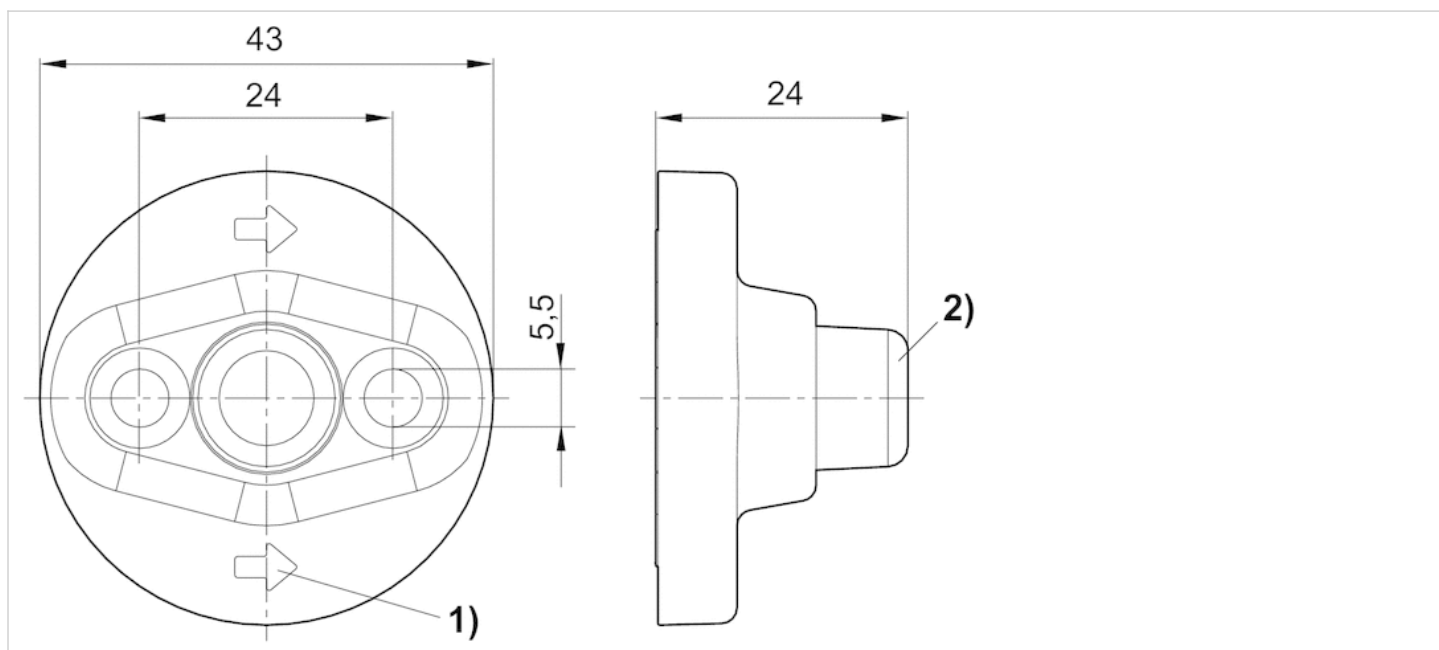
Material

Polyamide



## Dimensions

### Dimensions in mm



1) Flow direction

2) Display in initial state: green (=  $\Delta p$  0.35 bar )

Display turns red on contamination of the filter element (=  $\Delta p \geq 0.35$  bar ).























# 3/2-directional valve, Series DO16

- 3/2
- Plate connection
- Electrical connection : Plug, ISO 15217, form C
- Manual override : without detent with detent
- With spring return



|                                       |                           |
|---------------------------------------|---------------------------|
| Version                               | Poppet valve              |
| Activation                            | Electrically              |
| Sealing principle                     | Soft sealing              |
| Working pressure min./max.            | See table below           |
| Ambient temperature min./max.         | -10 ... 50 °C             |
| Medium temperature min./max.          | -10 ... 50 °C             |
| Medium                                | Compressed air            |
| Max. particle size                    | 5 µm                      |
| Oil content of compressed air         | 0 ... 5 mg/m <sup>3</sup> |
| Nominal flow 1 ▶ 2                    | See table below           |
| Nominal flow 2 ▶ 3                    | See table below           |
| Protection class acc. to DIN EN 61140 | Class I                   |
| Electrically                          |                           |
| Protection class with connection      | IP65                      |
| Duty cycle                            | 100 %                     |
| Mounting on manifold strip            | PRS strip                 |
| mounting screws                       | M3                        |
| Weight                                | 0.035 kg                  |

## Technical data

| Part No.   |   | MO  | Operational voltage |          |
|------------|---|---|---------------------|----------|
|            |   |   | DC                  | AC 50 Hz |
| 0820048002 |  |  | 24 V                | -        |
| 0820048004 |  |  | -                   | 24 V     |
| 0820048005 |  |  | -                   | -        |
| 0820048001 |  |  | -                   | 230 V    |
| 0820048026 |  |  | 24 V                | -        |
| 0820048028 |  |  | -                   | 24 V     |
| 0820048101 |  |  | -                   | 230 V    |
| 0820048029 |  |  | -                   | -        |
| 0820048025 |  |  | -                   | 230 V    |
| 0820048102 |  |  | 24 V                | -        |
| 0820048126 |  |  | 24 V                | -        |

| Part No.   | Operational voltage | Voltage tolerance |             |             |
|------------|---------------------|-------------------|-------------|-------------|
|            |                     | DC                | AC 50 Hz    | AC 60 Hz    |
| 0820048002 | -                   | -10% / +15%       | -           | -           |
| 0820048004 | -                   | -                 | -10% / +15% | -           |
| 0820048005 | 110 V               | -                 | -           | -10% / +15% |
| 0820048001 | -                   | -                 | -10% / +15% | -           |

| Part No.   | Operational voltage | Voltage tolerance | Voltage tolerance | Voltage tolerance |
|------------|---------------------|-------------------|-------------------|-------------------|
|            |                     | DC                | AC 50 Hz          | AC 60 Hz          |
| 0820048026 | -                   | -10% / +15%       | -                 | -                 |
| 0820048028 | -                   | -                 | -10% / +15%       | -                 |
| 0820048101 | -                   | -                 | -10% / +15%       | -                 |
| 0820048029 | 110 V               | -                 | -                 | -10% / +15%       |
| 0820048025 | -                   | -                 | -10% / +15%       | -                 |
| 0820048102 | -                   | -10% / +15%       | -                 | -                 |
| 0820048126 | -                   | -10% / +15%       | -                 | -                 |

| Part No.   | Power consumption | Holding power | Holding power | Switch-on power |
|------------|-------------------|---------------|---------------|-----------------|
|            | DC                | AC 50 Hz      | AC 60 Hz      | AC 50 Hz        |
| 0820048002 | 2 W               | -             | -             | -               |
| 0820048004 | -                 | 1.6 VA        | -             | 2.2 VA          |
| 0820048005 | -                 | -             | 1.4 VA        | -               |
| 0820048001 | -                 | 1.6 VA        | -             | 2.2 VA          |
| 0820048026 | 2 W               | -             | -             | -               |
| 0820048028 | -                 | 1.6 VA        | -             | 2.2 VA          |
| 0820048101 | -                 | 1.6 VA        | -             | 2.2 VA          |
| 0820048029 | -                 | -             | 1.4 VA        | -               |
| 0820048025 | -                 | 1.6 VA        | -             | 2.2 VA          |
| 0820048102 | 2 W               | -             | -             | -               |
| 0820048126 | 2 W               | -             | -             | -               |

| Part No.   | Switch-on power | Nominal flow 1 ▶ 2 | Nominal flow 2 ▶ 3 | Working pressure min./max. |
|------------|-----------------|--------------------|--------------------|----------------------------|
|            | AC 60 Hz        |                    |                    |                            |
| 0820048002 | -               | 25 l/min           | 36 l/min           | 0 ... 10 bar               |
| 0820048004 | -               | 25 l/min           | 36 l/min           | 0 ... 10 bar               |
| 0820048005 | 2 VA            | 25 l/min           | 36 l/min           | 0 ... 10 bar               |
| 0820048001 | -               | 25 l/min           | 36 l/min           | 0 ... 10 bar               |
| 0820048026 | -               | 25 l/min           | 36 l/min           | 0 ... 10 bar               |
| 0820048028 | -               | 25 l/min           | 36 l/min           | 0 ... 10 bar               |
| 0820048101 | -               | 16 l/min           | 19 l/min           | 0 ... 6 bar                |
| 0820048029 | 2 VA            | 25 l/min           | 36 l/min           | 0 ... 10 bar               |
| 0820048025 | -               | 25 l/min           | 36 l/min           | 0 ... 10 bar               |
| 0820048102 | -               | 20 l/min           | 26 l/min           | 0 ... 8 bar                |
| 0820048126 | -               | 20 l/min           | 26 l/min           | 0 ... 8 bar                |

Nominal flow Q<sub>n</sub> at 6 bar and Δp = 1 bar, MO = Manual override

## Technical information

The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

The oil content of compressed air must remain constant during the life cycle.

Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

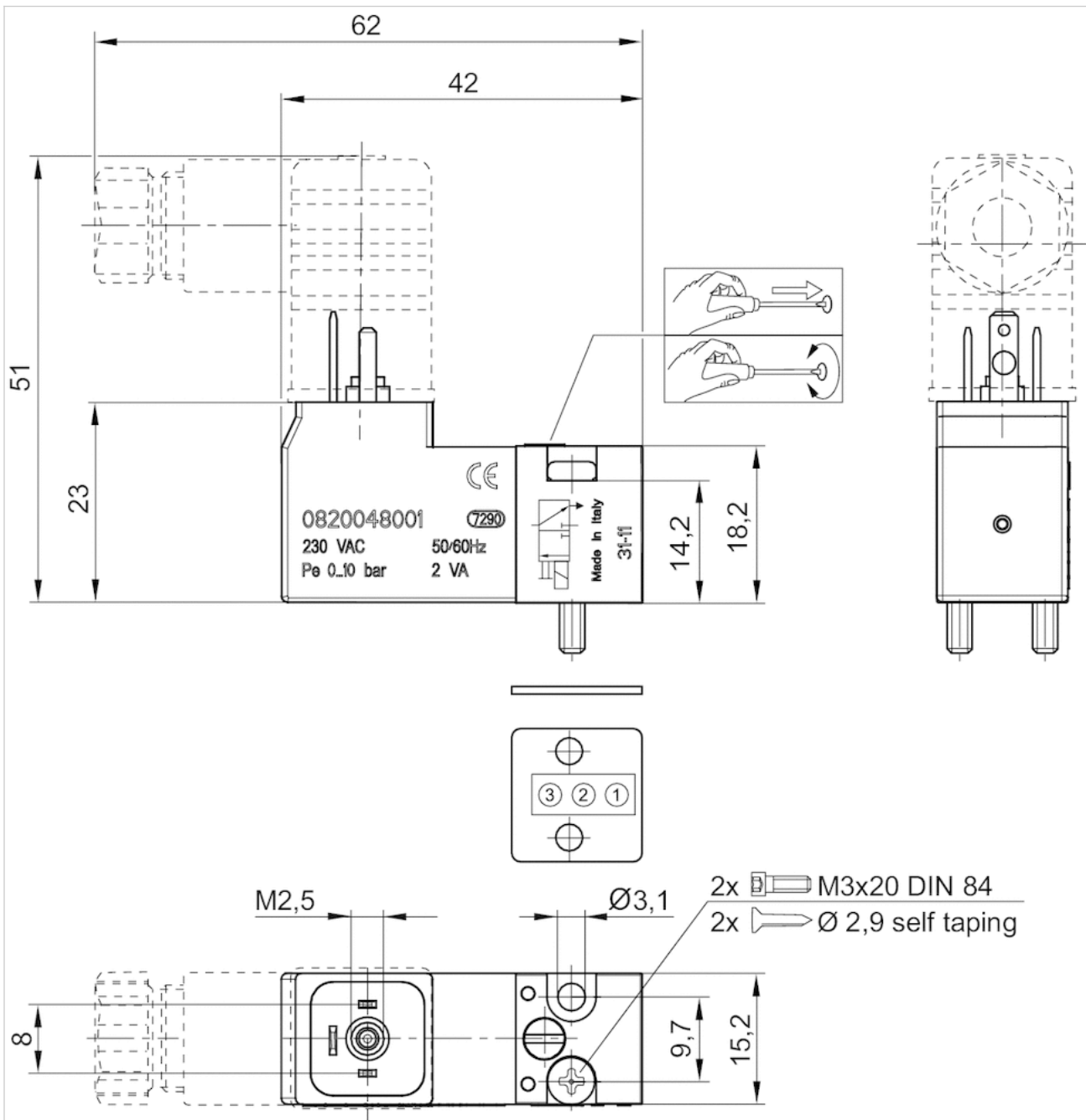
## Technical information

### Material

|         |  |
|---------|--|
| Housing | polyphenylene sulfide Polyamide fiber-glass reinforced |
| Seals   | Acrylonitrile butadiene rubber                         |

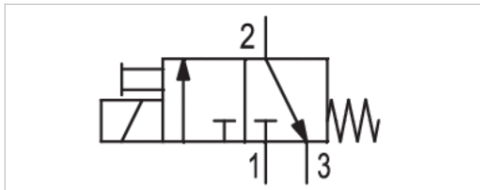
## Dimensions

### Dimensions





# 3/2-directional valve, Series DO16

- 3/2
- NC
- Plate connection
- Electrical connection : M12, 3-pin
- Manual override : without detent
- With spring return



|                                       |                           |
|---------------------------------------|---------------------------|
| Version                               | Poppet valve              |
| Activation                            | Electrically              |
| Sealing principle                     | Soft sealing              |
| Working pressure min./max.            | 0 ... 10 bar              |
| Ambient temperature min./max.         | -10 ... 50 °C             |
| Medium temperature min./max.          | -10 ... 50 °C             |
| Medium                                | Compressed air            |
| Max. particle size                    | 5 µm                      |
| Oil content of compressed air         | 0 ... 5 mg/m <sup>3</sup> |
| Nominal flow 1 ▶ 2                    | 18 l/min                  |
| Nominal flow 2 ▶ 3                    | 24 l/min                  |
| Protection class acc. to DIN EN 61140 | Class I                   |
| Electrically                          |                           |
| Duty cycle                            | 100 %                     |
| Mounting on manifold strip            | PRS strip                 |
| Weight                                | 0.035 kg                  |

## Technical data

| Part No.   | MO  |    | Operational voltage | Power consumption |       |    |
|------------|---|----|---------------------|-------------------|-------|----|
|            |   |    |                     | DC                | DC    |    |
| R412013391 |  | NC | 24 V                |                   | 1.5 W | 1) |
| R412019226 |  | NC | 24 V                |                   | 1.5 W | 2) |

1) Pilot valve only

2) Incl. pilot valve, seal, screws, and manual

## Technical information

The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

The oil content of compressed air must remain constant during the life cycle.

Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

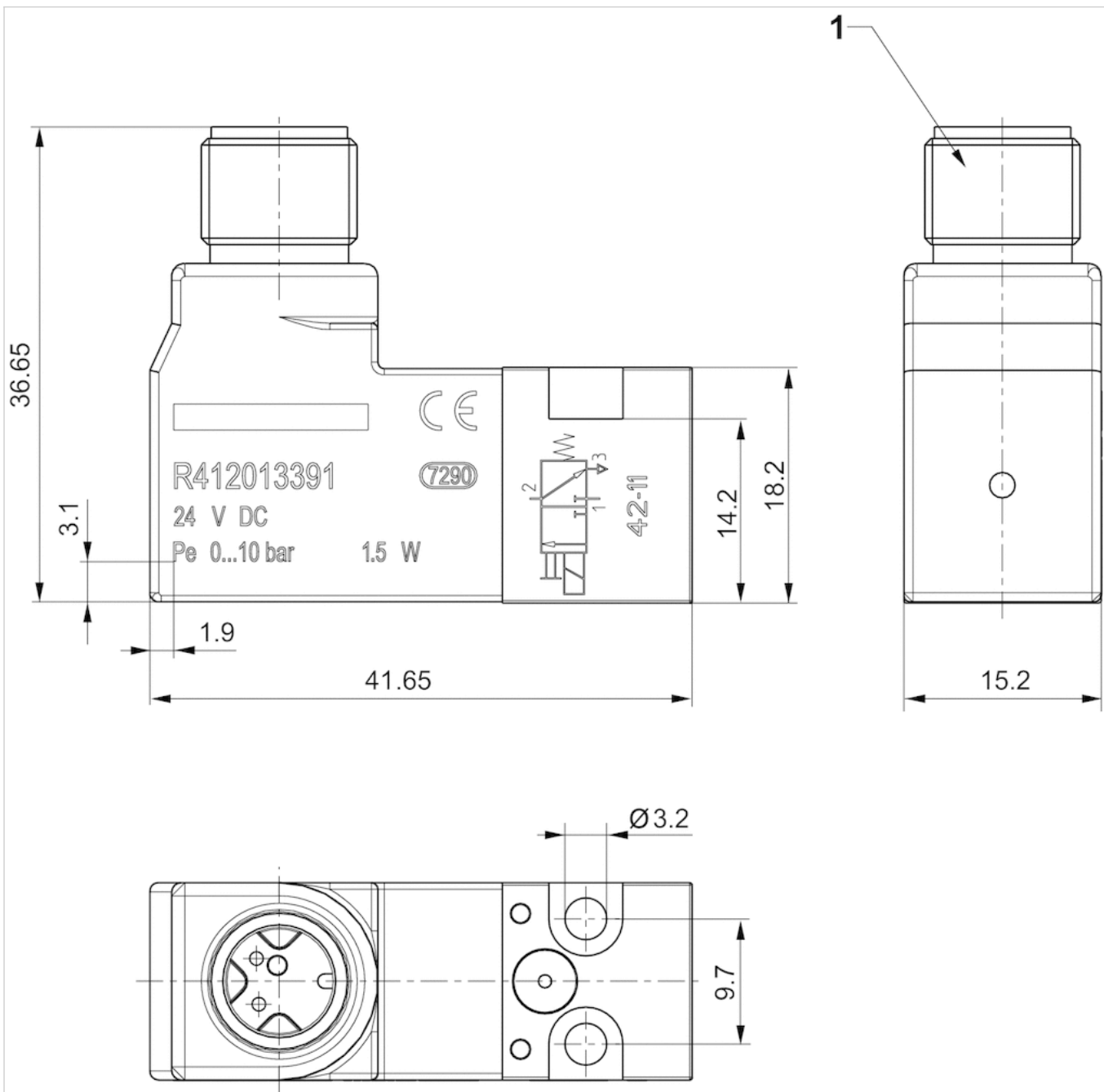
## Technical information

### Material

|         |  |
|---------|--|
| Housing | polyphenylene sulfide Polyamide fiber-glass reinforced |
| Seals   | Acrylonitrile butadiene rubber                         |

## Dimensions

### Dimensions



1) Port for plug M12x1



# 3/2-directional valve, Series DO30

- 3/2
- Pilot valve width : 30 mm
- Plate valve with pipe connection
- Compressed air connection output : CNOMO
- Electrical connection : Plug, EN 175301-803, form A
- Manual override : without detent with detent
- With spring return
- suitable for ATEX



|   |                           |
|---|---------------------------|
| Version                                       | Poppet valve              |
| Activation                                    | Electrically              |
| Sealing principle                             | Soft sealing              |
| Standards                                     | CNOMO / NFE 49-003-1      |
| Working pressure min./max.                    | 0 ... 10 bar              |
| Ambient temperature min./max.                 | -10 ... 50 °C             |
| Medium temperature min./max.                  | -10 ... 50 °C             |
| Medium  | Compressed air            |
| Max. particle size                            | 5 µm                      |
| Oil content of compressed air                 | 0 ... 5 mg/m <sup>3</sup> |
| Nominal flow 1 ▶ 2                            | See table below           |
| Nominal flow 2 ▶ 3                            | See table below           |
| Protection class with connection              | IP65                      |
| Compatibility index                           | 15                        |
| Duty cycle                                    | 100 %                     |
| Mounting on manifold strip<br>mounting screws | P-strip<br>M4             |
| Weight  | 0.06 kg                   |

## Technical data

| Part No.   | MO  | Compressed air connection |        |
|------------|---|---------------------------|--------|
|            |   | Input                     | Output |
| 0820019985 |  | CNOMO                     | CNOMO  |
| 0820019980 |  | CNOMO                     | CNOMO  |

| Part No.   | Compressed air connection |  | Nominal flow 1 ▶ 2 | Nominal flow 2 ▶ 3 |
|------------|---------------------------|--|--------------------|--------------------|
|            | Exhaust                   |  |                    |                    |
| 0820019985 | M5                        |  | 68 l/min           | 90 l/min           |
| 0820019980 | M5                        |  | 65 l/min           | 80 l/min           |

| Part No.   | basic valve with electrical connector | Power consumption        | ATEX              |
|------------|---------------------------------------|--------------------------|-------------------|
| 0820019985 | Basic valve without coil              | Higher voltage tolerance | suitable for ATEX |
| 0820019980 | Basic valve without coil              | Higher voltage tolerance | suitable for ATEX |

Nominal flow Q<sub>n</sub> at 6 bar and Δp = 1 bar, MO = Manual override  
pilot valve without coil

## Technical information

The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!  
 The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .  
 The oil content of compressed air must remain constant during the life cycle.  
 Use only the approved oils from AVENTICS. Further information can be found in the “Technical information” document (available in the MediaCentre).

ATEX optional: ATEX version can be produced by combining the basic valve without coil with an ATEX coil. ATEX ID: see ATEX coils catalog page.

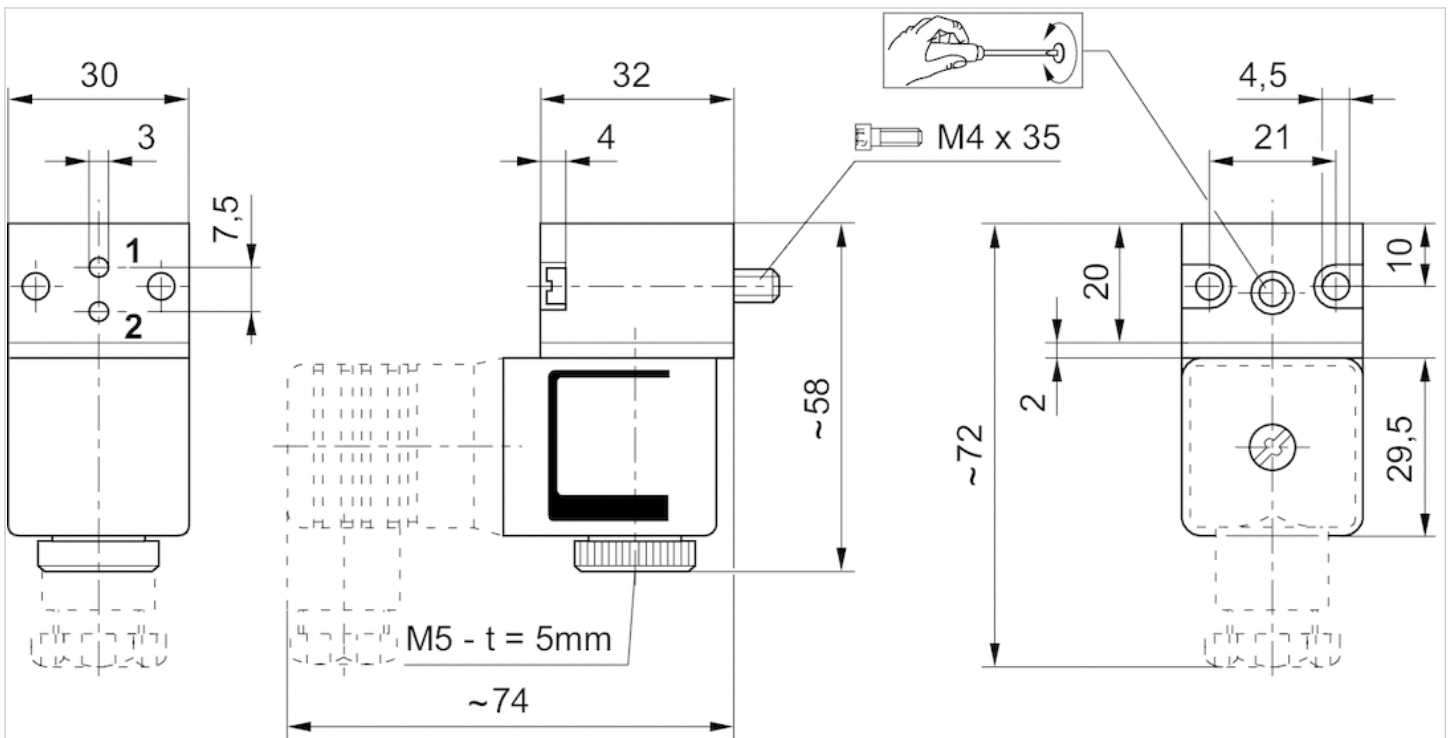
## Technical information

### Material

|         |                  |
|---------|------------------|
| Housing | Plastic          |
| Seals   | Fluorocaoutchouc |

## Dimensions

### Dimensions

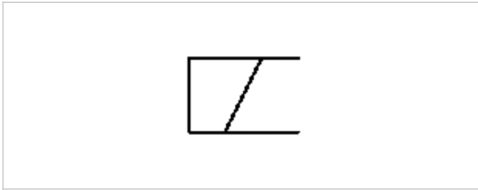


t = depth



# Coil, Series CO1

- Cable with valve plug connector
- Coil width 30 mm
- Power consumption DC 3.25 W
- Holding power AC 2.9-3 VA
- Switch-on power AC 3-3.1 VA
- ATEX



|                               |                                    |
|-------------------------------|------------------------------------|
| Certificates                  | ATEX                               |
| ATEX class G                  | II 2G Ex mb IIC T4 Gb              |
| ATEX class D                  | II 2D Ex mb tb IIIC T130°C Db IP65 |
| Ambient temperature min./max. | -20 ... 50 °C                      |
| Protection class              | IP65                               |
| Duty cycle ED                 | 100 %                              |
| Compatibility index           | 14                                 |
| Weight                        | See table below                    |

## Technical data

| Part No.   | Operational voltage | Operational voltage | Operational voltage |
|------------|---------------------|---------------------|---------------------|
|            | DC                  | AC 50 Hz            | AC 60 Hz            |
| 1827414297 | -                   | 230 V               | 230 V               |
| 1827414298 | -                   | 230 V               | 230 V               |
| 1827414299 | -                   | 110 V               | 110 V               |
| 1827414303 | 24 V                | -                   | -                   |
| 1827414304 | 24 V                | -                   | -                   |

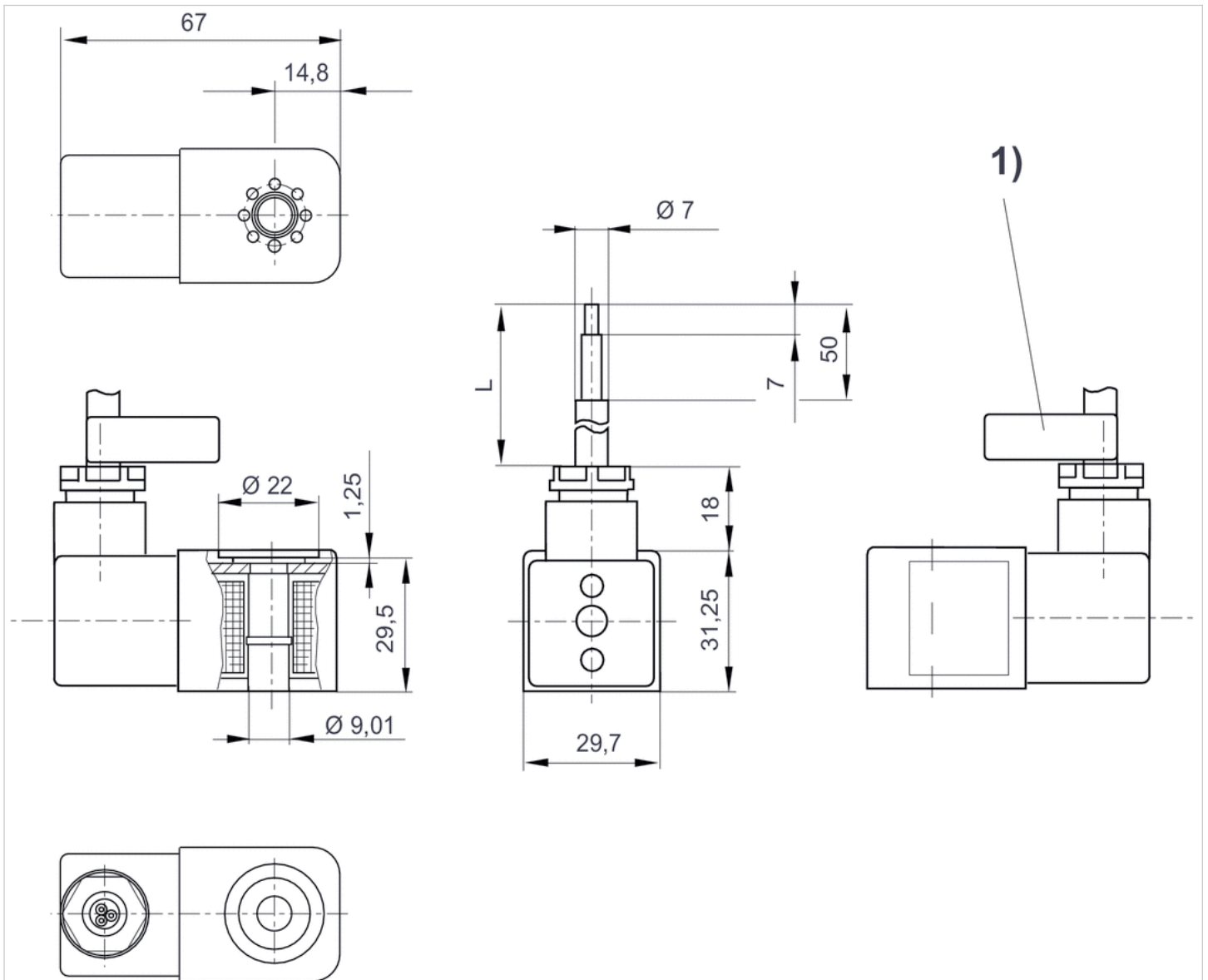
| Part No.   | Voltage tolerance | Voltage tolerance | Power consumption | Holding power |
|------------|-------------------|-------------------|-------------------|---------------|
|            | DC                | AC 50 Hz          | DC                | AC 50 Hz      |
| 1827414297 | -                 | -10% / +10%       | -                 | 3 VA          |
| 1827414298 | -                 | -10% / +10%       | -                 | 3 VA          |
| 1827414299 | -                 | -10% / +10%       | -                 | 2.9 VA        |
| 1827414303 | -10% / +10%       | -                 | 3.25 W            | -             |
| 1827414304 | -10% / +10%       | -                 | 3.25 W            | -             |

| Part No.   | Switch-on power | Cable length | Weight  |
|------------|-----------------|--------------|---------|
|            | AC 50 Hz        |              |         |
| 1827414297 | 3.1 VA          | 3 m          | 0.38 kg |
| 1827414298 | 3.1 VA          | 10 m         | 0.91 kg |
| 1827414299 | 3 VA            | 3 m          | 0.38 kg |

| Part No.   | Switch-on power | Cable length | Weight  |
|------------|-----------------|--------------|---------|
|            | AC 50 Hz        |              |         |
| 1827414303 | -               | 3 m          | 0.38 kg |
| 1827414304 | -               | 10 m         | 0.91 kg |

## Dimensions

### Dimensions

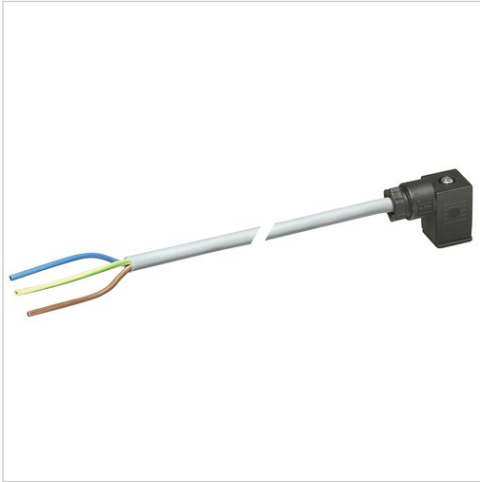


L = cable length

1) Cable ID band with serial number


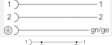
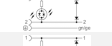



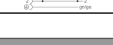
# Valve plug connector, series CON-VP

- Socket form C 2+E angled 90°
- open cable ends 3-pin
- with cable
- unshielded



|                                  |                      |
|----------------------------------|----------------------|
| Ambient temperature min./max.    | -20 ... 80 °C        |
| Operational voltage              | See table below      |
| Protection class                 | IP67                 |
| Wire cross-section               | 0.75 mm <sup>2</sup> |
| Mounting screw tightening torque | 0.4 Nm               |
| Weight                           | See table below      |

## Technical data

| Part No.   |   | Operational voltage | Max. current | Protective circuit | Contact assignment |
|------------|---|---------------------|--------------|--------------------|--------------------|
| 1834484213 |  | 230 V AC/DC         | 6 A          | -                  | 2+E                |
| 1834484215 |  | 230 V AC/DC         | 6 A          | -                  | 2+E                |
| 1834484205 |  | 24 V AC/DC          | 6 A          | Z-diode            | 2+E                |
| 1834484207 |  | 24 V AC/DC          | 6 A          | Z-diode            | 2+E                |
| 1834484209 |  | 230 V AC/DC         | 6 A          | Varistor           | 2+E                |
| 1834484211 |  | 230 V AC/DC         | 6 A          | Varistor           | 2+E                |
| 1834484236 |  | 24 V AC/DC          | 6 A          | Z-diode            | 2+E                |

| Part No.   | LED status display | Number of wires | Cable-Ø | Cable length | Weight   | Fig.   |    |
|------------|--------------------|-----------------|---------|--------------|----------|--------|----|
| 1834484213 | -                  | 3               | 5.9 mm  | 3 m          | 0.183 kg | Fig. 2 | -  |
| 1834484215 | -                  | 3               | 5.9 mm  | 5 m          | 0.308 kg | Fig. 2 | -  |
| 1834484205 | Yellow             | 3               | 5.9 mm  | 3 m          | 0.185 kg | Fig. 2 | 1) |
| 1834484207 | Yellow             | 3               | 5.9 mm  | 5 m          | 0.298 kg | Fig. 2 | 1) |
| 1834484209 | Yellow             | 3               | 5.9 mm  | 3 m          | 0.194 kg | Fig. 2 | 1) |
| 1834484211 | Yellow             | 3               | 5.9 mm  | 5 m          | 0.285 kg | Fig. 2 | 1) |
| 1834484236 | Yellow             | 3               | 5.9 mm  | 10 m         | 0.571 kg | Fig. 2 | 1) |

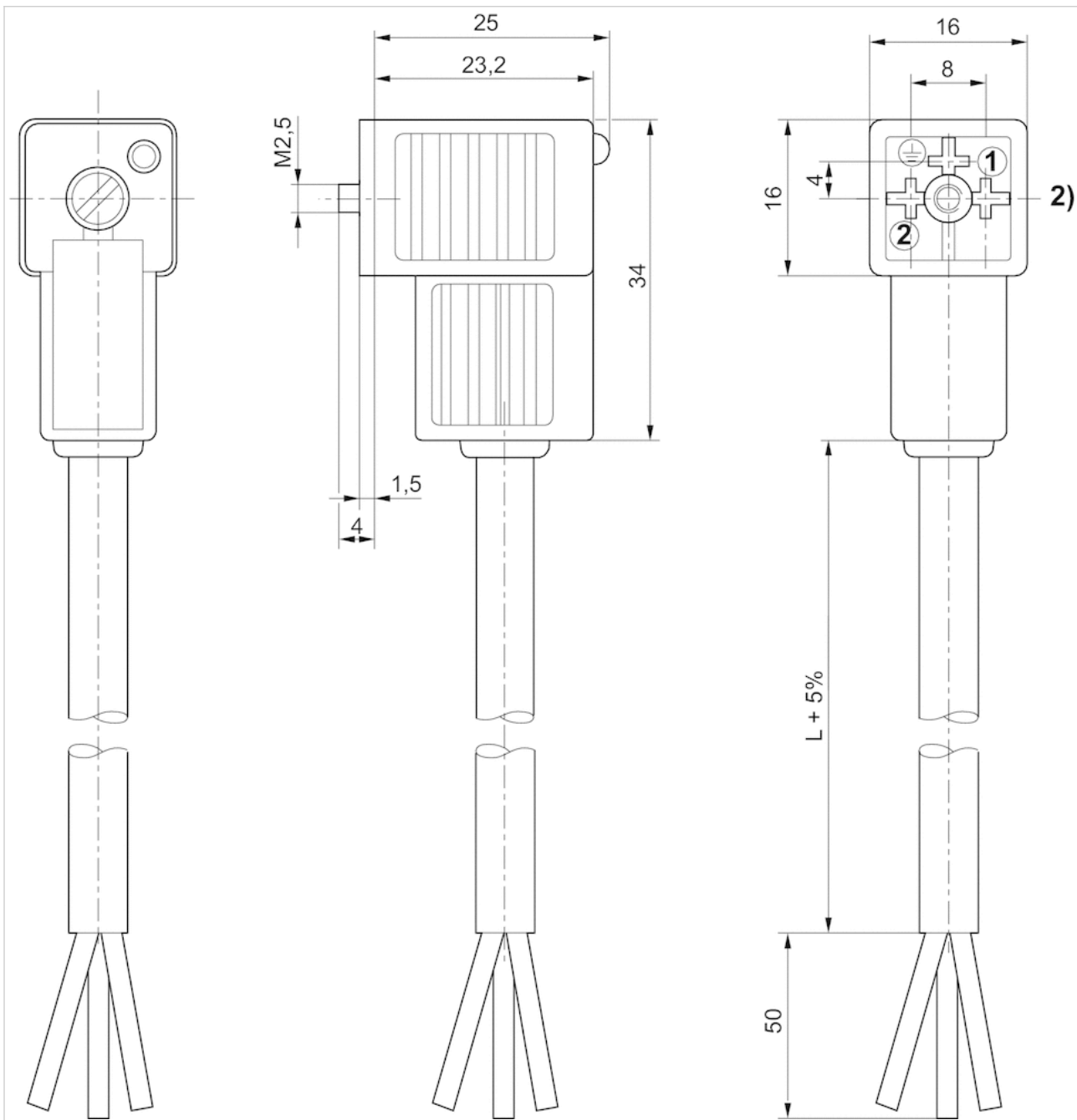
1) Scope of delivery incl. flat gasket

## Technical information

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



Fig. 2



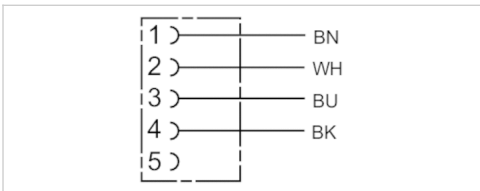
2) 180° female insert

# Round plug connector, Series CON-RD

- Socket M12x1 5-pin A-coded angled 90°
- open cable ends
- for DeviceNet
- with cable
- unshielded



|                               |                      |
|-------------------------------|----------------------|
| Ambient temperature min./max. | -40 ... 85 °C        |
| Operational voltage           | 48 V AC/DC           |
| Protection class              | IP65                 |
| Wire cross-section            | 0.34 mm <sup>2</sup> |
| Weight                        | See table below      |



## Technical data

| Part No.   | Max. current | Number of wires | Cable-Ø | Cable length | Weight   |
|------------|--------------|-----------------|---------|--------------|----------|
| 1834484259 | 4 A          | 4               | 5.2 mm  | 3 m          | 0.126 kg |
| 1834484260 | 4 A          | 4               | 5.2 mm  | 5 m          | 0.195 kg |
| 1834484261 | 4 A          | 4               | 5.2 mm  | 10 m         | 0.38 kg  |

## Technical information

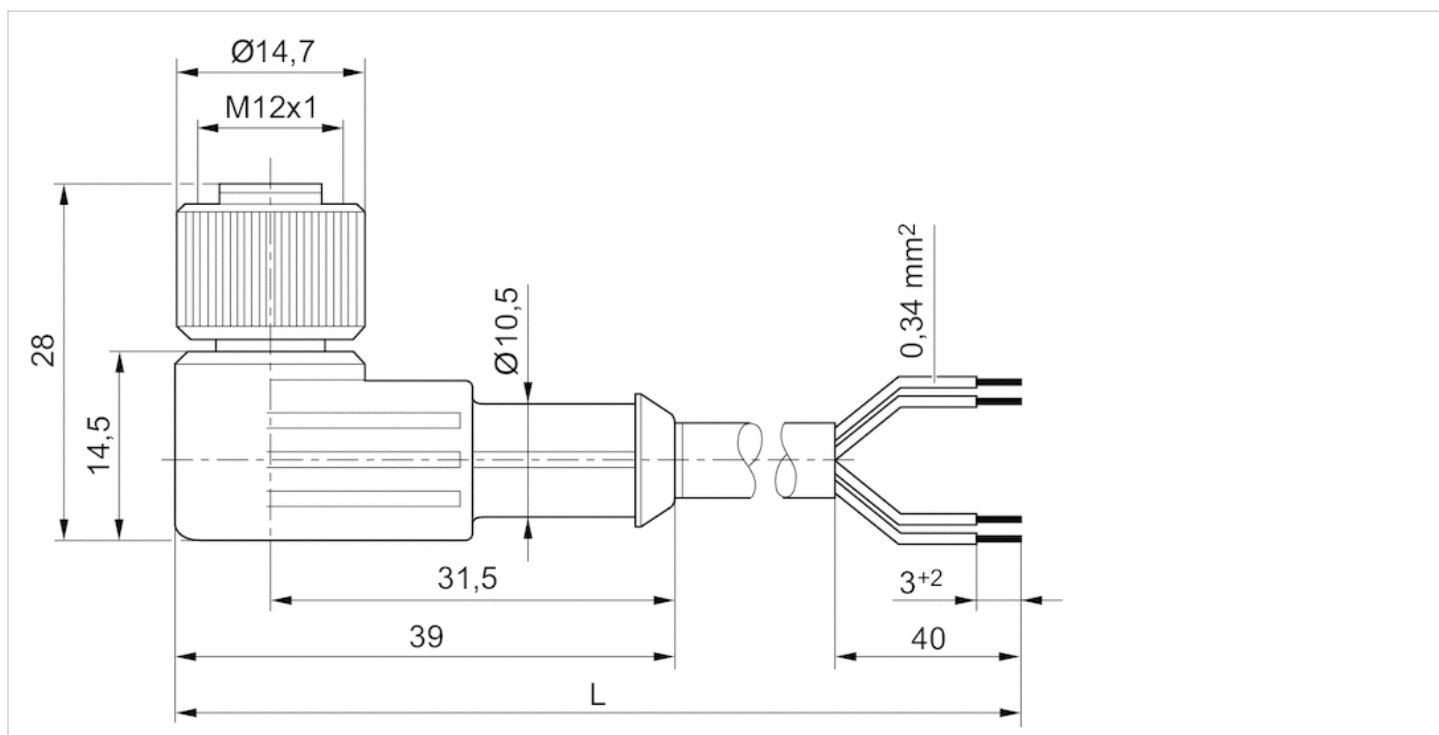
The specified protection class is only valid in assembled and tested state.

## Technical information

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

## Dimensions

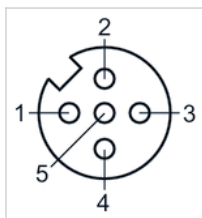
### Dimensions



L = length

## Pin assignments

### Pin assignment, socket



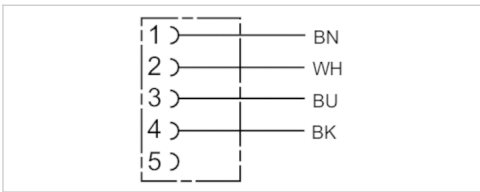
- (1) BN=brown
- (2) WH=white
- (3) BU=blue
- (4) BK=black
- (5) not assigned

# Round plug connector, Series CON-RD

- Socket M12x1 5-pin A-coded straight 180°
- open cable ends
- with cable
- unshielded



|                               |                      |
|-------------------------------|----------------------|
| Ambient temperature min./max. | -25 ... 70 °C        |
| Operational voltage           | 48 V AC/DC           |
| Protection class              | IP67                 |
| Wire cross-section            | 0.34 mm <sup>2</sup> |
| Weight                        | See table below      |



## Technical data

| Part No.   | Max. current | Number of wires | Cable-Ø | Cable length | Weight   |
|------------|--------------|-----------------|---------|--------------|----------|
| 1834484256 | 4 A          | 4               | 5.2 mm  | 3 m          | 0.122 kg |
| 1834484257 | 4 A          | 4               | 5.2 mm  | 5 m          | 0.194 kg |
| 1834484258 | 4 A          | 4               | 5.2 mm  | 10 m         | 0.373 kg |

## Technical information

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

## Technical information

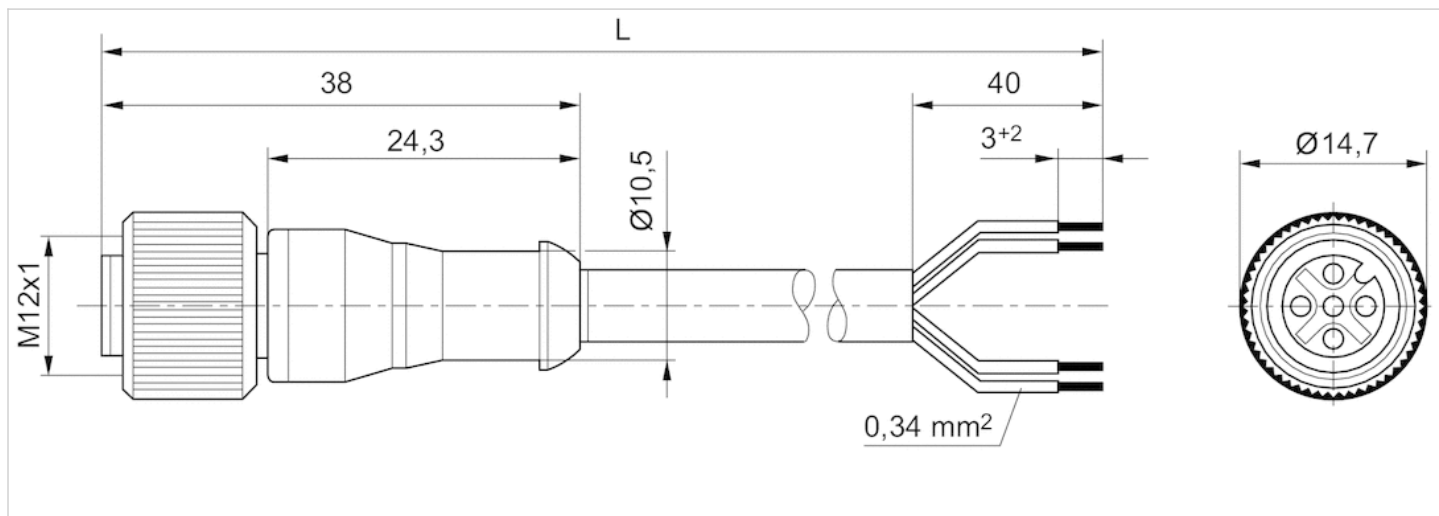
### Material

|              |              |
|--------------|--------------|
| Cable sheath | Polyurethane |
|--------------|--------------|



## Dimensions

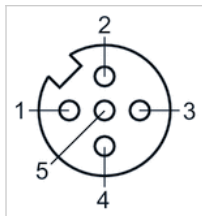
### Dimensions



L = length

## Pin assignments

### Pin assignment, socket



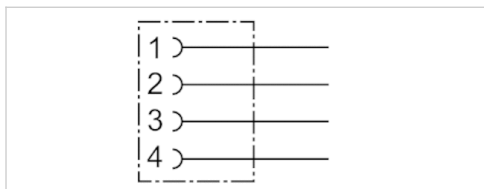
- (1) BN=brown
- (2) WH=white
- (3) BU=blue
- (4) BK=black
- (5) not assigned

# Round plug connector, Series CON-RD

- Socket, M12x1, 4-pin, A-coded, straight, 180°
- UL (Underwriters Laboratories)
- unshielded



|                               |               |
|-------------------------------|---------------|
| Connection type               | Screws        |
| Ambient temperature min./max. | -40 ... 85 °C |
| Operational voltage           | 48 V AC/DC    |
| Protection class              | IP67          |
| Weight                        | 0.015 kg      |



## Technical data

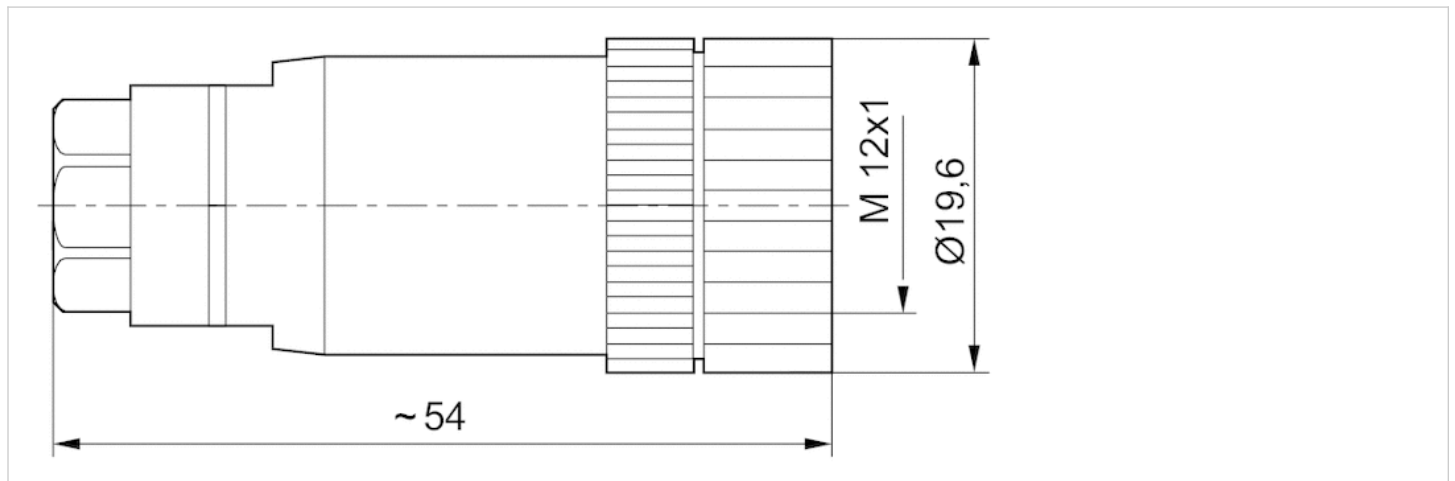
| Part No.   | Max. current | suitable cable-Ø min./max |
|------------|--------------|---------------------------|
| 1834484177 | 4 A          | 4 / 6 mm                  |

## Technical information

| Material |           |
|----------|-----------|
| Housing  | Polyamide |

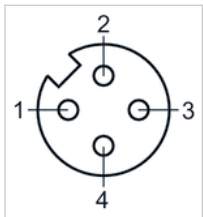
## Dimensions

## Dimensions



## Pin assignments

## Pin assignment, socket

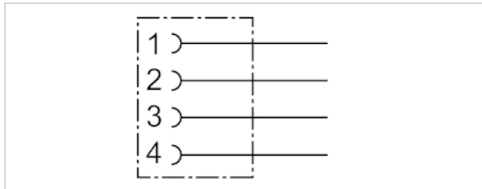


# Round plug connector, Series CON-RD

- Socket, M12x1, 4-pin, A-coded, angled, 90°
- unshielded



|                               |               |
|-------------------------------|---------------|
| Connection type               | Screws        |
| Ambient temperature min./max. | -40 ... 85 °C |
| Operational voltage           | 48 V AC/DC    |
| Protection class              | IP67          |
| Weight                        | 0.016 kg      |



## Technical data

| Part No.   | Max. current | suitable cable-Ø min./max |
|------------|--------------|---------------------------|
| 1834484178 | 4 A          | 4 mm                      |

## Technical information

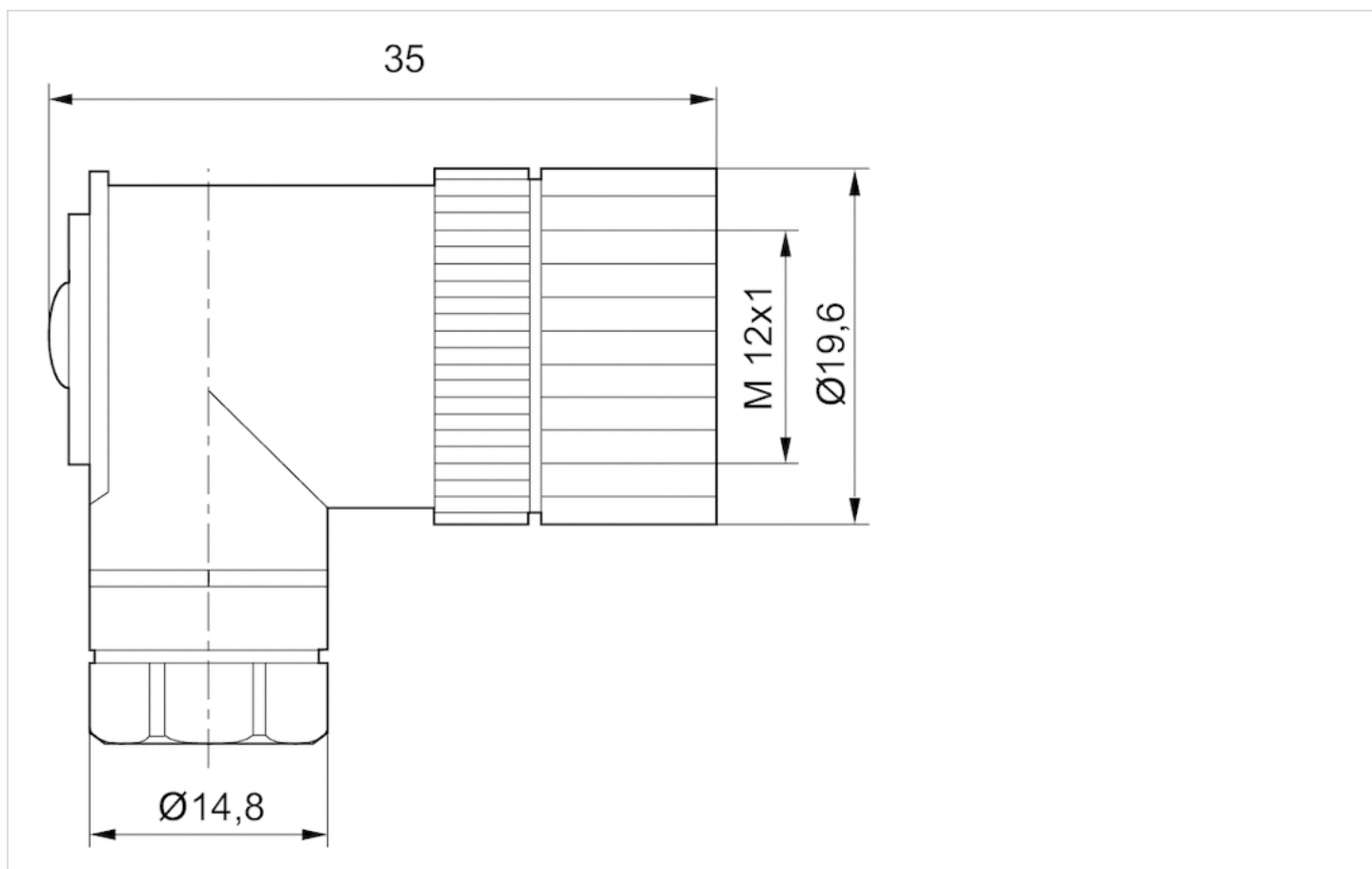
The specified protection class is only valid in assembled and tested state.

## Technical information

| Material |           |
|----------|-----------|
| Housing  | Polyamide |

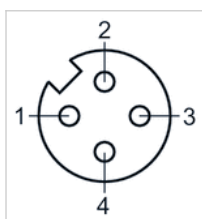
## Dimensions

## Dimensions



## Pin assignments

## Pin assignment, socket

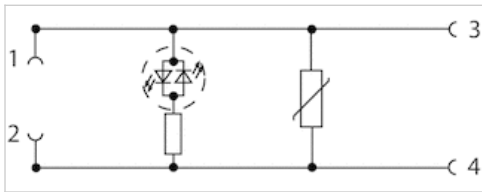


# Adapter, Series CON-VP

- Socket, form C, 2+E, angled, 90°
- Plug, M12x1, 3-pin, A-coded, straight, 180°
- unshielded
- with LED Yellow



|                                  |              |
|----------------------------------|--------------|
| Ambient temperature min./max.    | -10 ... 0 °C |
| Operational voltage              | 24 V DC      |
| Protection class                 | IP65         |
| Protective circuit               | Varistor     |
| Mounting screw tightening torque | 0.6 Nm       |
| Weight                           | 0.013 kg     |



## Technical data

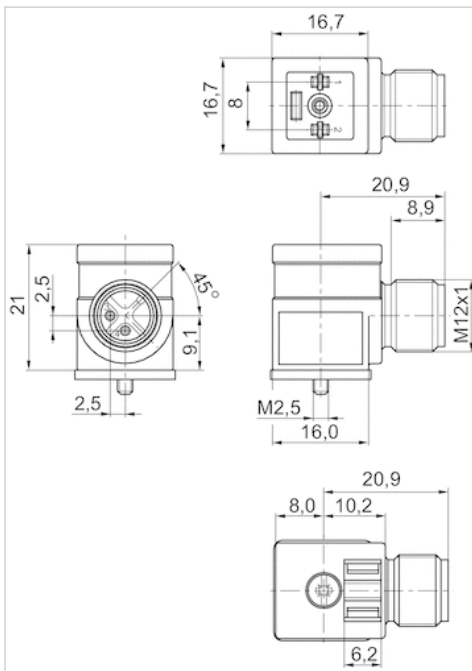
| Part No.   | Max. current | Protective circuit | Contact assignment | LED status display |
|------------|--------------|--------------------|--------------------|--------------------|
| R412009553 | 1 A          | Varistor           | 2+E                | Yellow             |

## Technical information

| Material |              |
|----------|--------------|
| Housing  | Polyurethane |

## Dimensions

### Dimensions



# Transition plate, Series AS1, AS2, AS3, AS5

- Adapter plate for assembling a series DO30 pilot valve with CNOMO porting configuration on a 3/2-way shut-off valve without pilot



Weight

0.025 kg

## Technical data

Part No.

R412006360

Scope of delivery incl. 4 mounting screws, 2 O-rings

## Technical information

Adapter plate for assembling a series DO30 pilot valve with CNOMO porting configuration on a 3/2-way shut-off valve without pilot

## Technical information

Material

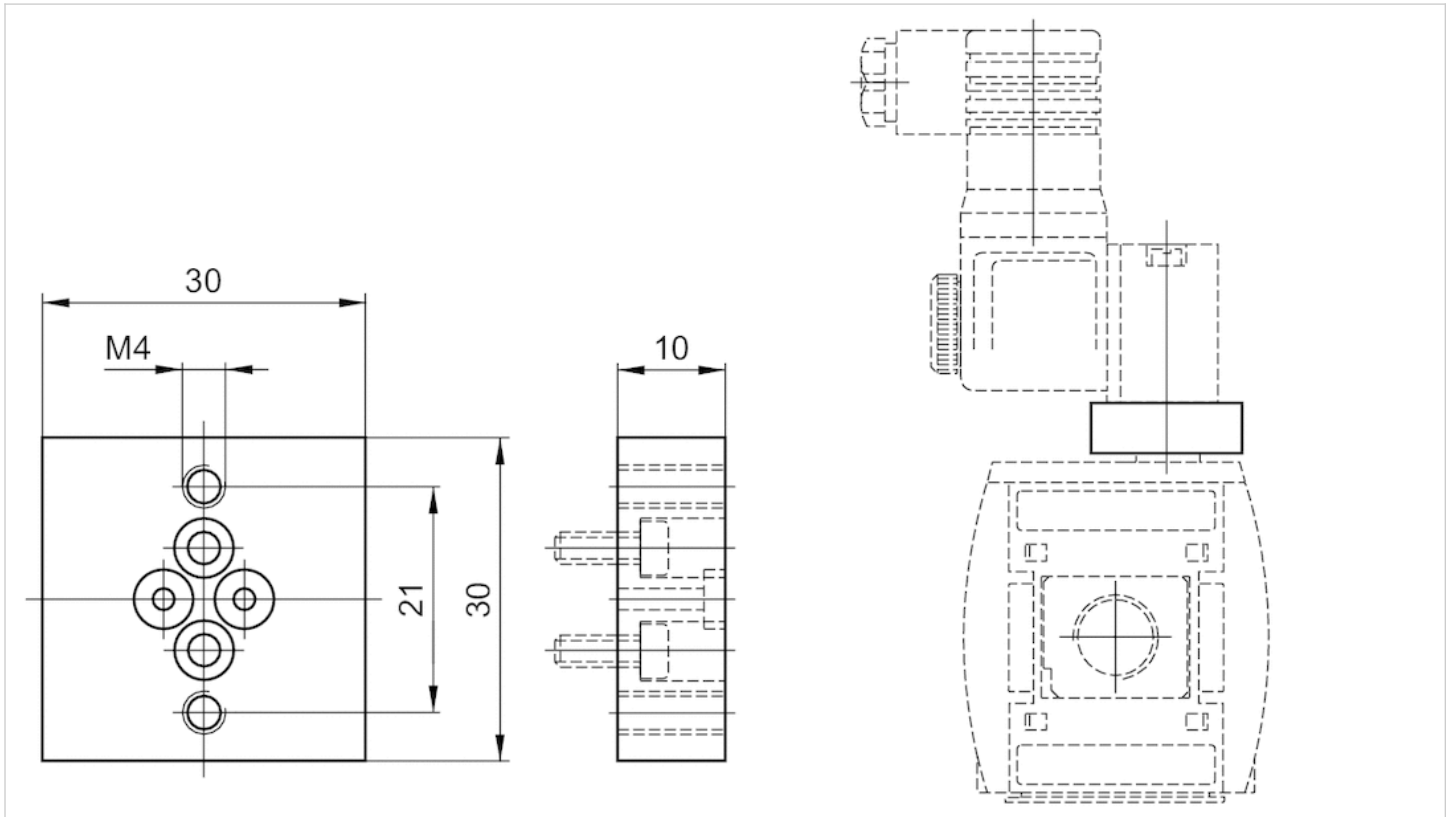
Material

Aluminum



## Dimensions

Dimensions in mm



# Adapter

- Adapter for connecting the control pressure to a AS series 3/2 directional shut-off valve without pilot control to realize pneumatic actuation, G 1/8
- G 1/8
- AS1 AS2 AS3 AS5



Weight

0.019 kg

## Technical data

| Part No.   | Port G |
|------------|--------|
| R412006359 | G 1/8  |

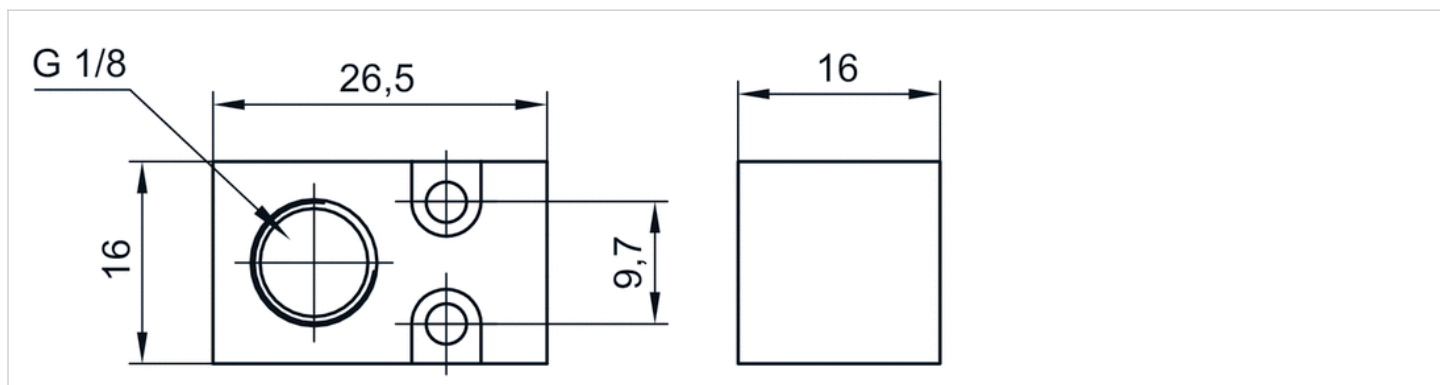
Delivery incl. 2 mounting screws M3x20, Flat gasket

## Technical information

| Material |          |
|----------|----------|
| Material | Aluminum |

## Dimensions

### Dimensions in mm



# Adapter for external pilot air



Ambient temperature min./max.

50 °C

Weight

0.015 kg

## Technical data

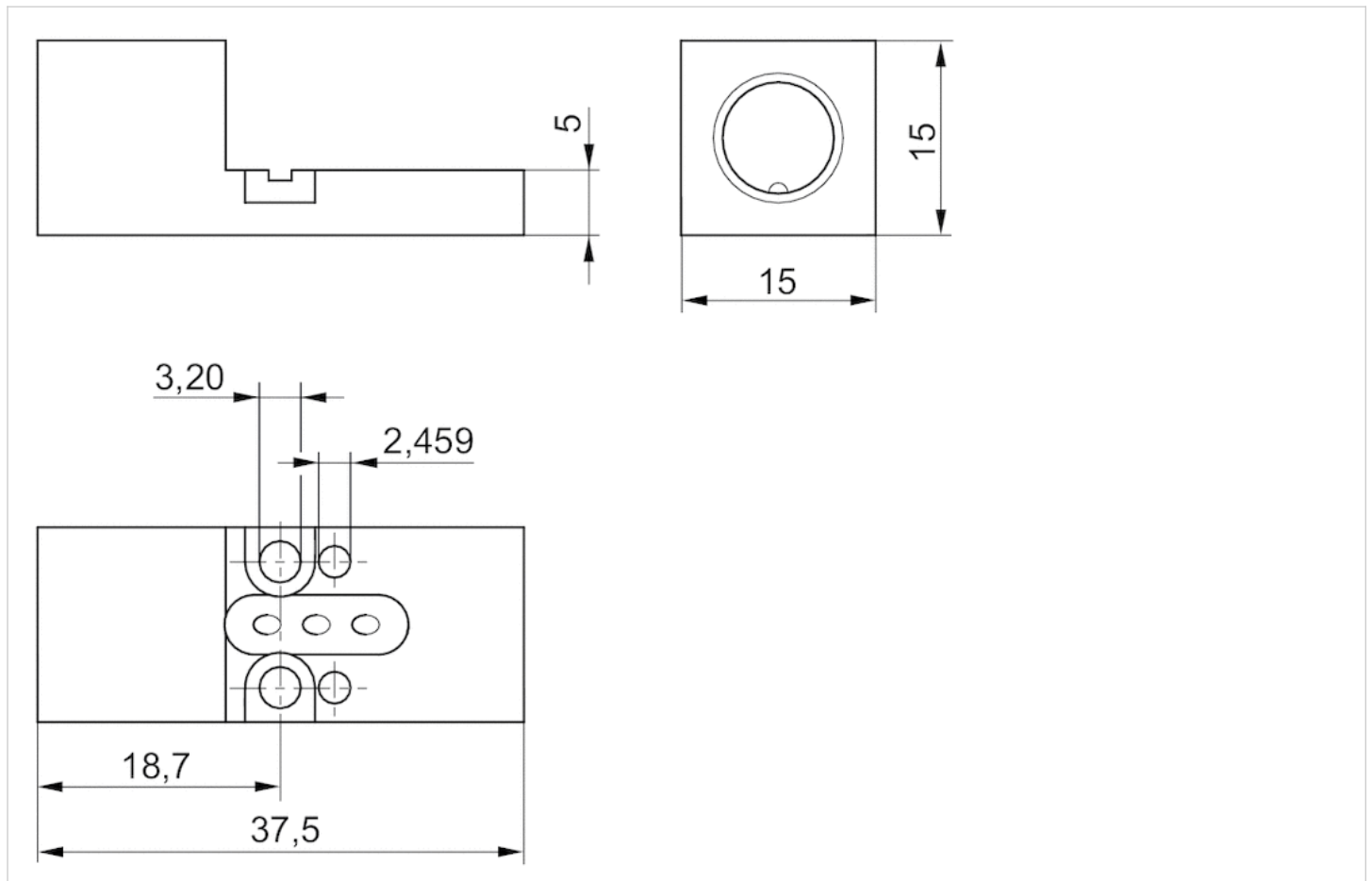
Part No.

R412025904

Delivery incl. 1 seal plate, 1 screw 3x10, 1 screw DIN 84-M3x18

## Dimensions

### Dimensions in mm



# Mounting aid

- Assembly aid for permanent actuation of manual override ("press") on pilot valve DO16 with electrical push-in fitting, form C.



## Technical data

| Part No.   |
|------------|
| R412019278 |

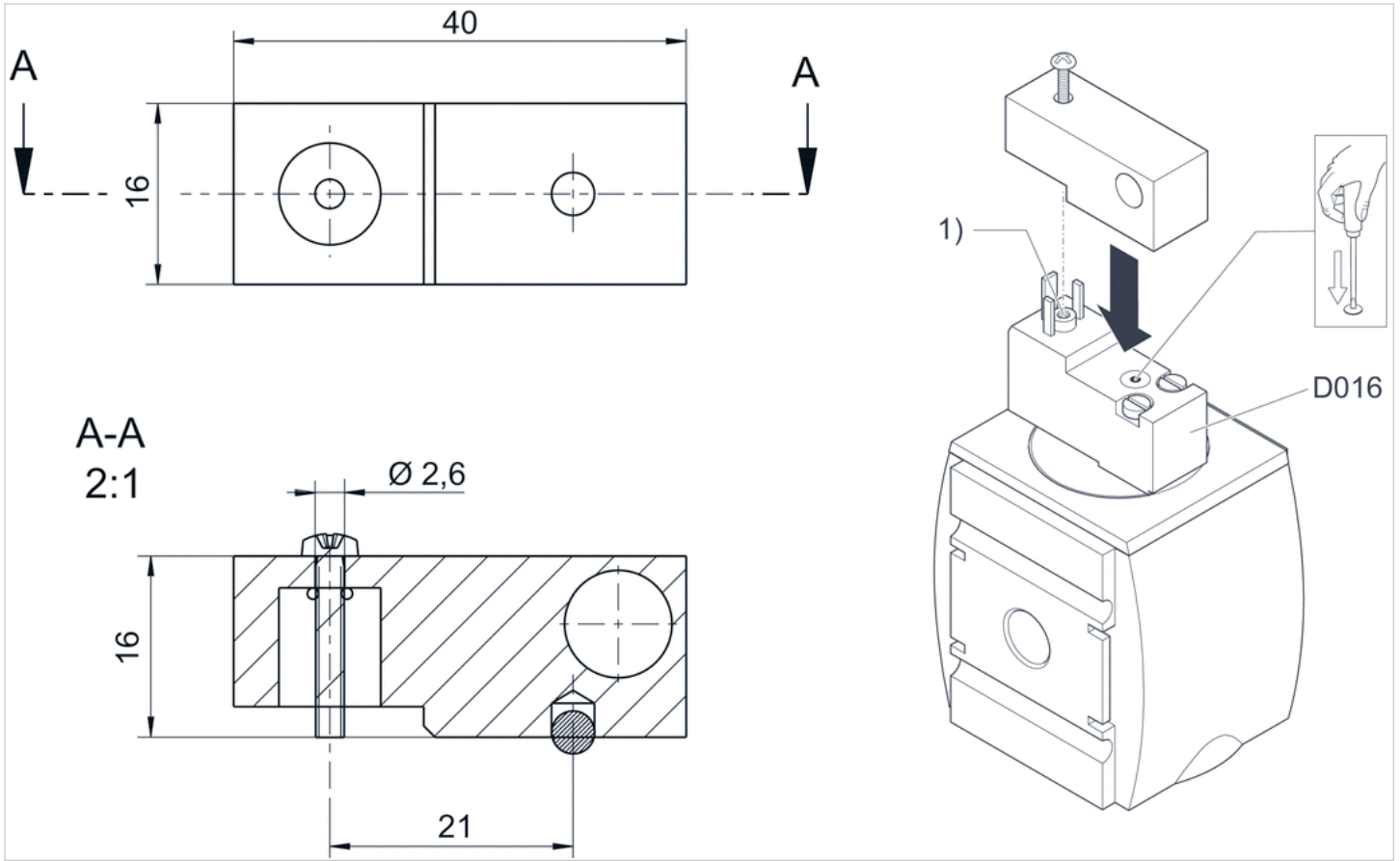
Scope of delivery incl. 1 mounting screw, 1 O-ring

## Technical information

| Material |          |
|----------|----------|
| Housing  | Aluminum |

## Dimensions

Dimensions in mm



1) ISO 15217, form C

# Mounting aid

- Assembly aid for permanent actuation of manual override ("press") on pilot valve DO16 with electrical connection M12x1.



Weight

0.023 kg

## Technical data

Part No.

R412015193

## Technical information

Mounting the assembly aid to the pilot valve using valve plug connector M12x1

## Technical information

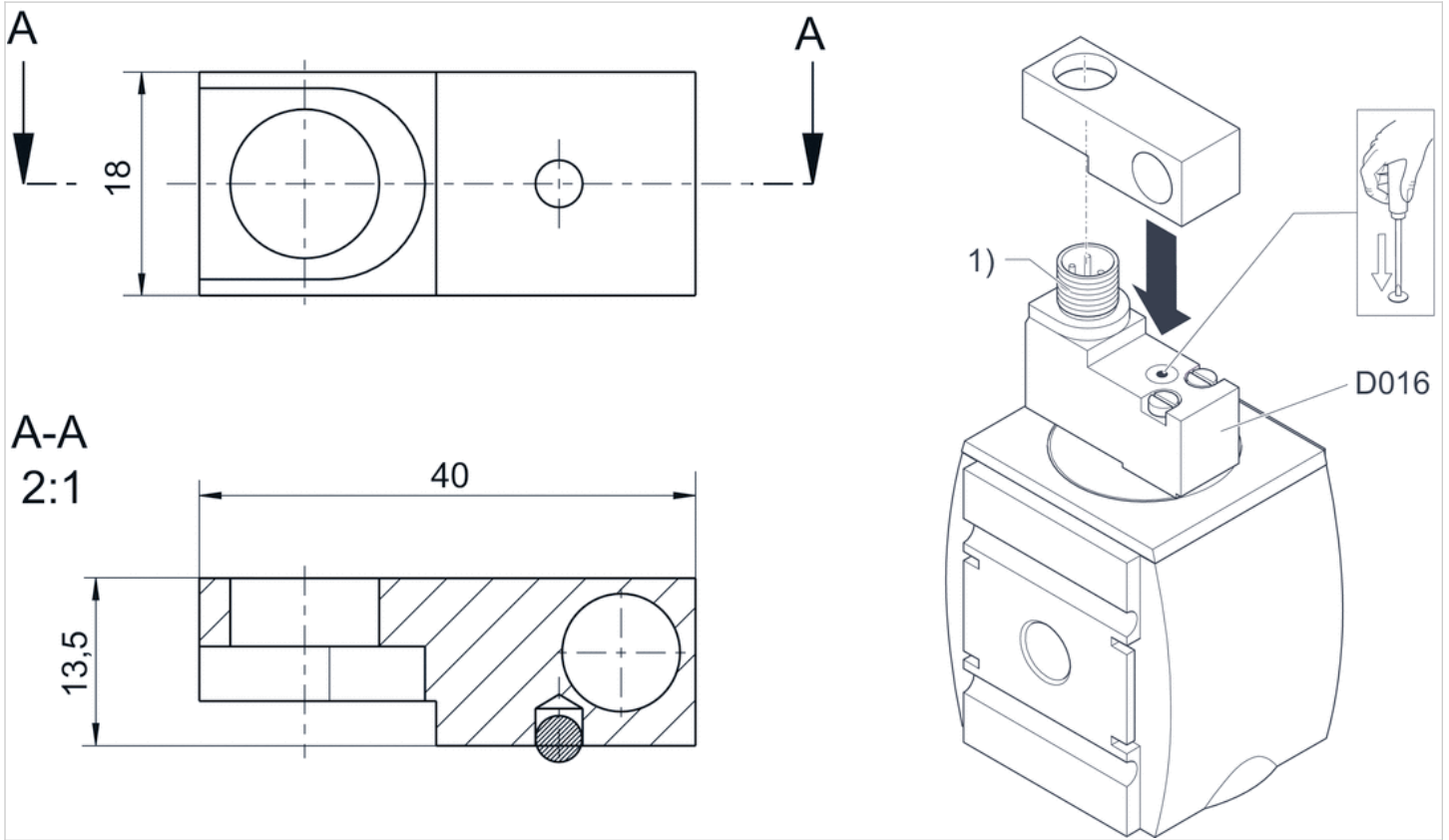
Material

Housing

Aluminum

## Dimensions

Dimensions in mm



1) M12x1



# mortise lock

- for AS2 AS3 AS5



## Technical data

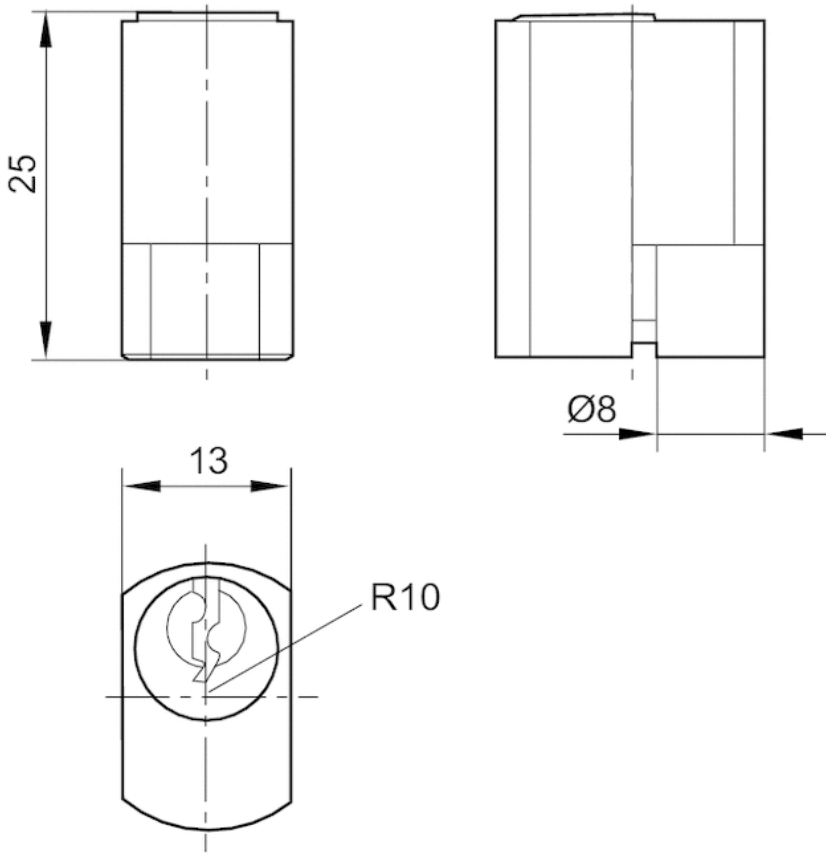
| Part No.   | Type                       |
|------------|----------------------------|
| R412007959 | Standard locking, with key |
| R412006374 | E11 locking, without key   |

## Technical information

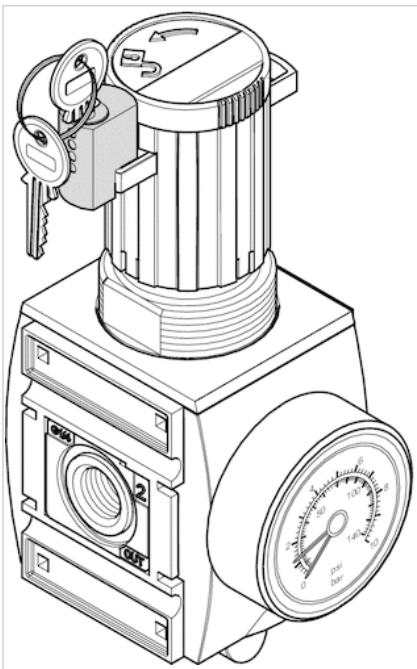
| Material |       |
|----------|-------|
| Housing  | Steel |

## Dimensions

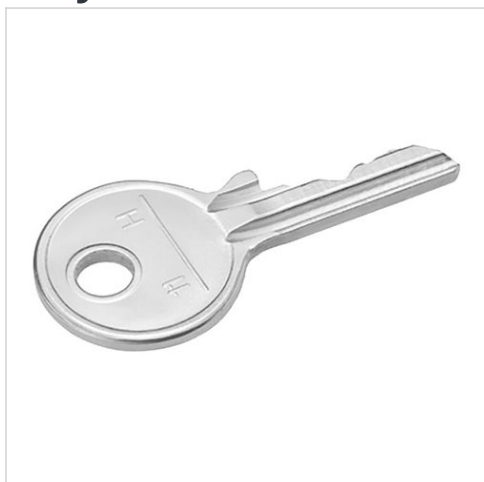
### Dimensions in mm



### Application example



## Key for E11 locking

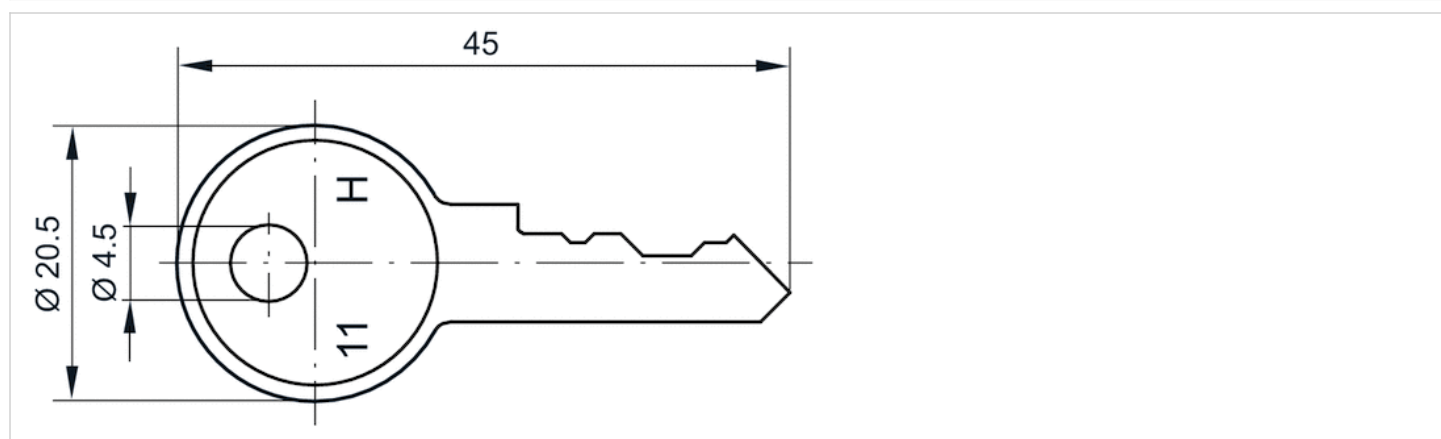


### Technical data

| Part No.   | Delivery unit |
|------------|---------------|
| R961403407 | 1 piece       |

### Dimensions

#### Dimensions in mm
















# Pressure sensor, Series PE5

- Operating pressure -1 ... 0 -1 ... 1 0 ... 6 0 ... 10 0 ... 12 bar
- electronic
- Output signal analog 0 - 10 V DC, 4 - 20 mA
- Output signal digital 2 x PNP, NPN, Push-pull PNP, NPN, Push-pull PNP, NPN, push-pull, 1x IO-Link
- Electr. connection Plug M12x1 4-pin
- Compressed air connection Internal thread G 1/4



|                                       |  |
|---------------------------------------|--|
| Type                                  | electronic   |
| Certificates                          | CE declaration of conformity cULus RoHS<br>Conforms with REACH Free of substances that impair surface wetting in the coating process |
| Compressed air connection             | Internal thread G 1/4  |
| Ambient temperature min./max.         | 0 ... 60 °C  |
| Medium temperature min./max.          | 0 ... 60 °C  |
| Medium                                | Compressed air (max. 40 µm)  |
| Max. oil content of compressed air    | 40 mg/m <sup>3</sup>   |
| Measurement                           | Relative pressure  |
| Display                               | LCD display, 4 digits Color setting: green or red  |
| Units displayed                       | bar, psi, kPa, MPa, inHg   |
| Switching logic                       | NO/NC (adjustable)   |
| Shock resistance max.                 | 30 g   |
| Vibration resistance                  | 5 g (10 - 150 Hz)  |
| Precision (% of full scale value)     | ±1.5% in temperature range of 10 - 30°C<br>± 2 % including temperature drift   |
| Repeatability (% of full scale value) | ± 0,2 %  |
| Switching time                        | 5 ms   |
| Switching point                       | adjustable 0 ... 100%  |
| Resetting point                       | adjustable 0 ... 100%  |
| Hysteresis                            | adjustable   |
| Delayed hysteresis                    | adjustable   |
| Window function                       | adjustable   |
| DC operating voltage min./max.        | 17 ... 30 V DC   |
| Analog output                         | 0 - 10 V DC, 4 - 20 mA   |
| Quiescent current consumption         | 40 mA  |
| Analog output linearity               | ± 0.5% of the final value  |
| Maximum load (analog current output)  | 600 Ω  |
| Short circuit resistance              | Max. 600 ohms (current output) Min. 3K ohms (voltage output)   |
| Mounting types                        | Directly on hat rail and wall mounting For panel installation using mounting kit via double nipple                                   |
| Protection class                      | IP65, IP67 with connections assembled  |
| Electr. connection                    | Plug M12x1 4-pin   |
| Weight                                | 0.04 kg  |

## Technical data

| Part No.   |  | Operating pressure range | Protection against overpressure |
|------------|---|--------------------------|---------------------------------|
|            |   | min./max.                |                                 |
| R412010761 |  | -1 ... 0 bar             | 5 bar                           |
| R412010769 |  | -1 ... 0 bar             | 5 bar                           |
| R412010775 |  | -1 ... 0 bar             | 5 bar                           |
| R412010763 |  | -1 ... 1 bar             | 5 bar                           |
| R412010771 |  | 0 ... 6 bar              | 15 bar                          |
| R412010765 |  | 0 ... 6 bar              | 15 bar                          |
| R412010777 |  | 0 ... 6 bar              | 15 bar                          |
| R412010773 |  | 0 ... 10 bar             | 15 bar                          |
| R412010767 |  | 0 ... 10 bar             | 15 bar                          |
| R412010779 |  | 0 ... 10 bar             | 15 bar                          |
| R412010782 |  | 0 ... 12 bar             | 16 bar                          |
| R412010806 |  | 0 ... 12 bar             | 16 bar                          |

| Part No.   | Output signal           | Output signal                   | Fig.   |    |
|------------|-------------------------|---------------------------------|--------|----|
|            | Analog                  | digital                         |        |    |
| R412010761 | -                       | 2 x PNP, NPN, Push-pull         | Fig. 1 | -  |
| R412010769 | 0 - 10 V DC-4 ... 20 mA | PNP, NPN, Push-pull             | Fig. 1 | -  |
| R412010775 | -                       | PNP, NPN, push-pull, 1x IO-Link | Fig. 1 | 1) |
| R412010763 | -                       | 2 x PNP, NPN, Push-pull         | Fig. 1 | -  |
| R412010771 | 0 - 10 V DC-4 ... 20 mA | PNP, NPN, Push-pull             | Fig. 1 | -  |
| R412010765 | -                       | 2 x PNP, NPN, Push-pull         | Fig. 1 | -  |
| R412010777 | -                       | PNP, NPN, push-pull, 1x IO-Link | Fig. 1 | 1) |
| R412010773 | 0 - 10 V DC-4 ... 20 mA | PNP, NPN, Push-pull             | Fig. 1 | -  |
| R412010767 | -                       | 2 x PNP, NPN, Push-pull         | Fig. 1 | -  |
| R412010779 | -                       | PNP, NPN, push-pull, 1x IO-Link | Fig. 1 | 1) |
| R412010782 | -                       | 2 x PNP, NPN, Push-pull         | Fig. 1 | -  |
| R412010806 | -                       | PNP, NPN, push-pull, 1x IO-Link | Fig. 1 | 1) |

1) The IO-Link device description (IODD) for the PE5 pressure sensor is available for download in the Media Centre.

## Technical information

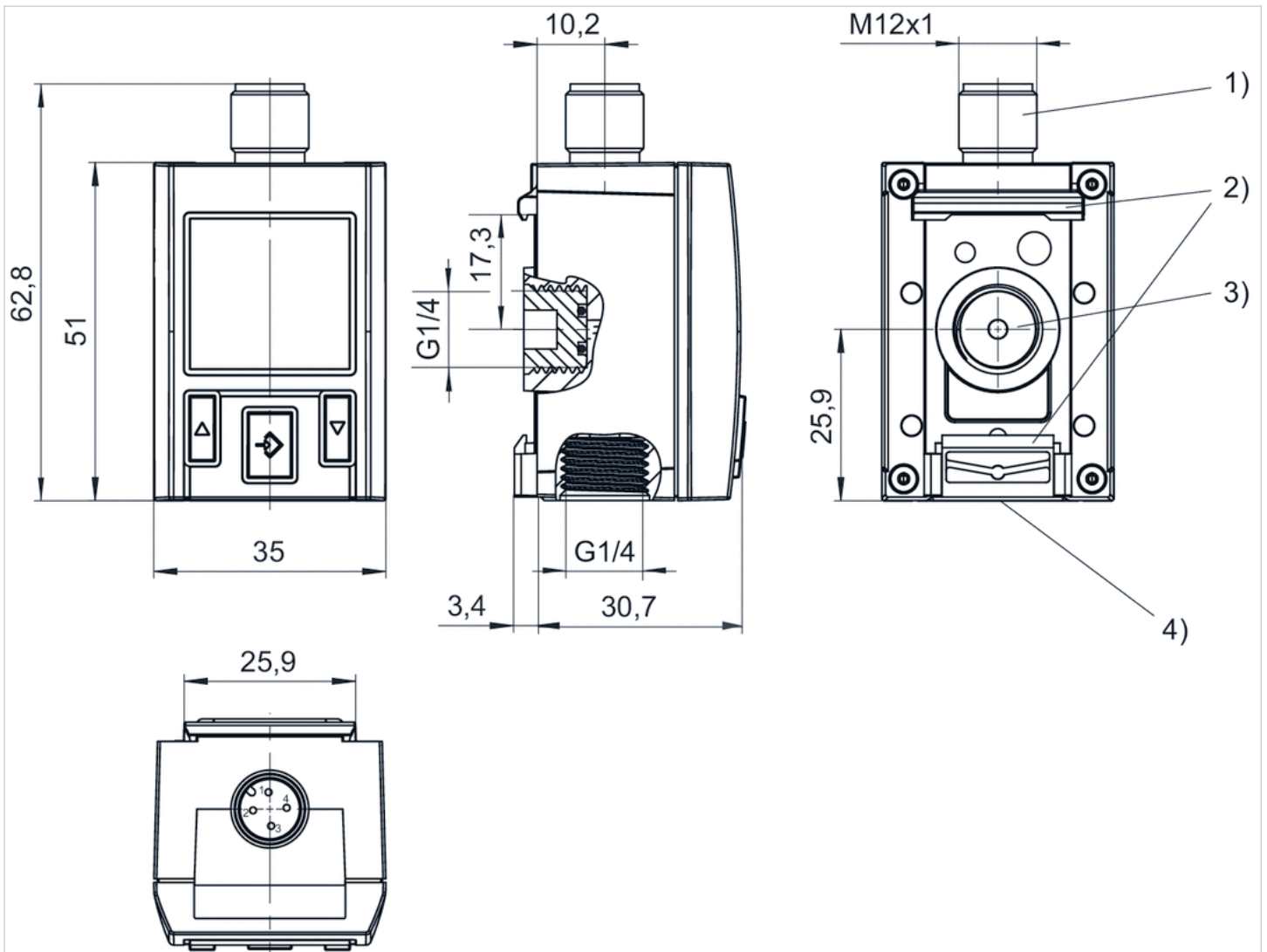
Alternative pressure connection (G1/4) on the rear side (closed with plug)  
Display color selectable, red or green

## Technical information

| Material           |                                |
|--------------------|--------------------------------|
| Housing            | Polycarbonate                  |
| Seals              | Acrylonitrile butadiene rubber |
| Blanking plug      | Polyoxymethylene               |
| Electr. connection | Aluminum, black anodized       |

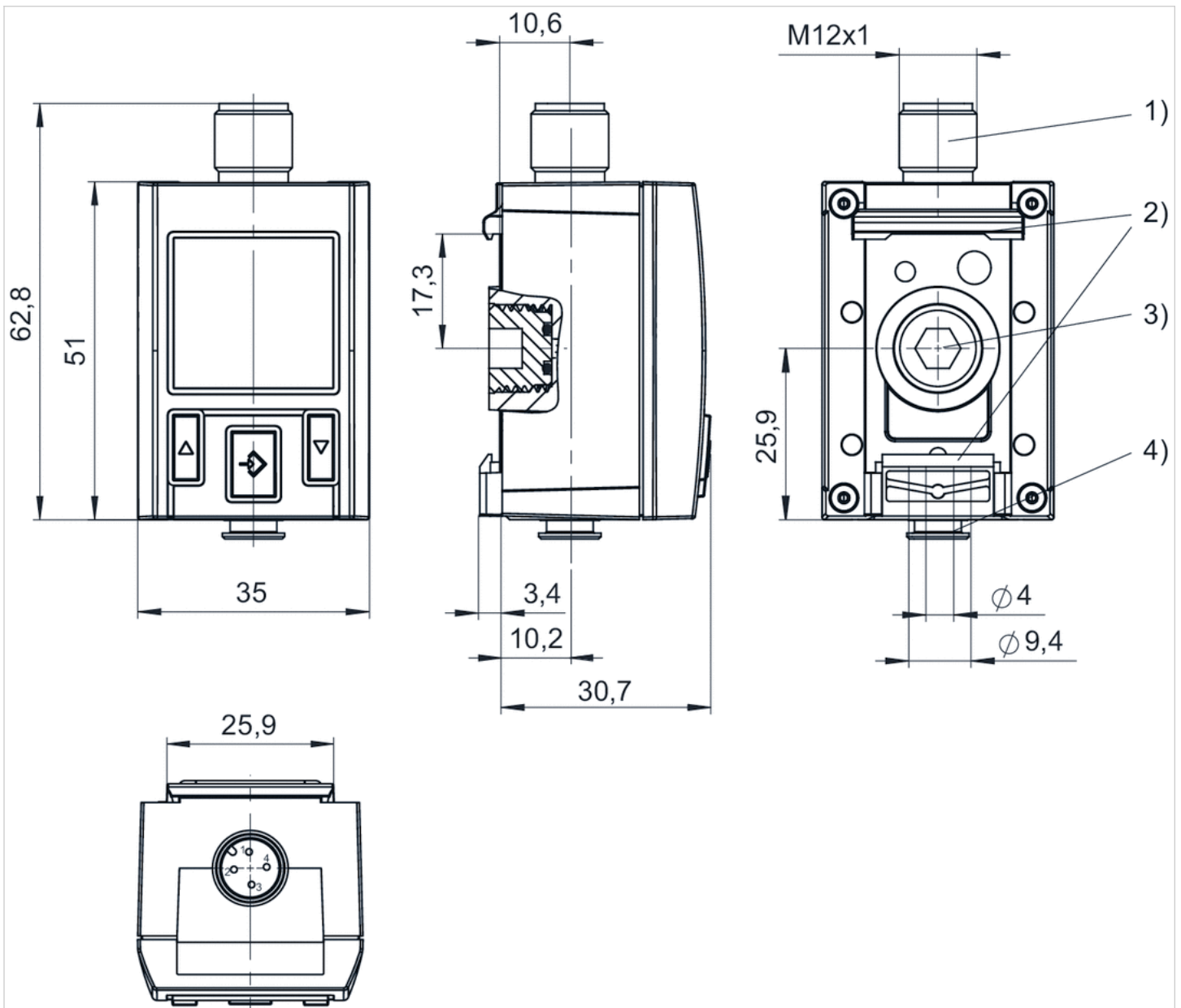
## Dimensions

Fig. 1



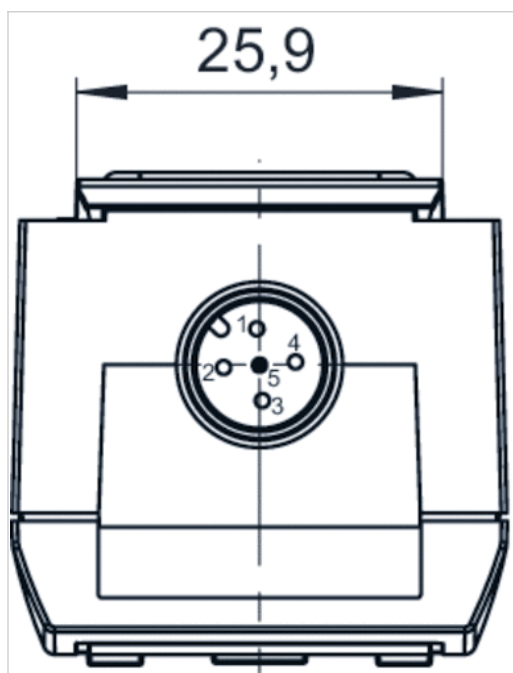
- 1) M12x1 electrical connection
- 2) Mounting for hat rail and wall mounting
- 3) Alternative pressure connection (G1/4) closed with plug
- 4) Pressure connection G1/4

Fig. 2

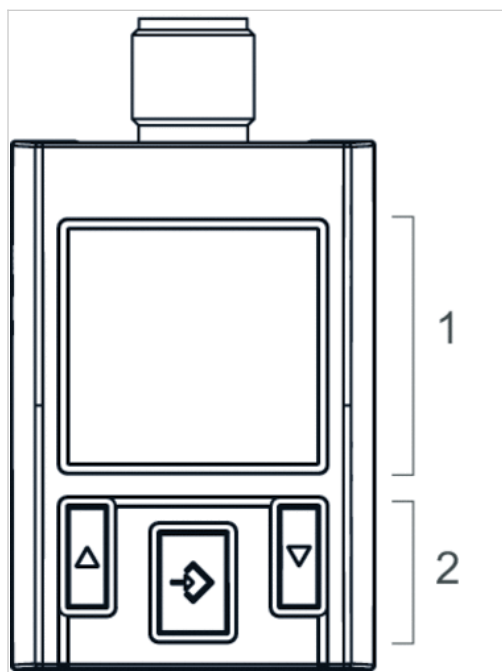


- 1) M12x1 electrical connection
- 2) Mounting for hat rail and wall mounting
- 3) Alternative pressure connection (G1/4) closed with plug
- 4) Pressure connection, tubing Ø 4 mm

Fig. 3, Electr. connection for leak test



Display and operation area

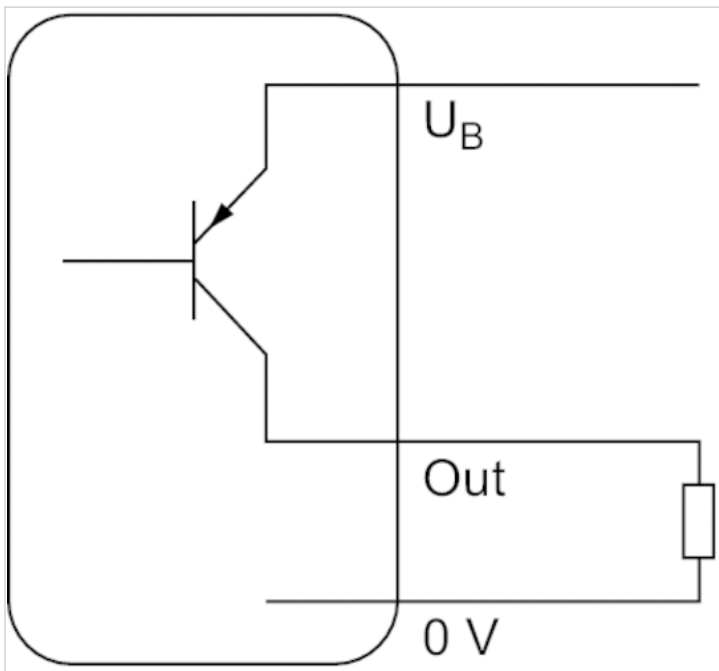


- 1) LCD display
- 2) Control panel with 3 buttons

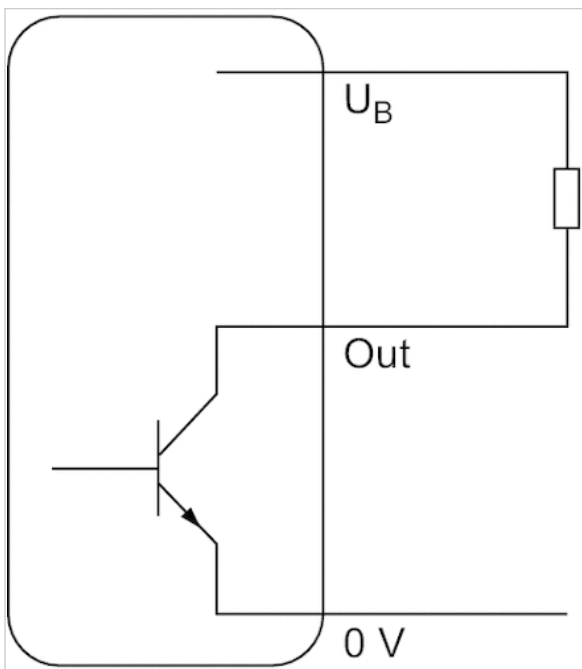


## Diagrams

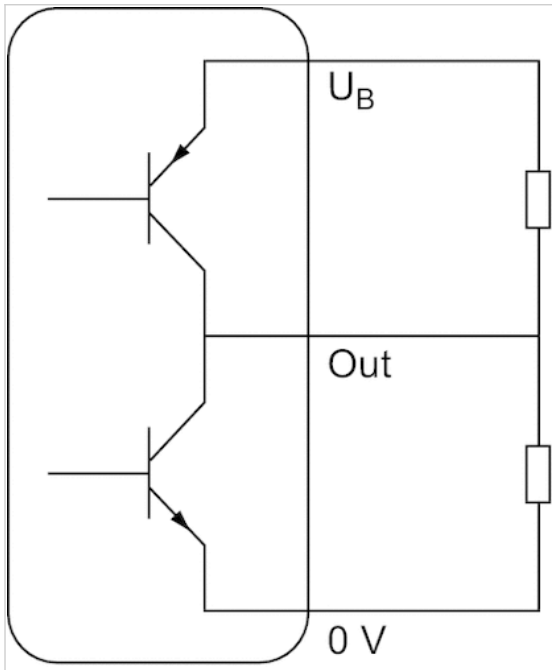
## Operating mode, PNP



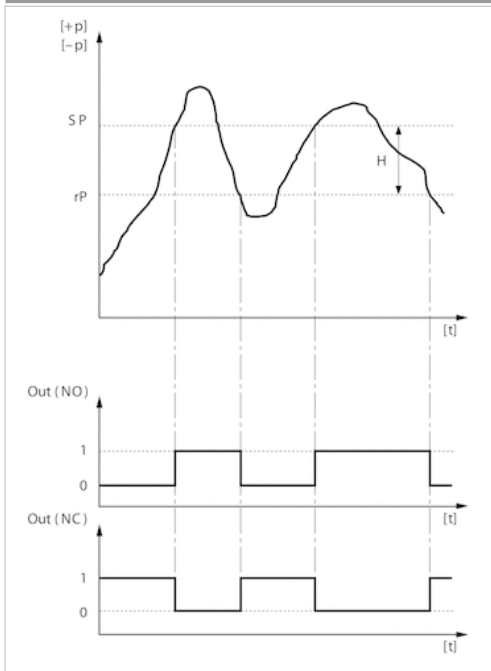
## Operating mode, NPN



Operating mode, Push-pull

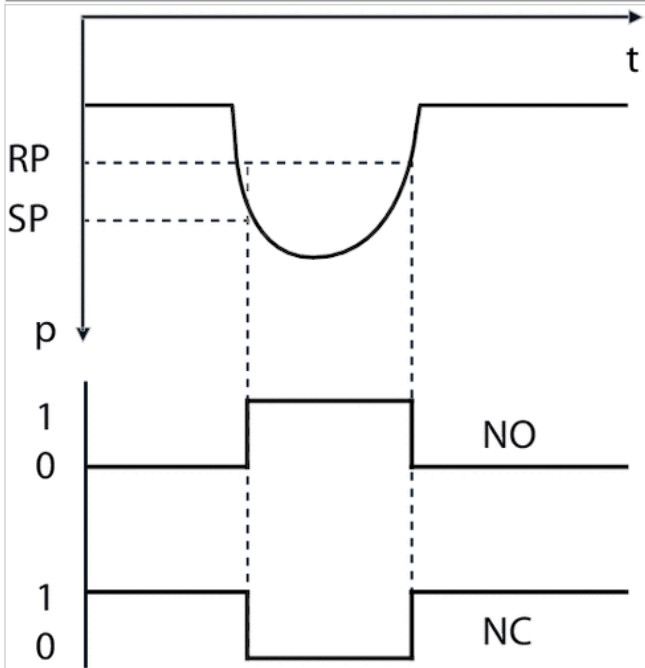


Hysteresis function: switching and resetting behavior dependent on pressure p and time t, in case of overpressure

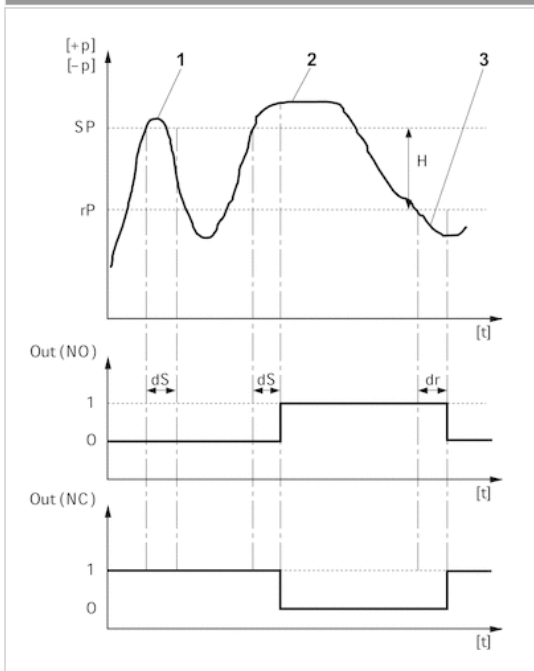


- H: Hysteresis
- SP = switching point
- RP = resetting point
- Out (NC): switch output, break contact
- Out (NO): switch output, make contact

Hysteresis function: switching and resetting behavior dependent on pressure  $p$  and time  $t$ , in case of underpressure

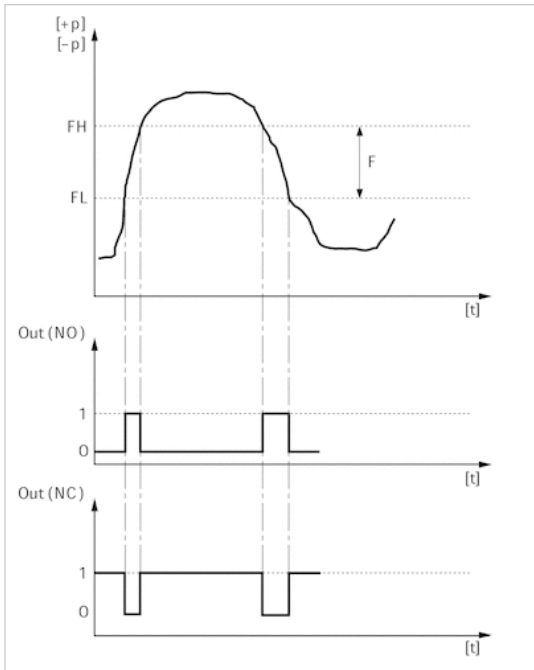


Delayed hysteresis function: switching and resetting behavior depending on pressure  $p$  and time  $t$



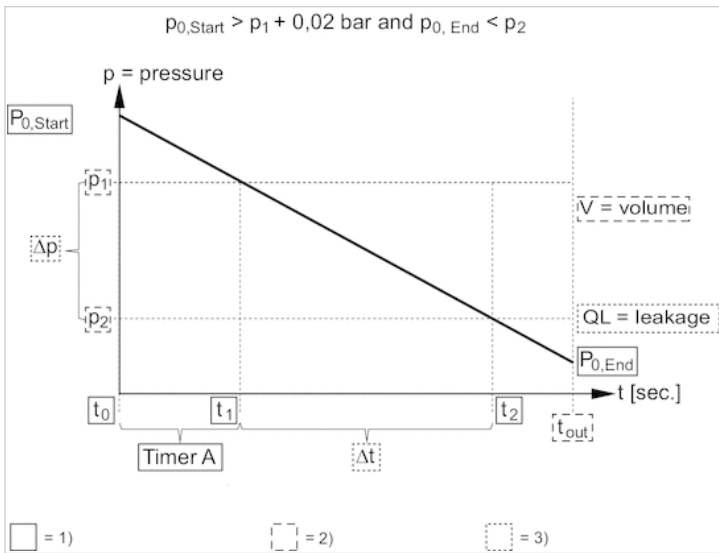
- H: Hysteresis
- SP = switching point
- RP = resetting point
- Out (NC): switch output, break contact
- Out (NO): switch output, make contact
- dS: switching delay
- dR = reset delay
- 1) period of pressure over the switching point  $dS$ : pressure sensor does not switch
- 2) Period of pressure over the switching point  $> dS$ : pressure sensor switches
- 3) Period of pressure under the resetting point  $> dR$ : pressure sensor switches

Window function: switching and resetting behavior depending on pressure p and time t



FH: pressure band, upper value  
 FL: pressure band, lower value  
 Out (NC): switch output, break contact  
 Out (NO): switch output, make contact

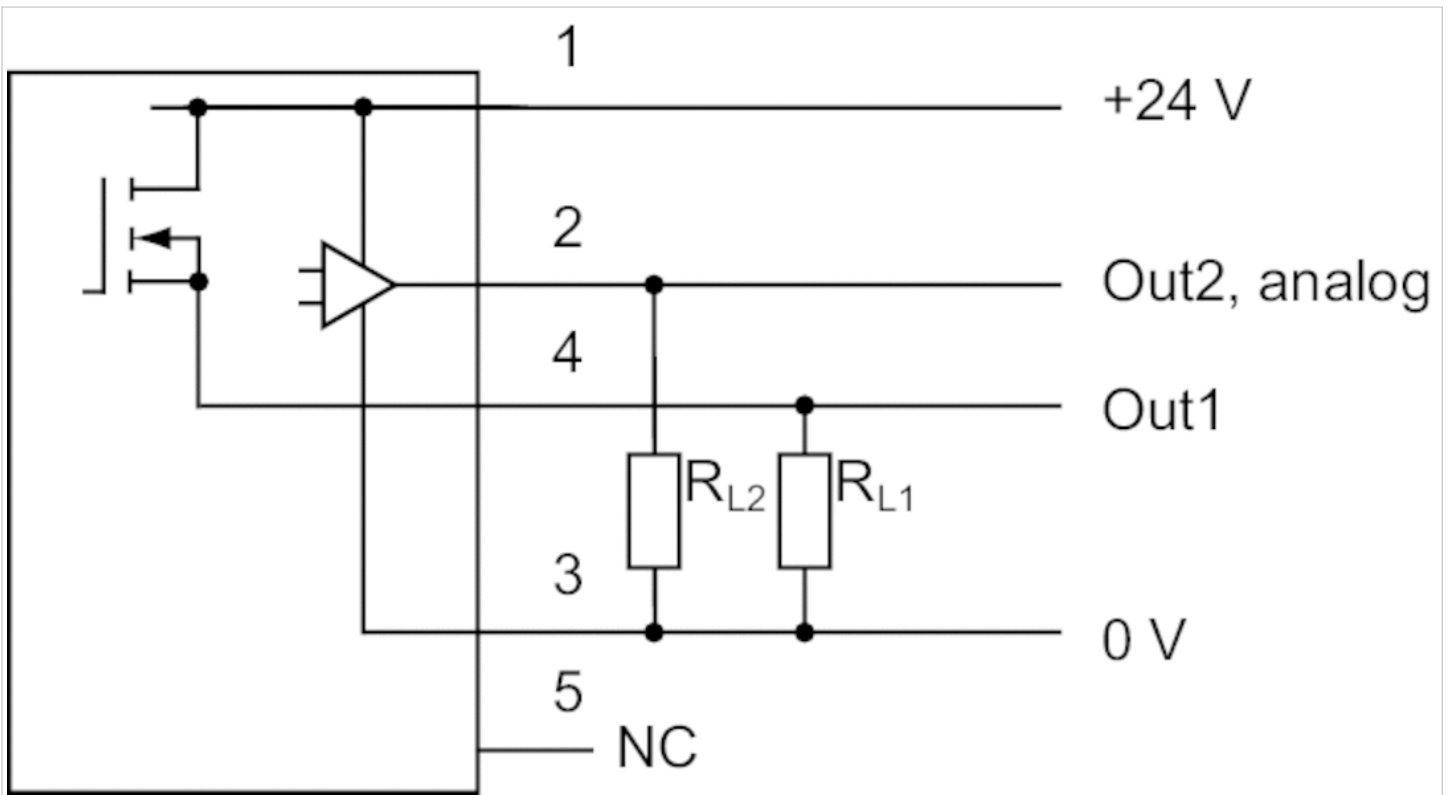
Leakage characteristic



- 1) Internally stored parameter
- 2) Adjustable parameter
- 3) Output value

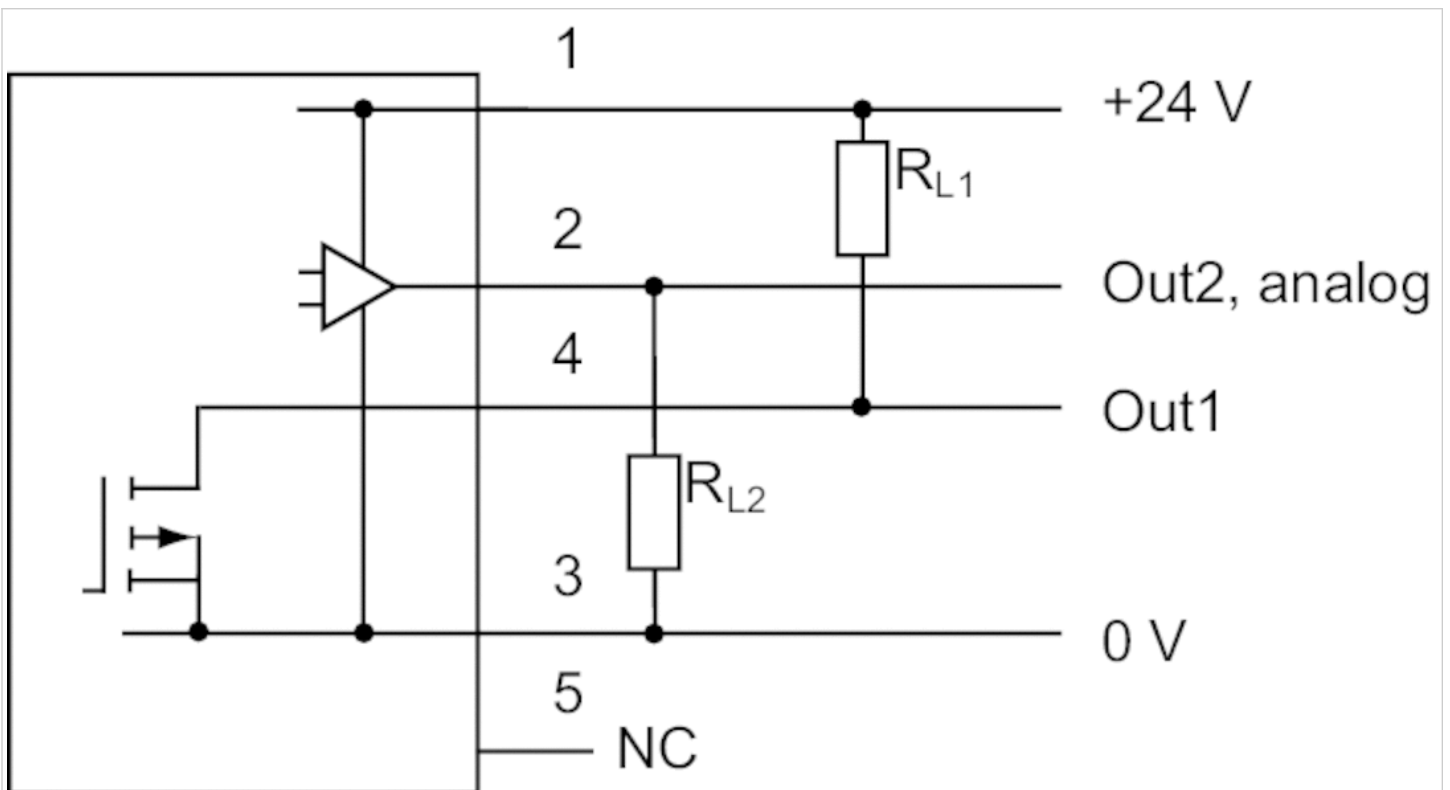
### Circuit diagram

#### Block diagram, 1x PNP and 1x analog



RL = storable position

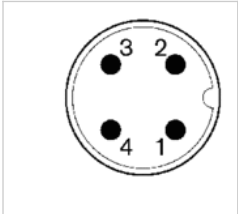
#### Block diagram, 1x NPN and 1x analog



RL = storable position

## Pin assignments

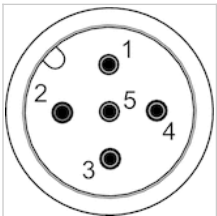
### Pin assignments, M12x1, 4-pin



|            |  |
|------------|--|
| Pin        | 1  |
| Allocation | operational voltage + UB   |
|            | 2  |
|            | 3  |
|            | switch output Out2, analog: A or V, digital: PNP, NPN, push-pull |
|            | 0 V  |
|            | 4  |
|            | switch output Out1, digital: PNP, NPN, push-pull                 |

## Pin assignments

### Pin assignments, M12x1, 5-pin



|            |                |  |     |
|------------|----------------|--|-----|
| Pin        | 1              | 2  | 3   |
| Allocation | Supply Voltage | Switch output PNP/NPN/push-pull, switchable                            | 0 V |
|            |                | 4  |     |
|            |                | Switch output PNP/NPN/push-pull/leakage mode, digital switch input PNP |     |
|            |                | 5  |     |
|            |                | Analog output ( 0 to 10 V DC, 4 to 20 mA)                              |     |











# Pressure sensor, Series PE2

- Operating pressure -1 ... 1 0 ... 16 bar
- electronic
- Output signal analog 1 x PNP, 1 x analog 4-20 mA
- Electr. connection Plug M12x1 5-pin
- Compressed air connection Internal thread G 1/4 Flange with O-ring Ø 5x1,5



|                                      |   |
|--------------------------------------|---|
| Type                                 | electronic  |
| Function                             | 1 x PNP, 2 x PNP 1x PNP and 1x analog   |
| Mounting orientation                 | Any   |
| Certificates                         | CE declaration of conformity EMV  |
| Working pressure min./max.           | See table below   |
| Ambient temperature min./max.        | -10 ... 75 °C   |
| Medium temperature min./max.         | -10 ... 75 °C   |
| Medium                               | Compressed air Neutral gases  |
| Measurement                          | Relative pressure   |
| Display                              | OLED  |
| Units displayed                      | bar, mbar, psi, kPa, MPa, %   |
| Switching logic                      | Hysteresis function NO/NC (programmable) Window function NO/NC (programmable) |
| Operating pressure display           | 2 LED   |
| Shock resistance max.                | 30 g  |
| Vibration resistance                 | 5 g (10 - 150 Hz)   |
| Precision (% of full scale value)    | ± 1 % including temperature drift   |
| Switching time                       | 10 ms at loads 100 kΩ > 10 ms at loads > 100 kΩ                               |
| Switching point                      | Adjustable ≥ 0.5% ... 100% FS   |
| Resetting point                      | Adjustable 0% FS to SP -0.5% FS (or +0.5% FS when SP 0)                       |
| Hysteresis                           | adjustable  |
| Switching/reset delay                | adjustable  |
| DC operating voltage min./max.       | 15 ... 32 V DC  |
| Analog output                        | 1 x PNP, 1 x analog 4-20 mA   |
| Quiescent current consumption        | 50 mA   |
| Maximum load (analog current output) | 600 Ω   |
| Short circuit resistance             | short circuit resistant   |
| Mounting types                       | via through holes   |
| Protection class                     | IP65  |
| Electr. connection                   | Plug M12x1 5-pin  |
| Weight                               | 0.3 kg  |

## Technical data

| Part No.   |   | Type                     | Operating pressure range |
|------------|---|--------------------------|--------------------------|
|            |   |                          | min./max.                |
| R412010848 |  | PE2-P1-G014-V10-010-M012 | -1 ... 1 bar             |
| R412010849 |  | PE2-P1-F001-V10-010-M012 | -1 ... 1 bar             |
| R412010853 |  | PE2-P2-G014-V10-010-M012 | -1 ... 1 bar             |
| R412010856 |  | PE2-PA-G014-V10-010-M012 | -1 ... 1 bar             |
| R412010850 |  | PE2-P1-G014-000-160-M012 | 0 ... 16 bar             |
| R412010851 |  | PE2-P1-F001-000-160-M012 | 0 ... 16 bar             |
| R412010854 |  | PE2-P2-G014-000-160-M012 | 0 ... 16 bar             |
| R412010855 |  | PE2-P2-F001-000-160-M012 | 0 ... 16 bar             |
| R412010857 |  | PE2-PA-G014-000-160-M012 | 0 ... 16 bar             |
| R412010858 |  | PE2-PA-F001-000-160-M012 | 0 ... 16 bar             |

| Part No.   | Protection against overpressure | Output signal | Output signal | Compressed air connection   |
|------------|---------------------------------|---------------|---------------|-----------------------------|
|            |                                 | Analog        | digital       |                             |
| R412010848 | 10 bar                          | -             | 1 x PNP       | Internal thread, G 1/4      |
| R412010849 | 10 bar                          | -             | 1 x PNP       | Flange with O-ring, Ø 5x1,5 |
| R412010853 | 10 bar                          | -             | 2 x PNP       | Internal thread, G 1/4      |
| R412010856 | 10 bar                          | 4 ... 20 mA   | 1 x PNP       | Internal thread, G 1/4      |
| R412010850 | 40 bar                          | -             | 1 x PNP       | Internal thread, G 1/4      |
| R412010851 | 40 bar                          | -             | 1 x PNP       | Flange with O-ring, Ø 5x1,5 |
| R412010854 | 40 bar                          | -             | 2 x PNP       | Internal thread, G 1/4      |
| R412010855 | 40 bar                          | -             | 2 x PNP       | Flange with O-ring, Ø 5x1,5 |
| R412010857 | 40 bar                          | 4 ... 20 mA   | 1 x PNP       | Internal thread, G 1/4      |
| R412010858 | 40 bar                          | 4 ... 20 mA   | 1 x PNP       | Flange with O-ring, Ø 5x1,5 |

| Part No.   | Fig.   |
|------------|--------|
| R412010848 | Fig. 1 |
| R412010849 | Fig. 2 |
| R412010853 | Fig. 1 |
| R412010856 | Fig. 1 |
| R412010850 | Fig. 1 |
| R412010851 | Fig. 2 |
| R412010854 | Fig. 1 |
| R412010855 | Fig. 2 |
| R412010857 | Fig. 1 |
| R412010858 | Fig. 2 |

## Technical information

Menu navigation is based on the VDMA specification with an additional plain text menu.



## Technical information

| Material           |  |
|--------------------|--|
| Housing            | Aluminum, Vibration-ground                 |
| Seals              | Fluorocaoutchouc                           |
| Electr. connection | Aluminum with polymer insert               |
| flange connection  | Nitrile butadiene rubber, Fluorocaoutchouc |

## Dimensions

Fig. 1

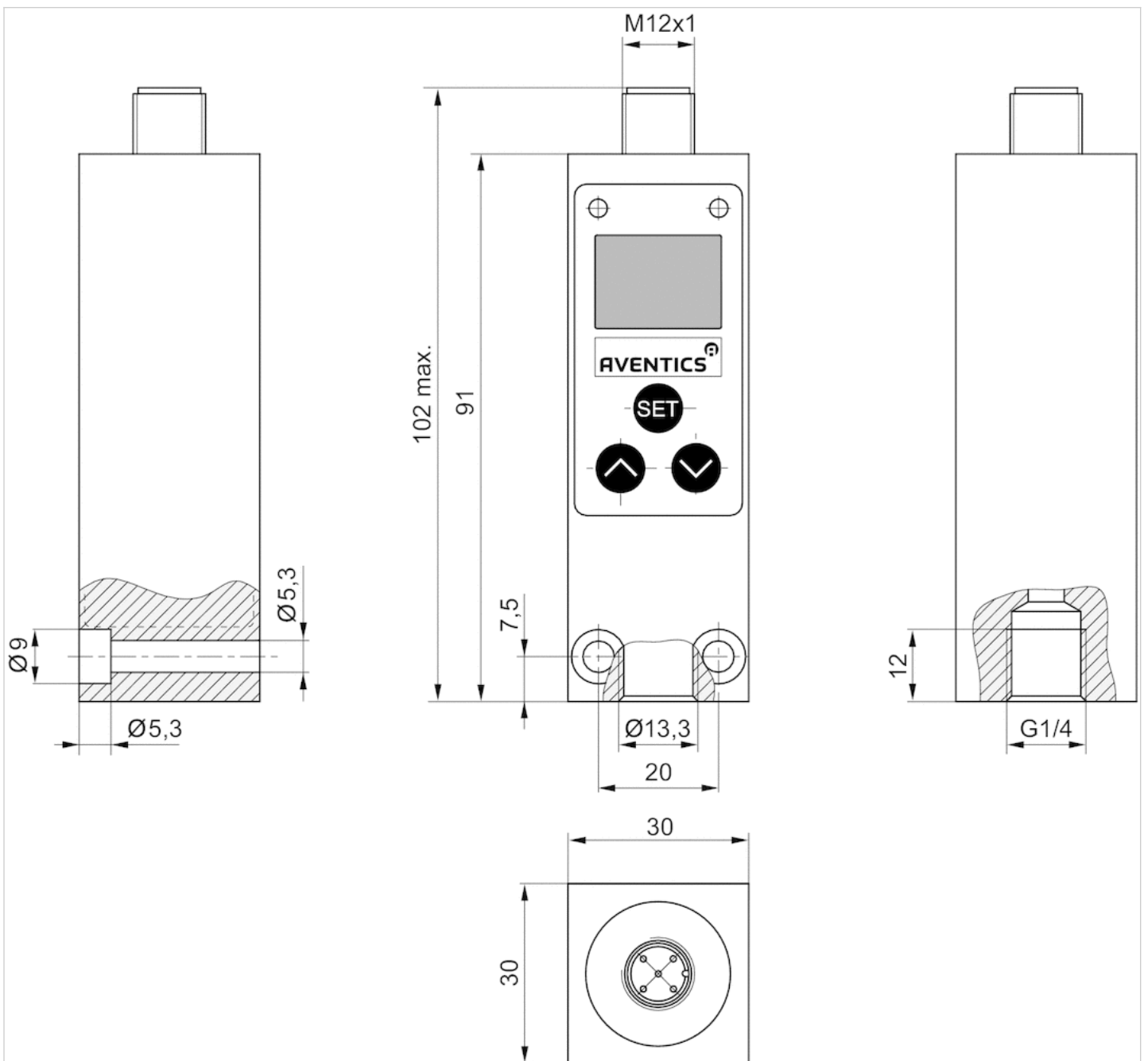
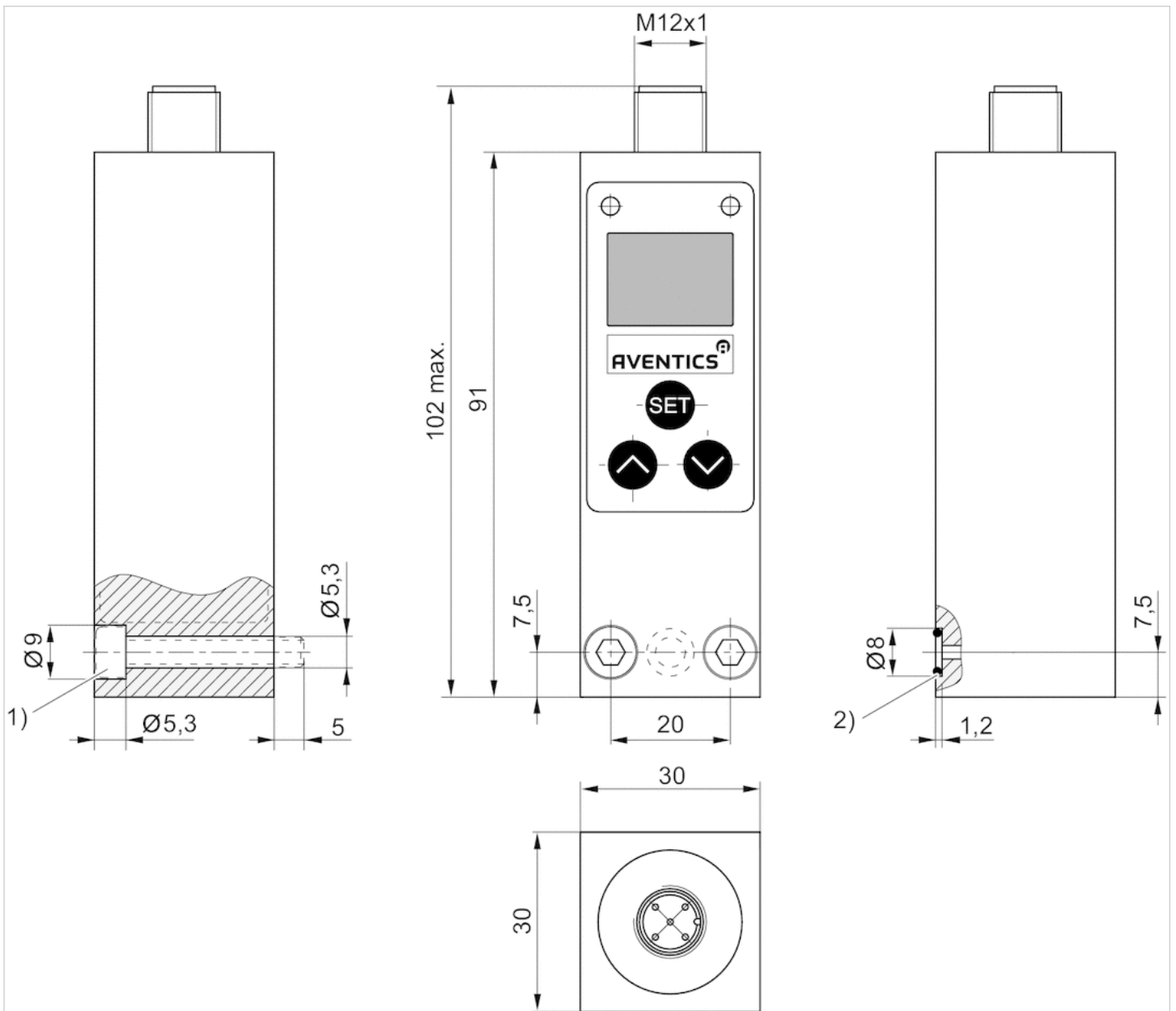


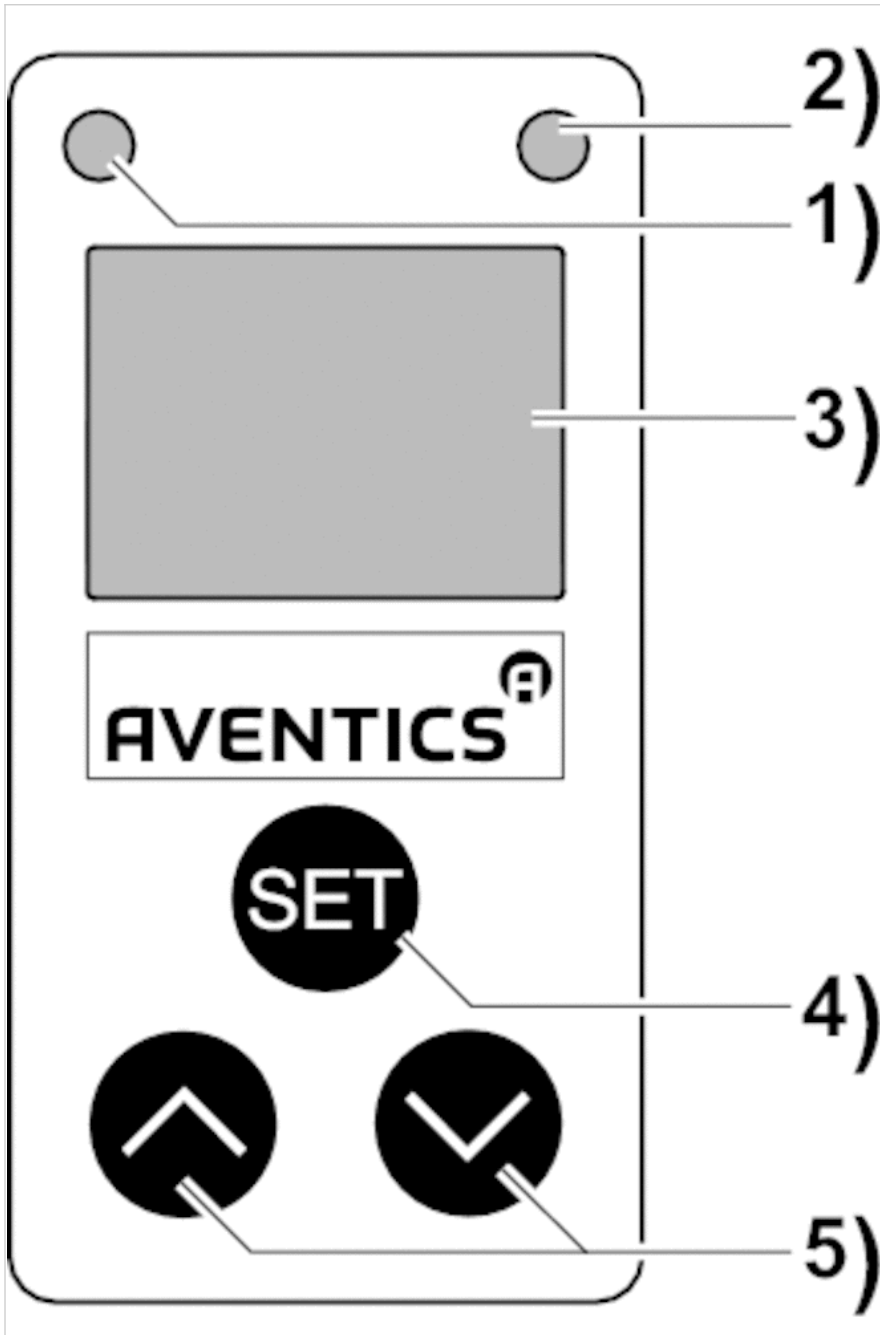
Fig. 2



1) cylinder screw M5x35 (included in scope of delivery)

2) O-ring  $\varnothing 5 \times 1,5$  (included)

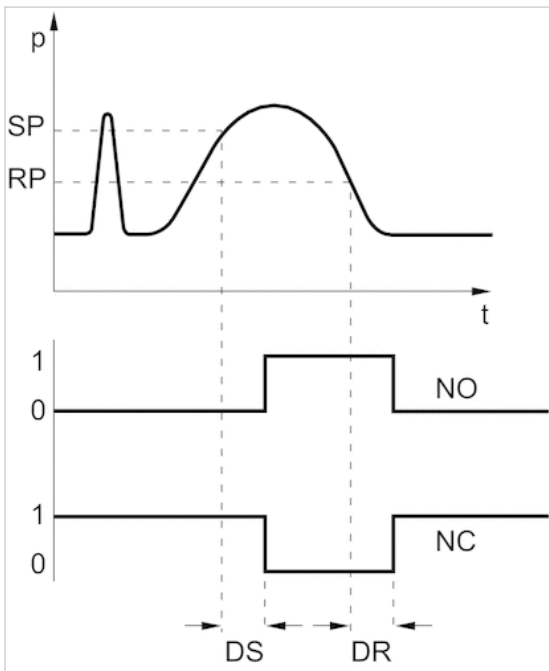
Display and operation area



- 1) LED for switch output 1
- 2) LED for switch output 2
- 3) Display (pressure, operating modes, navigation)
- 4) Confirm menu/menu item selection
- 5) Button for menu item/parameter change selection

## Diagrams

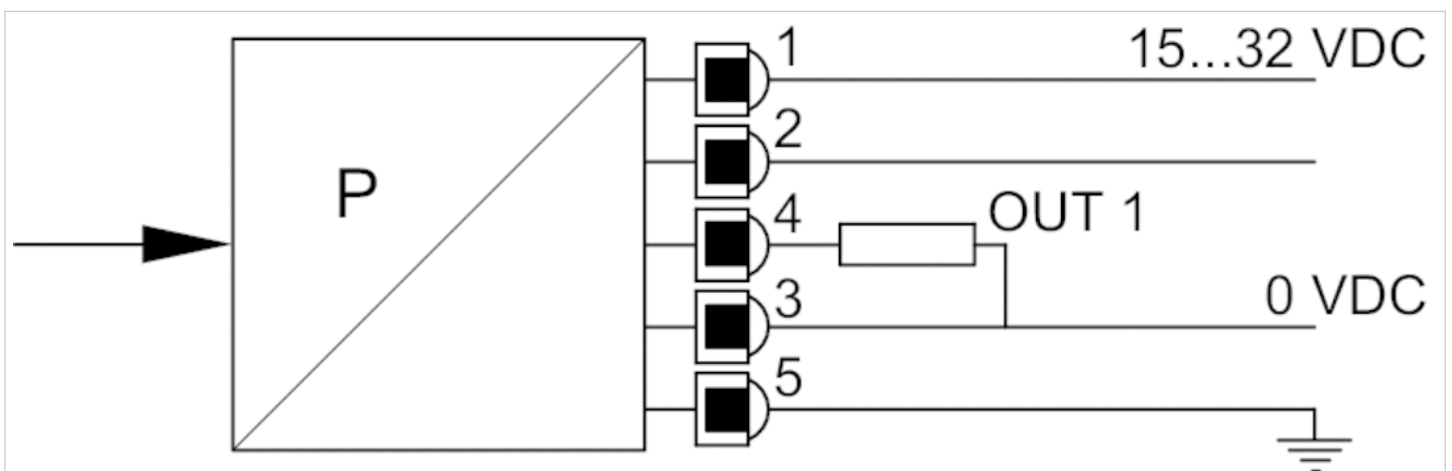
### Pressure-voltage characteristics curve



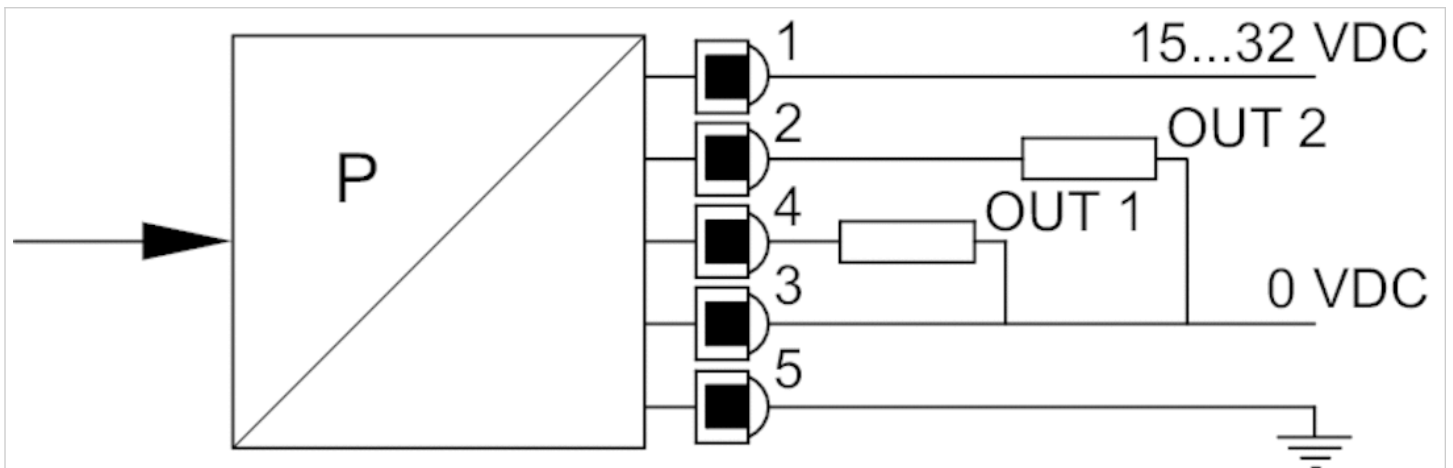
- SP = switching point
- RP = resetting point
- NO = Switching function open
- NC = Switching function closed without current
- DS = Delay for the switching point
- DR = Delay for the resetting point

## Circuit diagram

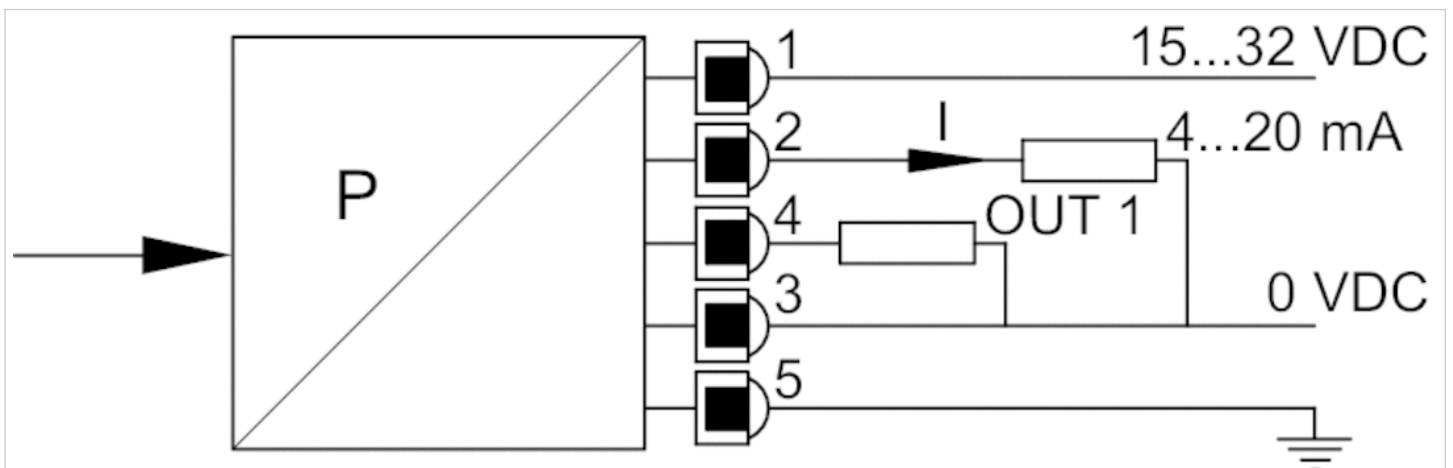
### Block diagram, 1 x PNP



Block diagram, 2 x PNP

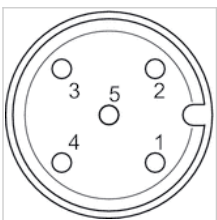


Block diagram, 1x PNP and 1x analog



Pin assignments

Pin assignments



pin 1: signal + UB, color: brown pin 2: signal: out 2 (PNP)/analog 4 - 20 mA, color: white pin 3: signal: 0 volt, color: blue pin 4: signal: out 1 (PNP), color: black pin 5: signal: FE, color: gray








# Pressure Switches, Series PM1

- Operating pressure -0.9 ... 0 -0.9 ... 3 0.2 ... 16 bar
- Mechanical
- Spring-loaded bellows, adjustable
- Electr. connection Plug EN 175301-803, form A
- Compressed air connection Internal thread G 1/4 Flange with O-ring Ø 5x1,5



|                                       |                                    |
|---------------------------------------|------------------------------------|
| Type                                  | Mechanical                         |
| Function                              | change-over contact (mechanical)   |
| Mounting orientation                  | Any                                |
| Working pressure min./max.            | See table below                    |
| Ambient temperature min./max.         | -20 ... 80 °C                      |
| Medium temperature min./max.          | -10 ... 80 °C                      |
| Medium                                | Compressed air Hydraulic oil       |
| Measurement                           | Relative pressure                  |
| Switching element                     | microswitch (input/output)         |
| Protection against overpressure       | 80 bar                             |
| Max. switching frequency              | 1,5 Hz                             |
| Shock resistance max.                 | 15 g                               |
| Vibration resistance                  | 10 g (60 - 500 Hz)                 |
| Repeatability (% of full scale value) | ± 1 %                              |
| Switching point                       | adjustable                         |
| Hysteresis                            | max. switching pressure difference |
| DC operating voltage min./max.        | 12 ... 30 V DC                     |
| Operational voltage AC min./max.      | 12 ... 250 V AC                    |
| Mounting types                        | via through holes                  |
| Protection class                      | IP65                               |
| Electr. connection                    | Plug EN 175301-803, form A         |
| Weight                                | 0.16 kg                            |

## Technical data

| Part No.   |   | Type        | Operating pressure range | Compressed air connection   |
|------------|---|-------------|--------------------------|-----------------------------|
|            |   |             | min./max.                |                             |
| R412010711 |  | PM1-M3-G014 | -0.9 ... 0 bar           | Internal thread, G 1/4      |
| R412022752 |  | PM1-M3-G014 | -0.9 ... 3 bar           | Internal thread, G 1/4      |
| R412010712 |  | PM1-M3-G014 | 0.2 ... 16 bar           | Internal thread, G 1/4      |
| R412010713 |  | PM1-M3-G014 | 0.2 ... 16 bar           | Internal thread, G 1/4      |
| R412010714 |  | PM1-M3-F001 | -0.9 ... 0 bar           | Flange with O-ring, Ø 5x1,5 |
| R412010715 |  | PM1-M3-F001 | 0.2 ... 16 bar           | Flange with O-ring, Ø 5x1,5 |
| R412010718 |  | PM1-M3-F001 | 0.2 ... 16 bar           | Flange with O-ring, Ø 5x1,5 |

| Part No.   | Scope of delivery            | Fig.   |    |
|------------|------------------------------|--------|----|
| R412010711 | With valve plug connector    | Fig. 1 | -  |
| R412022752 | Without valve plug connector | Fig. 1 | -  |
| R412010712 | Without valve plug connector | Fig. 1 | 1) |
| R412010713 | With valve plug connector    | Fig. 1 | 1) |
| R412010714 | With valve plug connector    | Fig. 2 | -  |
| R412010715 | Without valve plug connector | Fig. 2 | 1) |

| Part No.   | Scope of delivery         | Fig.   |    |
|------------|---------------------------|--------|----|
| R412010718 | With valve plug connector | Fig. 2 | 1) |

1) Min. switching pressure range 0.2 bar falling/0.5 bar rising

## Technical information

Switching function increasing pressure: contact switches from 1-2 to 1-3.

Switching function decreasing pressure: contact switches from 1-3 to 1-2.

Notice: Too-high currents can damage contacts. Inductive or capacitive loads must be equipped with appropriate spark-quenching!

The microswitch has silver-plated contacts.

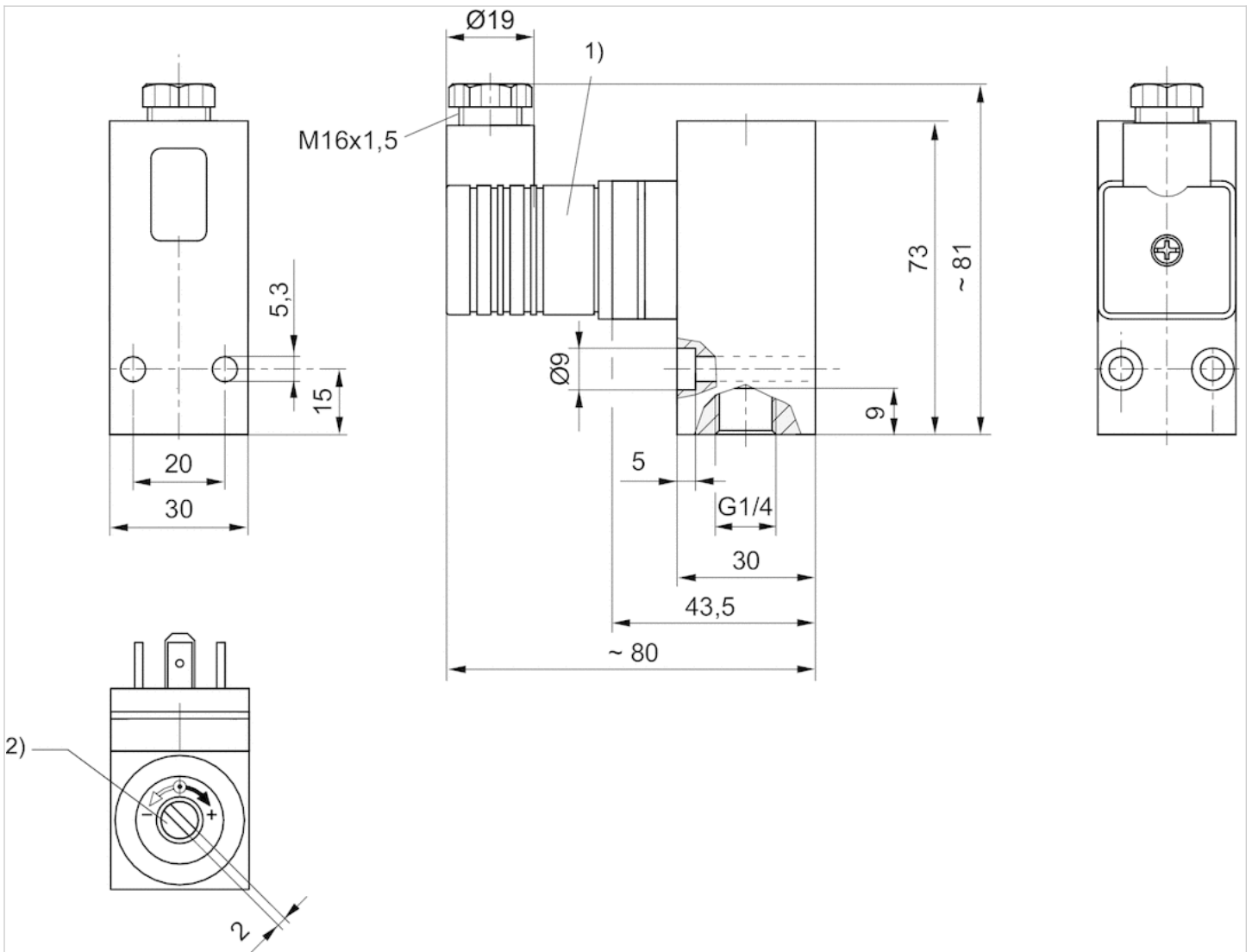
Please observe the pin assignment when selecting plug connectors.

## Technical information

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

## Dimensions

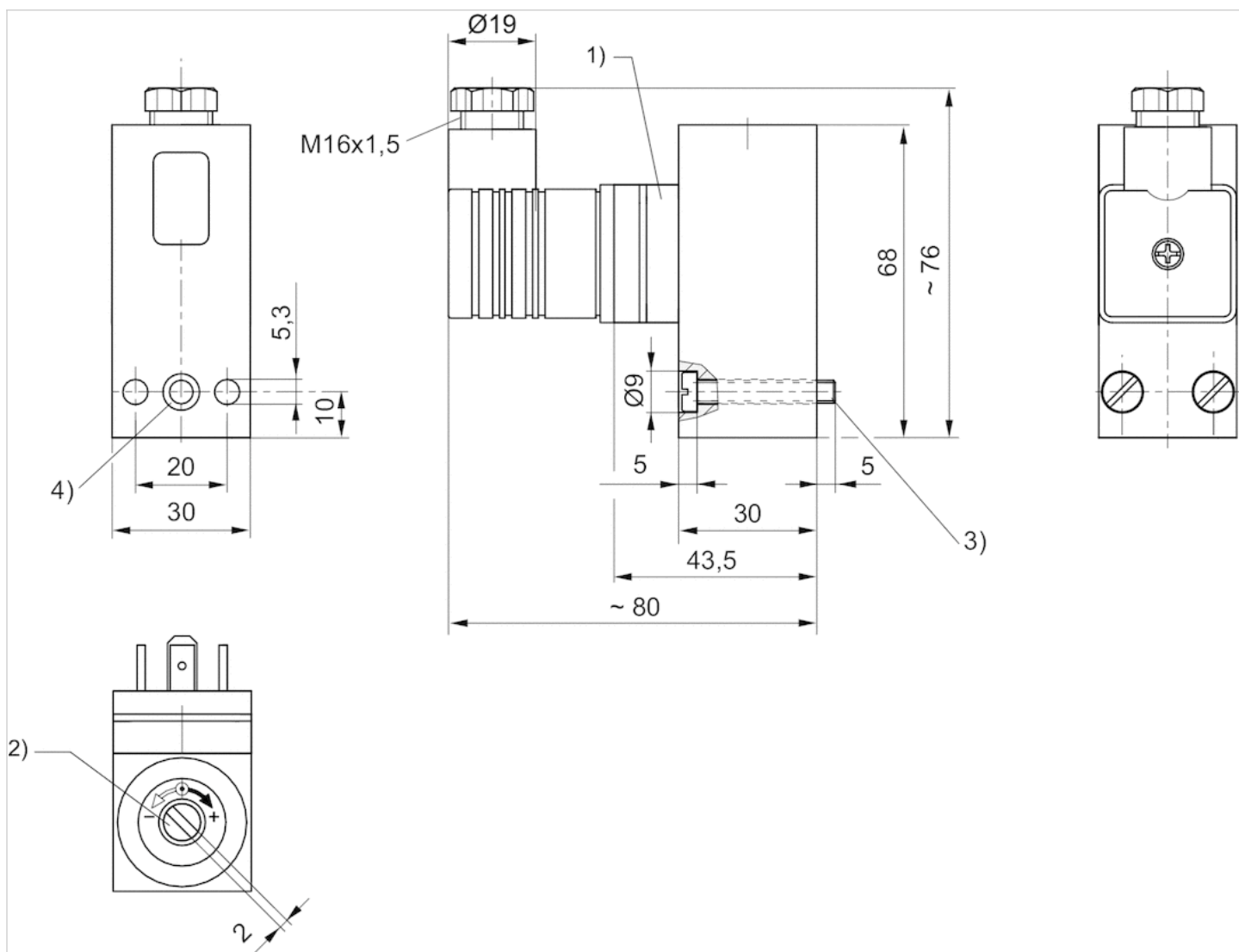
Fig. 1



- 1) Valve plug connector
- 2) Adjustment screw, self-holding



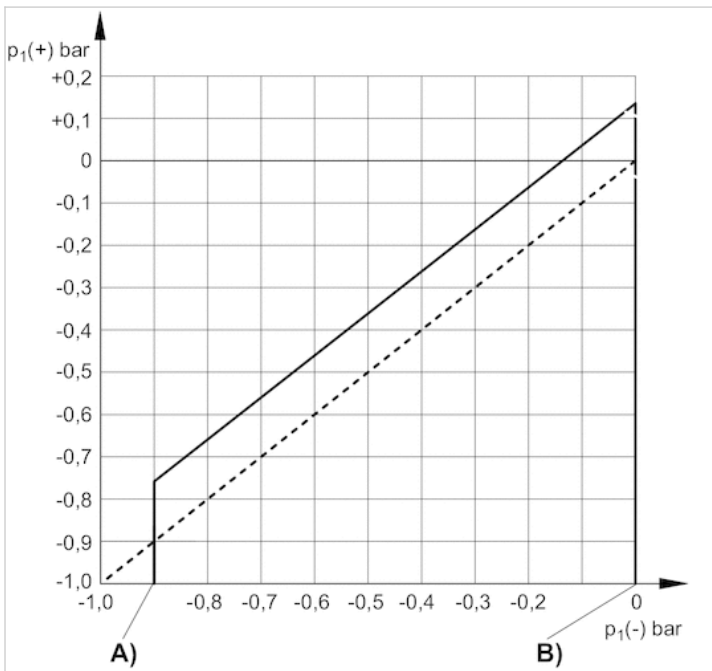
Fig. 2



- 1) Valve plug connector
- 2) Adjustment screw, self-holding
- 3) cylinder screw M5x30 (included in scope of delivery)
- 4) O-ring  $\text{Ø}5 \times 1,5$  (included)

## Diagrams

### differential switching pressure characteristic curve (-0,9 - 0 bar)



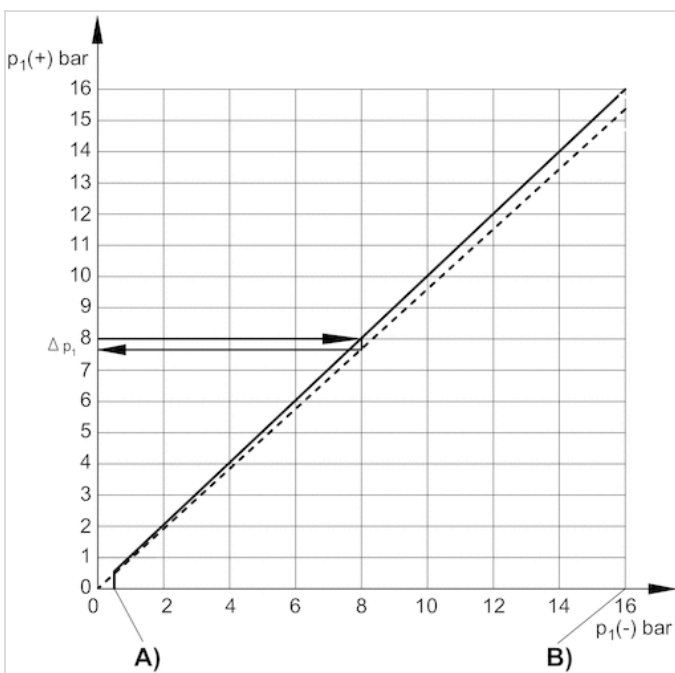
A)  $p_1(-)$ , min.

B)  $p_1(-)$ , max.

$p_1(+)$  = upper switching pressure with increasing pressure

$p_1(-)$  = lower switching pressure with decreasing pressure

### differential switching pressure characteristic curve (0,2 - 16 bar)



A)  $p_1(-)$ , min.

B)  $p_1(-)$ , max.

$p_1(+)$  = upper switching pressure with increasing pressure

$p_1(-)$  = lower switching pressure with decreasing pressure

$\Delta p_1$  = max. operating pressure difference or hysteresis

Example:

$p_1 (+) = 8 \text{ bar} > p_1 (-) = 7.6 \text{ bar}$   
 $\Delta p_1 = 0.4 \text{ bar}$

max. permissible continuous current  $I_{max.}$  [A] with ohmic load

| U [V] | I [A] 1) | I [A] 2) |
|-------|----------|----------|
| 30    | 5        | 3        |
| 48    | 5        | 1,2      |
| 60    | 5        | 0,8      |
| 125   | 5        | 0,4      |
| 250   | 5        | -        |

reference cycle: 30/min., reference temperature: + 30 °C

- 1) AC
- 2) DC

max. permissible continuous current  $I_{max.}$  [A] with inductive load

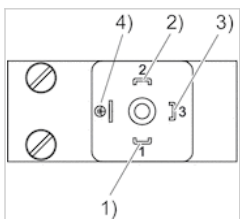
| U [V] | I [A] 1) 3) | I [A] 2) 4) |
|-------|-------------|-------------|
| 30    | 3           | 2           |
| 48    | 3           | 0.55        |
| 60    | 3           | 0.4         |
| 125   | 3           | 0.15        |
| 250   | 3           | -           |

reference cycle: 30/min., reference temperature: + 30 °C

- 1) AC
- 2) DC
- 3)  $\cos \approx 0,7^\circ$
- 4) L/R  $\approx 10 \text{ ms}$

## Pin assignments

PIN assignment for valve plug connectors



| Pin        | 1   | 2             | 3                 | 4   |
|------------|-----|---------------|-------------------|-----|
| Allocation | +UB | break contact | NO (make contact) | GND |





# Pressure Switches, Series PM1

- Operating pressure -0.9 ... 0 0.2 ... 16 bar
- Mechanical
- Spring-loaded bellows, adjustable
- Electr. connection Plug M12x1
- Compressed air connection Internal thread G 1/4 Flange with O-ring Ø 5x1,5



|                                       |                                    |
|---------------------------------------|------------------------------------|
| Type                                  | Mechanical                         |
| Function                              | change-over contact (mechanical)   |
| Mounting orientation                  | Any                                |
| Working pressure min./max.            | See table below                    |
| Ambient temperature min./max.         | -20 ... 80 °C                      |
| Medium temperature min./max.          | -10 ... 80 °C                      |
| Medium                                | Compressed air Hydraulic oil       |
| Measurement                           | Relative pressure                  |
| Switching element                     | microswitch (input/output)         |
| Protection against overpressure       | 80 bar                             |
| Max. switching frequency              | 1,5 Hz                             |
| Shock resistance max.                 | 15 g                               |
| Vibration resistance                  | 10 g (60 - 500 Hz)                 |
| Repeatability (% of full scale value) | ± 1 %                              |
| Switching point                       | adjustable                         |
| Hysteresis                            | max. switching pressure difference |
| DC operating voltage min./max.        | 12 ... 30 V DC                     |
| Operational voltage AC min./max.      | 12 ... 30 V AC                     |
| Mounting types                        | via through holes                  |
| Protection class                      | IP67                               |
| Electr. connection                    | Plug M12x1                         |
| Weight                                | 0.15 kg                            |

## Technical data

| Part No.   |   | Type        | Operating pressure range | Compressed air connection   |
|------------|---|-------------|--------------------------|-----------------------------|
|            |   |             | min./max.                |                             |
| R412010716 |  | PM1-M3-G014 | -0.9 ... 0 bar           | Internal thread, G 1/4      |
| R412010717 |  | PM1-M3-G014 | 0.2 ... 16 bar           | Internal thread, G 1/4      |
| R412010719 |  | PM1-M3-F001 | -0.9 ... 0 bar           | Flange with O-ring, Ø 5x1,5 |
| R412010720 |  | PM1-M3-F001 | 0.2 ... 16 bar           | Flange with O-ring, Ø 5x1,5 |

| Part No.   | Fig.   |    |
|------------|--------|----|
| R412010716 | Fig. 1 | -  |
| R412010717 | Fig. 1 | 1) |
| R412010719 | Fig. 2 | -  |
| R412010720 | Fig. 2 | 1) |

1) Min. switching pressure range 0.2 bar falling/0.5 bar rising

## Technical information

Switching function increasing pressure: contact switches from 1-2 to 1-3.

Switching function decreasing pressure: contact switches from 1-3 to 1-2.

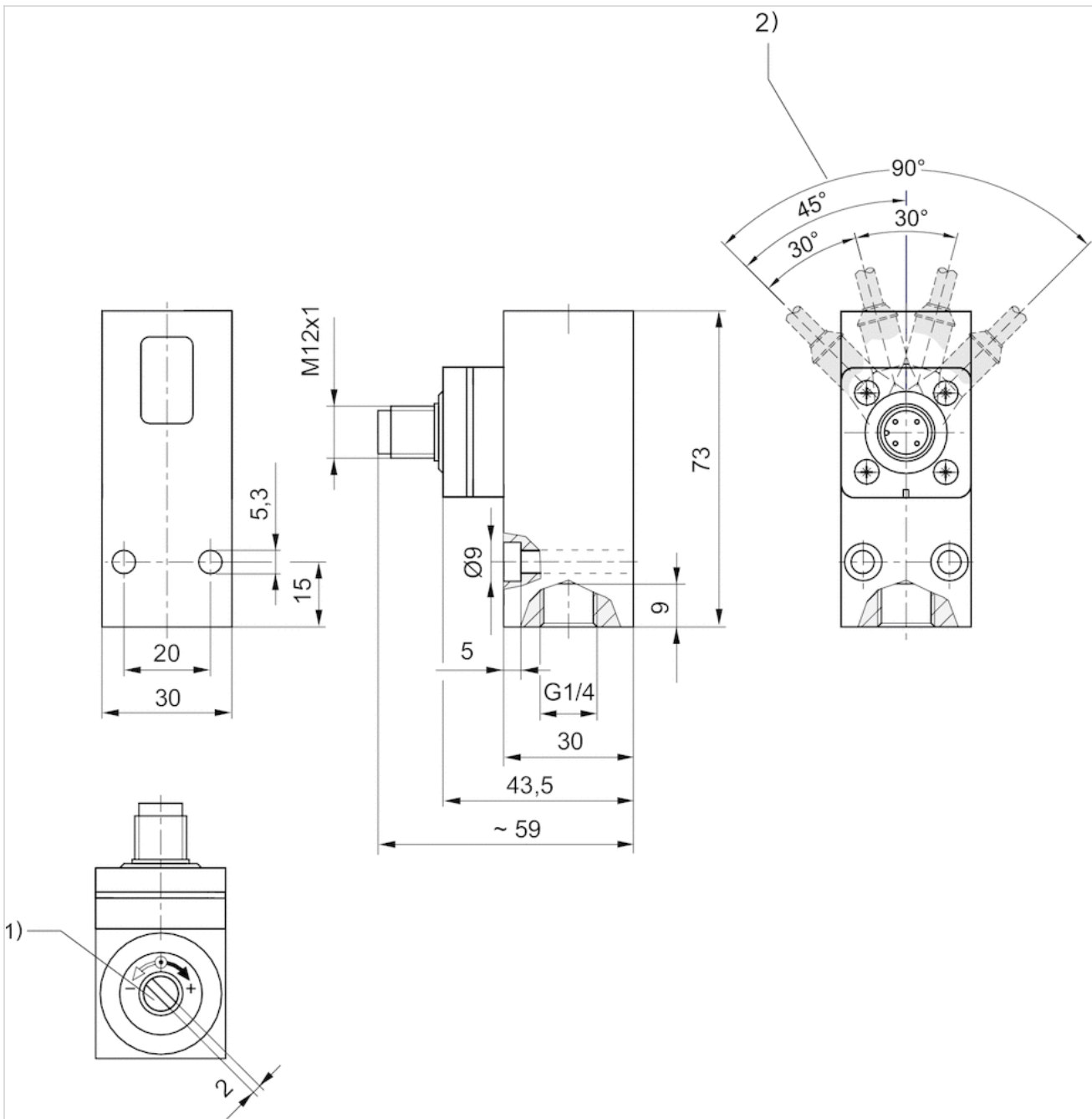
Notice: Too-high currents can damage contacts. Inductive or capacitive loads must be equipped with appropriate spark-quenching!  
The microswitch has silver-plated contacts.

## Technical information

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

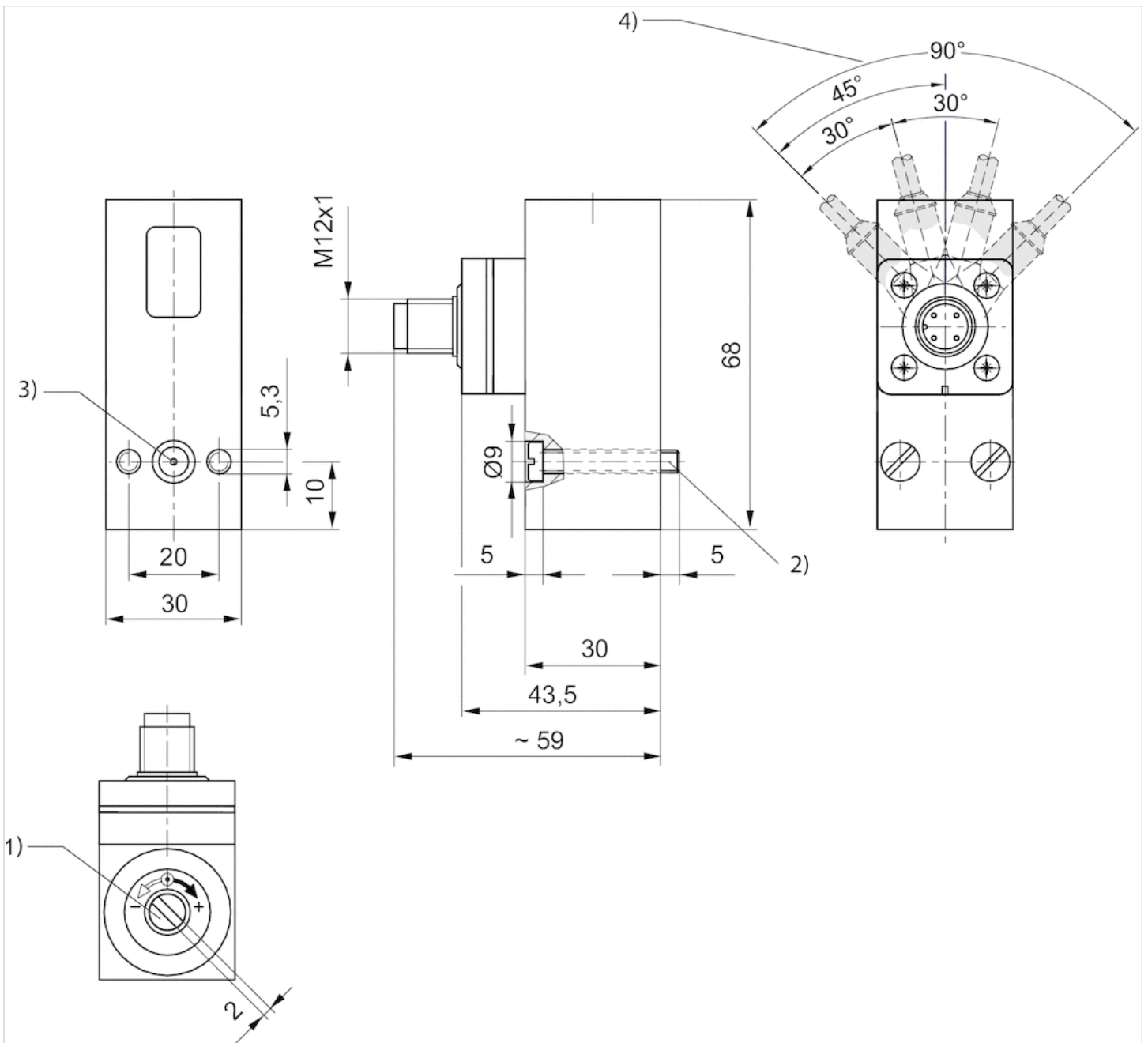
# Dimensions

Fig. 1



- 1) Adjustment screw, self-holding
- 2) Detent position

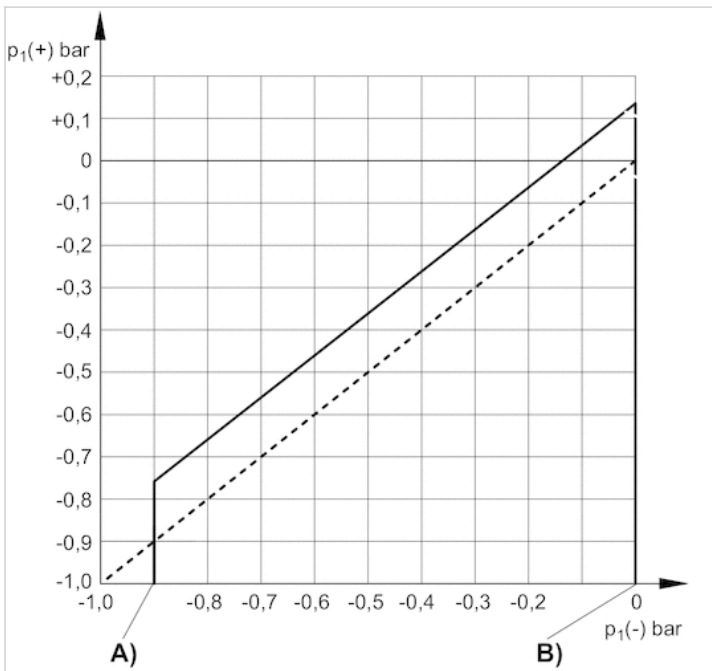
Fig. 2



- 1) Adjustment screw, self-holding
- 2) cylinder screw M5x30 (included in scope of delivery)
- 3) O-ring  $\varnothing 5 \times 1,5$  (included)
- 4) Detent position

## Diagrams

### differential switching pressure characteristic curve (-0,9 - 0 bar)



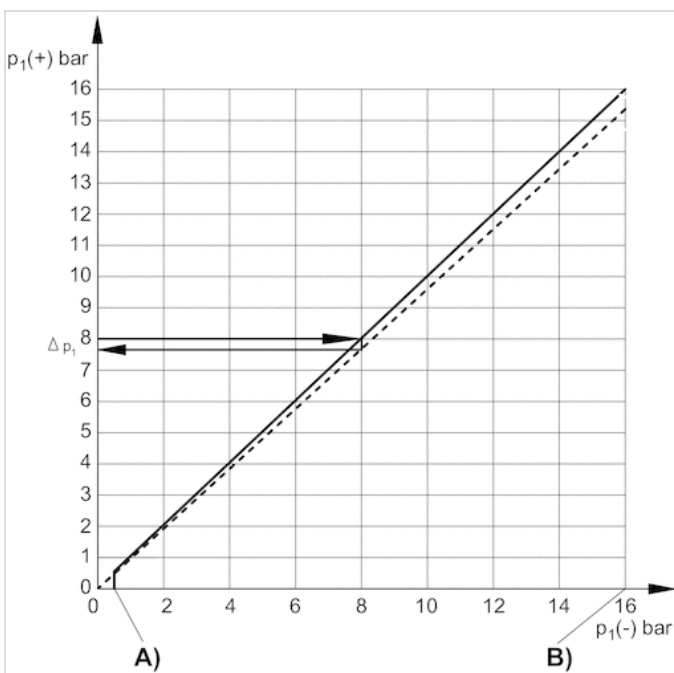
A)  $p_1(-)$ , min.

B)  $p_1(-)$ , max.

$p_1(+)$  = upper switching pressure with increasing pressure

$p_1(-)$  = lower switching pressure with decreasing pressure

### differential switching pressure characteristic curve (0,2 - 16 bar)



A)  $p_1(-)$ , min.

B)  $p_1(-)$ , max.

$p_1(+)$  = upper switching pressure with increasing pressure

$p_1(-)$  = lower switching pressure with decreasing pressure

$\Delta p_1$  = max. operating pressure difference or hysteresis

Example:



$p_1 (+) = 8 \text{ bar} > p_1 (-) = 7.6 \text{ bar}$   
 $\Delta p_1 = 0.4 \text{ bar}$

max. permissible continuous current  $I_{max.}$  [A] with ohmic load

| U [V]              | I [A] 1) | I [A] 2)            |
|--------------------|----------|---------------------|
| 30-250             | 3A       |                     |
| 30 / 48 / 60 / 125 |          | 3 / 1,2 / 0,8 / 0,4 |

reference cycle: 30/min., reference temperature: + 30 °C

- 1) AC
- 2) DC

max. permissible continuous current  $I_{max.}$  [A] with inductive load

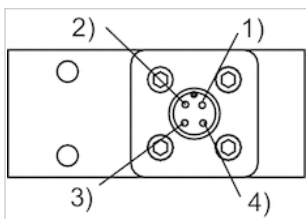
| U [V]              | I [A] 1) 3) | I [A] 2) 4)          |
|--------------------|-------------|----------------------|
| 30-250             | 3A          |                      |
| 30 / 48 / 60 / 125 |             | 2 / 0,55 / 0,4 / 0,2 |

reference cycle: 30/min., reference temperature: + 30 °C

- 1) AC
- 2) DC
- 3)  $\cos \approx 0,7^\circ$
- 4)  $L/R \approx 10 \text{ ms}$

Pin assignments

Pin assignments



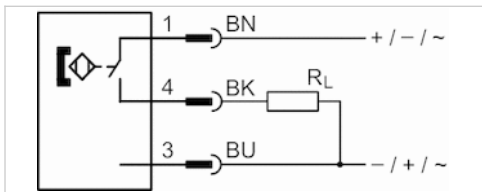
| Pin        | 1   | 2             | 3           | 4                 |
|------------|-----|---------------|-------------|-------------------|
| Allocation | +UB | break contact | No function | NO (make contact) |

# Sensor, Series ST6

- 6 mm T-slot
- with cable
- Plug, M12, 4-pin, with knurled screw
- UL certification
- Reed
- Direct mounting for series PRA PRE CCI KPZ SSI GPC CVI
- Indirect mounting for series TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR



|                                |   |
|--------------------------------|---|
| Certificates                   | CE declaration of conformity cULus RoHS |
| Ambient temperature min./max.  | -30 ... 80 °C                           |
| Protection class               | IP65, IP67                              |
| Switching point precision      | ±0,1 mT                                 |
| Min./max. DC operating voltage | 10 ... 30 V DC                          |
| Min./max. AC operating voltage | 10 ... 30 V AC                          |
| Hysteresis                     | ≥ 0,2 mT                                |
| Switching logic                | NO (make contact)                       |
| Switching capacity             | Reed, 3-pin: max. 6 W                   |
| LED status display             | Yellow                                  |
| Vibration resistance           | 10 - 55 Hz, 1 mm                        |
| Shock resistance               | 30 g / 11 ms                            |
| Cable length L                 | 0.3 m                                   |



## Technical data

| Part No.   | for                         | Type of contact | Cable length L |
|------------|-----------------------------|-----------------|----------------|
| R412022876 | PRA PRE CCI KPZ SSI GPC CVI | Reed            | 0.3 m          |

| Part No.   | Voltage drop U at I <sub>max</sub> | DC switching current, max. |
|------------|------------------------------------|----------------------------|
| R412022876 | ≤ 0,1 V                            | 0.3 A                      |

| Part No.   | AC switching current, max. | Max. switching frequency |
|------------|----------------------------|--------------------------|
| R412022876 | 0.5 A                      | 400 Hz                   |

| Part No.   | Version                             |
|------------|-------------------------------------|
| R412022876 | Protected against polarity reversal |

The product of operating voltage and continuous current must not exceed the maximum switching capacity.

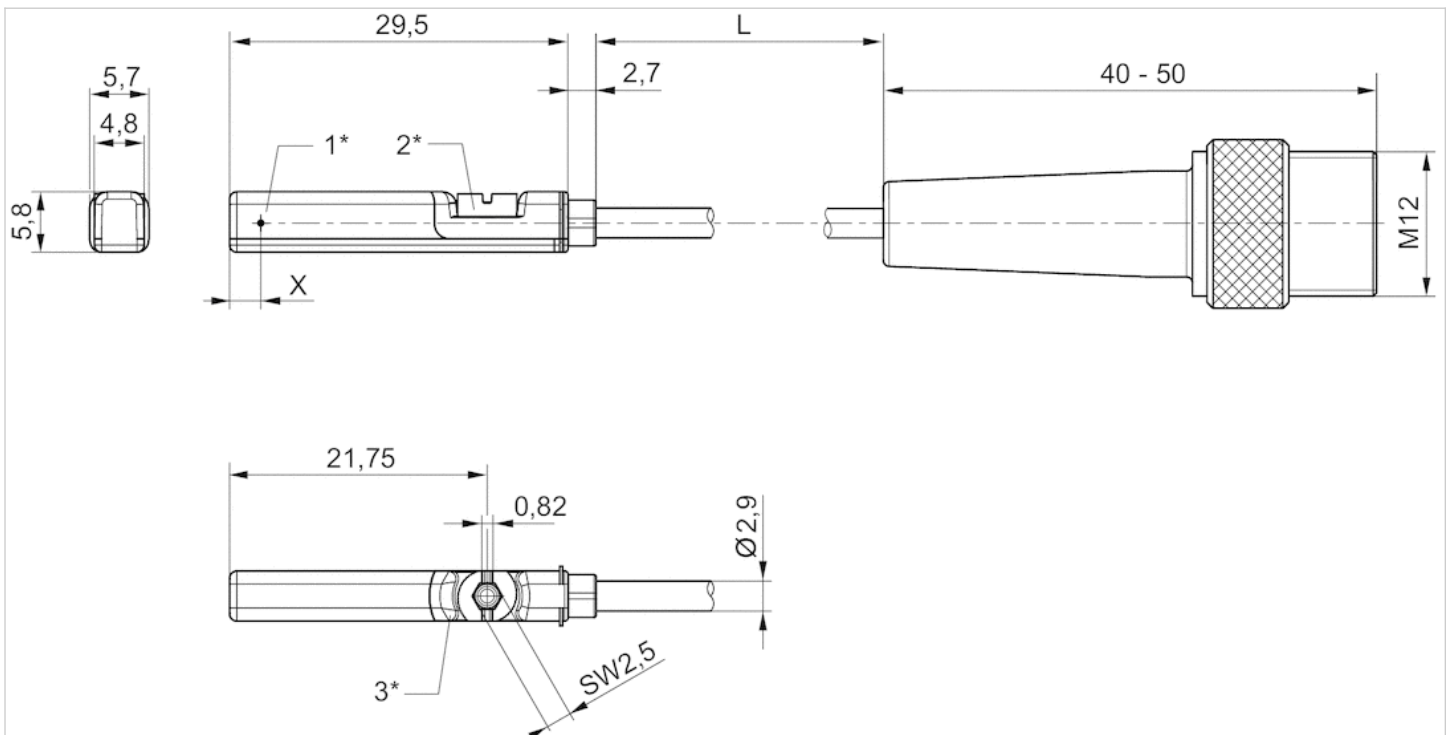
## Technical information

### Material

|               |                 |
|---------------|-----------------|
| Housing       | Polyamide       |
| Cable sheath  | Polyurethane    |
| Locking screw | Stainless steel |

## Dimensions

### Dimensions



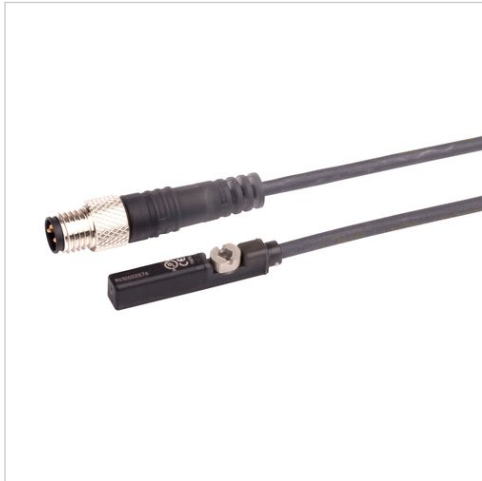
1\* = switching point 2\* = locking screw 3\* = LED window, transparent

L = cable length

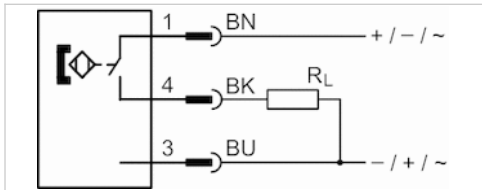
X = PNP: 11,6 mm, reed: 8,3 mm

# Sensor, Series ST6

- 6 mm T-slot
- with cable
- Plug, M8, 3-pin, with knurled screw
- UL certification
- Reed
- Direct mounting for series PRA PRE CCI KPZ SSI GPC CVI
- Indirect mounting for series TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR



|                                |   |
|--------------------------------|---|
| Certificates                   | CE declaration of conformity cULus RoHS |
| Ambient temperature min./max.  | -30 ... 80 °C                           |
| Protection class               | IP65, IP67                              |
| Switching point precision      | ±0,1 mT                                 |
| Min./max. DC operating voltage | 10 ... 30 V DC                          |
| Min./max. AC operating voltage | 10 ... 30 V AC                          |
| Hysteresis                     | ≥ 0,2 mT                                |
| Switching logic                | NO (make contact)                       |
| Switching capacity             | Reed, 3-pin: max. 6 W                   |
| LED status display             | Yellow                                  |
| Vibration resistance           | 10 - 55 Hz, 1 mm                        |
| Shock resistance               | 30 g / 11 ms                            |
| Cable length L                 | 0.3 0.5 m                               |



## Technical data

| Part No.   | for                         | Type of contact | Cable sheath       |
|------------|-----------------------------|-----------------|--------------------|
| R412022873 | PRA PRE CCI KPZ SSI GPC CVI | Reed            | Polyurethane       |
| R412022875 | PRA PRE CCI KPZ SSI GPC CVI | Reed            | Polyvinyl chloride |
| R412022874 | PRA PRE CCI KPZ SSI GPC CVI | Reed            | Polyurethane       |

| Part No.   | Cable length L | Voltage drop U at I <sub>max</sub> | DC switching current, max. |
|------------|----------------|------------------------------------|----------------------------|
| R412022873 | 0.3 m          | I*Rs                               | 0.3 A                      |
| R412022875 | 0.3 m          | I*Rs                               | 0.3 A                      |
| R412022874 | 0.5 m          | I*Rs                               | 0.3 A                      |

| Part No.   | AC switching current, max. | Max. switching frequency |
|------------|----------------------------|--------------------------|
| R412022873 | 0.5 A                      | 400 Hz                   |
| R412022875 | 0.5 A                      | 400 Hz                   |
| R412022874 | 0.5 A                      | 400 Hz                   |

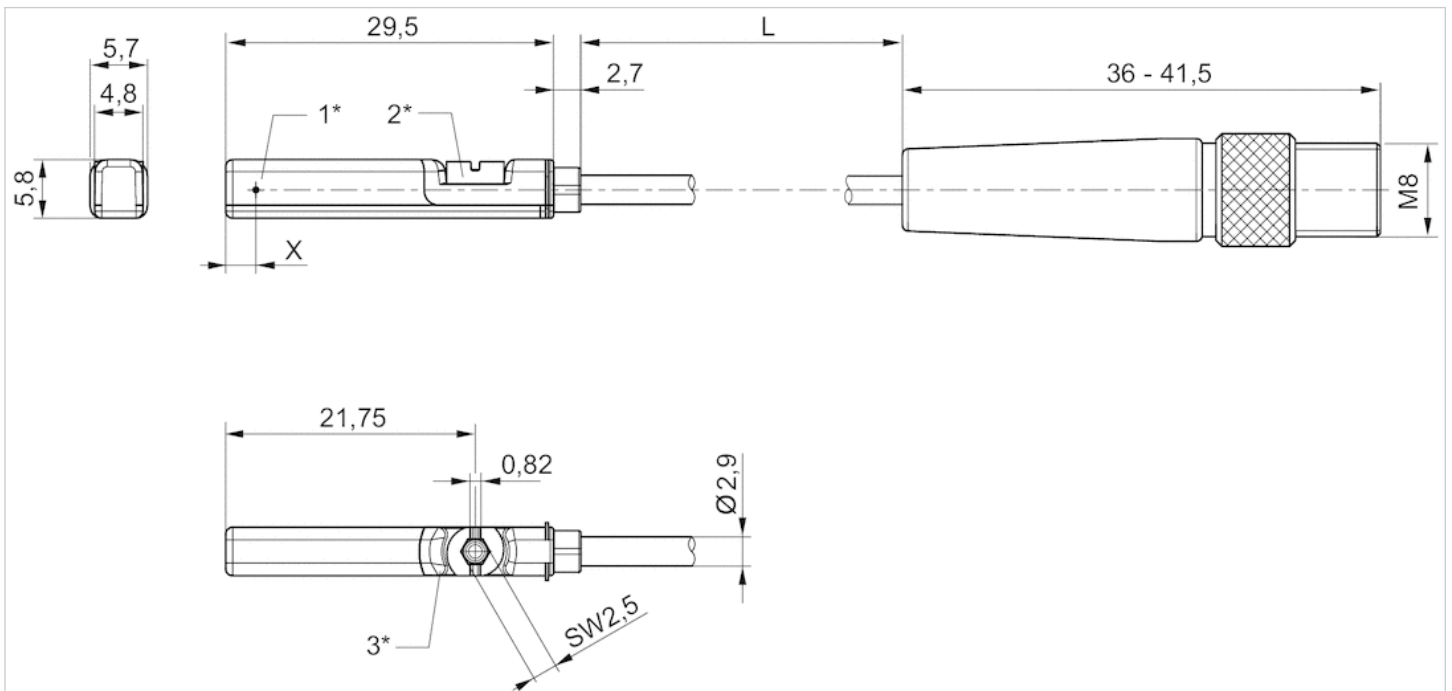
| Part No.   | Version                             |
|------------|-------------------------------------|
| R412022873 | Protected against polarity reversal |
| R412022875 | Protected against polarity reversal |
| R412022874 | Protected against polarity reversal |

## Technical information

| Material      |                                 |
|---------------|---------------------------------|
| Housing       | Polyamide                       |
| Cable sheath  | Polyurethane Polyvinyl chloride |
| Locking screw | Stainless steel                 |

## Dimensions

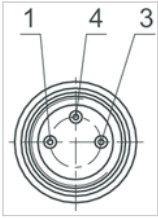
### Dimensions



1\* = switching point 2\* = locking screw 3\* = LED window, transparent  
 L = cable length  
 X = electronic: 11,6 mm, Reed: 8,3 mm

## Pin assignments

### Pin assignments



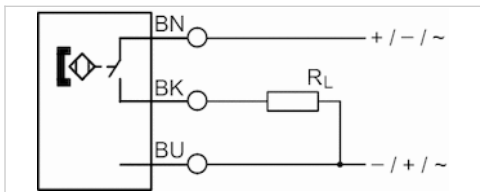
| Pin        | 1   | 3   | 4     |
|------------|-----|-----|-------|
| Allocation | (+) | (-) | (OUT) |

# Sensor, Series ST6

- 6 mm T-slot
- with cable
- open cable ends, 3-pin
- UL certification
- Reed
- Direct mounting for series PRA PRE CCI KPZ SSI GPC CVI
- Indirect mounting for series TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR



|                                |   |
|--------------------------------|---|
| Certificates                   | CE declaration of conformity cULus RoHS |
| Ambient temperature min./max.  | -30 ... 80 °C                           |
| Protection class               | IP65, IP67, IP69K                       |
| Switching point precision      | ±0,1 mT                                 |
| Min./max. DC operating voltage | 10 ... 30 V DC                          |
| Min./max. AC operating voltage | 10 ... 30 V AC                          |
| Hysteresis                     | ≥ 0,2 mT                                |
| Switching logic                | NO (make contact)                       |
| Switching capacity             | Reed, 3-pin: max. 6 W                   |
| LED status display             | Yellow                                  |
| Vibration resistance           | 10 - 55 Hz, 1 mm                        |
| Shock resistance               | 30 g / 11 ms                            |
| Cable length L                 | 3 5 10 m                                |



## Technical data

| Part No.   | for                         | Type of contact | Cable length L |
|------------|-----------------------------|-----------------|----------------|
| R412022869 | PRA PRE CCI KPZ SSI GPC CVI | Reed            | 3 m            |
| R412022870 | PRA PRE CCI KPZ SSI GPC CVI | Reed            | 5 m            |
| R412022871 | PRA PRE CCI KPZ SSI GPC CVI | Reed            | 10 m           |

| Part No.   | Voltage drop U at I <sub>max</sub> | DC switching current, max. |
|------------|------------------------------------|----------------------------|
| R412022869 | I*Rs                               | 0.3 A                      |
| R412022870 | ≤ 0,1 V                            | 0.3 A                      |
| R412022871 | I*Rs                               | 0.3 A                      |

| Part No.   | AC switching current, max. | Max. switching frequency |
|------------|----------------------------|--------------------------|
| R412022869 | 0.5 A                      | 400 Hz                   |
| R412022870 | 0.5 A                      | 400 Hz                   |
| R412022871 | 0.5 A                      | 400 Hz                   |

| Part No.   | Version                             | Fig.   |
|------------|-------------------------------------|--------|
| R412022869 | Protected against polarity reversal | Fig. 2 |
| R412022870 | Protected against polarity reversal | Fig. 2 |
| R412022871 | Protected against polarity reversal | Fig. 2 |

open cable ends, 3-pin, The product of operating voltage and continuous current must not exceed the maximum switching capacity.

## Technical information

No cULus certification for 230 V variant.

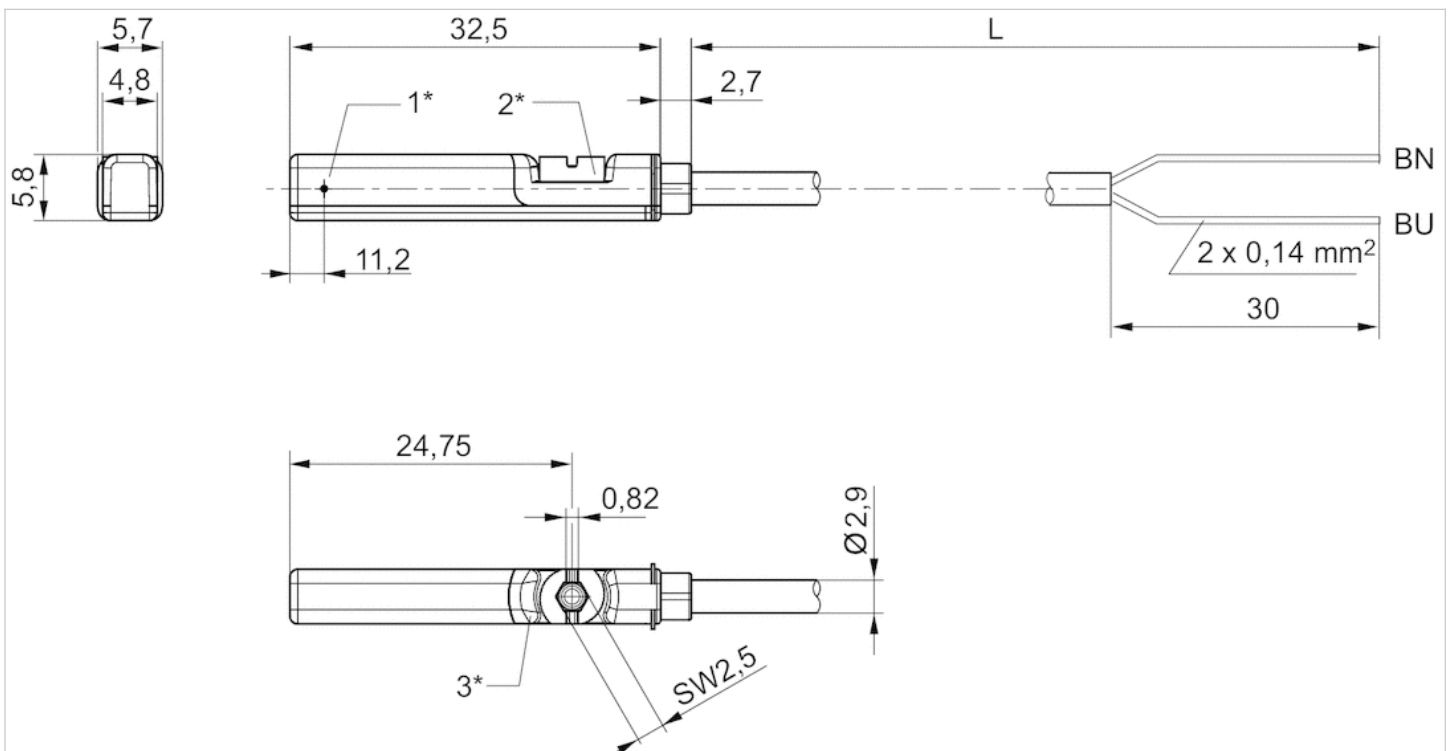
## Technical information

### Material

|               |                 |
|---------------|-----------------|
| Housing       | Polyamide       |
| Cable sheath  | Polyurethane    |
| Locking screw | Stainless steel |

## Dimensions

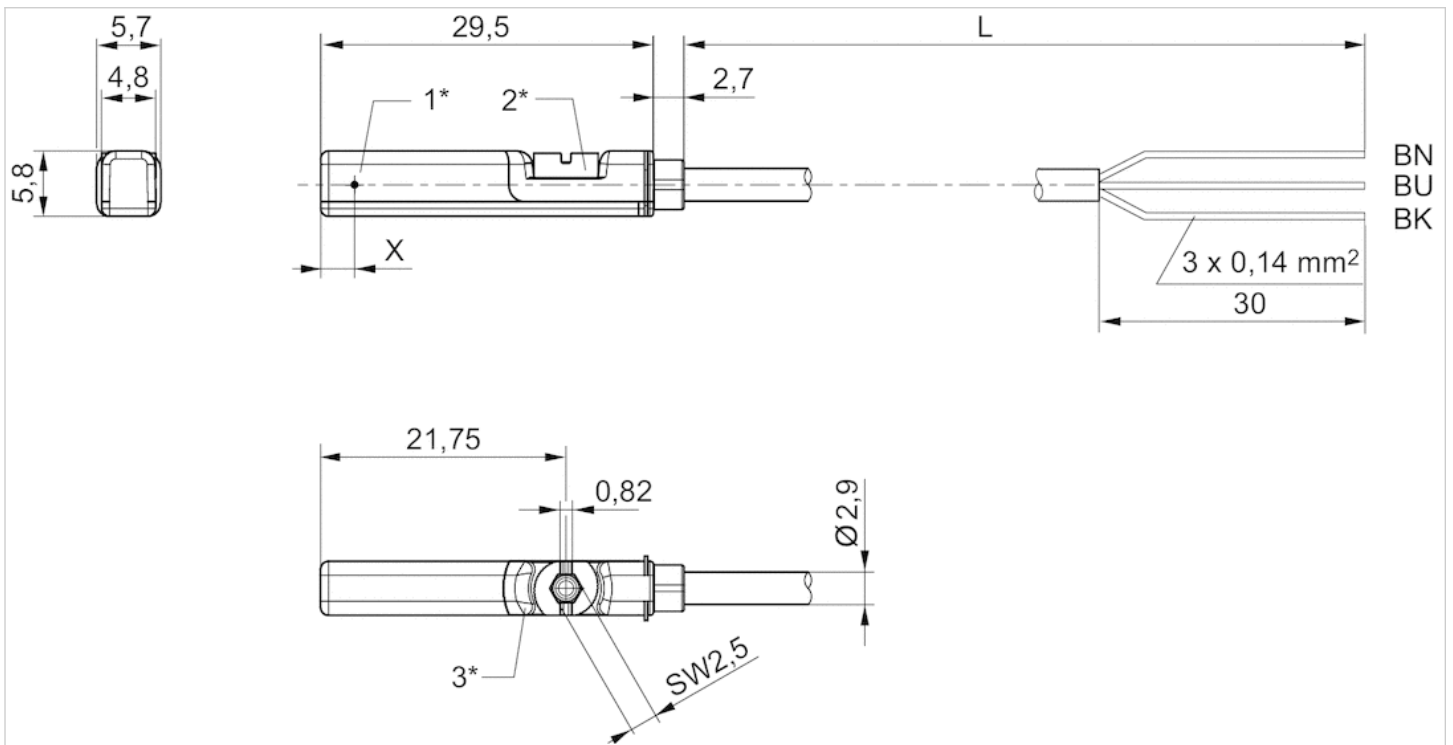
Fig. 1



1\* = switching point 2\* = locking screw 3\* = LED window, transparent  
 L = cable length  
 BN=brown, BU=blue



Fig. 2



1\* = switching point 2\* = locking screw 3\* = LED window, transparent

L = cable length

BN = brown, BK = black, BU = blue

X = electronic: 11.6 mm

## QR1-S-RPN standard series

- Straight fitting
- External thread
- G 1/2
- push-in fitting
- Ø 8 Ø 10 Ø 12 Ø 14 Ø 16
- QR1-S-RPN



|                               |                  |
|-------------------------------|------------------|
| Working pressure min./max.    | -0.95 ... 10 bar |
| Ambient temperature min./max. | 0 ... 60 °C      |
| Weight per piece              | See table below  |

### Technical data

| Part No.   | Port G | Port D | Delivery unit | Weight per piece |
|------------|--------|--------|---------------|------------------|
| R412005001 | G 1/2  | Ø 8    | 10 piece      | 0.052 kg         |
| 2121010120 | G 1/2  | Ø 10   | 10 piece      | 0.058 kg         |
| 2121012120 | G 1/2  | Ø 12   | 10 piece      | 0.057 kg         |
| 2121014120 | G 1/2  | Ø 14   | 10 piece      | 0.064 kg         |
| R412005006 | G 1/2  | Ø 16   | 10 piece      | 0.067 kg         |

### Technical information

The series QR1 (plastic) and QR2 (metal) can not be combined  
Thread seal with captive O-ring

For further information about assembling and tolerances of adaptable tubing can be found in the "Technical information" document (available in the MediaCentre).

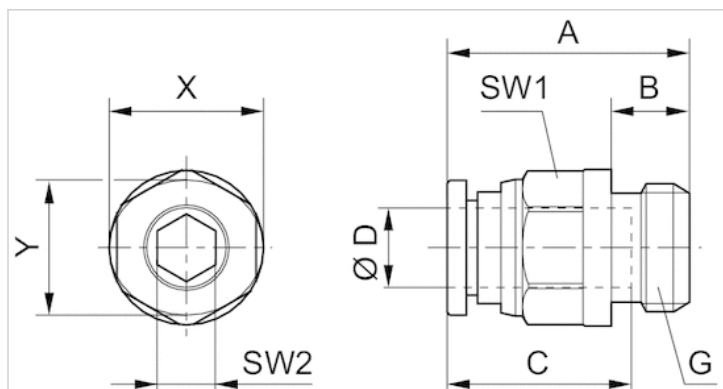
### Technical information

| Material            |                                    |
|---------------------|------------------------------------|
| Material            | nickel-plated                      |
| Housing             | Brass, nickel-plated               |
| Seal                | Acrylonitrile butadiene rubber     |
| Tooth lock washer   | Stainless steel                    |
| Release ring        | Polyoxymethylene                   |
| Release ring holder | Die cast zinc Brass, nickel-plated |

|          |                      |
|----------|----------------------|
| Material |                      |
| Thread   | Brass, nickel-plated |

## Dimensions

### Dimensions



## Dimensions

| Part No.   | Port D | Port G | A    | B   | C    | SW1 | SW2 | X  | Y  |
|------------|--------|--------|------|-----|------|-----|-----|----|----|
| R412005001 | Ø 8    | G 1/2  | 25.7 | 8.5 | 18.5 | 14  | 6   | 16 | 14 |
| 2121010120 | Ø 10   | G 1/2  | 27.4 | 8.5 | 21   | 17  | 8   | 19 | 17 |
| 2121012120 | Ø 12   | G 1/2  | 29.5 | 8.5 | 23   | 21  | 10  | 23 | 21 |
| 2121014120 | Ø 14   | G 1/2  | 25.6 | 8.5 | 24.6 | 24  | 11  | 25 | 23 |
| R412005006 | Ø 16   | G 1/2  | 36.3 | 8.5 | 25.5 | 24  | 10  | 27 | 24 |

# QR1-S-RVT standard series

- Elbow fitting
- External thread
- G 1/2
- push-in fitting
- Ø 8 Ø 10 Ø 12 Ø 14 Ø 16
- QR1-S-RVT



|                               |                  |
|-------------------------------|------------------|
| Working pressure min./max.    | -0.95 ... 10 bar |
| Ambient temperature min./max. | 0 ... 60 °C      |
| Weight per piece              | See table below  |

## Technical data

| Part No.   | Port G | Port D | Delivery unit | Weight per piece |
|------------|--------|--------|---------------|------------------|
| R412005093 | G 1/2  | Ø 8    | 10 piece      | 0.049 kg         |
| 2122010120 | G 1/2  | Ø 10   | 10 piece      | 0.05 kg          |
| 2122012120 | G 1/2  | Ø 12   | 10 piece      | 0.056 kg         |
| 2122014120 | G 1/2  | Ø 14   | 5 piece       | 0.066 kg         |
| R412005098 | G 1/2  | Ø 16   | 5 piece       | 0.076 kg         |

## Technical information

The series QR1 (plastic) and QR2 (metal) can not be combined  
Thread seal with captive O-ring

For further information about assembling and tolerances of adaptable tubing can be found in the "Technical information" document (available in the MediaCentre).

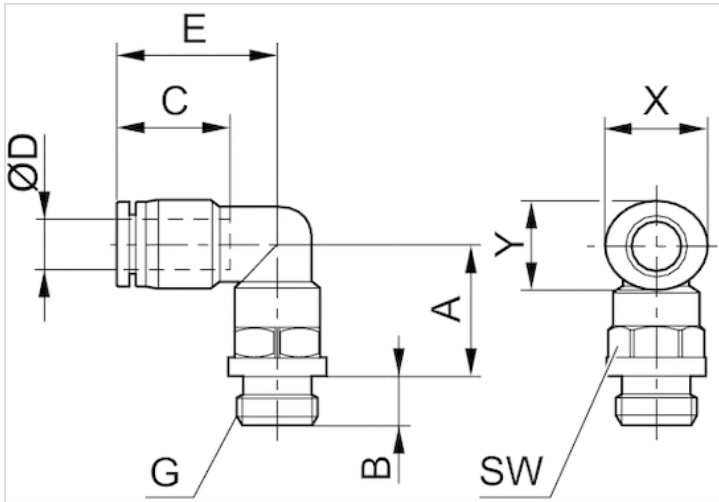
## Technical information

| Material            |                                    |
|---------------------|------------------------------------|
| Material            | nickel-plated                      |
| Housing             | Polybutyleneterephthalate          |
| Seal                | Acrylonitrile butadiene rubber     |
| Tooth lock washer   | Stainless steel                    |
| Release ring        | Polyoxymethylene                   |
| Release ring holder | Die cast zinc Brass, nickel-plated |

|          |                      |
|----------|----------------------|
| Material |                      |
| Thread   | Brass, nickel-plated |

## Dimensions

### Dimensions



### Dimensions

| Part No.   | Port D | Port G | A    | B   | C    | E    | SW | X  | Y  |
|------------|--------|--------|------|-----|------|------|----|----|----|
| R412005093 | Ø 8    | G 1/2  | 12.5 | 8.5 | 18.5 | 22.6 | 24 | 16 | 14 |
| 2122010120 | Ø 10   | G 1/2  | 14.1 | 8.5 | 21   | 27   | 24 | 19 | 14 |
| 2122012120 | Ø 12   | G 1/2  | 15.8 | 8.5 | 22.5 | 29.2 | 24 | 23 | 21 |
| 2122014120 | Ø 14   | G 1/2  | 17.1 | 8.5 | 24.6 | 32.1 | 24 | 25 | 23 |
| R412005098 | Ø 16   | G 1/2  | 18.2 | 8.5 | 24.8 | 33.3 | 24 | 27 | 24 |

## Series QR2-S-RPN standard

- Straight fitting
- External thread
- G 1/2
- push-in fitting
- Ø 12 Ø 14 Ø16
- QR2-S-RPN



|                               |                  |
|-------------------------------|------------------|
| Working pressure min./max.    | -0.95 ... 16 bar |
| Ambient temperature min./max. | -20 ... 80 °C    |
| Weight per piece              | See table below  |

### Technical data

| Part No.   | Port G | Port D | Delivery unit | Weight per piece | Fig.   |
|------------|--------|--------|---------------|------------------|--------|
| 1823373054 | G 1/2  | Ø 12   | 5 piece       | 0.048 kg         | Fig. 1 |
| 1823373055 | G 1/2  | Ø 14   | 5 piece       | 0.064 kg         | Fig. 1 |
| R412007955 | G 1/2  | Ø16    | 1 piece       | 0.072 kg         | Fig. 1 |

### Technical information

The series QR1 (plastic) and QR2 (metal) can not be combined  
Thread seal with captive O-ring

For further information about assembling and tolerances of adaptable tubing can be found in the "Technical information" document (available in the MediaCentre).

### Technical information

| Material          |                                |
|-------------------|--------------------------------|
| Housing           | Brass, nickel-plated           |
| Seal              | Acrylonitrile butadiene rubber |
| Tooth lock washer | Stainless steel                |
| Release ring      | Brass, nickel-plated           |
| Thread            | Brass, nickel-plated           |

## Dimensions

Fig. 1

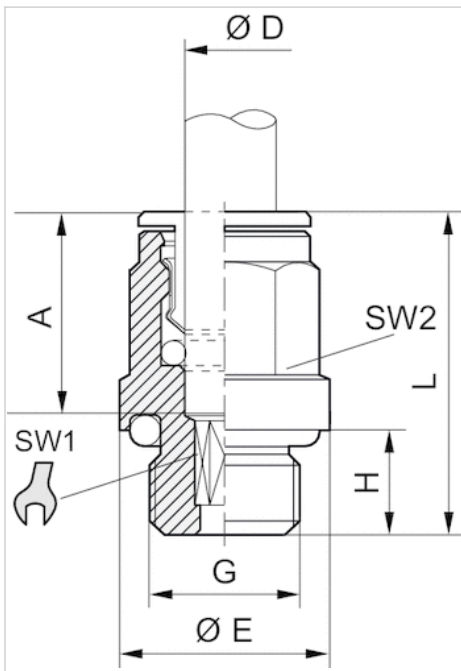
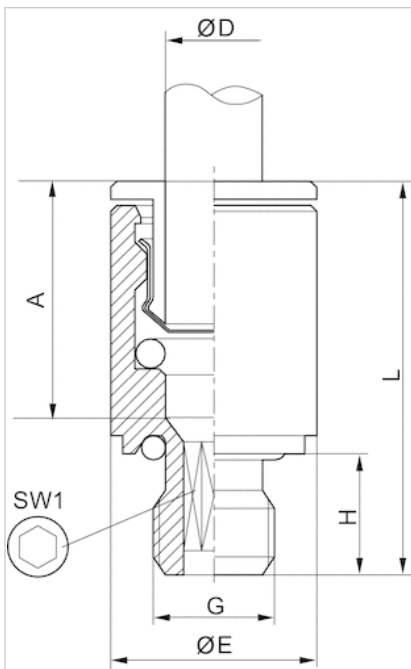


Fig. 2



## Dimensions

| Part No.   | Port D | Port G | Ø E | H  | L  | A Insertion depth | SW 1 | SW 2 | Fig.   |
|------------|--------|--------|-----|----|----|-------------------|------|------|--------|
| 1823373054 | Ø 12   | G 1/2  | 24  | 11 | 31 | 20                | 10   | 18   | Fig. 1 |
| 1823373055 | Ø 14   | G 1/2  | 24  | 11 | 34 | 22                | 12   | 21   | Fig. 1 |
| R412007955 | Ø16    | G 1/2  | 24  | 11 | 37 | 12                | 24   | -    | Fig. 1 |

# Series QR2-S-RVT standard

- Elbow fitting, rotatable
- External thread
- G 1/2
- push-in fitting
- Ø 10 Ø 12 Ø 14 Ø 16
- QR2-S-RVT



|                               |                  |
|-------------------------------|------------------|
| Working pressure min./max.    | -0.95 ... 16 bar |
| Ambient temperature min./max. | -20 ... 80 °C    |
| Weight per piece              | See table below  |

## Technical data

| Part No.   | Port G | Port D | Delivery unit | Weight per piece |
|------------|--------|--------|---------------|------------------|
| R412007589 | G 1/2  | Ø 10   | 5 piece       | 0.046 kg         |
| 1823391840 | G 1/2  | Ø 12   | 5 piece       | 0.065 kg         |
| 1823391841 | G 1/2  | Ø 14   | 5 piece       | 0.07 kg          |
| R412007956 | G 1/2  | Ø 16   | 1 piece       | 0.084 kg         |

## Technical information

The series QR1 (plastic) and QR2 (metal) can not be combined  
Thread seal with captive O-ring

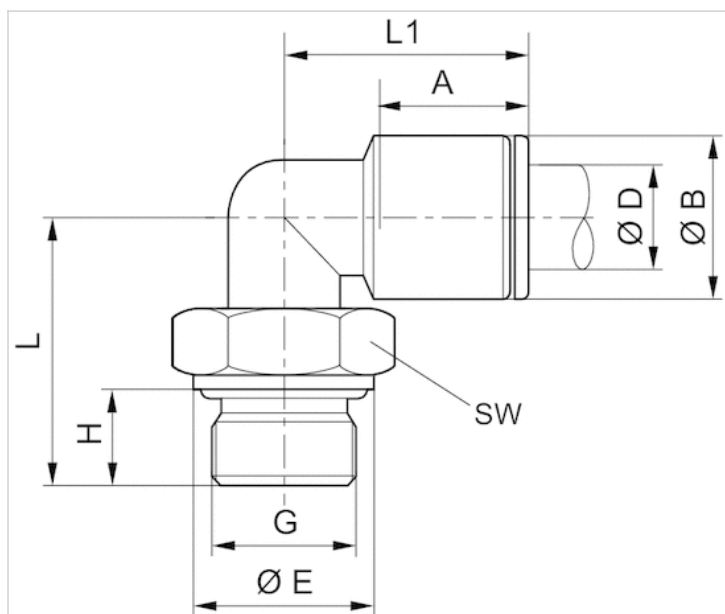
For further information about assembling and tolerances of adaptable tubing can be found in the "Technical information" document (available in the MediaCentre).

## Technical information

| Material          |                                |
|-------------------|--------------------------------|
| Housing           | Brass, nickel-plated           |
| Seal              | Acrylonitrile butadiene rubber |
| Tooth lock washer | Stainless steel                |
| Release ring      | Brass, nickel-plated           |
| Thread            | Brass, nickel-plated           |



## Dimensions



## Dimensions

| Part No.   | Port D | Port G | ØB | ØE | H  | L    | L1 | A Insertion depth | SW |
|------------|--------|--------|----|----|----|------|----|-------------------|----|
| R412007589 | Ø 10   | G 1/2  | 15 | 25 | 11 | 30   | 27 | 19                | 16 |
| 1823391840 | Ø 12   | G 1/2  | 17 | 25 | 11 | 33.5 | 28 | 20                | 20 |
| 1823391841 | Ø 14   | G 1/2  | 20 | 25 | 11 | 33.5 | 31 | 22                | 20 |
| R412007956 | Ø16    | G 1/2  | 23 | 25 | 11 | 38   | 33 | 23.5              | 20 |

## Series NU2

- Swivel banjo connection 1-fold
- External thread
- G 3/4 G 1
- plug-in with tube nut
- Ø 18
- NU2-S-RW1



|                               |                  |
|-------------------------------|------------------|
| Working pressure min./max.    | -0.95 ... 10 bar |
| Ambient temperature min./max. | -10 ... 60 °C    |
| Weight per piece              | See table below  |

### Technical data

| Part No.   | Port G | Port D | Delivery unit | Weight per piece |
|------------|--------|--------|---------------|------------------|
| 1823391807 | G 3/4  | Ø 18   | 10 piece      | 0.208 kg         |
| 1823391808 | G 1    | Ø 18   | 10 piece      | 0.276 kg         |

### Technical information

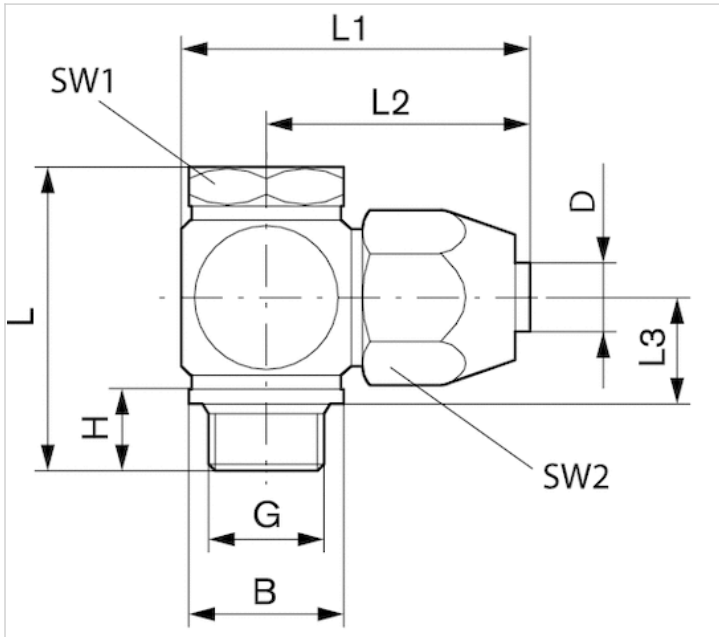
For further information about assembling and tolerances of adaptable tubing can be found in the "Technical information" document (available in the MediaCentre).

### Technical information

| Material |                    |
|----------|--------------------|
| Housing  | Aluminum, anodized |
| Seal     | Polyvinyl chloride |

## Dimensions

### Dimensions



for fabric-reinforced plastic tubing

## Dimensions

| Part No.   | Port D | Port G | B  | H    | L  | L1 | L2 | L3 | SW1 | SW2 |
|------------|--------|--------|----|------|----|----|----|----|-----|-----|
| 1823391807 | Ø 18   | G 3/4  | 33 | 18.5 | 66 | 69 | 51 | 25 | 32  | 41  |
| 1823391808 | Ø 18   | G 1    | 40 | 20.5 | 70 | 77 | 55 | 25 | 41  | 41  |

Connection D = inside diameter of the tubing to be used

# Double nipple, Series PE5

- External thread



Weight per piece

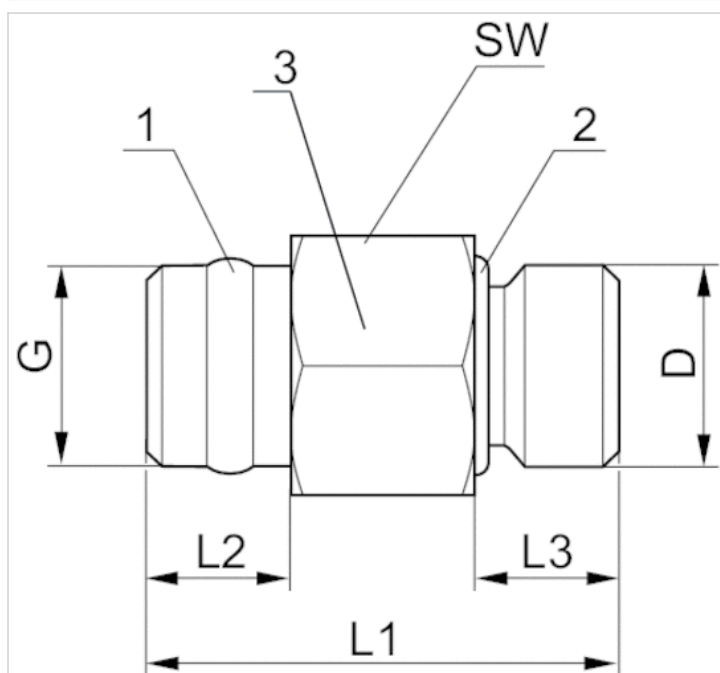
0.04 kg

## Technical data

| Part No.   | Port G | Port D | Delivery unit |
|------------|--------|--------|---------------|
| R412010015 | G 1/4  | G 1/8  | 2 piece       |
| R412010016 | G 1/4  | G 1/4  | 2 piece       |

## Dimensions

### Dimensions



- 1) sealing ring Polytetrafluorethylen
- 2) O-ring - acrylonitrile butadiene rubber
- 3) Housing - brass, nickel-plated

## Dimensions

| Part No.   | Port G | Port D | L1 | L2 | L3  | SW |
|------------|--------|--------|----|----|-----|----|
| R412010015 | G 1/4  | G 1/8  | 30 | 10 | 8.5 | 17 |
| R412010016 | G 1/4  | G 1/4  | 30 | 10 | 8.5 | 17 |

# Blanking screw

- External thread
- G 1/8 G 1/4
- FPT-S-RIO



Working pressure min./max.

0 ... 16 bar

Ambient temperature min./max.

-20 ... 80 °C

## Technical data

| Part No.   | Port G | Delivery unit |
|------------|--------|---------------|
| 1823462004 | G 1/8  | 10 piece      |
| 1823462003 | G 1/4  | 10 piece      |

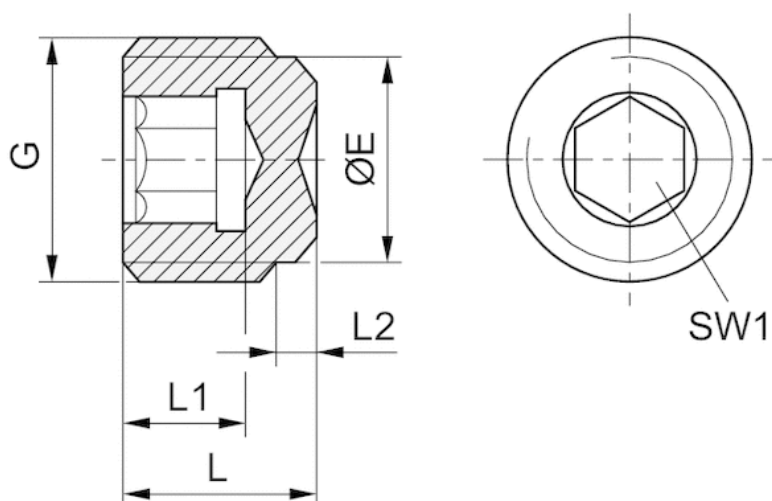
## Technical information

Material

|          |       |
|----------|-------|
| Material | Brass |
|----------|-------|

## Dimensions

Dimensions



## Dimensions in mm

| Port G | ØE | L  | L1 | L2  | SW1 |
|--------|----|----|----|-----|-----|
| G 1/8  | 8  | 8  | 5  | 2   | 5   |
| G 1/4  | 11 | 11 | 7  | 3.5 | 6   |

# plugs



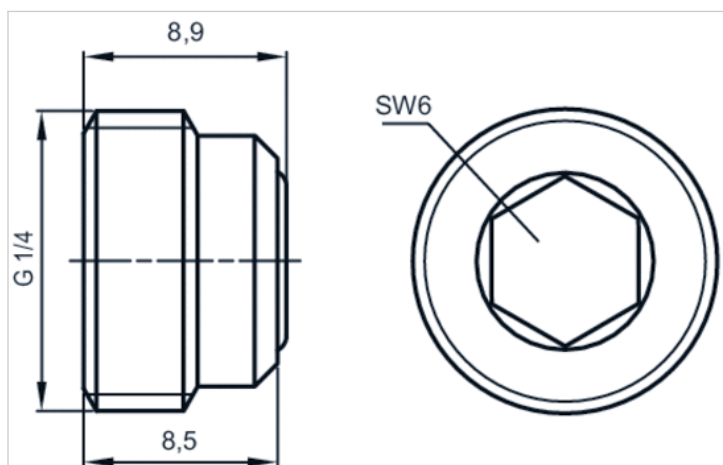
## Technical data

| Part No.   | Type  | Suitable for                     | Delivery unit |
|------------|-------|----------------------------------|---------------|
| R412010124 | plugs | Pressure gauge connection: G 1/4 | 10 piece      |

## Technical information

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

## Dimensions





# Reducing nipple

- External thread
- G 3/4
- Internal thread
- G 1/4
- FPT-S-RDZ



Working pressure min./max.

0 ... 60 bar

Ambient temperature min./max.

-20 ... 70 °C

## Technical data

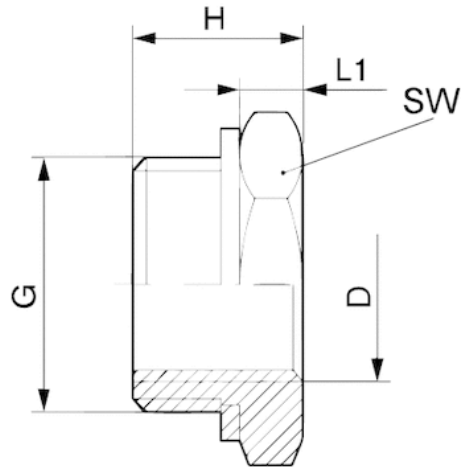
| Part No.   | Port G | Port D | Delivery unit |
|------------|--------|--------|---------------|
| 1823391301 | G 3/4  | G 1/4  | 5 piece       |

## Technical information

| Material |                          |
|----------|--------------------------|
| Material | Brass, nickel-plated     |
| Seal     | Polyvinyl chloride, hard |

## Dimensions

### Dimensions



## Dimensions

| Part No.   | Port D | Port G | H  | L1 | SW |
|------------|--------|--------|----|----|----|
| 1823391301 | G 1/4  | G 3/4  | 19 | 7  | 32 |

# Sealing ring

- Acrylonitrile butadiene styrene



Working pressure min./max.

-0.95 ... 16 bar

Ambient temperature min./max.

-10 ... 60 °C

## Technical data

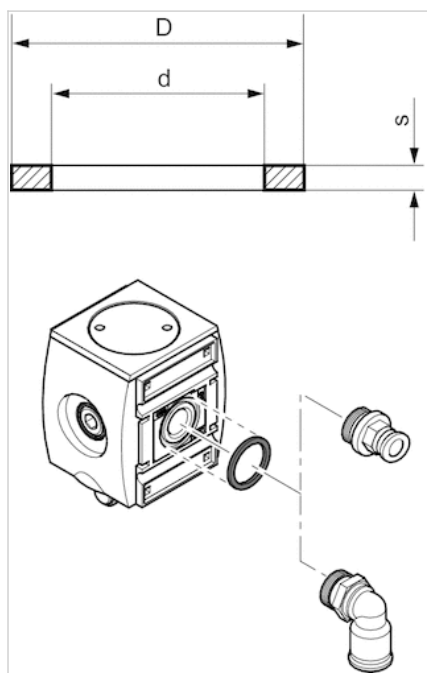
| Part No.   | Port G | Delivery unit |
|------------|--------|---------------|
| R412010148 | G 3/8  | 10 piece      |
| R412010149 | G 1/2  | 10 piece      |
| R412010150 | G 1    | 10 piece      |

For inserting into the O-ring groove when using series QR1 and QR2 fittings.

## Technical information

| Material |                                 |
|----------|---------------------------------|
| Material | Acrylonitrile butadiene styrene |

## Dimensions



## Dimensions

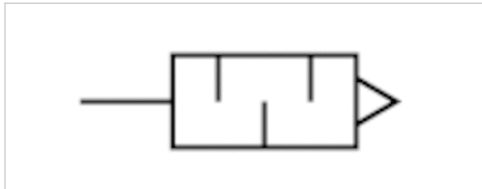
| Part No.   | usage | Type                                | d    | D    | s   |
|------------|-------|-------------------------------------|------|------|-----|
| R412010148 | AS2   | For compressed air connection G 3/8 | 18.5 | 22.8 | 2.0 |
| R412010149 | AS3   | For compressed air connection G 1/2 | 22.4 | 26.4 | 2.0 |
| R412010150 | AS5   | For compressed air connection G 1   | 36.9 | 41.9 | 2.0 |

# Silencers, series SI1

- G 1/2
- Sintered bronze



|                               |   |
|-------------------------------|---|
| Working pressure min./max.    | 0 ... 10 bar  |
| Ambient temperature min./max. | -25 ... 80 °C   |
| Medium                        | Compressed air  |
| Sound pressure level          | 90 dB   |
| Weight                        | 0.08 kg   |
| Comment                       | Flow characteristic curves can be found under "Diagrams". |



## Technical data

| Part No.   | Compressed air connection | Flow       | Delivery unit |
|------------|---------------------------|------------|---------------|
|            |                           | Qn         |               |
| 1827000003 | G 1/2                     | 7223 l/min | 2 piece       |

Weight per piece

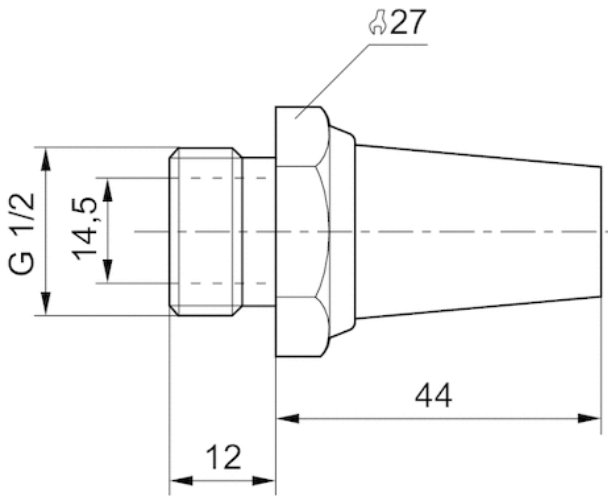
Nominal flow Qn at p1 = 6 bar (absolute) freely discharged. Sound pressure level measured at 6 bar against atmosphere at 1 m distance.

## Technical information

| Material |                 |
|----------|-----------------|
| Silencer | Sintered bronze |
| Thread   | Brass           |

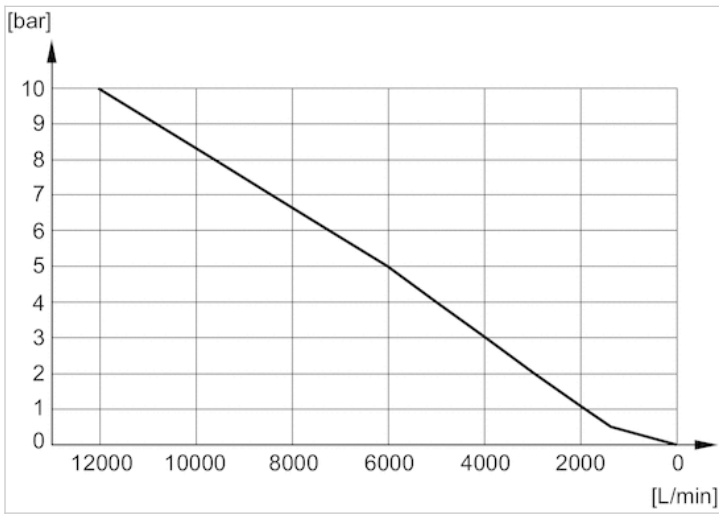
## Dimensions

### Dimensions in mm



## Diagrams

### Flow diagram, 1827000003

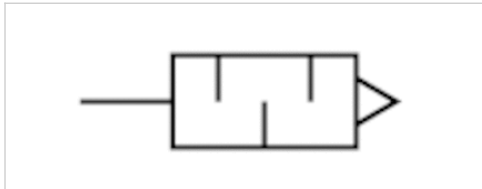


# Silencers, series SI1

- G 3/4
- Sintered bronze



|                               |   |
|-------------------------------|---|
| Working pressure min./max.    | 0 ... 10 bar  |
| Ambient temperature min./max. | -25 ... 80 °C   |
| Medium                        | Compressed air  |
| Sound pressure level          | 92 dB   |
| Weight                        | 0.13 kg   |
| Comment                       | Flow characteristic curves can be found under "Diagrams". |



## Technical data

| Part No.   | Compressed air connection | Flow       | Delivery unit |
|------------|---------------------------|------------|---------------|
|            |                           | Qn         |               |
| 1827000004 | G 3/4                     | 8394 l/min | 1 piece       |

Weight per piece

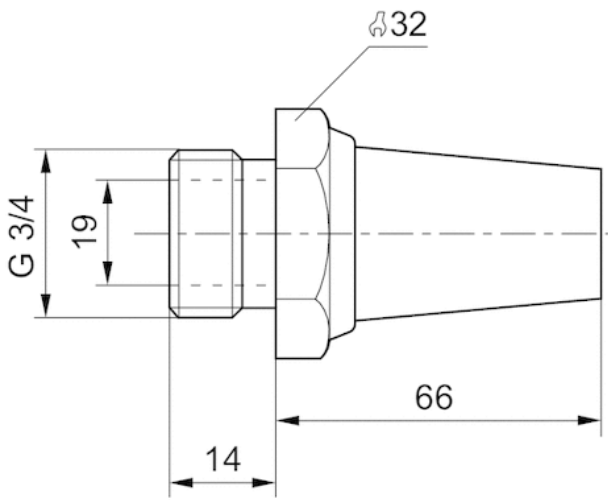
Nominal flow Qn at p1 = 6 bar (absolute) freely discharged. Sound pressure level measured at 6 bar against atmosphere at 1 m distance.

## Technical information

| Material |                 |
|----------|-----------------|
| Silencer | Sintered bronze |
| Thread   | Brass           |

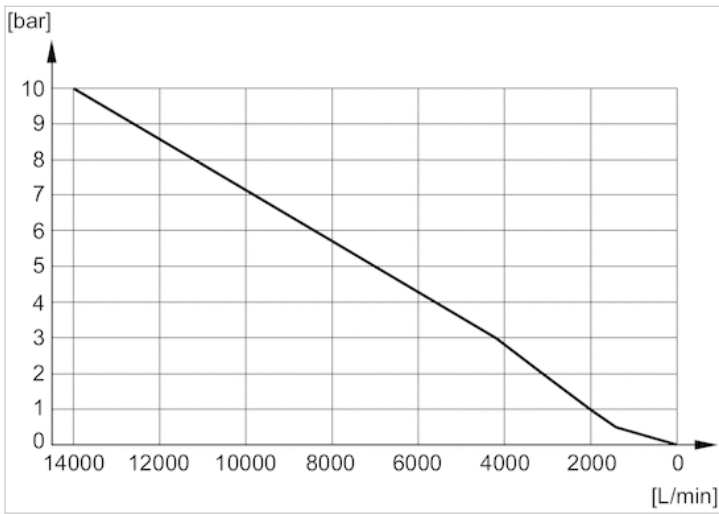
## Dimensions

### Dimensions in mm



## Diagrams

### Flow diagram, 1827000004



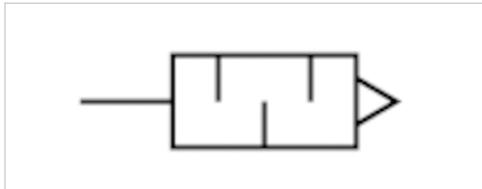


# Silencers, series SI1

- G 1/2
- Sintered bronze



|                               |   |
|-------------------------------|---|
| Working pressure min./max.    | 0 ... 10 bar  |
| Ambient temperature min./max. | -25 ... 80 °C   |
| Medium                        | Compressed air  |
| Sound pressure level          | 85 dB   |
| Weight                        | 0.035 kg  |
| Comment                       | Flow characteristic curves can be found under "Diagrams". |



## Technical data

| Part No.   | Compressed air connection | Flow       | Delivery unit |
|------------|---------------------------|------------|---------------|
|            |                           | Qn         |               |
| 1827000035 | G 1/2                     | 2568 l/min | 2 piece       |

Weight per piece

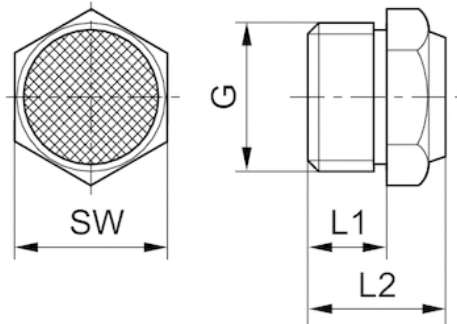
Nominal flow Qn at p1 = 6 bar (absolute) freely discharged. Sound pressure level measured at 6 bar against atmosphere at 1 m distance.

## Technical information

| Material |                 |
|----------|-----------------|
| Silencer | Sintered bronze |
| Thread   | Brass           |

## Dimensions

### Dimensions



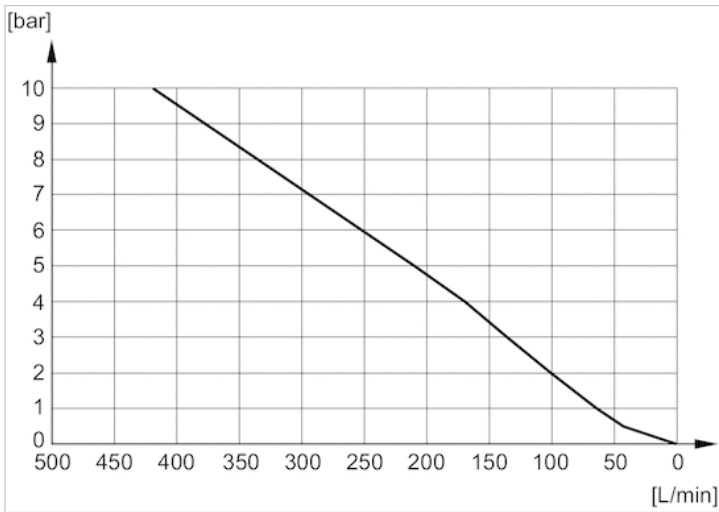
## Dimensions

| Part No.   | Port G | L1 | L2   | SW |
|------------|--------|----|------|----|
| 1827000035 | G 1/2  | 12 | 19.5 | 27 |

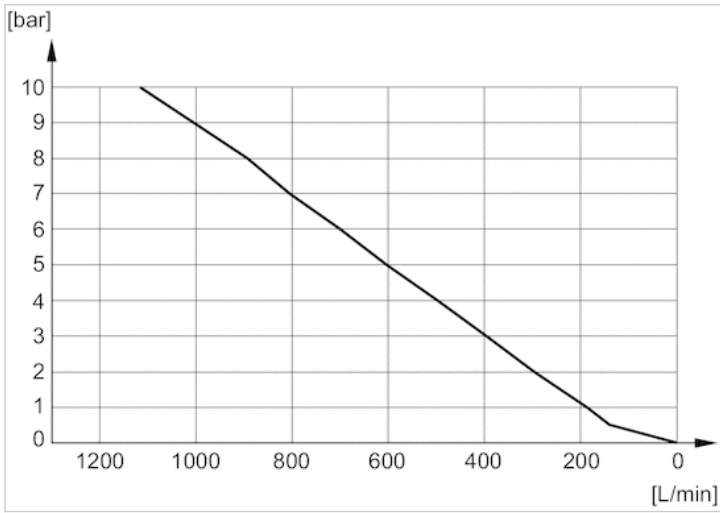
Sound pressure level measured at 6 bar at 1 m distance

## Diagrams

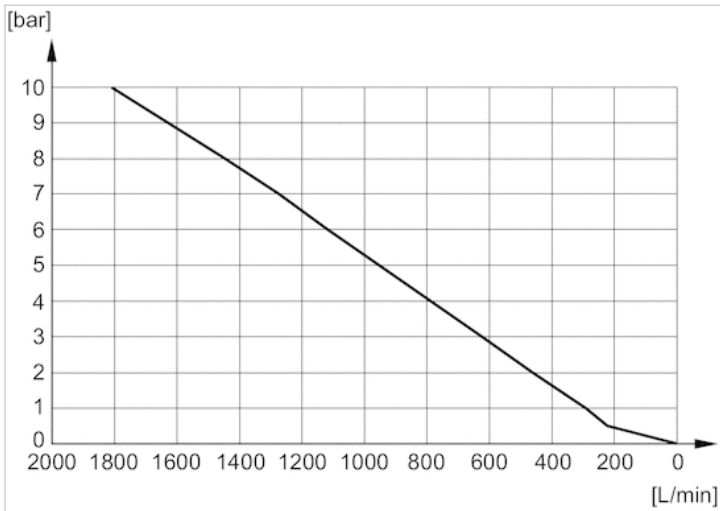
### Flow diagram, 1827000032



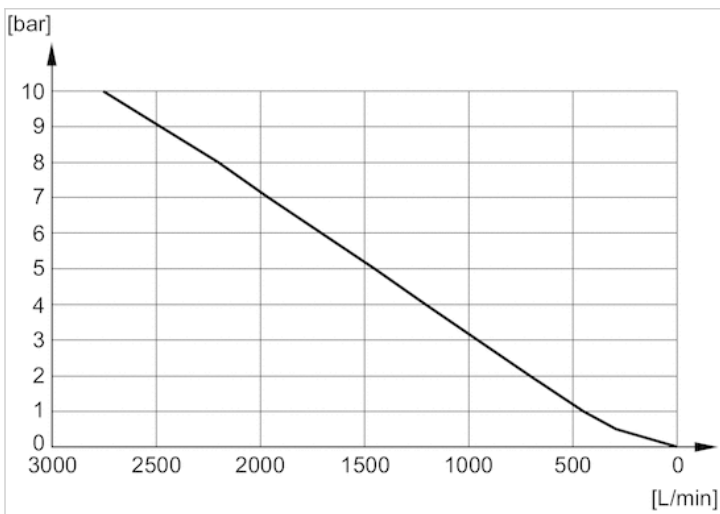
Flow diagram, 1827000031



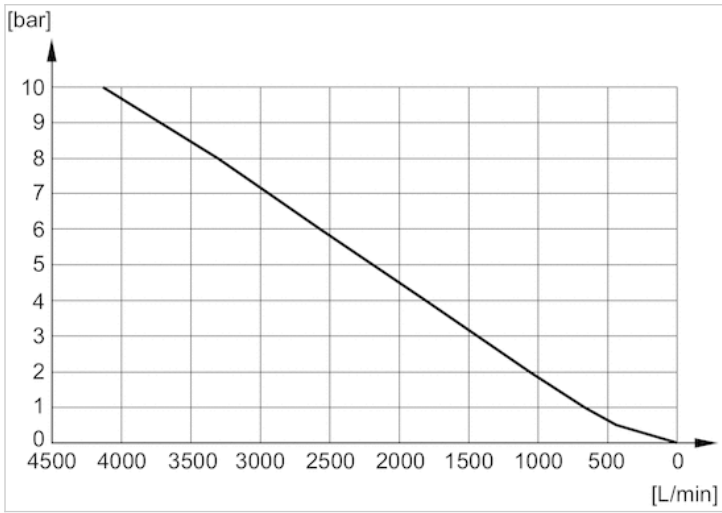
Flow diagram, 1827000033



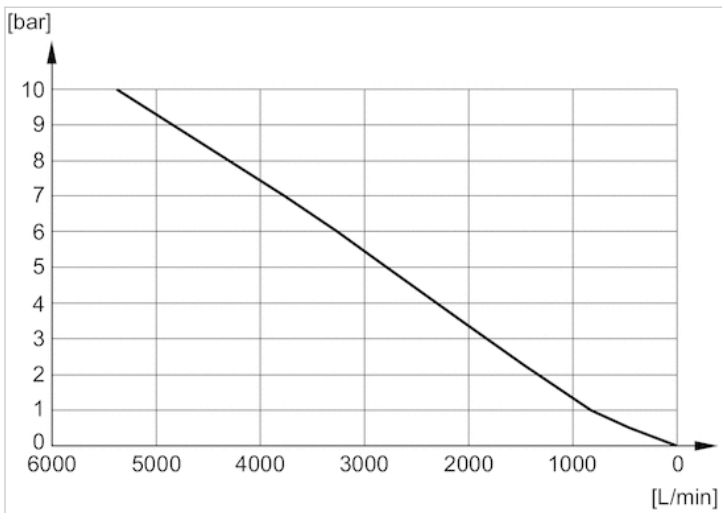
Flow diagram, 1827000034



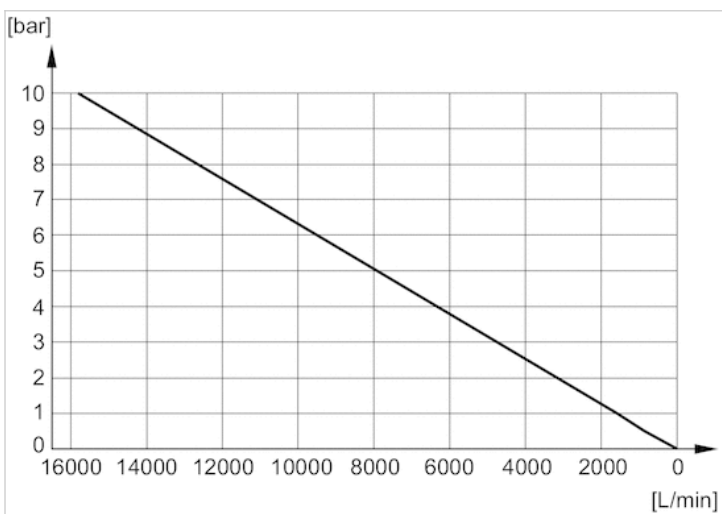
Flow diagram, 1827000035



Flow diagram, 8145003400



Flow diagram, 8145001000

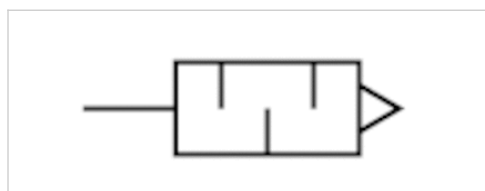


# Silencers, series SI1

- G 1/2
- Polyethylene



|                               |                |
|-------------------------------|----------------|
| Working pressure min./max.    | 0 ... 10 bar   |
| Ambient temperature min./max. | -25 ... 80 °C  |
| Medium                        | Compressed air |
| Sound pressure level          | 88 dB          |
| Weight                        | 0.013 kg       |



## Technical data

| Part No.   | Compressed air connection | Flow       | Delivery unit |
|------------|---------------------------|------------|---------------|
|            |                           | Qn         |               |
| 1827000022 | G 1/2                     | 7142 l/min | 1 piece       |

Weight per piece

Nominal flow Qn at p1 = 6 bar (absolute) freely discharged. Sound pressure level measured at 6 bar against atmosphere at 1 m distance.

## Technical information

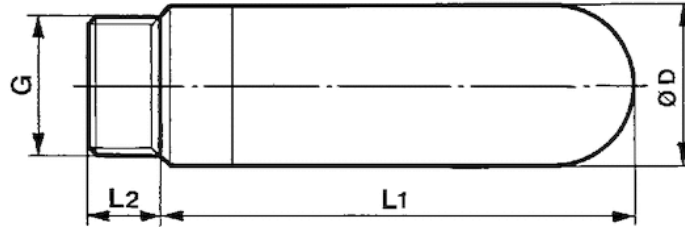
Flow characteristic curves can be found under "Diagrams".

## Technical information

| Material |              |
|----------|--------------|
| Silencer | Polyethylene |
| Thread   | Polyethylene |

## Dimensions

### Dimensions

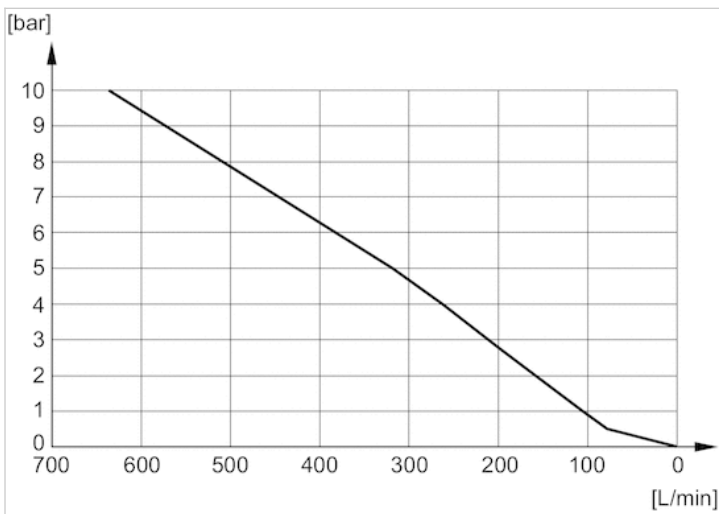


## Dimensions

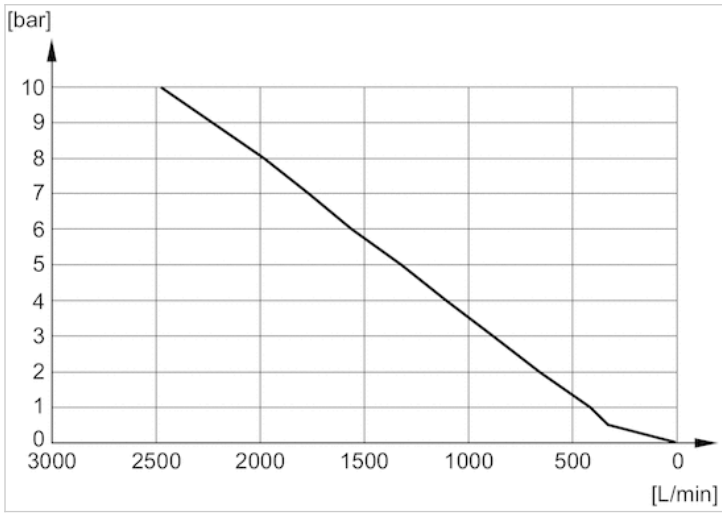
| Part No.   | Port G | Ø D  | L1   | L2 |
|------------|--------|------|------|----|
| 1827000022 | G 1/2  | 23.3 | 66.5 | 11 |

## Diagrams

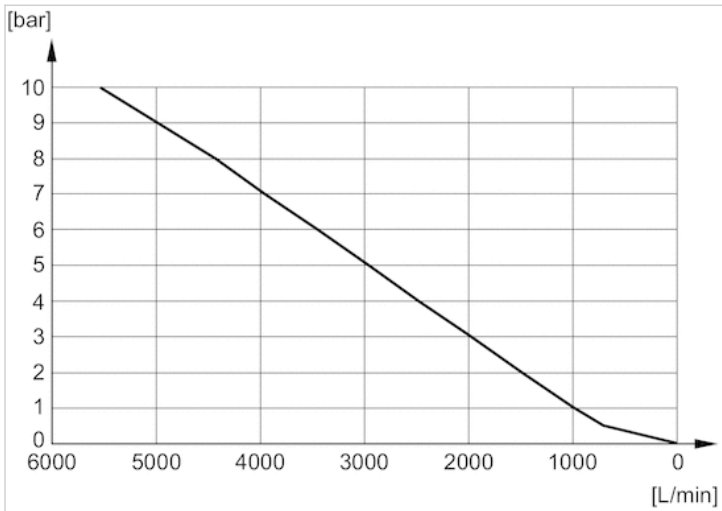
### Flow diagram, 1827000018



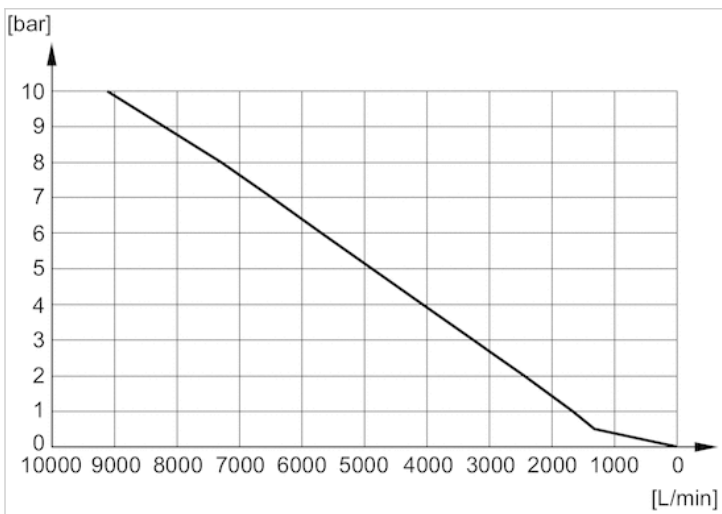
Flow diagram, 1827000019



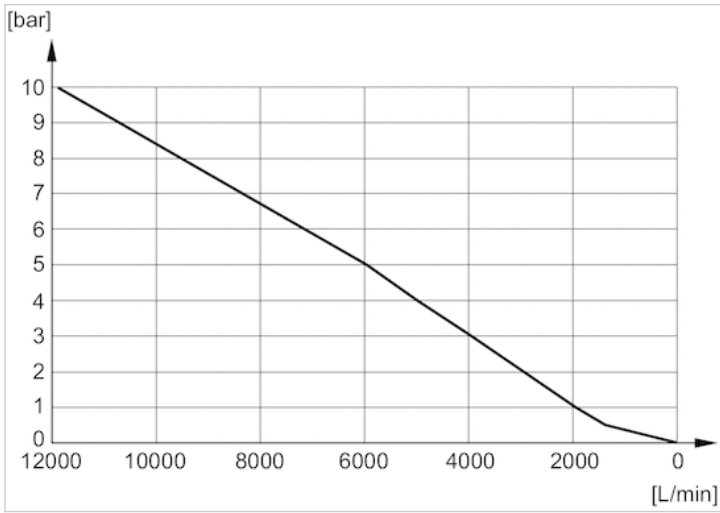
Flow diagram, 1827000020



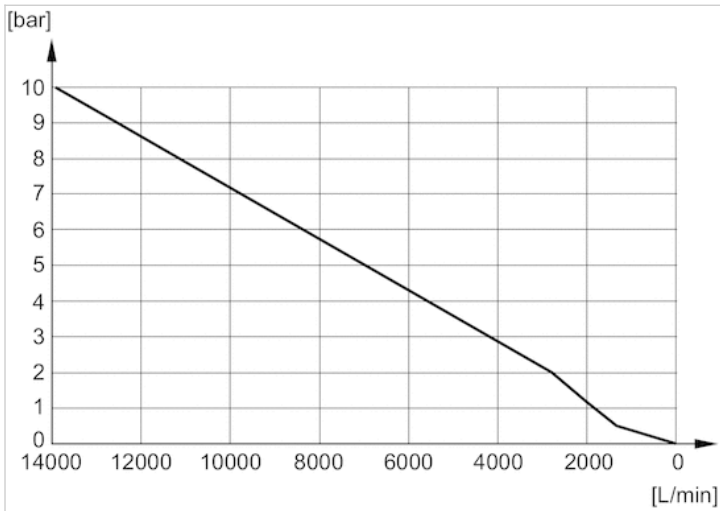
Flow diagram, 1827000021



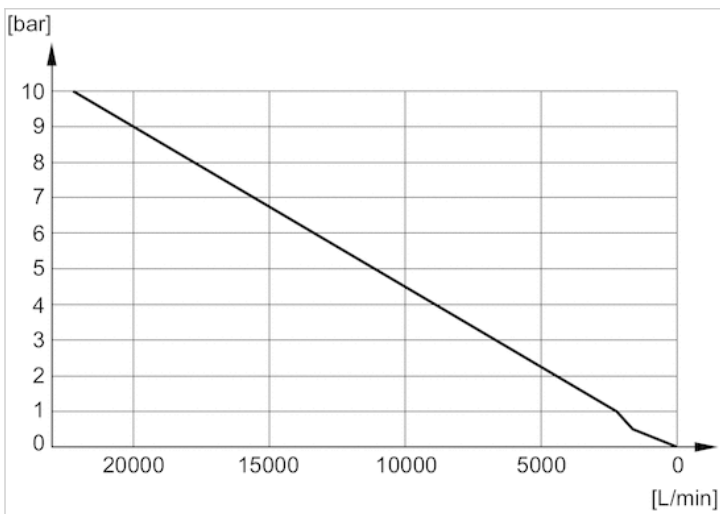
Flow diagram, 1827000022



Flow diagram, 1827000023



Flow diagram, 1827000024





# Mounting clip, Series AS3-MBR-...-W03, Aluminum



Ambient temperature min./max. -10 ... 50 °C  
 Weight 0.133 kg

## Technical data

| Part No.   |
|------------|
| R412026828 |

Scope of delivery incl. 2 mounting screws M5x68-4.8-A2R according to EN ISO 7046-1 (countersunk screw with type H X-slot), 1x O-ring

## Technical information

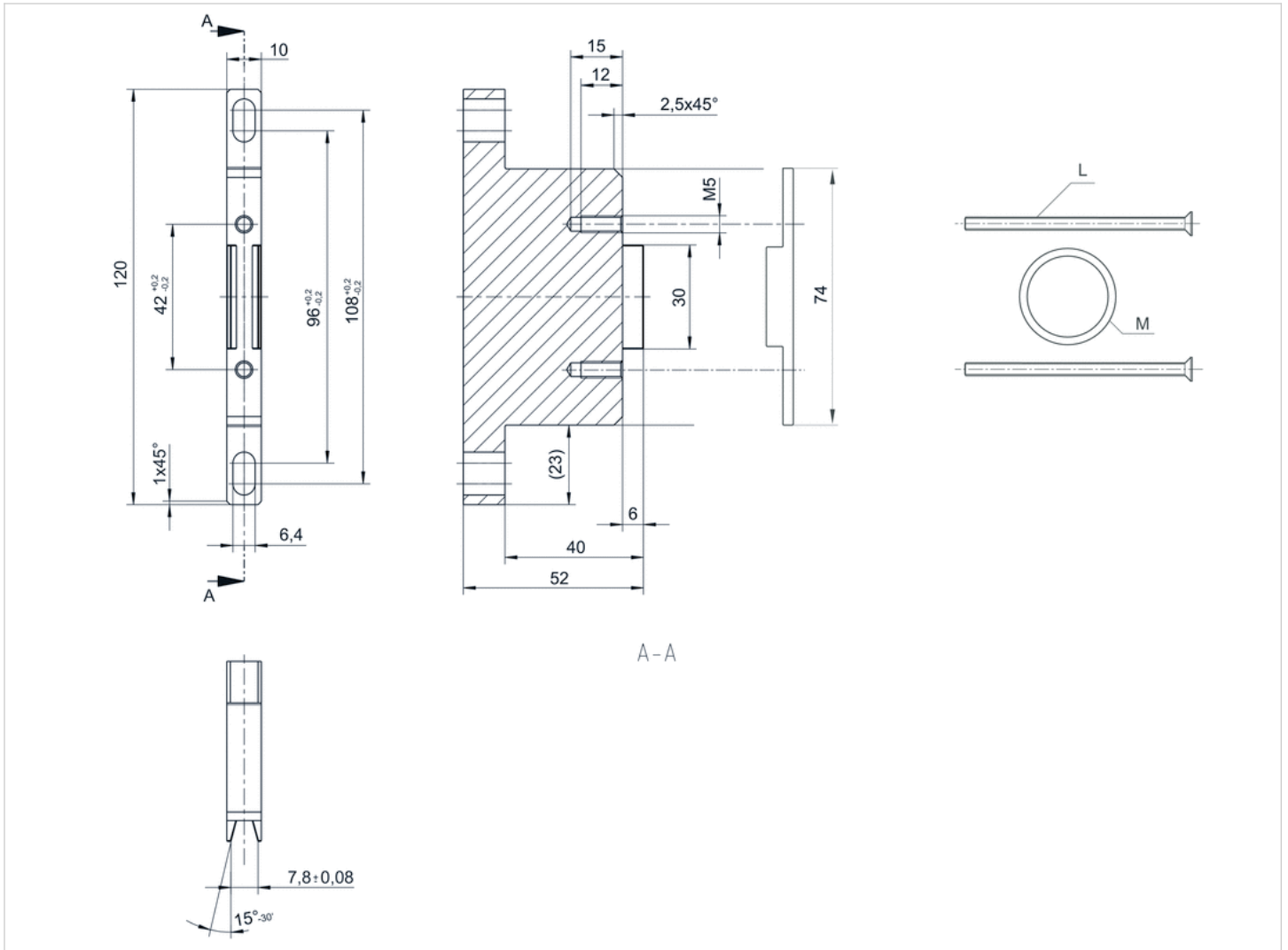
This mounting clip is recommended for installing an AS3-SV safety valve in an air preparation unit.

## Technical information

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

# Dimensions

## Dimensions



L = Mounting screw  
 M = O-ring

# Block assembly kit, Series AS3-MBR-...-W05

- G 3/8 - G 1/2



Ambient temperature min./max.

-10 ... 50 °C

Weight

0.825 kg

## Technical data

| Part No.   | Port  |
|------------|-------|
| R412007366 | G 3/8 |
| R412007367 | G 1/2 |

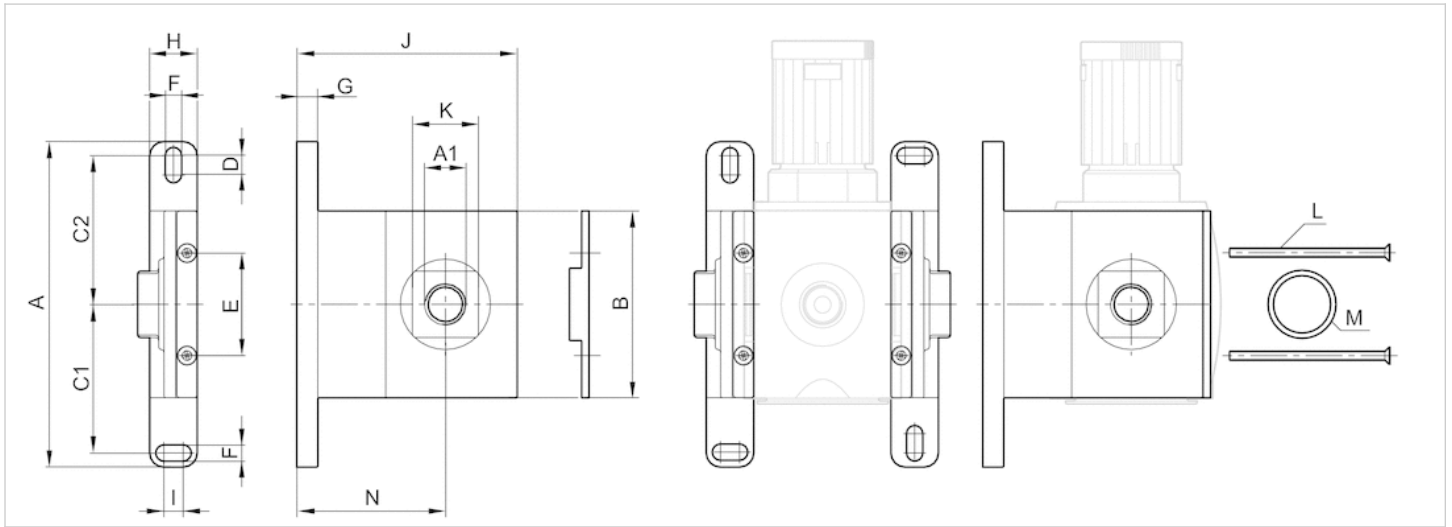
Scope of delivery incl. 4 mounting screws M5x68-4.8-A2R according to EN ISO 7046-1 (countersunk screw with type H X-slot), 2x O-ring

## Technical information

| Material |                                |
|----------|--------------------------------|
| Housing  | Die cast zinc, painted         |
| Seal     | Acrylonitrile butadiene rubber |

## Dimensions

### Dimensions



## Dimensions

| Part No.   | A1    | A   | B  | C1 | C2 | D | E  | F   | G | H  | I | J     | K  | L     | M    | N  |
|------------|-------|-----|----|----|----|---|----|-----|---|----|---|-------|----|-------|------|----|
| R412007366 | G 3/8 | 120 | 75 | 54 | 54 | 8 | 42 | 6.4 | 7 | 20 | 8 | 102.5 | 30 | M5x68 | 23x2 | 72 |
| R412007367 | G 1/2 | 120 | 75 | 54 | 54 | 8 | 42 | 6.4 | 7 | 20 | 8 | 102.5 | 30 | M5x68 | 23x2 | 72 |

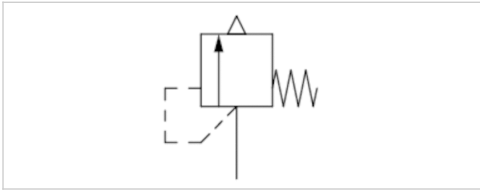
# Series RV1

- Qn 1►2 = 2627-33505 l/min
- thread-in
- External thread
- G 3/4
- Uncollected



Version  
 Certificates  
 Working pressure min./max.  
 Opening pressure of valve  
 Ambient temperature min./max.  
 Medium

Poppet valve  
 CE declaration of conformity  
 0 ... 20 bar  
 See table below  
 -20 ... 100 °C  
 Compressed air



## Technical data

| Part No.   | Port 1 | Opening pressure of valve | Flow        |
|------------|--------|---------------------------|-------------|
|            |        |                           | Qn 1►2      |
| R412007544 | G 3/4  | 0.5 bar                   | 2627 l/min  |
| R412007684 | G 3/4  | 1 bar                     | 3783 l/min  |
| R412007545 | G 3/4  | 3.5 bar                   | 8737 l/min  |
| R412007546 | G 3/4  | 6 bar                     | 13690 l/min |
| R412007547 | G 3/4  | 6.5 bar                   | 14754 l/min |
| R412007548 | G 3/4  | 8 bar                     | 17653 l/min |
| R412007549 | G 3/4  | 10 bar                    | 21616 l/min |
| R412007550 | G 3/4  | 11 bar                    | 23598 l/min |
| R412007551 | G 3/4  | 12.5 bar                  | 26570 l/min |
| R412007552 | G 3/4  | 16 bar                    | 33505 l/min |

## Technical information

The specified performance values are achieved at a 10% (PE 1 bar , 0.1 bar ) pressure increase, measured with compressed air at 20 °C .

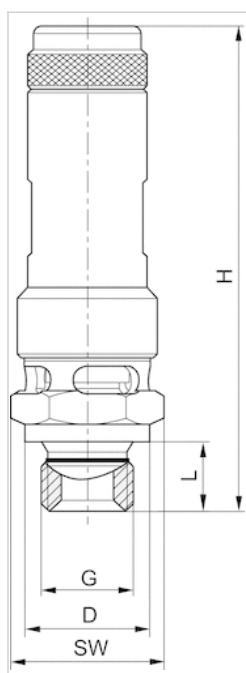
## Technical information

### Material

|         |                  |
|---------|------------------|
| Housing | Brass            |
| Seals   | Fluorocaoutchouc |

## Dimensions

### Dimensions



G = connection 1

## Dimensions

| Part No.   | Port G | Ø D | H   | L  | SW | T [Nm] | NW |
|------------|--------|-----|-----|----|----|--------|----|
| R412007544 | G 3/4  | 32  | 106 | 12 | 30 | 60     | 20 |
| R412007684 | G 3/4  | 32  | 106 | 12 | 30 | 60     | 20 |
| R412007545 | G 3/4  | 32  | 106 | 12 | 30 | 60     | 20 |
| R412007546 | G 3/4  | 32  | 106 | 12 | 30 | 60     | 20 |
| R412007547 | G 3/4  | 32  | 106 | 12 | 30 | 60     | 20 |
| R412007548 | G 3/4  | 32  | 106 | 12 | 30 | 60     | 20 |
| R412007549 | G 3/4  | 32  | 116 | 12 | 30 | 60     | 20 |
| R412007550 | G 3/4  | 32  | 116 | 12 | 30 | 60     | 20 |
| R412007551 | G 3/4  | 32  | 116 | 12 | 30 | 60     | 20 |
| R412007552 | G 3/4  | 32  | 116 | 12 | 30 | 60     | 20 |

T = maximum torque

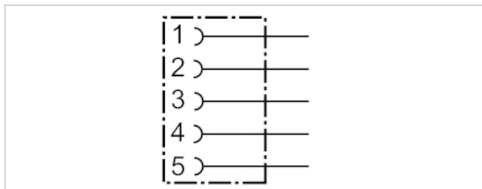
NW = nominal width

# Round plug connector, Series CON-RD

- Socket, M12x1, 5-pin, A-coded, straight, 180°
- for DeviceNet
- unshielded



|                               |               |
|-------------------------------|---------------|
| Connection type               | Screws        |
| Ambient temperature min./max. | -40 ... 85 °C |
| Operational voltage           | 48 V AC/DC    |
| Protection class              | IP67          |
| Weight                        | 0.016 kg      |



## Technical data

| Part No.   | Max. current | suitable cable-Ø min./max |
|------------|--------------|---------------------------|
| 4407230020 | 4 A          | 4 mm                      |

## Technical information

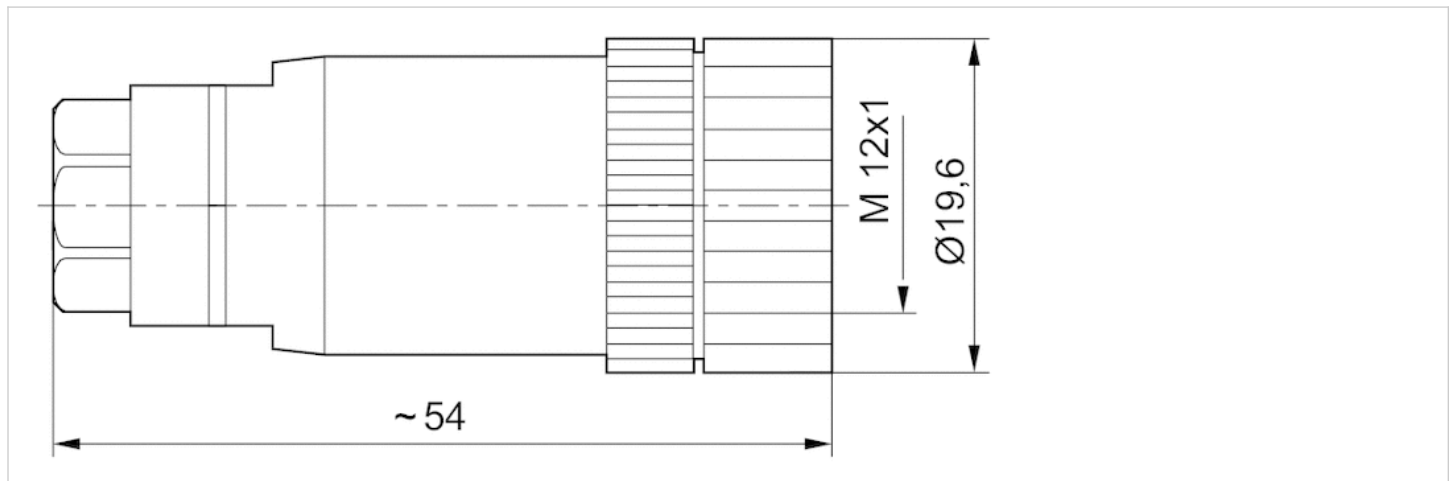
The specified protection class is only valid in assembled and tested state.

## Technical information

| Material |           |
|----------|-----------|
| Housing  | Polyamide |

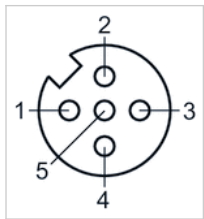
## Dimensions

### Dimensions



## Pin assignments

### Pin assignment, socket



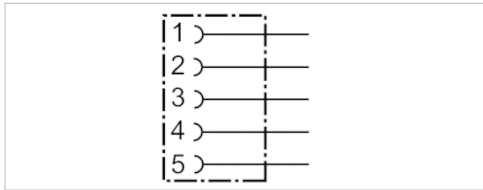


# Round plug connector, Series CON-RD

- Socket, M12x1, 5-pin, A-coded, angled, 90°
- for CANopen
- UL (Underwriters Laboratories)
- shielded



|                               |               |
|-------------------------------|---------------|
| Connection type               | Screws        |
| Ambient temperature min./max. | -40 ... 85 °C |
| Operational voltage           | 48 V AC/DC    |
| Protection class              | IP67          |
| Weight                        | 0.072 kg      |



## Technical data

| Part No.   | Max. current | suitable cable-Ø min./max |
|------------|--------------|---------------------------|
| 1824484029 | 4 A          | 6 / 8 mm                  |

## Technical information

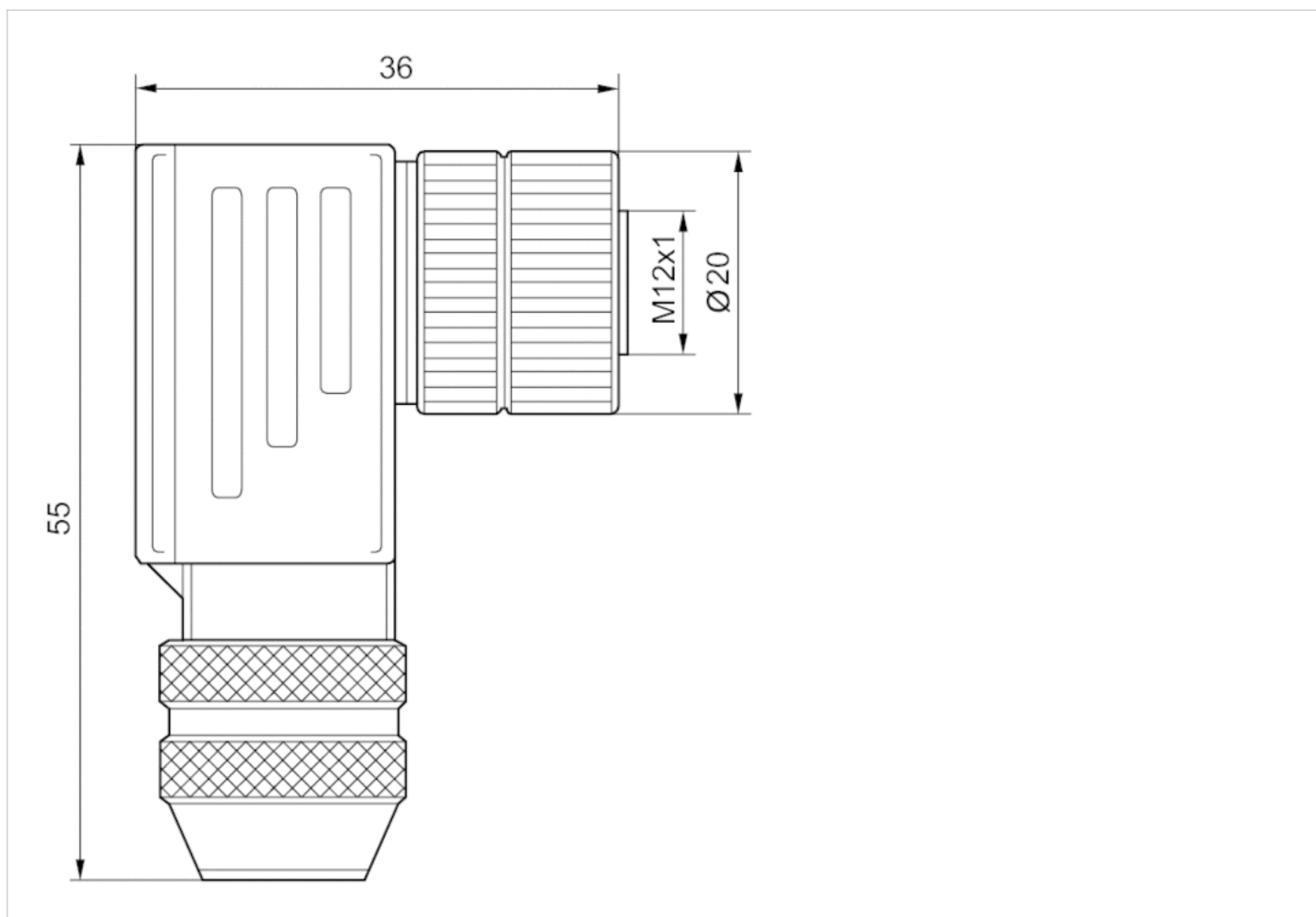
The specified protection class is only valid in assembled and tested state.

## Technical information

| Material |               |
|----------|---------------|
| Housing  | Die cast zinc |

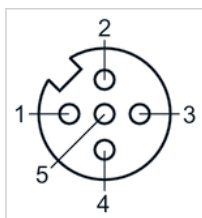
## Dimensions

### Dimensions



## Pin assignments

### Pin assignment, socket

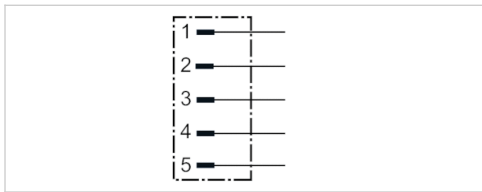


# Round plug connector, Series CON-RD

- Plug, M12x1, 5-pin, A-coded, straight, 180°
- for CANopen, DeviceNet
- UL (Underwriters Laboratories)
- shielded



|                               |               |
|-------------------------------|---------------|
| Connection type               | Screws        |
| Ambient temperature min./max. | -40 ... 85 °C |
| Operational voltage           | 48 V AC/DC    |
| Protection class              | IP67          |
| Weight                        | 0.48 kg       |



## Technical data

| Part No.   | Max. current | suitable cable-Ø min./max |
|------------|--------------|---------------------------|
| 8942051612 | 4 A          | 6 / 8 mm                  |

## Technical information

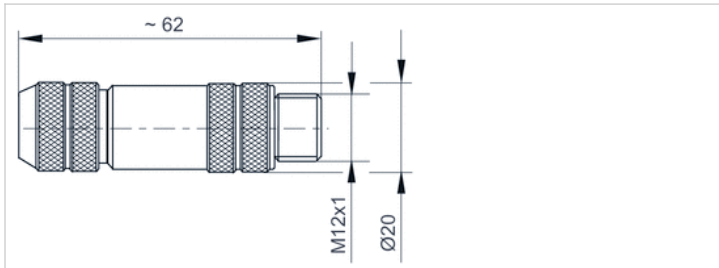
The specified protection class is only valid in assembled and tested state.

## Technical information

| Material |                      |
|----------|----------------------|
| Housing  | Brass, nickel-plated |

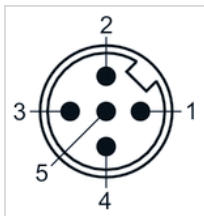
## Dimensions

### Dimensions



## Pin assignments

### Plug pin assignment



# Round plug connector, Series CON-RD

- Plug, M12x1, 5-pin, A-coded, angled, 90°
- for CANopen
- UL (Underwriters Laboratories)
- shielded



|                               |               |
|-------------------------------|---------------|
| Connection type               | Screws        |
| Ambient temperature min./max. | -40 ... 85 °C |
| Operational voltage           | 48 V AC/DC    |
| Protection class              | IP67          |
| Weight                        | 0.068 kg      |



## Technical data

| Part No.   | Max. current | suitable cable-Ø min./max |
|------------|--------------|---------------------------|
| 1824484028 | 4 A          | 6 / 8 mm                  |

## Technical information

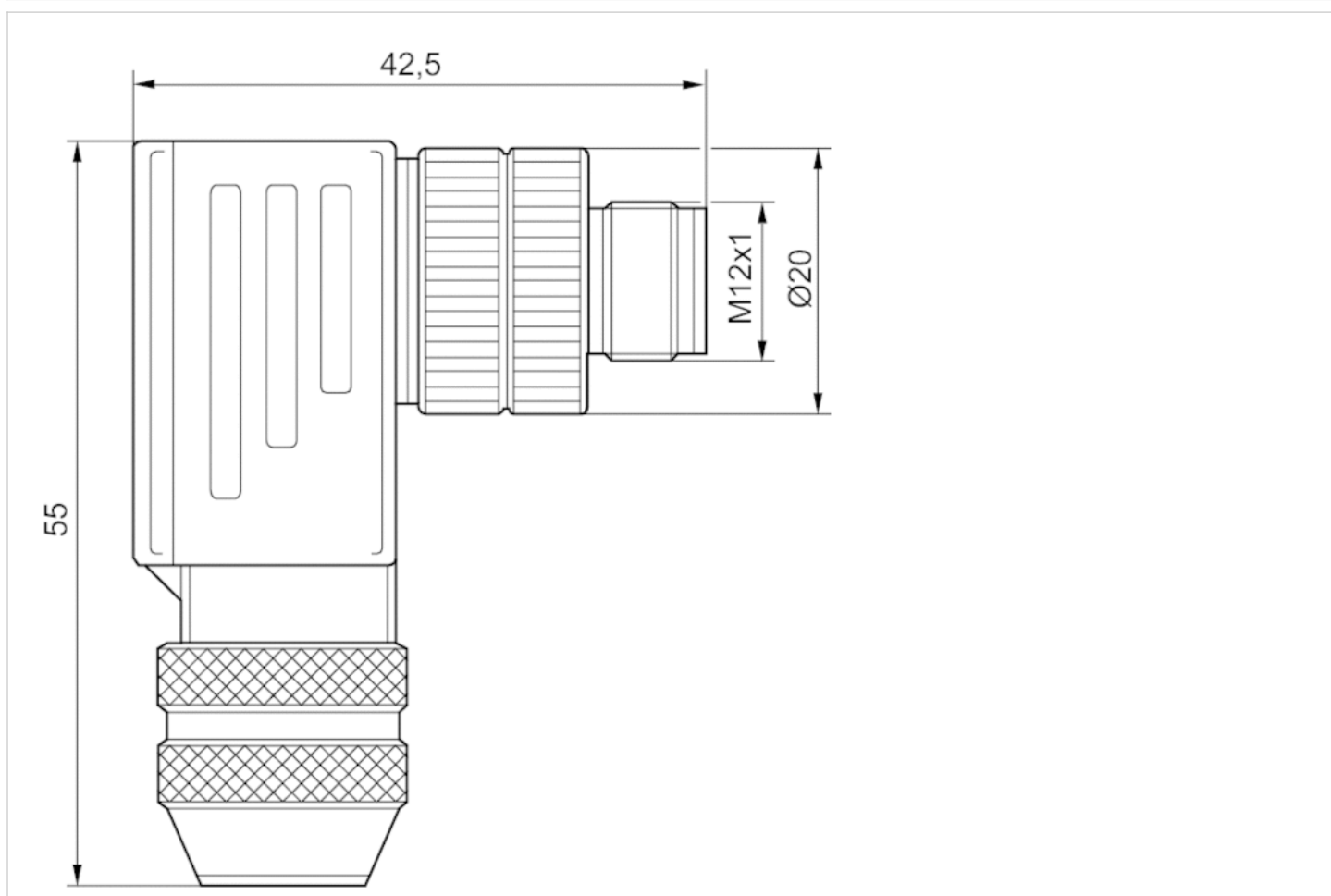
The specified protection class is only valid in assembled and tested state.

## Technical information

| Material |                      |
|----------|----------------------|
| Housing  | Brass, nickel-plated |

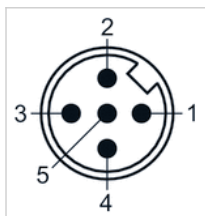
## Dimensions

### Dimensions



## Pin assignments

### Plug pin assignment

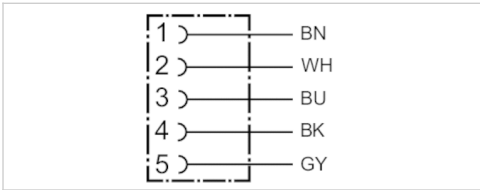


# Round plug connector, Series CON-RD

- Socket M12x1 5-pin A-coded angled 90°
- open cable ends
- with cable
- shielded



|                               |                      |
|-------------------------------|----------------------|
| Ambient temperature min./max. | -25 ... 80 °C        |
| Operational voltage           | 48 V AC/DC           |
| Protection class              | IP67                 |
| Wire cross-section            | 0.34 mm <sup>2</sup> |
| Weight                        | See table below      |



## Technical data

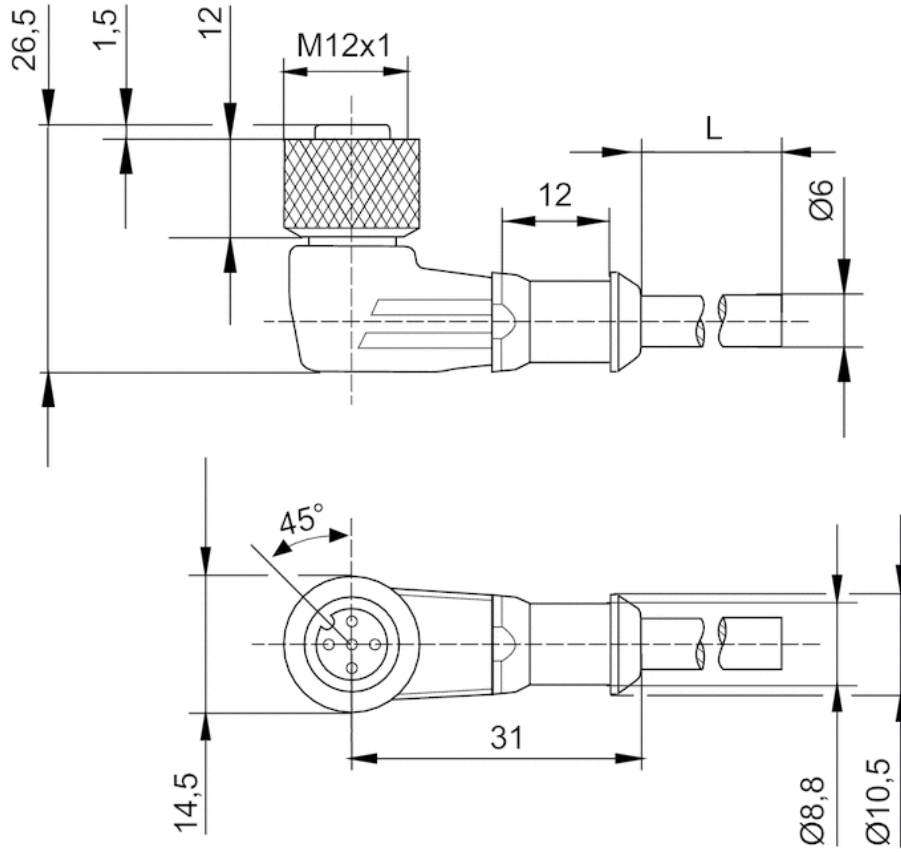
| Part No.   | Max. current | Number of wires | Cable-Ø | Cable length | Weight   |
|------------|--------------|-----------------|---------|--------------|----------|
| R419800109 | 4 A          | 5               | 6 mm    | 2.5 m        | 0.145 kg |
| R419800110 | 4 A          | 5               | 6 mm    | 5 m          | 0.27 kg  |
| R419800546 | 4 A          | 5               | 6 mm    | 10 m         | 0.514 kg |

## Technical information

| Material     |                         |
|--------------|-------------------------|
| Housing      | Thermoplastic elastomer |
| Cable sheath | Polyurethane            |

## Dimensions

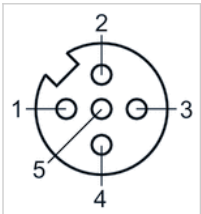
### Dimensions



L = length

## Pin assignments

### Pin assignment, socket



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



# Round plug connector, Series CON-RD

- Plug M12x1 5-pin A-coded straight 180°
- open cable ends 5-pin
- with cable
- unshielded

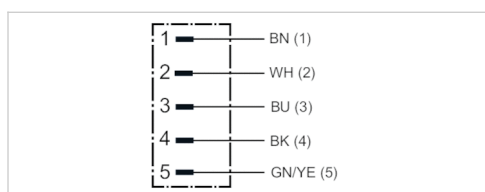


Protection class  
Weight

IP68

See table below

The delivered product may vary from that in the illustration.



## Technical data

| Part No.   | Number of wires | Cable length | Weight   |
|------------|-----------------|--------------|----------|
| 8946203432 | 5               | 2 m          | 0.102 kg |
| 8946203442 | 5               | 5 m          | 0.238 kg |

with self-clinching screw

## Technical information

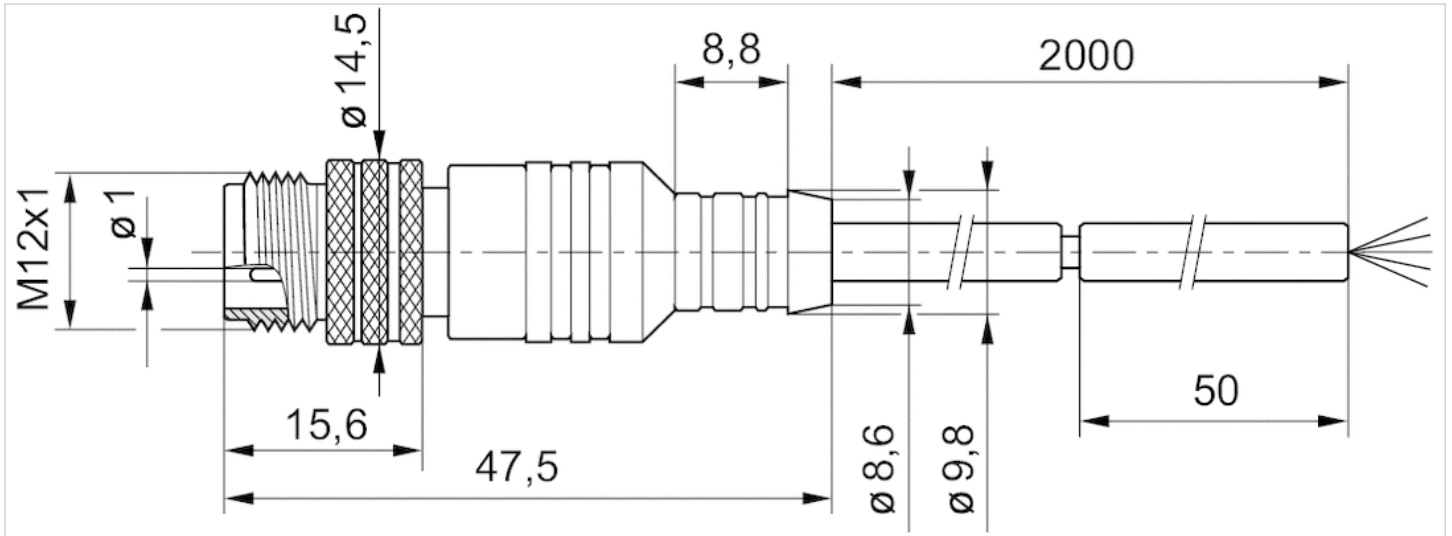
The specified protection class is only valid in assembled and tested state.

## Technical information

| Material     |                    |
|--------------|--------------------|
| Cable sheath | Polyvinyl chloride |

## Dimensions

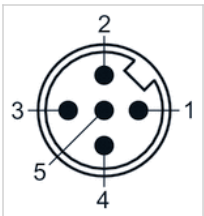
### Dimensions



L = length

## Pin assignments

### Plug pin assignment



- (1) BN=brown
- (2) WH=white
- (3) BU=blue
- (4) BK=black
- (5) GRN-Y=green-yellow

# Round plug connector, Series CON-RD

- Plug M12x1 5-pin A-coded angled 90°
- open cable ends 5-pin
- with cable
- suitable for dynamic laying
- unshielded



|                                  |                      |
|----------------------------------|----------------------|
| Ambient temperature min./max.    | See table below      |
| Operational voltage              | 48 V AC/DC           |
| Protection class                 | IP68                 |
| Wire cross-section               | 0.34 mm <sup>2</sup> |
| Mounting screw tightening torque | 0.8 Nm               |
| Weight                           | See table below      |



## Technical data

| Part No.   | Ambient temperature min./max. | Max. current | Number of wires | Bending radius min. | Cable-Ø | Cable length |
|------------|-------------------------------|--------------|-----------------|---------------------|---------|--------------|
| R412021691 | -40 ... 85 °C                 | 4 A          | 5               | 50 mm               | 5 mm    | 2 m          |
| R412021692 | -40 ... 85 °C                 | 4 A          | 5               | 50 mm               | 5 mm    | 5 m          |
| R412021693 | -25 ... 85 °C                 | 4 A          | 5               | 50 mm               | 5 mm    | 10 m         |

| Part No.   | Weight   |
|------------|----------|
| R412021691 | 0.093 kg |
| R412021692 | 0.2 kg   |
| R412021693 | 0.381 kg |

suitable for dynamic laying

## Technical information

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

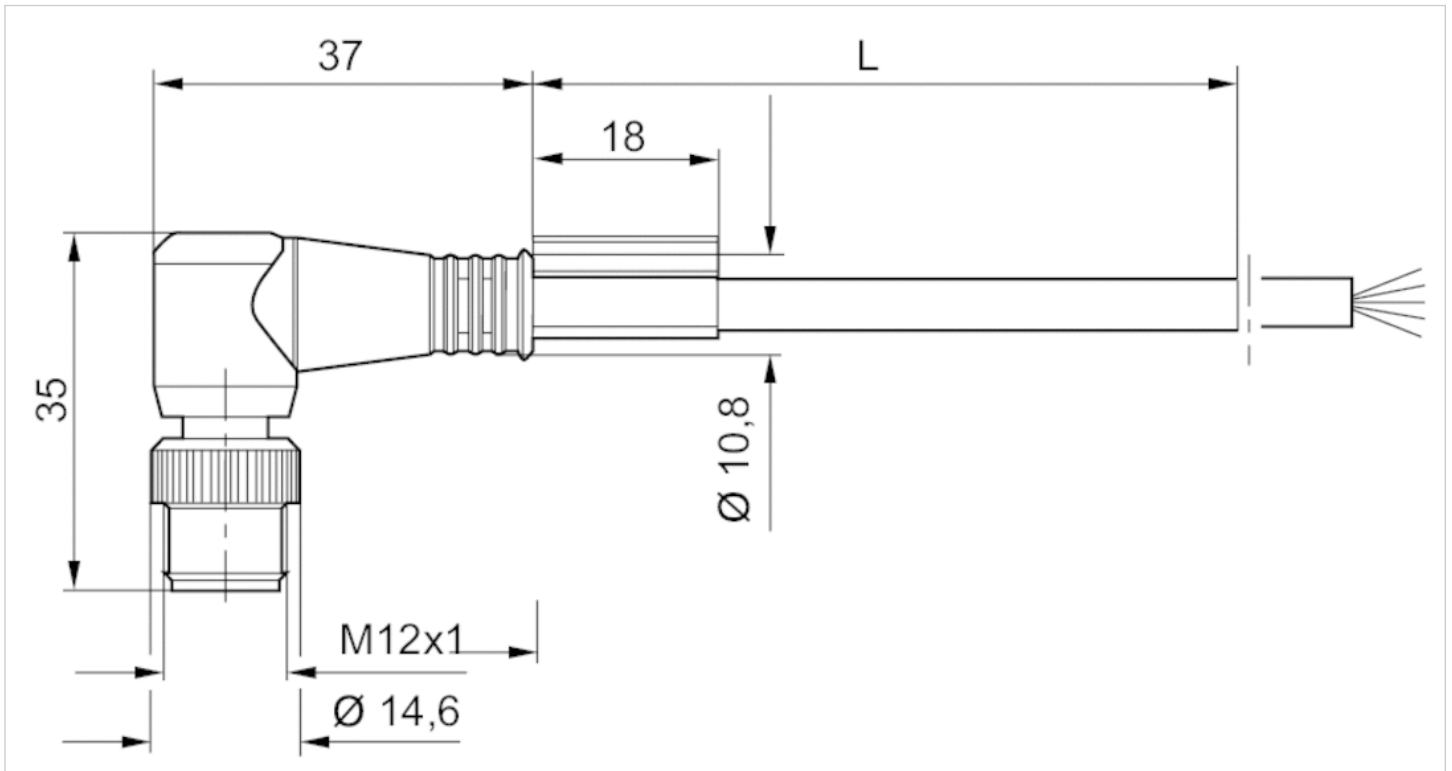
## Technical information

### Material

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

## Dimensions

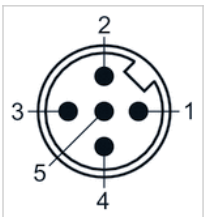
### Dimensions



L = length

## Pin assignments

### Plug pin assignment



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

# Silencers, series SI1

- G 1/8 G 1/4 G 3/8 G 1/2 G 3/4 G 1

- Metal braiding



Working pressure min./max.

0 ... 15 bar

Ambient temperature min./max.

-10 ... 150 °C

Medium

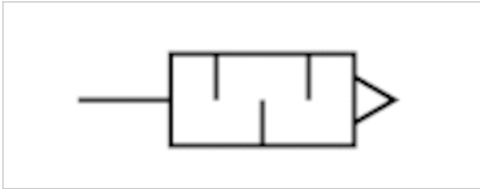
Compressed air

Sound pressure level

See table below

Comment

Flow characteristic curves can be found under "Diagrams".



## Technical data

| Part No.   | Compressed air connection | Sound pressure level | Flow        | Delivery unit |
|------------|---------------------------|----------------------|-------------|---------------|
|            |                           |                      | Qn          |               |
| R412010283 | G 1/8                     | 94 dB                | 1664 l/min  | 10 piece      |
| R412010245 | G 1/4                     | 96 dB                | 2687 l/min  | 10 piece      |
| R412010246 | G 3/8                     | 98 dB                | 4709 l/min  | 5 piece       |
| R412010247 | G 1/2                     | 100 dB               | 6285 l/min  | 5 piece       |
| R412010248 | G 3/4                     | 102 dB               | 6455 l/min  | 2 piece       |
| R412010249 | G 1                       | 104 dB               | 10642 l/min | 2 piece       |

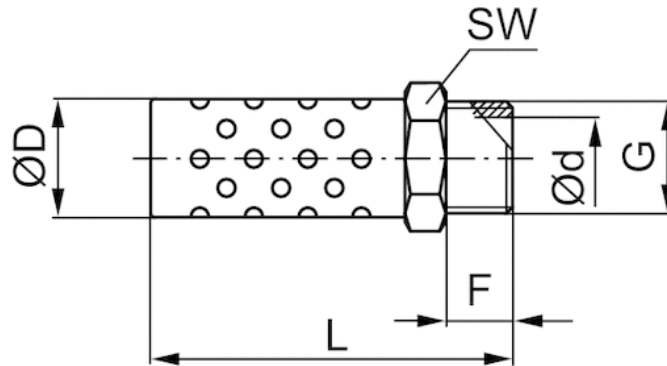
Nominal flow Qn at p1 = 6 bar (absolute) freely discharged. Sound pressure level measured at 6 bar against atmosphere at 1 m distance.

## Technical information

| Material |                |
|----------|----------------|
| Silencer | Metal braiding |
| Thread   | Aluminum       |

## Dimensions

### Dimensions



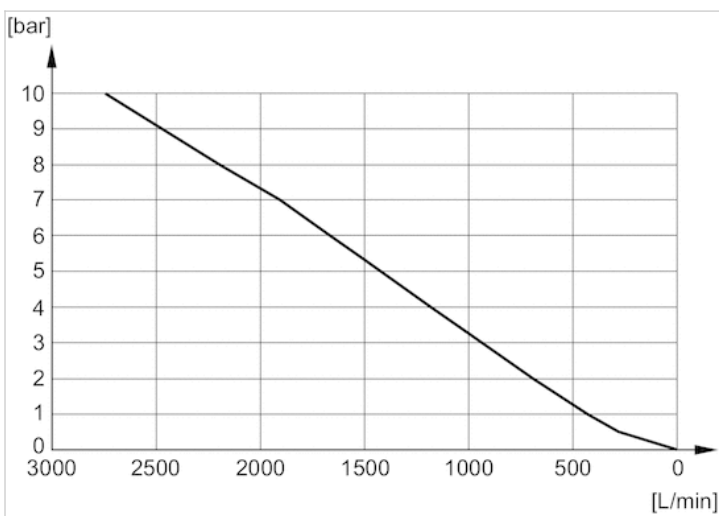
## Dimensions

| Part No.   | Port G | L    | F    | D    | d   | SW |
|------------|--------|------|------|------|-----|----|
| R412010283 | G 1/8  | 33.5 | 6    | 10.4 | 6   | 11 |
| R412010245 | G 1/4  | 42.5 | 8.5  | 13.4 | 8.5 | 14 |
| R412010246 | G 3/8  | 49.2 | 9    | 16.5 | 12  | 17 |
| R412010247 | G 1/2  | 65.2 | 11   | 21.5 | 15  | 22 |
| R412010248 | G 3/4  | 74.5 | 12   | 26.5 | 20  | 27 |
| R412010249 | G 1    | 91   | 15.5 | 32.3 | 26  | 34 |

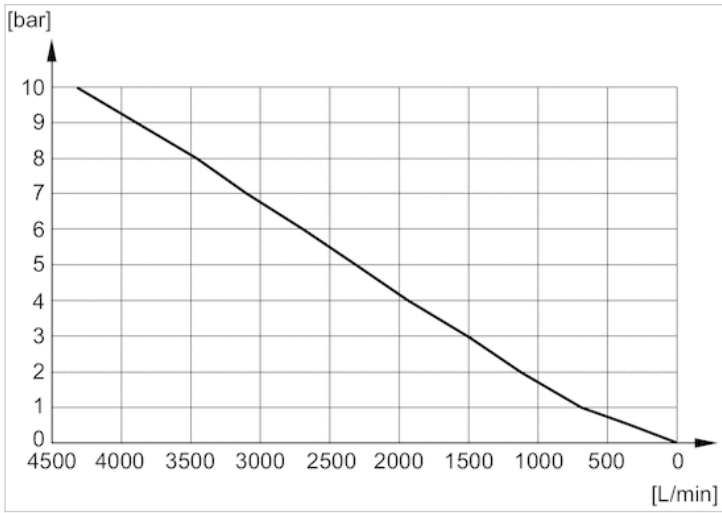
Sound pressure level measured at 6 bar at 1 m distance

## Diagrams

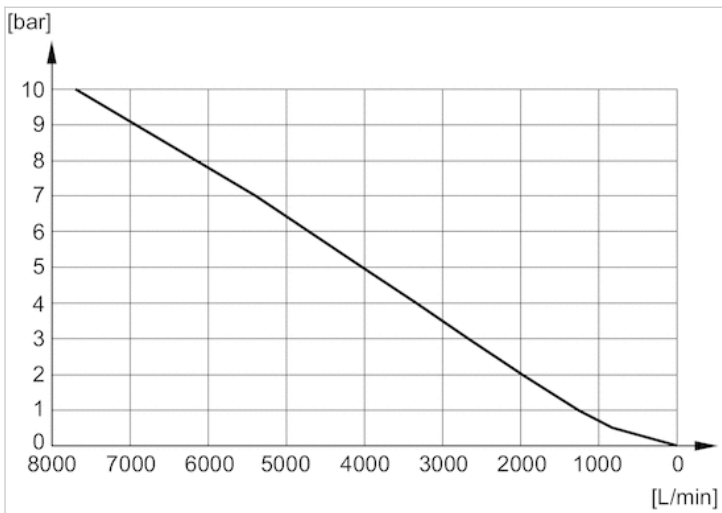
### Flow diagram, R412010283



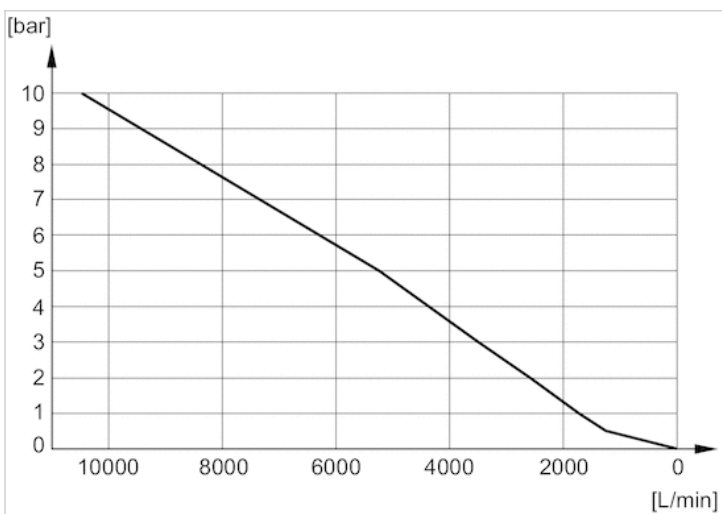
Flow diagram, R412010245



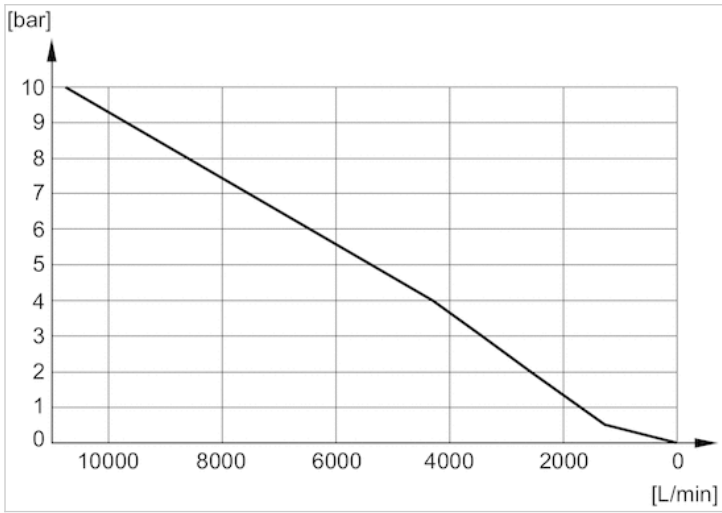
Flow diagram, R412010246



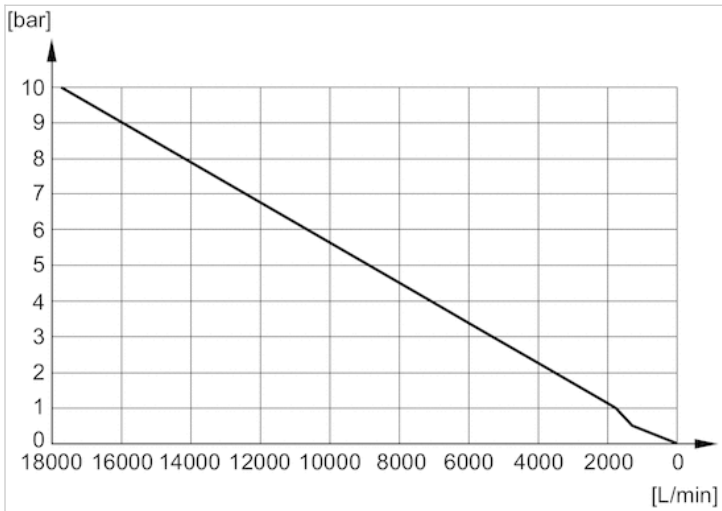
Flow diagram, R412010247



Flow diagram, R412010248



Flow diagram, R412010249



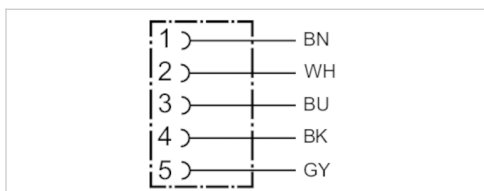


# Round plug connector, Series CON-RD

- Socket M12x1 5-pin A-coded angled 90°
- open cable ends
- with cable
- shielded



|                               |                      |
|-------------------------------|----------------------|
| Ambient temperature min./max. | -25 ... 80 °C        |
| Operational voltage           | 48 V AC/DC           |
| Protection class              | IP67                 |
| Wire cross-section            | 0.34 mm <sup>2</sup> |
| Weight                        | See table below      |



## Technical data

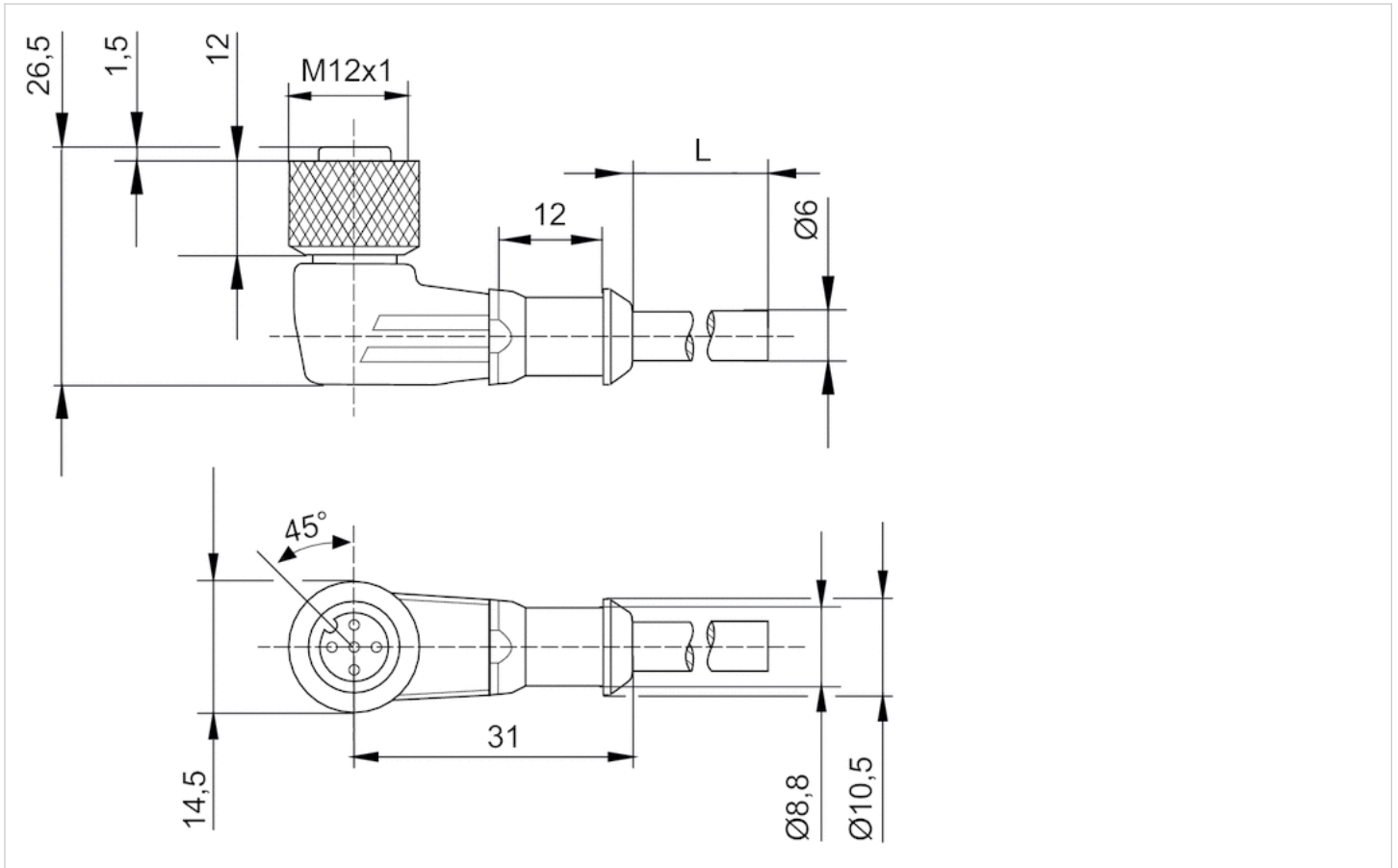
| Part No.   | Max. current | Number of wires | Cable-Ø | Cable length | Weight   |
|------------|--------------|-----------------|---------|--------------|----------|
| R419800109 | 4 A          | 5               | 6 mm    | 2.5 m        | 0.145 kg |
| R419800110 | 4 A          | 5               | 6 mm    | 5 m          | 0.27 kg  |
| R419800546 | 4 A          | 5               | 6 mm    | 10 m         | 0.514 kg |

## Technical information

| Material     |                         |
|--------------|-------------------------|
| Housing      | Thermoplastic elastomer |
| Cable sheath | Polyurethane            |

## Dimensions

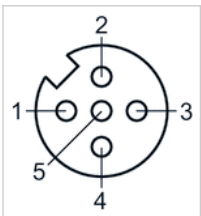
### Dimensions



L = length

## Pin assignments

### Pin assignment, socket



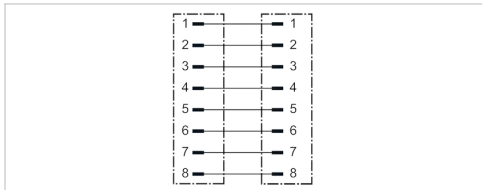
- (1) BN=brown
- (2) WH=white
- (3) BU=blue
- (4) BK=black
- (5) GY=grey

# Round plug connectors with cable, Series CON-RD

- Plug M12x1 8-pin X-coded angled 90°
- Plug RJ45 8-pin X-coded straight
- shielded



|                               |                      |
|-------------------------------|----------------------|
| Ambient temperature min./max. | -25 ... 85 °C        |
| Protection class              | IP66K                |
| Wire cross-section            | 0.14 mm <sup>2</sup> |



## Technical data

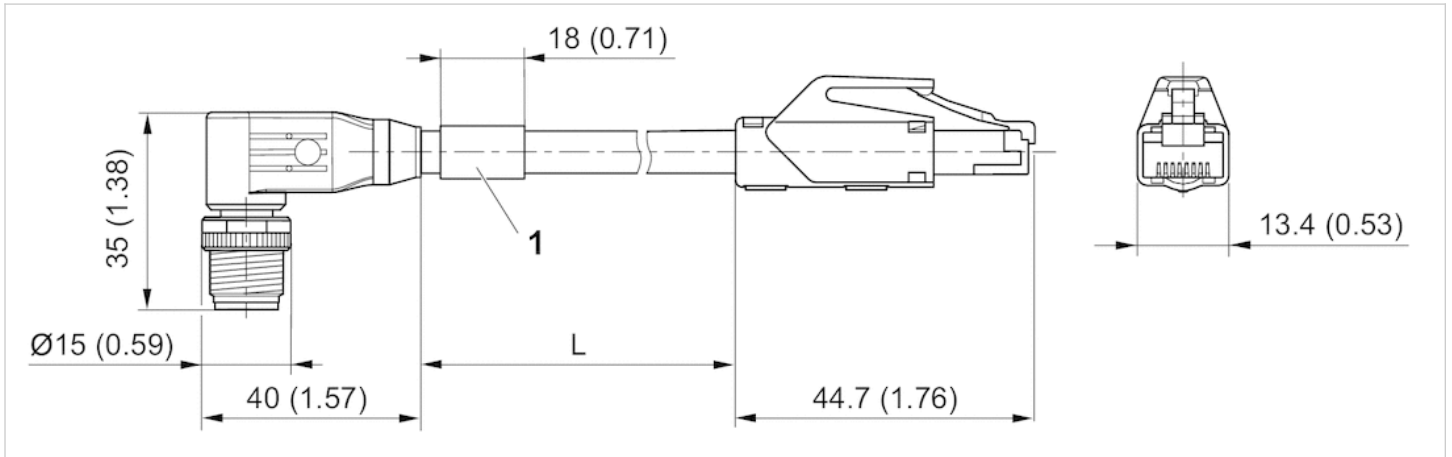
| Part No.   | Max. current | Cable length |
|------------|--------------|--------------|
| R412027647 | 0.5 A        | 5 m          |

## Technical information

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

## Dimensions

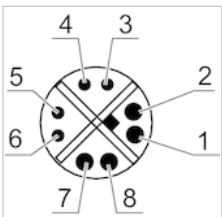
### Dimensions



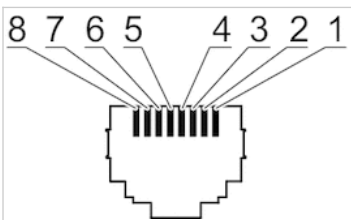
1) Name plate

## Pin assignments

### Plug pin assignment



### Plug pin assignment

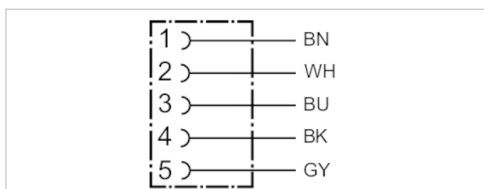


# Round plug connector, Series CON-RD

- Socket M12x1 5-pin A-coded angled 90°
- open cable ends
- with cable
- shielded



|                               |                      |
|-------------------------------|----------------------|
| Ambient temperature min./max. | -25 ... 80 °C        |
| Operational voltage           | 48 V AC/DC           |
| Protection class              | IP67                 |
| Wire cross-section            | 0.34 mm <sup>2</sup> |
| Weight                        | See table below      |



## Technical data

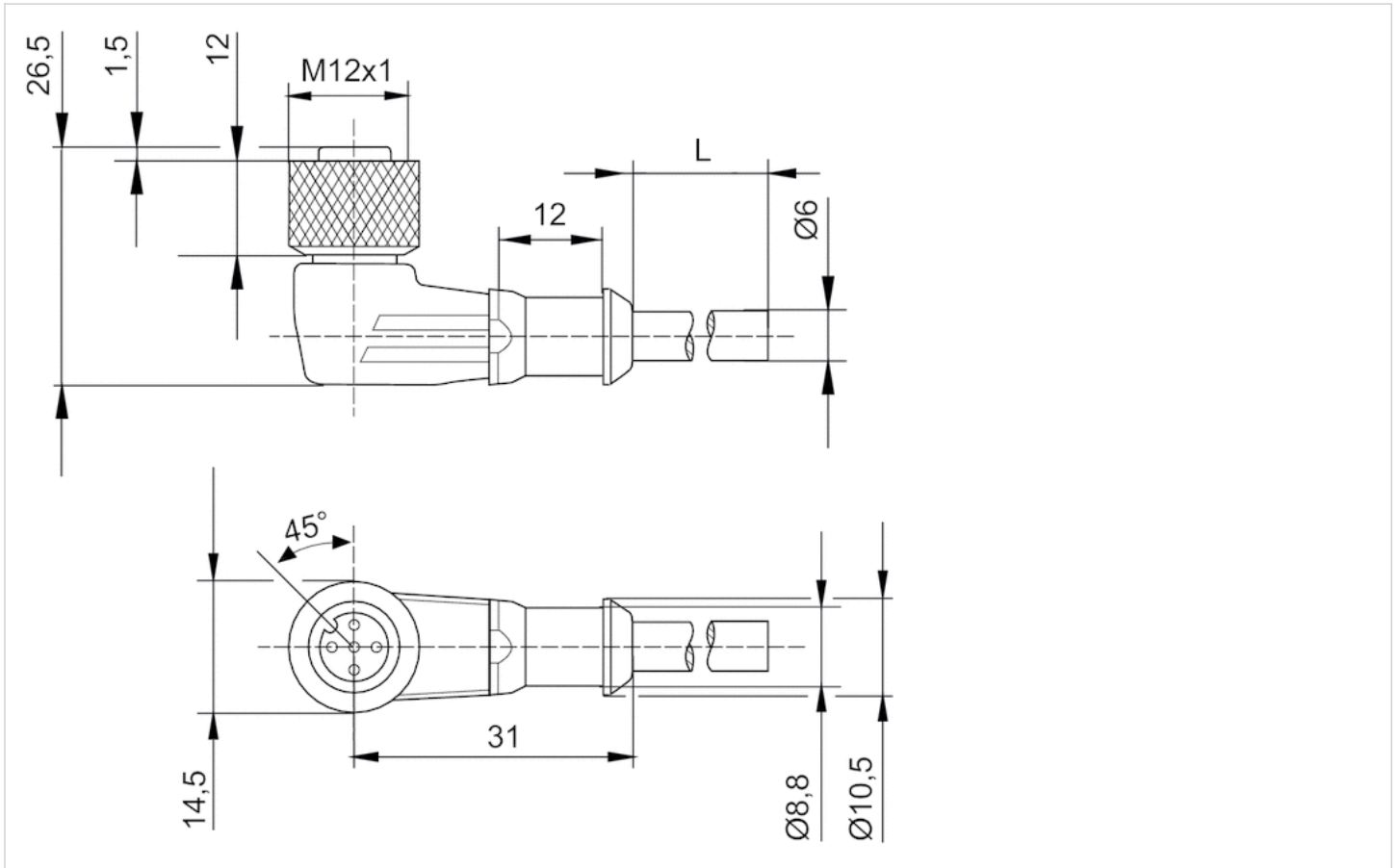
| Part No.   | Max. current | Number of wires | Cable-Ø | Cable length | Weight   |
|------------|--------------|-----------------|---------|--------------|----------|
| R419800109 | 4 A          | 5               | 6 mm    | 2.5 m        | 0.145 kg |
| R419800110 | 4 A          | 5               | 6 mm    | 5 m          | 0.27 kg  |
| R419800546 | 4 A          | 5               | 6 mm    | 10 m         | 0.514 kg |

## Technical information

| Material     |                         |
|--------------|-------------------------|
| Housing      | Thermoplastic elastomer |
| Cable sheath | Polyurethane            |

## Dimensions

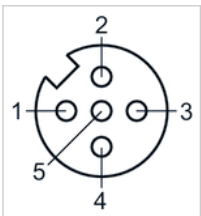
### Dimensions



L = length

## Pin assignments

### Pin assignment, socket



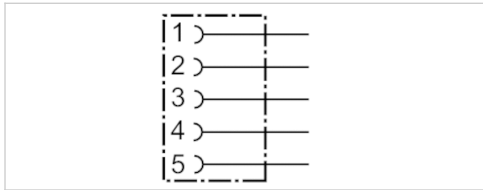
- (1) BN=brown
- (2) WH=white
- (3) BU=blue
- (4) BK=black
- (5) GY=grey

# Round plug connector, Series CON-RD

- Socket, M12x1, 5-pin, A-coded, angled, 90°
- for CANopen
- UL (Underwriters Laboratories)
- shielded



|                               |               |
|-------------------------------|---------------|
| Connection type               | Screws        |
| Ambient temperature min./max. | -40 ... 85 °C |
| Operational voltage           | 48 V AC/DC    |
| Protection class              | IP67          |
| Weight                        | 0.072 kg      |



## Technical data

| Part No.   | Max. current | suitable cable-Ø min./max |
|------------|--------------|---------------------------|
| 1824484029 | 4 A          | 6 / 8 mm                  |

## Technical information

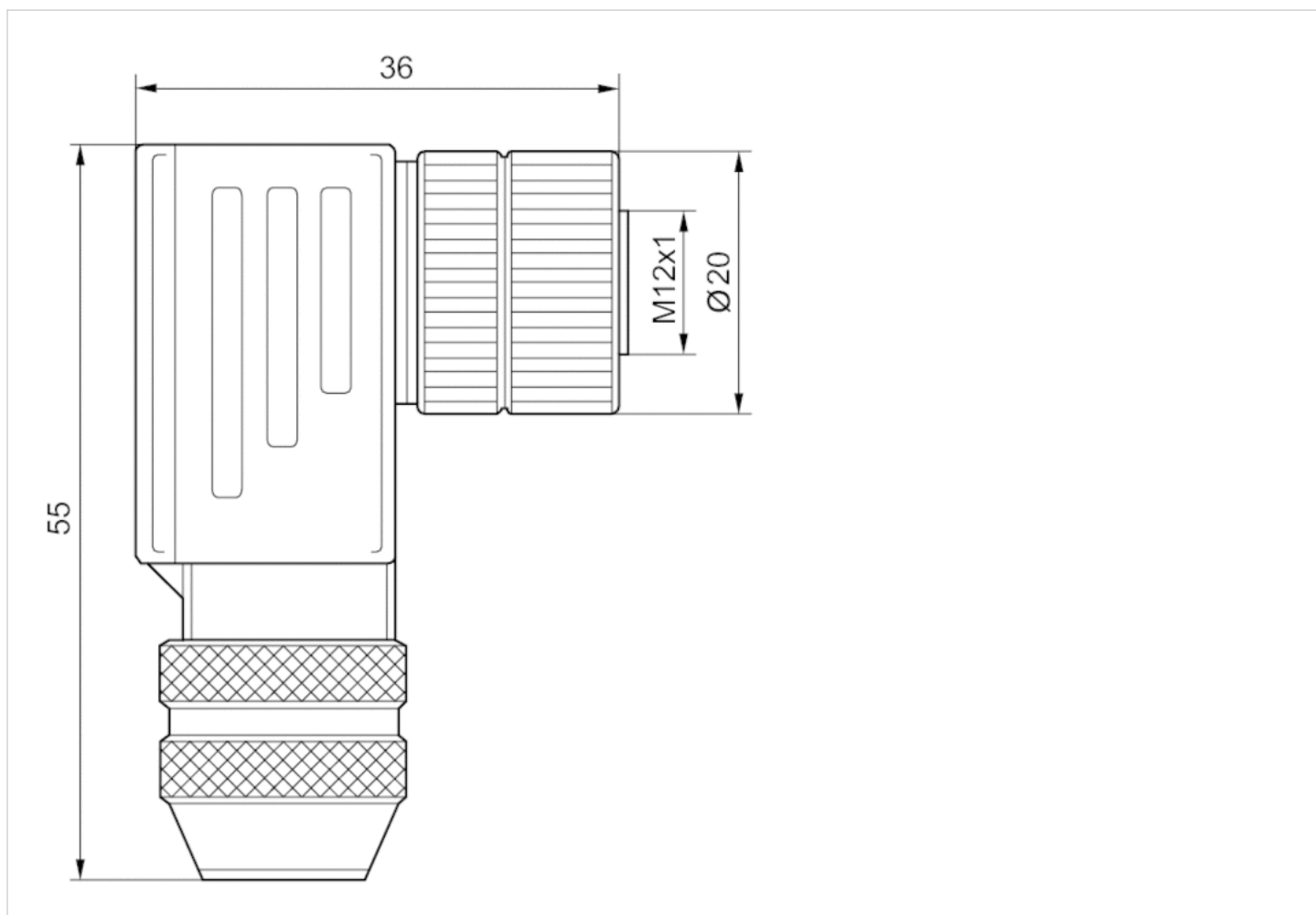
The specified protection class is only valid in assembled and tested state.

## Technical information

| Material |               |
|----------|---------------|
| Housing  | Die cast zinc |

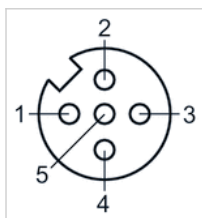
## Dimensions

### Dimensions



## Pin assignments

### Pin assignment, socket





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