

FOR FINE PRESSURE AND FLOW MEASUREMENT

## **OEM relative pressure** transmitter type 505

Pressure range 0 ... 4 – 16 bar



Type 505 pressure transmitters are particularly suitable for measuring water pressure rates in heating and industrial circular flow.

Due to partially automated manfacturing we are able to handle customer orders in high quantities.

- Best price / performance ratio through:
- electronic integrated in measuring element– optimised mounting concept
- automatic production
- Ideal for use as a control element, owing to small hysteresis
- The measuring element includes the well proven ceramic technology of Huba Control AG.

| Technical overview   |  |   |  |
|--|--|---|--|
| Pressure range   |  |   |  |
| Relative   |  |   | 0 4 – 16 bar   |
| Operating conditions   |  |   |  |
| Medium   |  |   | Liquids and not aggressive gases                           |
|  |  | Medium                                      | +2 +90 °C  |
| Temperature  |  | Ambient                                     | +2 +85 °C  |
| · · · · · · · · · · · · · · · · · · ·                          |  | Storage                                     | -30 +85 °C   |
| Tolerable overload   |  | $\leq$ 4 bar                                | 8 bar  |
|  |  | > 4 bar                                     | 20 bar   |
| Rupture pressure   |  | $\leq$ 4 bar                                | 12 bar   |
|  |  | > 4 bar                                     | 25 bar   |
| Materials  |  |   |  |
| Case   |  |   | Plastic thermoplast  |
|  |  | Pressure connection                         | Fibre reinforced plastic                                   |
| Materialien in contact with the medi                           | ium  | Sensor                                      | Ceramic Al <sub>2</sub> O <sub>3</sub> (96%)               |
|  |  | Sealing material                            | EPDM (Ethylene propylene)                                  |
| Electrical overview  |  |   |  |
| Output   | Power supply                               | Load  | Current consumption 1)                                     |
| 0.5 3.5 V  | 8.5 30 VDC                                 | > 10 kOhm / < 100 nF                        | < 7 mA   |
| Ratiom. 10 70%   | 5 VDC ±5%                                  | > 10 kOhm / < 100 nF                        | < 4 mA   |
| Ratiom. 10 50%   | 5 VDC ±5%                                  | > 10 kOhm / < 100 nF                        | < 4 mA   |
| Polarity reversal protection                                   | Short circuit proof and protected a        |   | on is protected against crossover up to max. supply voltag |
| Electromagnetic compatibility                                  | The product is designed exclusively for ir | nstallation in equipment.The customer is re | sponsible for CE conformity.                               |
|  |  |   |  |
| Dynamic response<br>Response time                              |  |   | < 5 ms   |
| Load cycle   |  |   | < 50 Hz  |
|  |  |   | < 30 Hz  |
| Protection standard  |  |   |  |
| IP 00  |  |   |  |
| D  |  |   |  |
| Pressure connection  |  |   | Standard   |
|  |  |   | Form 2 without orifice                                     |
| Connection plug fitting  |  |   | Form 3   |
|  |  |   | Form 4 without orifice                                     |
|  |  | G 1   |  |
|  |  | G 3   |  |
|  |  | <br>G 3                                     |  |
| Outside thread   |  | G 3   |  |
|  |  | G 3   |  |
|  |  | <u> </u>                                    |  |
|  |  |   |  |
| Electrical connection  |  |   |  |
| Connector RAST 2.5   |  |   |  |
|  |  |   |  |
| Installation arrangement<br>Recommended: Electrical connection | a upwards                                  |   |  |
| Recommended. Electrical connection                             | Tupwards                                   |   |  |
| Tests / Admissions   |  |   |  |
| Shock acc. to DIN IEC 60068-2-27                               |  | 40 $\alpha$ . 11 ms half sine wave, a       | ll directions. Free fall from 1 m on concrete.             |
| Vibration acc. to DIN IEC 60068-2-6                            |  | 5 g, 2 2000 Hz                              |  |
|  |  | <i></i>                                     |  |
| Weight   |  |   |  |
| ~ 30 g   |  |   |  |
| Packaging  |  |   |  |
| Bulk cargo in cardboard boxes on EL                            | uro pallet (500 pcs.)                      |   |  |
| Sam cargo in caraboara boxes on Et                             |  |   |  |
|  |  |   |  |
| Accuracy   |  |   |  |
|  |  |   |  |
| Parameter  | Unit                                       | Test condition                              | ons: 25 °C, 45% RH, power supply 24 VDC / 5 VDC            |
| rarameter  | Onit                                       |   | TC z.p. / TC s. 2 +80 °C                                   |

| Parameter                                 |      | Unit     |          |
|---|------|----------|----------|
| Tolerance zero point                      | max. | % FS     | ± 1.5    |
| Tolerance full scale                      | max. | % FS     | ± 1.5    |
| Resolution                                |      | % FS     | 0.1      |
| Total of linearity, hysteresis            |      |          |          |
| and repeatability                         | max. | % FS     | ± 1.0    |
| Long term stabilitiy acc. to DIN EN 60770 |      | % FS     | ± 0.5    |
| TC zero point 3)                          | typ. | % FS/10K | ± 0.6 4) |
| TC sensitivity 3)                         | typ. | % FS/10K | ± 0.15   |
| Ratiometric error 5)                      | typ. | % FS     | ± 0.5    |

 $^{2)}$  Ratiometric version only through the electrical connector mechanically protected.  $^{5)}$  At ratiometric version only

|                       |  |  | 1      | 2 | 3 | 4   | 5 |
|-----------------------|--|--|--------|---|---|-----|---|
| Variantenplan         |  | 5  | 605. X | Х | Х | Х   | Х |
|                       | 0 4 bar                                      |  | 9      | 1 | 5 |     |   |
|                       | 0 10 bar                                     | material admission for drinking water $\leq$ 85 °C | 9      | 3 | 0 | 7,B | 2 |
| Pressure range 1)     | 0 12 bar                                     | material admission for drinking water $\leq$ 85 °C | 9      | 3 | В | 7,B |   |
|                       | 0 16 bar                                     | material admission for drinking water $\leq$ 85 °C | 9      | 3 | 1 | 7,B |   |
|                       | Full scale signal at this press              | ure  |        |   |   |     |   |
|                       | Connection plug fitting standard             |  |        |   | 5 | 3   |   |
|                       | Connection plug fitting standard             | without orifice                                    |        |   | 5 | 9   |   |
|                       | Connection plug fitting form 2               | without orifice                                    |        |   | 5 | С   |   |
|                       | Connection plug fitting form 3               |  |        |   | 5 | 1   |   |
| Pressure connection   | Connection plug fitting form 4               | without orifice                                    |        |   | 5 | А   |   |
|                       | Outside thread G 3/8                         |  |        |   | 5 | 4   |   |
|                       | Outside thread G 3/8                         | material admission for drinking water $\leq$ 85 °C |        |   | 5 | 5   |   |
|                       | Outside thread G 3/8                         | with needle valve                                  |        |   | 5 | 6   |   |
|                       | Outside thread G 3/8                         | without orifice                                    |        |   |   | 7   |   |
|                       | Outside thread G 3/8                         | with with needle valve without orifice             |        |   | 5 | 8   |   |
|                       | Outside thread G <sup>1</sup> / <sub>4</sub> | without orifice                                    |        |   |   | В   |   |
|                       | 0.5 3.5 V                                    | 8.5 30 VDC   |        |   |   |     | 0 |
| Output / power supply | ratiom. 10 70%                               | 5 VDC ±5%  |        |   |   |     | 1 |
|                       | ratiom. 10 50%                               | 5 VDC ±5%  |        |   |   |     | 2 |

| 66 | A 6 | 60        | es |  |
|----|-----|-----------|----|--|
|    |     | <u>10</u> |    |  |

|   | Order number |
|---|--------------|
| Safety spring for plug connector standard   | 105883       |
| emale connector RAST 2.5 with cable 1450 mm | 103167       |
| Calibration certificate                     | 104551       |

For flexible wire

AMP Connector 4)

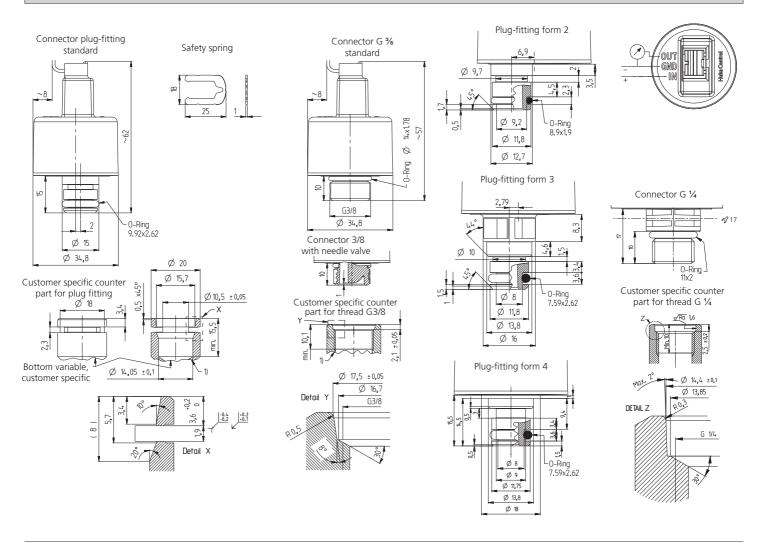
Manufacturer's Part No. 3-829868-3 1-966194-3

grey beige

Colour

7 x 0.20 mm = 0.22 mm<sup>2</sup> or 12 x 0.20 mm = 0.35 mm<sup>2</sup> 7 x 0.25 mm = 0.35 mm<sup>2</sup>

Connector with cable IN = red OUT = yellow GND = black



<sup>1)</sup> Other pressure ranges on request

<sup>2)</sup> Accessories supplied loose

<sup>3)</sup> To be ordered separately from original manufacturer. Further information can be found in the manufacturer specification No. 114-18049