

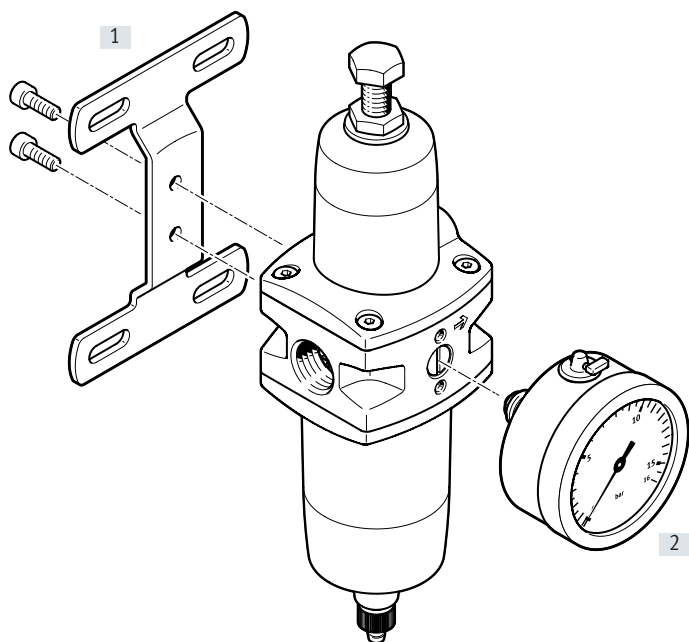
## Filter regulators PCRP

**FESTO**



## Peripherals overview and type codes

### Peripherals overview



#### Mounting components and accessories

|     |                          | → Page/Internet |
|-----|--------------------------|-----------------|
| [1] | Mounting bracket<br>PAMP | 7               |
| [2] | Pressure gauge<br>PAGN   | 8               |
| –   | Filter cartridge<br>PFEP | 7               |

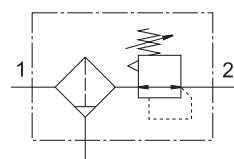
### Type codes

|      |                           |  |
|------|---------------------------|--|
| 001  | Series                    |  |
| PCRP | Filter regulator          |  |
| 002  | Size                      |  |
| 44   | 44                        |  |
| 64   | 64                        |  |
| 003  | Pneumatic connection      |  |
| G14  | G1/4                      |  |
| G12  | G1/2                      |  |
| N14  | 1/4 NPT                   |  |
| N12  | 1/2 NPT                   |  |
| 004  | Pressure regulation range |  |
| 7    | Up to 7 bar               |  |
| 12   | Up to 12 bar              |  |

|     |                   |  |
|-----|-------------------|--|
| 005 | Filter version    |  |
| C   | 5 µm              |  |
| E   | 40 µm             |  |
| 006 | Bowl type         |  |
| R1  | Stainless steel   |  |
| 007 | Condensate drain  |  |
| M   | Manual            |  |
| 008 | Temperature range |  |
| T18 | -20 ... +80°C     |  |
| T19 | -60 ... +80°C     |  |

## Data sheet

## Function



-  - Flow rate 1920 ... 4115 l/min
-  - Temperature range  
-60 ... +80 °C
-  - Operating pressure  
1 ... 20 bar

Conforms to standard:  
NACE MR0175/ISO 15156 (housing  
and bowl)



- Space-saving design with filter and regulator in a single unit
- Good particle separation and high flow rate
- Good regulation characteristics with minimal hysteresis
- Robust housing for the specific requirements of process automation
- Suitable for use outdoors and at temperatures down to -60 °C
- Resistant to UV radiation and corrosive environments
- Two pressure regulation ranges: 0.5°... 7 bar and 0.5 ... 12 bar
- Two pressure gauge connections for flexible installation
- The set values are secured by an adjusting screw with lock
- Safe to use in explosion zones 1/2/21/22
- New filter cartridges → 7

| General technical data                    |                                                                                                                                                              |      |         |         |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|------|---------|---------|
| Size                                      | 64                                                                                                                                                           |      |         |         |
| Pneumatic port 1, 2                       | G1/4                                                                                                                                                         | G1/2 | 1/4 NPT | 1/2 NPT |
| Design                                    | Filter regulator without pressure gauge                                                                                                                      |      |         |         |
| Conforms to standard                      | NACE MR0175/ISO 15156 (housing and bowl)                                                                                                                     |      |         |         |
| Controller function                       | With primary pressure compensation, with secondary venting                                                                                                   |      |         |         |
| Type of mounting                          | Via mounting kit<br>In-line installation                                                                                                                     |      |         |         |
| Mounting position                         | Vertical ±5°                                                                                                                                                 |      |         |         |
| Grade of filtration [µm]                  | 40<br>5                                                                                                                                                      |      |         |         |
| Air quality class at the output           | Compressed air to ISO 8573-1:2010 [6:4:4] (grade of filtration 5 µm)<br>Compressed air to ISO 8573-1:2010 [7:4:4] (grade of filtration 40 µm)<br>Inert gases |      |         |         |
| Condensate drain                          | Manually rotating                                                                                                                                            |      |         |         |
| Actuator lock                             | Adjusting screw with lock                                                                                                                                    |      |         |         |
| Pressure regulation range [bar]           | 0.5 ... 7 (7.25 ... 101.5 psi/0.05 ... 0.7 MPa)<br>0.5 ... 12 (7.25 ... 174 psi/0.05 ... 1.2 MPa)                                                            |      |         |         |
| Max. pressure hysteresis [bar]            | 0.2                                                                                                                                                          |      |         |         |
| Pressure indication                       | Prepared for G1/4                                                                                                                                            |      |         |         |
| Max. condensate volume [cm <sup>3</sup> ] | 30                                                                                                                                                           |      |         |         |

## Data sheet

| Flow rates                                       |       |               |               |               |               |
|--------------------------------------------------|-------|---------------|---------------|---------------|---------------|
| Pressure regulation range                        |       | 0.5 ... 7 bar |               | 0.5 ... 12    |               |
| Pneumatic port 1, 2                              |       | G1/4, 1/4 NPT | G1/2, 1/2 NPT | G1/4, 1/4 NPT | G1/2, 1/2 NPT |
| Standard nominal flow rate $q_{nN}^{1)}$ [l/min] |       |               |               |               |               |
| Grade of filtration                              | 40 µm | 3240          | 4455          | 2860          | 3045          |
|                                                  | 5 µm  | 1830          | 2050          | 1800          | 1930          |
| Max. standard flow rate [l/min]                  |       |               |               |               |               |
| Grade of filtration                              | 40 µm | 3980          | 6750          | 3990          | 6440          |
|                                                  | 5 µm  | 2410          | 2920          | 2400          | 2740          |

1) Measured at p1 = 10 bar, p2 = 6 bar and Δp = 1 bar.

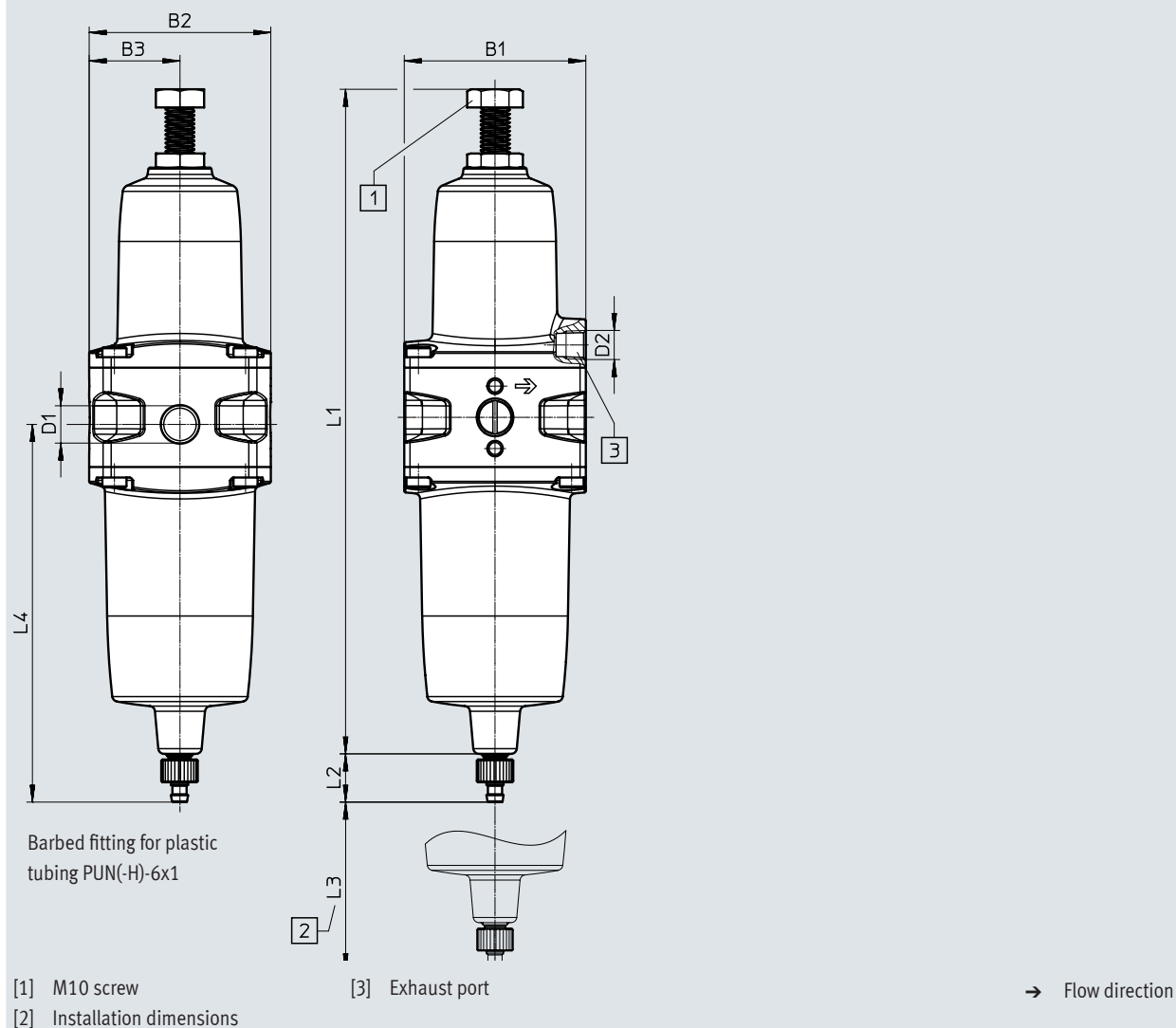
| Operating and environmental conditions |       |                                           |             |
|----------------------------------------|-------|-------------------------------------------|-------------|
| Type                                   |       | PCRP-...T18                               | PCRP-...T19 |
| Operating pressure                     | [bar] | 1 ... 20 (14.5 ... 290 psi/0.1 ... 2 MPa) |             |
| Operating medium                       |       | Compressed air to ISO 8573-1:2010 [-:4:-] |             |
|                                        |       | Inert gases                               |             |
| Ambient temperature                    | [°C]  | -20 ... +80                               | -60 ... +80 |
| Temperature of medium                  | [°C]  | -20 ... +80                               | -60 ... +80 |
| Storage temperature                    | [°C]  | -20 ... +80                               | -60 ... +80 |

|                       |               |               |
|-----------------------|---------------|---------------|
| <b>Weights [g]</b>    |               |               |
| Pneumatic port 1, 2   | G1/4, 1/4 NPT | G1/2, 1/2 NPT |
| Filter regulator PCRP | 1965          | 1910          |

| Materials         |                                                             |             |
|-------------------|-------------------------------------------------------------|-------------|
| Type              | PCRP....T18                                                 | PCRP....T19 |
| Housing           | Stainless steel casting, material number: 1.4409/CF3M(316L) |             |
| Filter holder     | Stainless steel casting, material number: 1.4409/CF3M(316L) |             |
| Bowl              | Stainless steel casting, material number: 1.4409/CF3M(316L) |             |
| Filter            | High-alloy stainless steel, material number: 1.4404/316L    |             |
| Drain screw       | High-alloy stainless steel, material number: 1.4404/316L    |             |
| Adjusting screw   | High-alloy stainless steel                                  |             |
| Spring            | High-alloy stainless steel                                  |             |
| Seals             | CR                                                          |             |
|                   | NBR                                                         |             |
|                   | –                                                           | VMQ         |
| Note on materials | RoHS-compliant                                              |             |
|                   | Contains paint-wetting impairment substances                |             |

## Data sheet

## Dimensions

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| Type        | B1 | B2 | B3 | D1      | D2      | L1    | L2 | L3<br>Min. | L4    |
|-------------|----|----|----|---------|---------|-------|----|------------|-------|
| PCRP-64-G14 | 64 | 64 | 32 | G1/4    | G1/8    | 234.2 | 17 | 60         | 135.6 |
| PCRP-64-G12 |    |    |    | G1/2    |         |       |    |            |       |
| PCRP-64-N14 |    |    |    | 1/4 NPT | 1/8 NPT |       |    |            |       |
| PCRP-64-N12 |    |    |    | 1/2 NPT |         |       |    |            |       |

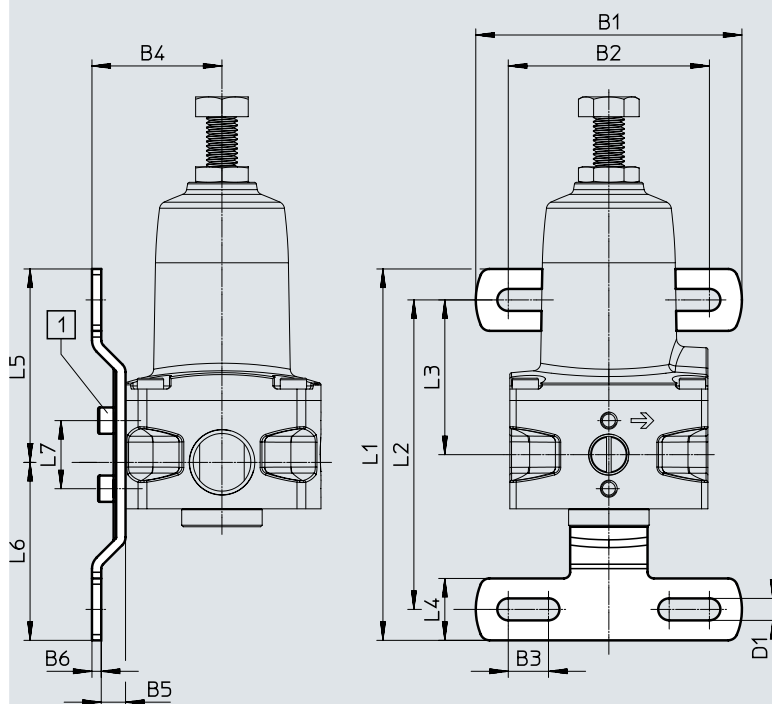
† Note: This product conforms to ISO 1179-1 and ISO 228-1.

## Data sheet

## Dimensions – Accessories

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Using mounting bracket PAMP



[1] Socket head screw  
ISO 4762-M5X8-A2-70

Mounting bracket PAMP  
→ page 7

| B1 | B2 | B3 | B4 | B5  | B6 | D1  | L1  | L2  | L3 | L4 | L5   | L6   | L7 |
|----|----|----|----|-----|----|-----|-----|-----|----|----|------|------|----|
| 86 | 65 | 13 | 42 | 7.8 | 3  | 7.1 | 120 | 100 | 50 | 20 | 62.5 | 57.5 | 22 |

## Ordering data

Temperature range –20 ... +80 °C

| Connection | Grade of filtration 5 µm |      | Grade of filtration 40 µm |      |
|------------|--------------------------|------|---------------------------|------|
|            | Part no.                 | Type | Part no.                  | Type |

## Pressure regulation range 0.5 ... 7 bar

|         |         |                          |         |                          |
|---------|---------|--------------------------|---------|--------------------------|
| G1/4    | 4787803 | PCRP-64-G14-7-C-R1-M-T18 | 4787805 | PCRP-64-G14-7-E-R1-M-T18 |
| G1/2    | 4787811 | PCRP-64-G12-7-C-R1-M-T18 | 4787813 | PCRP-64-G12-7-E-R1-M-T18 |
| 1/4 NPT | 4787799 | PCRP-64-N14-7-C-R1-M-T18 | 4787801 | PCRP-64-N14-7-E-R1-M-T18 |
| 1/2 NPT | 4787807 | PCRP-64-N12-7-C-R1-M-T18 | 4787809 | PCRP-64-N12-7-E-R1-M-T18 |

## Pressure regulation range 0.5 ... 12 bar

|         |         |                           |         |                           |
|---------|---------|---------------------------|---------|---------------------------|
| G1/4    | 4787804 | PCRP-64-G14-12-C-R1-M-T18 | 4787806 | PCRP-64-G14-12-E-R1-M-T18 |
| G1/2    | 4787812 | PCRP-64-G12-12-C-R1-M-T18 | 4787814 | PCRP-64-G12-12-E-R1-M-T18 |
| 1/4 NPT | 4787800 | PCRP-64-N14-12-C-R1-M-T18 | 4787802 | PCRP-64-N14-12-E-R1-M-T18 |
| 1/2 NPT | 4787808 | PCRP-64-N12-12-C-R1-M-T18 | 4787810 | PCRP-64-N12-12-E-R1-M-T18 |

## Ordering data

Temperature range –60 ... +80 °C

| Connection | Grade of filtration 5 µm |      | Grade of filtration 40 µm |      |
|------------|--------------------------|------|---------------------------|------|
|            | Part no.                 | Type | Part no.                  | Type |

## Pressure regulation range 0.5 ... 7 bar

|         |         |                          |         |                          |
|---------|---------|--------------------------|---------|--------------------------|
| G1/4    | 5394669 | PCRP-64-G14-7-C-R1-M-T19 | 5394671 | PCRP-64-G14-7-E-R1-M-T19 |
| G1/2    | 5394677 | PCRP-64-G12-7-C-R1-M-T19 | 5394679 | PCRP-64-G12-7-E-R1-M-T19 |
| 1/4 NPT | 5394665 | PCRP-64-N14-7-C-R1-M-T19 | 5394667 | PCRP-64-N14-7-E-R1-M-T19 |
| 1/2 NPT | 5394673 | PCRP-64-N12-7-C-R1-M-T19 | 5394675 | PCRP-64-N12-7-E-R1-M-T19 |

## Pressure regulation range 0.5 ... 12 bar

|         |         |                           |         |                           |
|---------|---------|---------------------------|---------|---------------------------|
| G1/4    | 5394670 | PCRP-64-G14-12-C-R1-M-T19 | 5394672 | PCRP-64-G14-12-E-R1-M-T19 |
| G1/2    | 5394678 | PCRP-64-G12-12-C-R1-M-T19 | 5394680 | PCRP-64-G12-12-E-R1-M-T19 |
| 1/4 NPT | 5394666 | PCRP-64-N14-12-C-R1-M-T19 | 5394668 | PCRP-64-N14-12-E-R1-M-T19 |
| 1/2 NPT | 5394674 | PCRP-64-N12-12-C-R1-M-T19 | 5394676 | PCRP-64-N12-12-E-R1-M-T19 |

## Accessories

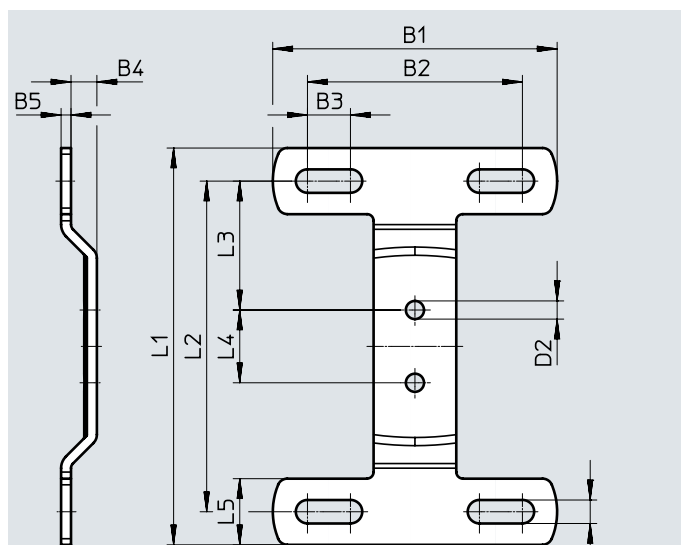
**Mounting bracket PAMP**

- For wall mounting an individual unit

Temperature of medium/ambient  
temperature: -60°... +80 °C

Material of bracket/screws:  
High-alloy stainless steel

Note on materials:  
RoHS-compliant  
Free of copper and PTFE



| Dimensions |    |    |     |    |     |     |     |     |    |    |    |
|------------|----|----|-----|----|-----|-----|-----|-----|----|----|----|
| B1         | B2 | B3 | B4  | B5 | D1  | D2  | L1  | L2  | L3 | L4 | L5 |
| 86         | 65 | 13 | 7.8 | 3  | 7.1 | 5.5 | 120 | 100 | 39 | 22 | 20 |

| Ordering data |                                           |            |          |            |
|---------------|-------------------------------------------|------------|----------|------------|
| Size          | Tightening torque for valve mounting [Nm] | Weight [g] | Part no. | Type       |
| 64            | 5 ±10%                                    | 119        | 8081356  | PAMP-MB-64 |

**Filter cartridges PFEP**

Filter material:  
High-alloy stainless steel

Note on materials:  
RoHS-compliant  
Free of copper and PTFE



| Ordering data |                          |            |          |           |
|---------------|--------------------------|------------|----------|-----------|
| Size          | Grade of filtration [μm] | Weight [g] | Part no. | Type      |
| 64            | 5                        | 77         | 8081360  | PFEP-64-C |
|               | 40                       | 64         | 8081365  | PFEP-64-E |

## Accessories

## Pressure gauge PAGN



— ● — Temperature range  
−40 ... +200 °C



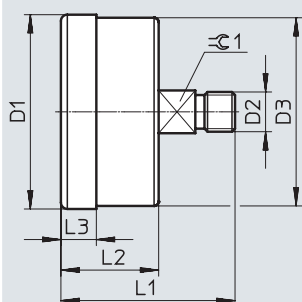
| Technical data                     |                             |                            |
|------------------------------------|-----------------------------|----------------------------|
| Nominal size                       | 63                          |                            |
| Pneumatic connection               | G1/4                        |                            |
| Operating medium                   | Inert gases                 |                            |
|                                    | Neutral fluids              |                            |
| Note on operating/<br>pilot medium | No oxygen                   |                            |
|                                    | No acetylene                |                            |
| Design                             | Bourdon tube pressure gauge |                            |
| Conforms to standard               | EN 837-1                    |                            |
| Type of mounting                   | In-line installation        |                            |
| Connection position                | Centred, rear               |                            |
| Ambient temperature                | [°C]                        | −40 ... +60                |
| Temperature of medium              | [°C]                        | −40 ... +200 <sup>1)</sup> |
| Storage temperature                | [°C]                        | −40 ... +70                |
| Measurement accuracy class         |                             | 1.6                        |
| Intermittent load factor           |                             | 0.66                       |
| Degree of protection               |                             | IP65                       |
| Weight                             | [g]                         | 160                        |

1) If the temperature of the medium used is below 0 °C, ensure the operating medium is dry.

| Materials                                                |                                             |
|----------------------------------------------------------|---------------------------------------------|
| Housing                                                  | High-alloy stainless steel (colour: silver) |
| Inspection window                                        | PC                                          |
| Screwed trunnion/<br>materials in contact with the media | High-alloy stainless steel                  |
| Note on materials                                        | RoHS-compliant                              |

## Dimensions

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[1] ≤ 16 bar with compensating valve

| B1   | D1<br>ø | D2   | D3<br>ø | L1 | L2 | L3   | ⌀ 1 |
|------|---------|------|---------|----|----|------|-----|
| 69.5 | 63      | G1/4 | 62      | 57 | 33 | 11.5 | 14  |

| Ordering data |                      |                    |               |          |                              |
|---------------|----------------------|--------------------|---------------|----------|------------------------------|
| Nominal size  | Pneumatic connection | Operating pressure | Display range | Part no. | Type                         |
| 63            | G1/4                 | 0 ... 16 bar       | 0 ... 16 bar  | 8081401  | PAGN-63-16-G14-R1-1.6-0.5-V2 |

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