



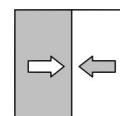
## Data sheet

### DA03 GKT/HLP (ATEX)

Differential pressure measuring device  
Pressure levels PN40/PN100/PN160

Models for use in  
explosive areas

DA03 ... 0A  
DA03 ... 1B  
DA03 ... 1C  
DA03 ... 2D



# 1 Product and functional description

## 1.1 Performance features

### Typical applications

- Chemical, petrochemical industry
- Process technology
- Marine and offshore technology
- Power plant technology
- Mechanical and plant engineering

### Important features

- Highly corrosion resistant
- CrNi-steel model
- Use with aggressive media
- Highly durable
- Variable connection technology
- With fluid filling as an option
- Optional additional equipment such as contact element or rotation angle encoder

## 1.2 Equipment versions

The following illustrations depict typical combinations of the measuring cell, measured value display and contact elements. However, these can be freely combined according to the order code. Wherever this is not possible, this is clearly stated.

For instance, a small measuring cell with an NG160 display and a contact element is also available.

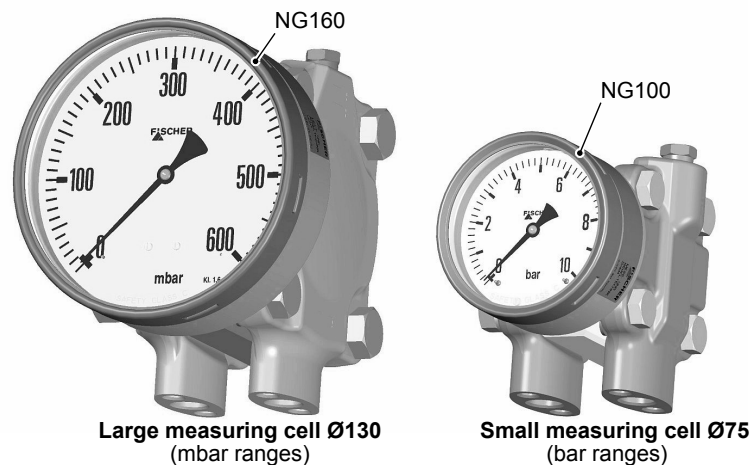


Fig. 1: Device overview

1.2.1 Process connection

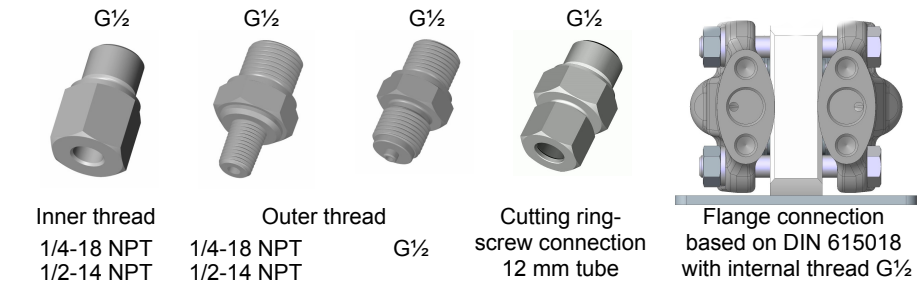
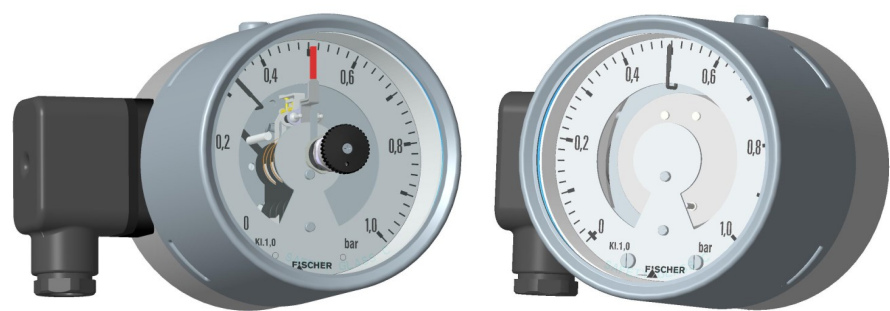


Fig. 2: Options for the process connection

1.2.2 Contact elements



| Limit switch in accordance with data sheet KE##   | Rotation angle encoder in accordance with data sheet KE09                                       |
|---|---|
| for standard devices  |   |
| <ul style="list-style-type: none"><li>Low-action contacts</li><li>Snap-actiocontacts</li><li>Inductive contacts</li></ul> | <ul style="list-style-type: none"><li>KINAX 3W2 708-226D0</li><li>KINAX 3W2 708-226E0</li></ul> |
| for ATEX devices  |   |
| <ul style="list-style-type: none"><li>Snap-action contacts</li><li>Inductive contacts</li></ul>                           | <ul style="list-style-type: none"><li>KINAX 3W2 708-226D0</li><li>KINAX 3W2 708-226E0</li></ul> |

Fig. 3: Contact elements

1.2.3 Special functions

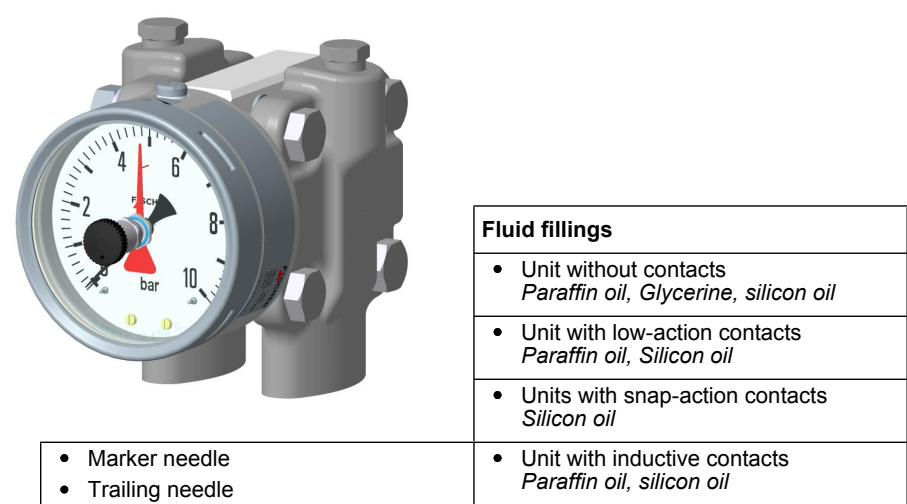
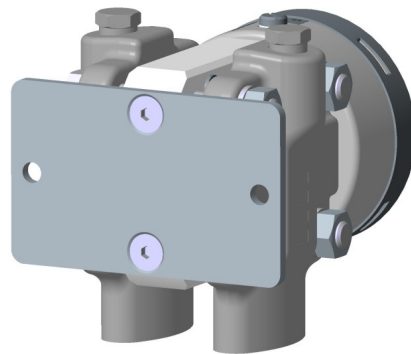
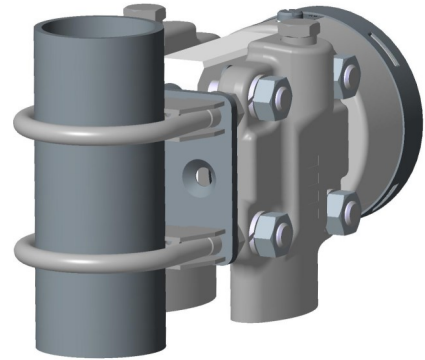


Fig. 4: Special functions

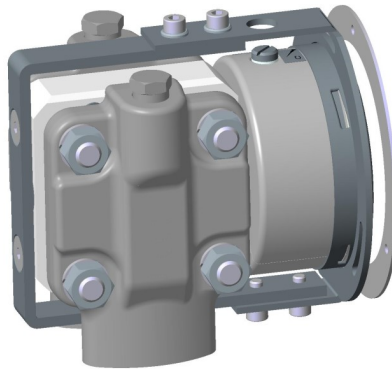
### 1.2.4 Assembly



Wall mounting



Pipe mounting



Panel mounting set type 1  
with panel mounting set



Panel mounting set type 2  
with front ring

Fig. 5: Assembly types

The panel installation fittings can only be used in devices with a small measuring cell ( $\varnothing 75$ ) and a display in the NG100 bayonet ring casing.



#### **WARNING**

##### **Panel mounting set**

Due to the heavy weight, the operator needs to install a support construction for installation of the front panel.

### 1.2.5 Equipment features (overview)

The following shows the configuration possibilities of the DA03 depending on the measuring cell used and the pressure level.

#### **Key**

- available
- on request

## Small measuring cell Ø75

| Measurement range | Measurement display |      | Low-action contacts |   |   | Snap-action contacts |   |   | Inductive contacts |   | Rot. angle transducer | Trailing needle | Marker needle | Remote seal | Pressure level   |
|-------------------|---------------------|------|---------------------|---|---|----------------------|---|---|--------------------|---|-----------------------|-----------------|---------------|-------------|------------------|
|                   | Ø100                | Ø160 | 1                   | 2 | 3 | 1                    | 2 | 3 | 1                  | 2 |                       |                 |               |             |                  |
| 0 ... 250 mbar    | ●                   | ●    |                     |   |   |                      |   |   |                    |   |                       | ●               | ●             |             | PN160            |
| 0 ... 400 mbar    | ●                   | ●    |                     |   |   | ●                    | ● |   | ●                  | ● | ●                     | ●               | ●             |             |                  |
| -100 ... 150 mbar | ●                   | ●    |                     |   |   |                      |   |   |                    |   |                       | ●               | ●             |             |                  |
| -150 ... 250 mbar | ●                   | ●    |                     |   |   | ●                    | ● |   | ●                  | ● | ●                     | ●               | ●             |             |                  |
| 0 ... 0.6 bar     | ●                   | ●    |                     |   |   | ●                    | ● |   | ●                  | ● | ●                     | ●               | ●             | ●           | PN40/PN100/PN160 |
| 0 ... 1 bar       | ●                   | ●    |                     |   |   | ●                    | ● |   | ●                  | ● | ●                     | ●               | ●             | ●           |                  |
| 0 ... 1.6 bar     | ●                   | ●    |                     |   |   | ●                    | ● |   | ●                  | ● | ●                     | ●               | ●             | ●           |                  |
| 0 ... 2.5 bar     | ●                   | ●    |                     |   |   | ●                    | ● |   | ●                  | ● | ●                     | ●               | ●             | ●           |                  |
| 0 ... 4.0 bar     | ●                   | ●    |                     |   |   | ●                    | ● |   | ●                  | ● | ●                     | ●               | ●             | ●           |                  |
| 0 ... 6bar        | ●                   | ●    |                     |   |   | ●                    | ● |   | ●                  | ● | ●                     | ●               | ●             | ●           |                  |
| 0 ... 10 bar      | ●                   | ●    |                     |   |   | ●                    | ● |   | ●                  | ● | ●                     | ●               | ●             | ●           |                  |
| 0 ... 16 bar      | ●                   | ●    |                     |   |   | ●                    | ● |   | ●                  | ● | ●                     | ●               | ●             | ●           |                  |
| 0 ... 25 bar      | ●                   | ●    |                     |   |   | ●                    | ● |   | ●                  | ● | ●                     | ●               | ●             | ●           |                  |
| -1 ... 0.6 bar    | ●                   | ●    |                     |   |   | ●                    | ● |   | ●                  | ● | ●                     | ●               | ●             | ●           |                  |
| -1 ... 1.5 bar    | ●                   | ●    |                     |   |   | ●                    | ● |   | ●                  | ● | ●                     | ●               | ●             | ●           |                  |
| -1 ... 3 bar      | ●                   | ●    |                     |   |   | ●                    | ● |   | ●                  | ● | ●                     | ●               | ●             | ●           |                  |
| -1 ... 5 bar      | ●                   | ●    |                     |   |   | ●                    | ● |   | ●                  | ● | ●                     | ●               | ●             | ●           |                  |

## Large measuring cell Ø130

| Measurement range  | Measurement display |      | Low-action contacts |   |   | Snap-action contacts |   |   | Inductive contacts |   | Rot. angle transducer | Trailing needle | Marker needle | Remote seal | Pressure level   |
|--------------------|---------------------|------|---------------------|---|---|----------------------|---|---|--------------------|---|-----------------------|-----------------|---------------|-------------|------------------|
|                    | Ø100                | Ø160 | 1                   | 2 | 3 | 1                    | 2 | 3 | 1                  | 2 |                       |                 |               |             |                  |
| 0 ... 40 mbar      | ●                   | ●    |                     |   |   | □                    | □ |   | □                  | □ | ●                     |                 | ●             |             | PN40<br>PN100    |
| 0 ... 60 mbar      | ●                   | ●    |                     |   |   | ●                    | ● |   | ●                  | ● | ●                     |                 | ●             |             |                  |
| 0 ... 100 mbar     | ●                   | ●    |                     |   |   | ●                    | ● |   | ●                  | ● | ●                     | ●               | ●             | ●           | PN40/PN100/PN160 |
| 0 ... 160 mbar     | ●                   | ●    |                     |   |   | ●                    | ● |   | ●                  | ● | ●                     | ●               | ●             | ●           |                  |
| 0 ... 250 mbar     | ●                   | ●    |                     |   |   | ●                    | ● |   | ●                  | ● | ●                     | ●               | ●             | ●           |                  |
| 0 ... 400 mbar     | ●                   | ●    |                     |   |   | ●                    | ● |   | ●                  | ● | ●                     | ●               | ●             | ●           |                  |
| -40 ... +60 mbar   | ●                   | ●    |                     |   |   | ●                    | ● |   | ●                  | ● | ●                     | ●               | ●             | ●           |                  |
| -60 ... +100 mbar  | ●                   | ●    |                     |   |   | ●                    | ● |   | ●                  | ● | ●                     | ●               | ●             | ●           |                  |
| -100 ... +150 mbar | ●                   | ●    |                     |   |   | ●                    | ● |   | ●                  | ● | ●                     | ●               | ●             | ●           |                  |
| -100 ... +250 mbar | ●                   | ●    |                     |   |   | ●                    | ● |   | ●                  | ● | ●                     | ●               | ●             | ●           |                  |

### 1.3 Design and mode of operation

The pressures in the pressure chambers that are to be compared are each exerted onto a measuring membrane that can be rigidly connected using a connection rod. To compensate the static pressure, the space between the measuring membranes is filled with a pressure transfer fluid.

During pressure equalisation, the two measuring membranes are in an idle position. In case of pressure difference, the force acting on the membranes causes it to be moved towards the side of the lower pressure.

The connecting rod transfers the deflection of the measuring membranes onto the transfer lever mounted to the measuring shaft. Proportional to the current differential pressure, the measurement shaft makes a rotational movement that the indicator translates into a rotation angle between 0 and 270°.

In the case of one-sided pressure by the measuring system above and beyond the measuring range, the over-pressure guard will be activated. The over-pressure causes the overloaded membrane and its collar to be pressed against the inner O-ring. This creates two separate pressure spaces between the measuring membranes that need to be filled with fluid. In the adjacent pressure space, a corresponding over-pressure is created. The measuring membrane is supported by the contained transfer fluid. In this way the measuring membranes compensate the forces acting upon them.

## 2 Technical data

### 2.1 General information

| EXECUTION         | Nominal pressure | Measuring cell | Application information  |
|-------------------|------------------|----------------|--|
| <b>DA03 G ...</b> | PN40             | Ø75            | Measuring ranges: 0...0.6 bar to 0...25 bar<br>Remote seals: <sup>(1)</sup><br>It is possible to attach remote seals for measuring ranges $\geq 0.6$ bar.  |
| <b>DA03 K ...</b> | PN100            | Ø75            | Measuring ranges: 0...0.6 bar to 0...25 bar<br>Remote seals:<br>It is possible to attach remote seals for measuring ranges $\geq 0.6$ mbar.  |
| <b>DA03 T ...</b> | PN160            | Ø75            | Measuring ranges: 0...250 mbar to 0...25 bar<br>Limitations:<br>Drag indicator measuring ranges $\geq 250$ mbar<br>Contacts / Transmitter measuring ranges $\geq 400$ mbar<br>Remote seals:<br>It is possible to attach remote seals for measuring ranges $\geq 0.6$ mbar. |
| <b>DA03 H ...</b> | PN40             | Ø130           | Measuring ranges: 0...40 mbar to 0...400 bar<br>Limitations:<br>Drag indicator measuring ranges $\geq 60$ mbar<br>Contacts / Transmitter measuring ranges $\geq 100$ mbar<br>Remote seals:<br>It is possible to attach remote seals for measuring ranges $\geq 160$ mbar.. |
| <b>DA03 L ...</b> | PN100            | Ø130           | Measuring ranges: 0...40 mbar to 0...400 bar<br>Limitations:<br>Drag indicator measuring ranges $\geq 60$ mbar<br>Contacts / Transmitter measuring ranges $\geq 100$ mbar<br>Remote seals:<br>It is possible to attach remote seals for measuring ranges $\geq 160$ mbar.. |
| <b>DA03 P ...</b> | PN160            | Ø130           | Measuring ranges: 0...40 mbar to 0...400 bar<br>Limitations:<br>Drag indicator measuring ranges $\geq 60$ mbar<br>Contacts / Transmitter measuring ranges $\geq 100$ mbar<br>Remote seals:<br>It is possible to attach remote seals for measuring ranges $\geq 0.6$ mbar.  |

<sup>(1)</sup> The remote seals need to be designed for the displacement volume, the length of the cable and the application temperature

## 2.2 Input variables

### Measuring variable

Differential pressure in gaseous and fluid aggressive media.

### General information

|  |   |
|--|---|
| Rated pressure of the measuring system | Max. static operating pressure  |
| Durability                             | One-sided over-pressure-proof up to the rated pressure of the measuring system resistance to under-pressure on the (+) and (-) side |
| Measurement accuracy                   | ±1.6 % of the measuring range   |
| Temperature sensor                     | 0.3 % / 10 °C   |
| Zero-point adjustment                  | ±25 % of the measuring range  |

### Measuring ranges

#### Small measuring cell Ø75

| Measurement range | Device model |   |   |
|-------------------|--------------|---|---|
|                   | H            | K | D |
| 0 ... 250 mbar    |              |   | • |
| 0 ... 400 mbar    |              |   | • |
| -100 ... 150 mbar |              |   | • |
| -150 ... 250 mbar |              |   | • |
| 0...0.6 bar       | •            | • | • |
| 0...1 bar         | •            | • | • |
| 0...1.6 bar       | •            | • | • |
| 0 ... 2.5bar      | •            | • | • |
| 0...4.0 bar       | •            | • | • |
| 0...6 bar         | •            | • | • |
| 0...10 bar        | •            | • | • |
| 0...16 bar        | •            | • | • |
| 0...25 bar        | •            | • | • |
| -1...0.6 bar      | •            | • | • |
| -1...1.5 bar      | •            | • | • |
| -1...3 bar        | •            | • | • |
| -1...5 bar        | •            | • | • |

#### Large measuring cell Ø130

| Measurement range  | Device model |   |   |
|--------------------|--------------|---|---|
|                    | H            | L | P |
| 0 ... 40 mbar      | •            | • | • |
| 0 ... 60 mbar      | •            | • | • |
| 0 ... 100 mbar     | •            | • | • |
| 0 ... 160 mbar     | •            | • | • |
| 0 ... 250 mbar     | •            | • | • |
| 0 ... 400 mbar     | •            | • | • |
| 0 ... 600 mbar     | •            | • | • |
| -40 ... +60 mbar   | •            | • | • |
| -60 ... +100 mbar  | •            | • | • |
| -100 ... +150 mbar | •            | • | • |
| -100 ... +250 mbar | •            | • | • |

## 2.3 Operating conditions

|                                 |                        |
|---------------------------------|------------------------|
| Permissible ambient temperature | -20 ... +80 °C         |
| Admissible storage temperature  | -40 ... +80 °C         |
| Admissible media temperature    | Max. 100 °C            |
| Type of protection:             | IP 65 acc. to EN 60529 |

## 2.4 Construction design

### Materials

| Measured value display            | Material                    | Material no. |      |
|-----------------------------------|-----------------------------|--------------|------|
|                                   |                             | EU           | AISI |
| Bayonet ring housing NG100, NG160 | CrNi steel                  | 1.4301       | 304  |
| Process connection (all models)   | CrNi steel                  | 1.4404       | 316L |
| Intermediate plate                | AlMgSiPb                    | HARD-COAT®   |      |
| Seals                             | FKM                         |              |      |
| Motion train                      | CrNi steel                  |              |      |
| Dial face and needle              | Aluminium, painted, printed |              |      |
| Inspection disk                   | Safety laminated glass      |              |      |

**MB = Measurement range**

### Materials (media-contacting)

| Design of the measuring system (R) |               | Material     | Material no. |       |
|------------------------------------|---------------|--------------|--------------|-------|
|                                    |               |              | EU           | AISI  |
| Pressure caps                      |               | CrNi steel   | 1.4404       | 316L  |
| Measuring membranes                | MB ≤ 400 mbar | CrNi steel   | 1.4571       | 361Ti |
|                                    | MB ≥ 0.6 bar  | NiCrCo alloy | DURATHERM®   |       |

| Design of the measuring system (H) |              | Material   |
|------------------------------------|--------------|--|
| Pressure caps                      |              | Hastelloy® C276  |
| Measuring membranes                | MB ≤ 2.5 bar | Hastelloy® C276  |
|                                    | MB ≥ 4 bar   | Standard membrane with separator film Hastelloy® C276 The model with the separator foil is not suitable for under-pressure |

| Design of the measuring system (G) |               | Material     | Material no. |       |
|------------------------------------|---------------|--------------|--------------|-------|
|                                    |               |              | EU           | AISI  |
| Pressure caps                      |               | CrNi steel   | 1.4404       | 316L  |
| Measuring membranes                | MB ≤ 400 mbar | CrNi steel   | 1.4571       | 361Ti |
|                                    | MB ≥ 0.6 bar  | NiCrCo alloy | DURATHERM®   |       |

| Process connection             |  | Material   | Material no. |      |
|--------------------------------|--|------------|--------------|------|
|                                |  |            | EU           | AISI |
| Connecting piece and port      |  | CrNi steel | 1.4404       | 316L |
| Cutting ring screw connections |  | CrNi steel | 1.4571       |      |

## Assembly

|                           |  |
|---------------------------|--|
| Wall mounting             | Flanged assembly plate   |
| Pipe mounting             | Flanged assembly plate and attachment bracket  |
| Panel mounting set type 1 | Panel installation fittings for units with a small measuring cell (Ø75) and NG100 bayonet ring casing. |
| Panel mounting set type 2 | Front ring and support construction  |

### 2.4.1 Additional Attachments

#### 2.4.1.1 Contact elements

Limit signal transmitters (contacts) and capacitive rotation angle transducers with an output signal proportional to the angular position can be fitted into a housing augmented by a corresponding bayonet ring connector.

A certain minimum pressure level is required to operate this kind of contact element, which is why there is a lower limit for the mbar measuring ranges. This limit depends on the model type and is stated in the section 'General [► 7]'.

The measuring deviation increases by  $\pm 0.5\%$  per contact when the contacts are driven and switched.

For more information and the order key, please refer to the data sheet:

- for limit switch in [data sheet KE](#)
- for rotation angle converter in the [data sheet KE09](#)

#### 2.4.1.2 Fluid charging

Under aggravated operating conditions, such as vibrations and extreme pressure fluctuations, or in order to avoid condensation forming if used outdoors, the casing can be filled with the following fluids depending in the type of contacts installed:

|                           |                        |
|---------------------------|------------------------|
| without contacts          | Glycerine, silicon oil |
| Low-action contacts       | Silicon oil            |
| Magnetic spring contacts  | Silicon oil            |
| Inductive contacts        | Paraffin oil           |
| Rotation angle transducer | no filling possible    |

#### 2.4.1.3 Marker needle

A settable red marker can be attached to the scale to clearly show a certain pressure (limit value).

#### 2.4.1.4 Trailing needle

The railing needle is 'dragged' with the measured value indicator. As there is no fixed connection between the two needles, one-off maximum values are stored. The trailing needle can be reset using an adjusting dial in the window. Trailing needles cannot be used in conjunction with contacts. A certain minimum pressure level is required to move the drag indicator, which is why there is a lower limit for the mbar measuring ranges. This limit depends on the model type and is stated in the section 'General [► 7]'.

#### 2.4.1.5 Shut-off fitting

3-spindle valve block PN 100, DN 5, can be directly flanged

- Type DZ3600SV2700
- Material 1.4571
- Functions: Shut-off, pressure compensation

### 2.4.2 Electrical connection

In the case of devices with additional electronic equipment, the connection is realised using a cable socket attached to the side and/or with a Han 7D connector on the power plant models. The pin assignment depends on the ordered mode and is stated in the data sheet KE or KE09.

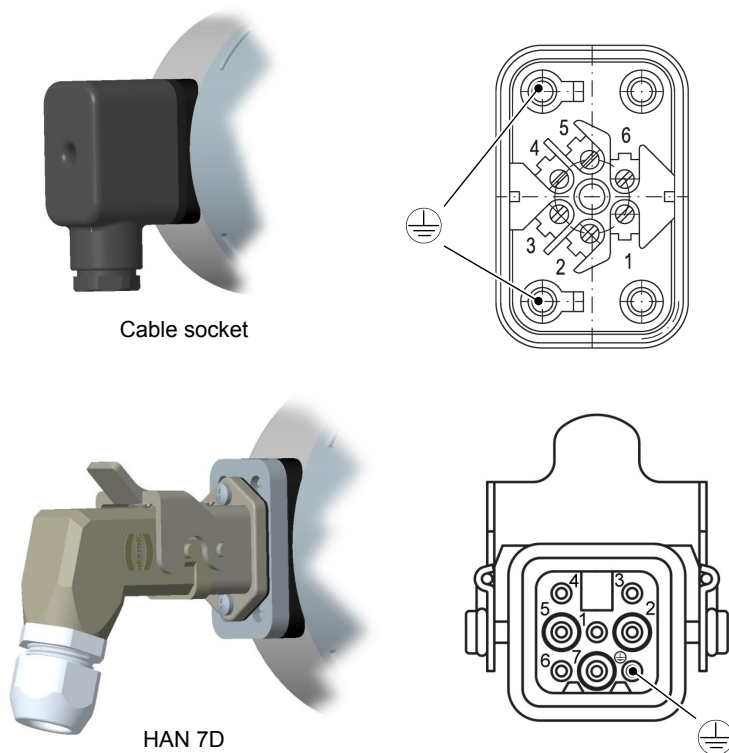


Fig. 6: Cable socket

#### Cable socket

|                           |  |
|---------------------------|--|
| Number of screw terminals | 6 + 2PE  |
| Rated current             | See data sheet KE                              |
| Rated voltage             | 250V   |
| Cable diameter            | up to 1.5 mm <sup>2</sup> with wire protection |
| Cable screw connection    | M20 x 1.5, terminal range 7 ... 13 mm          |

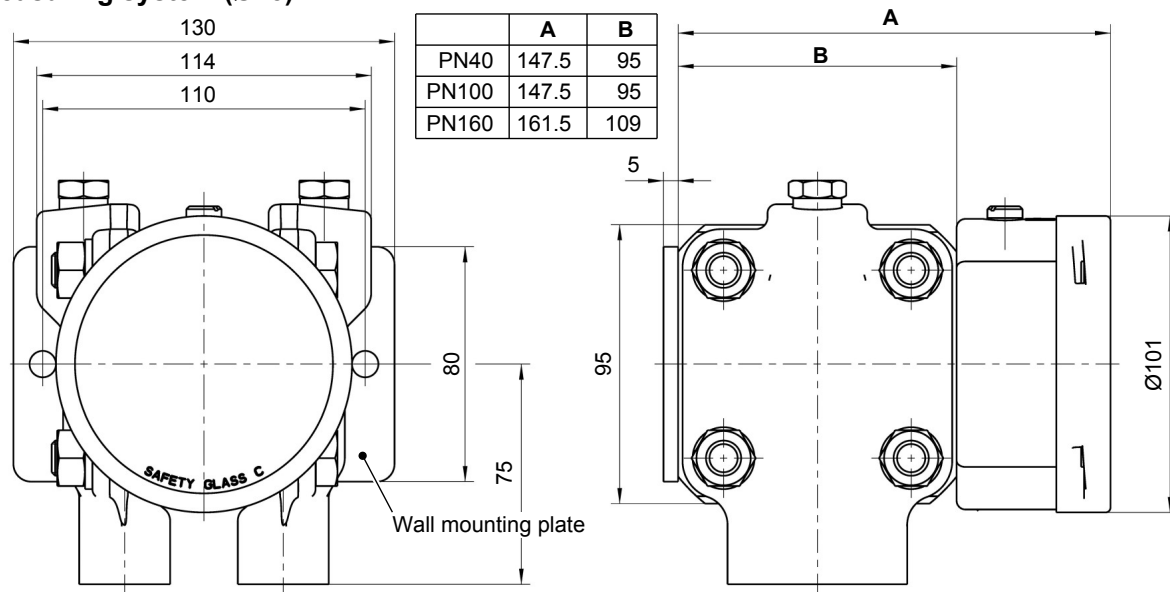
#### HAN 7D

|                        |                                       |
|------------------------|---------------------------------------|
| No. of crimp contacts  | 7 + PE                                |
| Rated current          | See data sheet KE                     |
| Rated voltage          | 50V                                   |
| Cable diameter         | 1 mm <sup>2</sup>                     |
| Cable screw connection | M20 x 1.5, terminal range 7 ... 13 mm |

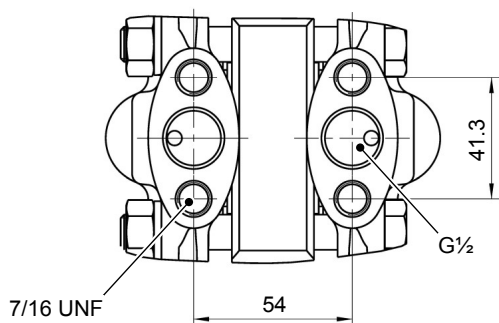
### 2.4.3 Dimensional drawings

All dimensions in mm unless otherwise stated

#### Small measuring system (Ø75)



#### Flange based on DIN EN 61518



#### Wall mounting plate

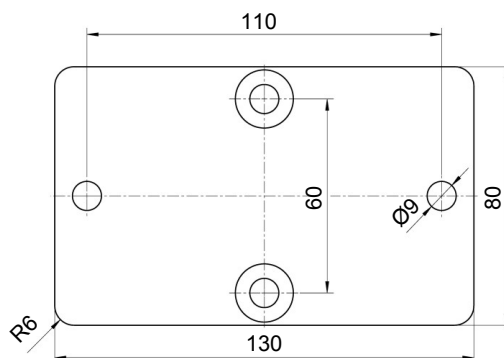


Fig. 7: Dimensional drawing (Small measuring system Ø75)

#### 2" pipe mounting (possible for all models)

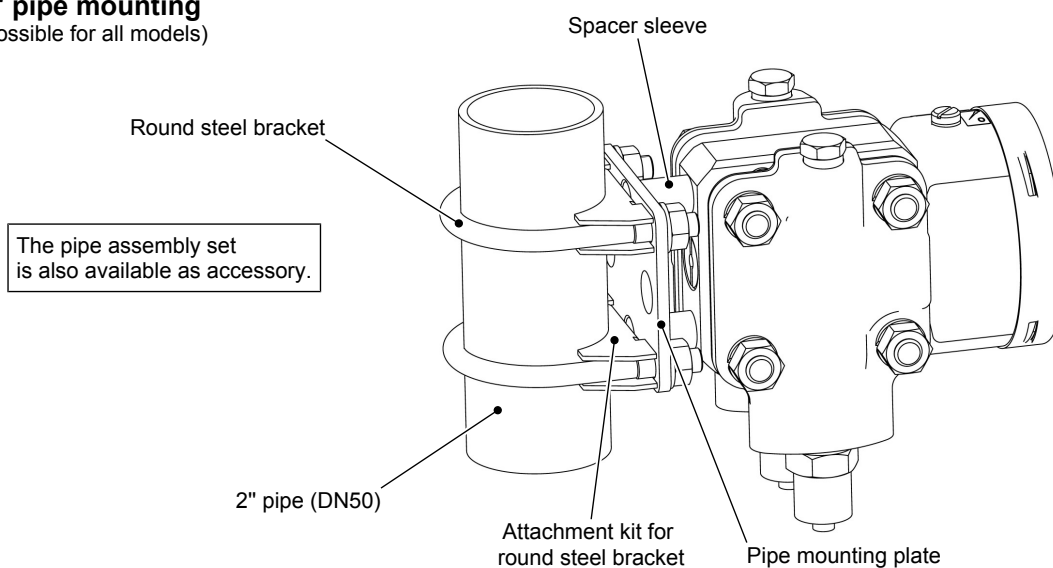


Fig. 8: Pipe mounting

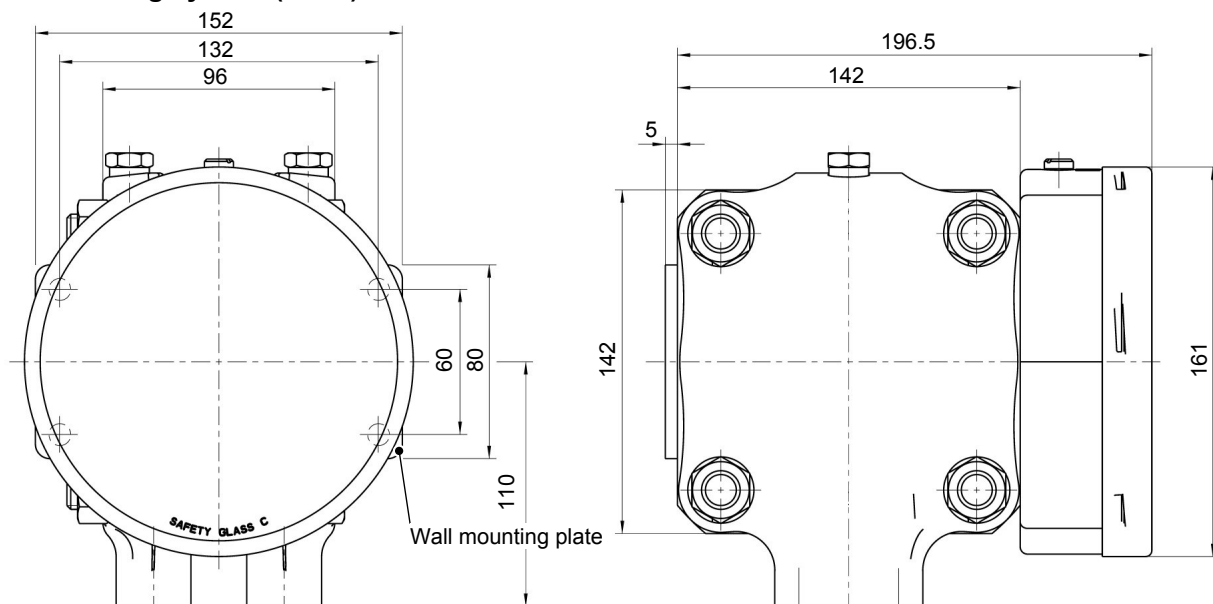
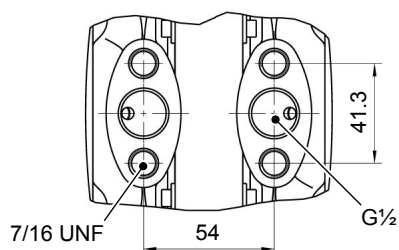
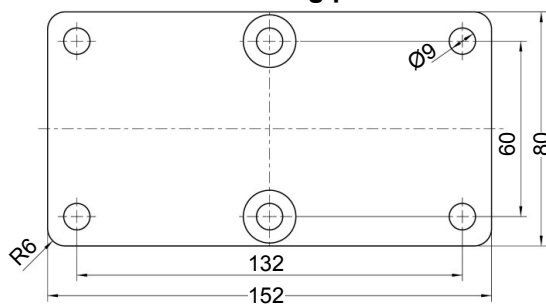
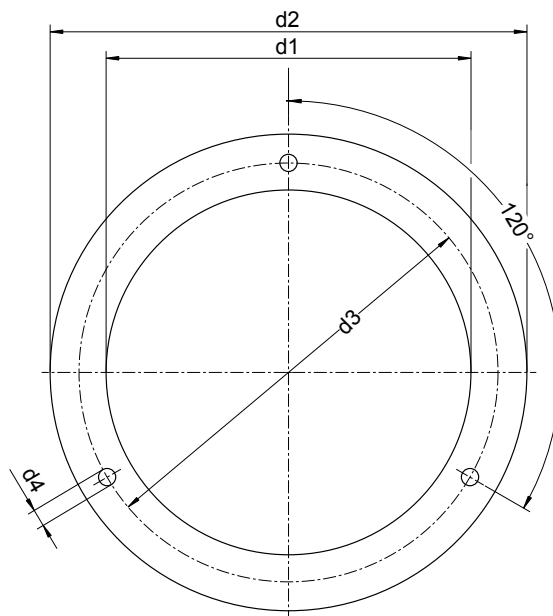
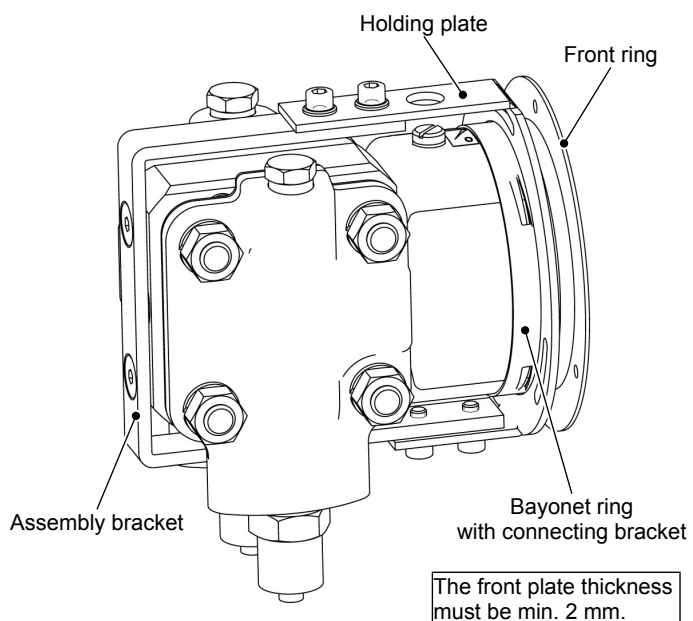
**Large measuring system (Ø130)****Flange based on DIN EN 61518****Wall mounting plate**

Fig. 9: Dimensional drawing (Large measuring system Ø130)

**Installation of front panel type 1**

(only small measuring system Ø75 and NG100 display)

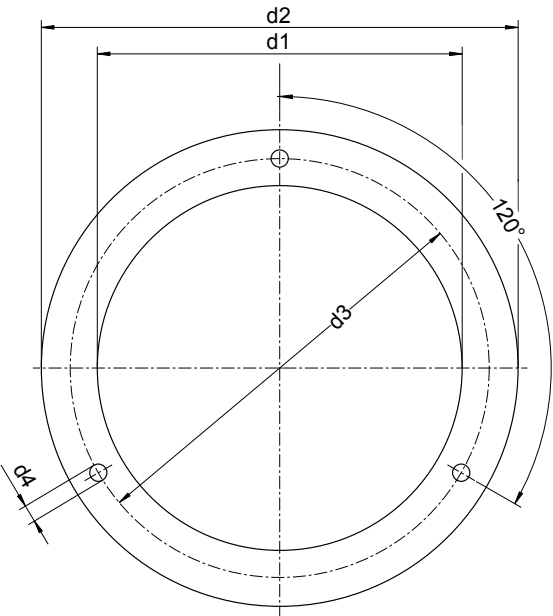
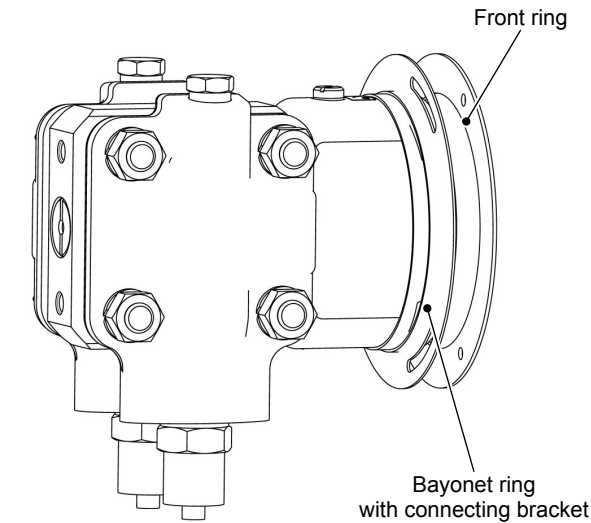


|              | d1  | d2  | d3  | d4  |
|--------------|-----|-----|-----|-----|
| <b>NG100</b> | 101 | 132 | 116 | 4.8 |

Fig. 10: Installation of front panel with panel fittings

Installation of front panel type 2

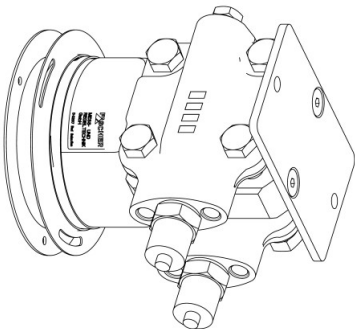
The front plate thickness must be min. 2 mm.



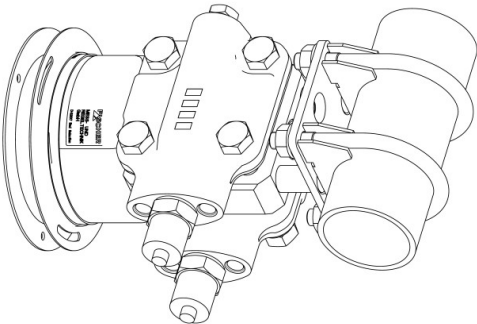
|       | d1  | d2  | d3  | d4  |
|-------|-----|-----|-----|-----|
| NG100 | 101 | 132 | 116 | 4.8 |
| NG160 | 161 | 196 | 178 | 5.8 |

A suitable steel construction must be used to ensure that the front plate can bear the weight of the DA03.

Examples:



Assembly on a mounting plate



Mounting to a 2" pipe

Fig. 11: Installation of front panel with front ring

### Contact elements

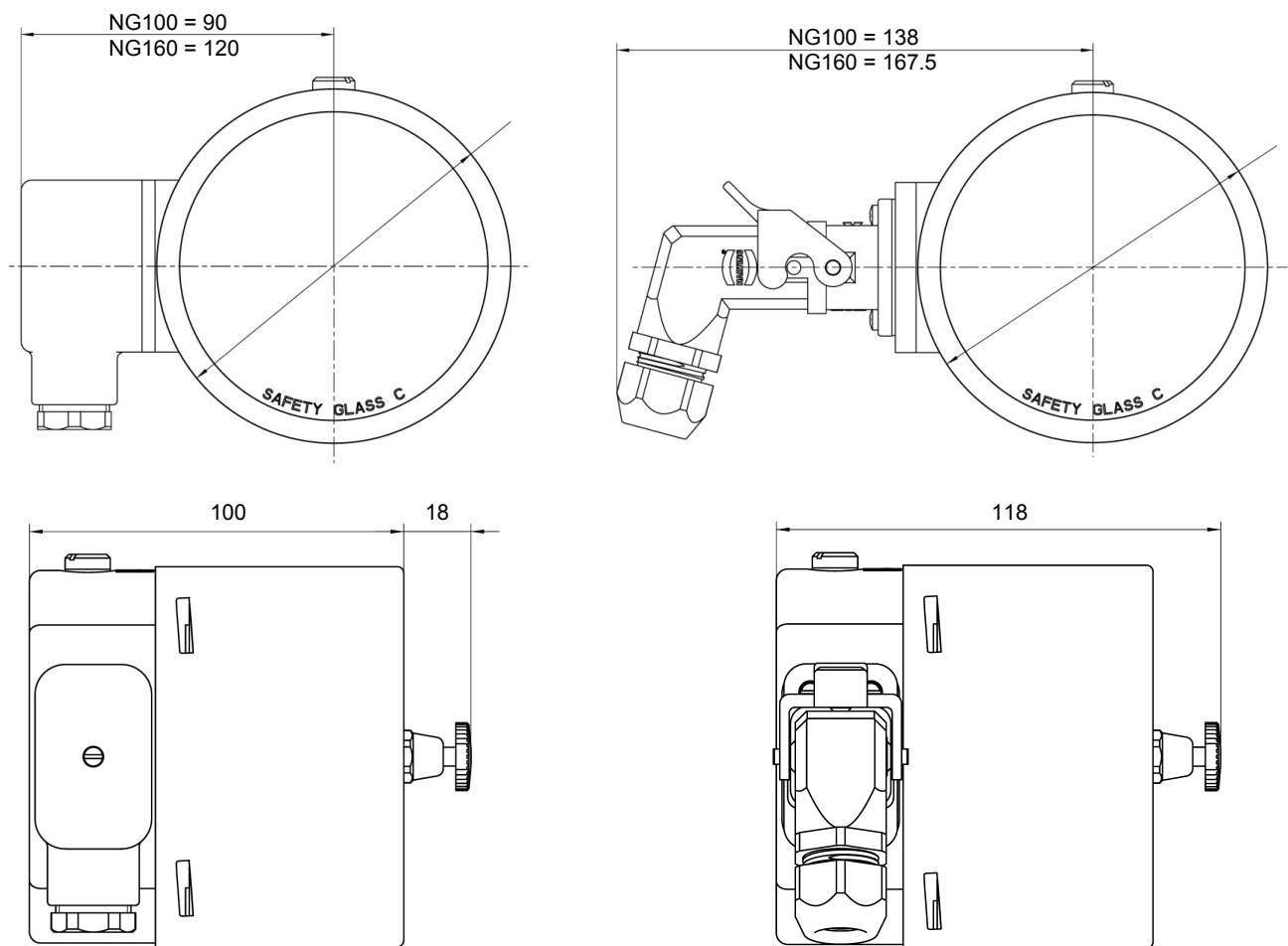


Fig. 12: Dimensional drawing contact devices

### Shut-off fitting with inner spindle thread

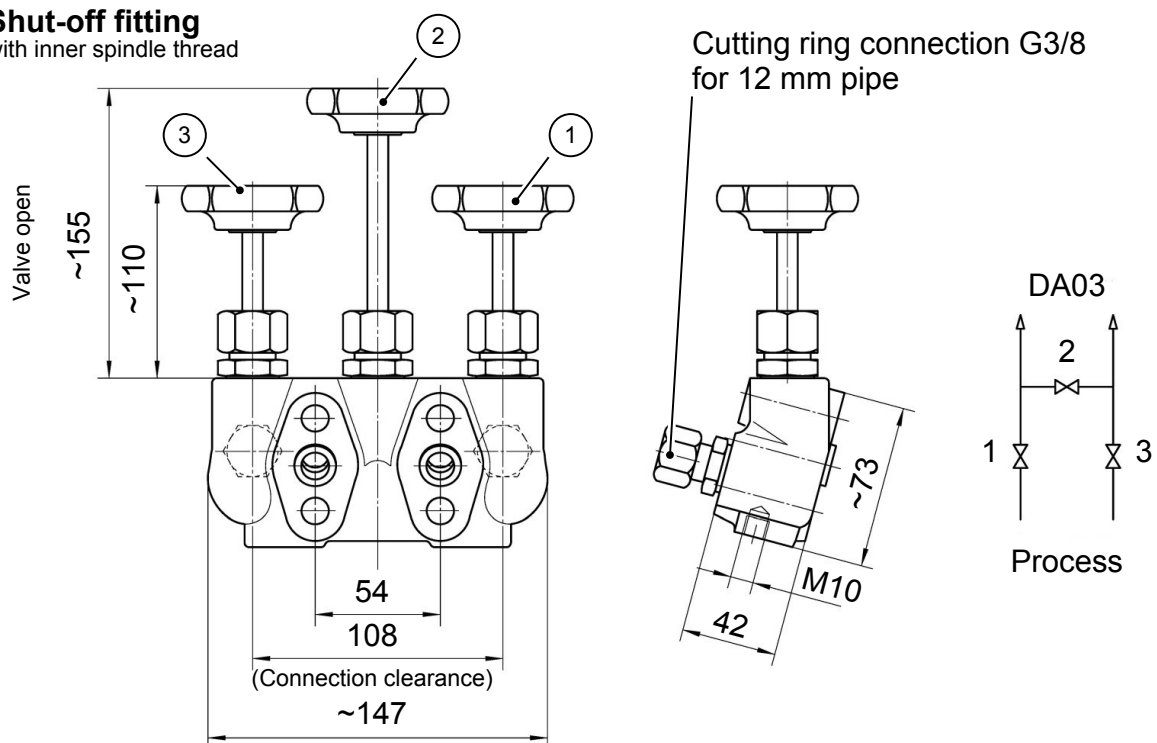
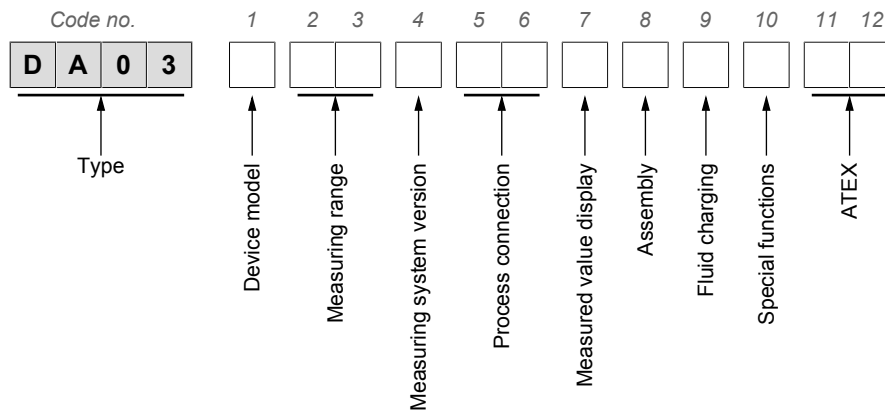


Fig. 13: Shutoff valve DZ3600SV2700

### 3 Order Codes



#### Device model:

| [1] | Pressure level | Measuring cell |
|-----|----------------|----------------|
| G   | PN40           | Ø75            |
| H   | PN40           | Ø130           |
| K   | PN100          | Ø75            |
| L   | PN100          | Ø130           |
| T   | PN160          | Ø75            |
| P   | PN160          | Ø130           |

#### Measuring range:

#### Small measuring system Ø75

| [2.3] | Measurement range | Device model |   |   |
|-------|-------------------|--------------|---|---|
|       |                   | G            | K | T |
| 82    | 0 ... 250 mbar    |              |   | • |
| 83    | 0 ... 400 mbar    |              |   | • |
| 74    | -100 ... 150 mbar |              |   | • |
| 76    | -150 ... 250 mbar |              |   | • |
| 01    | 0...0.6 bar       | •            | • | • |
| 02    | 0...1 bar         | •            | • | • |
| 03    | 0...1.6 bar       | •            | • | • |
| 04    | 0 ... 2.5bar      | •            | • | • |
| 05    | 0...4.0 bar       | •            | • | • |
| 06    | 0...6 bar         | •            | • | • |
| 07    | 0...10 bar        | •            | • | • |
| 08    | 0...16 bar        | •            | • | • |
| 09    | 0...25 bar        | •            | • | • |
| 32    | -1...0.6 bar      | •            | • | • |
| 33    | -1...1.5 bar      | •            | • | • |
| 34    | -1...3 bar        | •            | • | • |
| 35    | -1...5 bar        | •            | • | • |

**Large measuring system  
Ø130**

| [2.3] | Measurement range  | Device model |   |   |
|-------|--------------------|--------------|---|---|
|       |                    | H            | L | P |
| 57    | 0 ... 40 mbar      | •            | • | • |
| 58    | 0 ... 60 mbar      | •            | • | • |
| 59    | 0 ... 100 mbar     | •            | • | • |
| 60    | 0 ... 160 mbar     | •            | • | • |
| 82    | 0 ... 250 mbar     | •            | • | • |
| 83    | 0 ... 400 mbar     | •            | • | • |
| C1    | 0 ... 600 mbar     | •            | • | • |
| 70    | -40 ... +60 mbar   | •            | • | • |
| 72    | -60 ... +100 mbar  | •            | • | • |
| 74    | -100 ... +150 mbar | •            | • | • |
| 76    | -100 ... +250 mbar | •            | • | • |

**Design of the measuring system:**

| [4] |   |
|-----|---|
| R   | Pressure chamber CrNi steel 1.4404 (AISI 316L)<br>Measuring membrane standard       |
| H   | Pressure chamber Hastelloy C4 Measuring membrane Hastelloy C276                     |
| G   | Pressure chamber CrNi steel 1.4404 (AISI 316L)<br>Measuring membrane Hastelloy C276 |

**Process connection:**

| [5.6] |  |
|-------|--|
| 03    | Flange connection based on DIN EN 61518<br>with internal thread G½ |
| 04    | Connecting piece G½ with inside thread 1/4 -18 NPT                 |
| 05    | Connecting piece G½ with inside thread 1/2 -14 NPT                 |
| 13    | Connection shanks G½ with external thread G½                       |
| 14    | Connecting port G½ with outer thread 1/4-18 NPT                    |
| 15    | Connecting port G½ with outer thread 1/2-14 NPT                    |
| 27    | Cutting ring connection in brass for 12 mm pipe                    |

**Measured value display:**

| [7] |                            |
|-----|----------------------------|
| L   | Bayonet ring housing NG100 |
| M   | Bayonet ring housing NG160 |

**Assembly:**

| [8] |  |
|-----|--|
| W   | Wall mounting  |
| R   | Pipe mounting  |
| T   | Panel installation fittings<br>(only a small measuring system Ø75, NG100 measured value display<br>without contact elements) |
| G   | Front ring for panel mounting  |

**Fluid filling:**

| [9] |                       |
|-----|-----------------------|
| 0   | Without fluid filling |
| 1   | Glycerine             |
| 4   | Paraffin oil          |
| 5   | Silicon oil           |

**Special functions:**

| [10] |                          |
|------|--------------------------|
| 0    | Without special function |
| 1    | Adjustable marker needle |
| 2    | Resettable drag needle   |

**Contacts/transmitters/ATEX:**

| [11.12] ATEX model |  |  |
|--------------------|--|--|
| 0A                 | Non-electrical unit<br>(without switch contacts)   | II 2G Ex h IIC T4 Gb<br>II 2D Ex h IIIC T95°C Db |
| 1B                 | Unit with snap-action contacts<br>KE##M##0B4H2<br><br>Simple electrical operating equipment acc.<br>to DIN EN 60079-11 | II 2G Ex h IIC T4 Gb                             |
| 1C                 | Unit with inductive contacts KE##I##0C0H2  | II 2G Ex h IIC T4 Gb<br>II 2D Ex h IIIC T95°C Db |
| 2D                 | Unit with capacitive rotation angle transducer KE0905#9  | II 2G Ex h IIC T4 Gb                             |

**Limitations**

A minimum operating pressure, which not all measuring ranges achieve, is required to activate a contact element or a drag indicator. Please also note the information about the equipment features [► 4].

**3.1 accessories**

| Order no.    | Planned measures   | Material |
|--------------|--|----------|
| DZ3600SV2700 | Triple valve block DN5 PN420 <ul style="list-style-type: none"> <li>• Flange connection acc. to DIN EN 61518</li> <li>• Cutting ring screw connections 12 mm pipe</li> <li>• Including assembly set</li> </ul> | 1.4571   |

| Order no. | Planned measures                            | Type            |
|-----------|---|-----------------|
| 05003065  | Isolating unit amplifier 1-channel 24 V DC  | TS500Ex-ia-1R-5 |
| 05003066  | Isolating unit amplifier 2-channel 24 V DC  | TS500Ex-ia-2R-5 |
| 05003083  | Isolating unit amplifier 1-channel 230 V AC | TS500Ex-ia-1R-0 |
| 05003084  | Isolating unit amplifier 2-channel 230 V AC | TS500Ex-ia-2R-0 |
| 05003070  | Universal supplier isolator                 | ST500Ex-10-5    |
| 05003086  | Universal supplier isolator                 | ST500Ex-10-0    |

### 3.2 Information about the document

This document contains all technical data about the device. Great care was taken when compiling the texts and illustrations; Nevertheless, errors cannot be ruled out.

Subject to technical amendments.



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