

# Relative and absolute pressure transmitter type 527 for shipbuilding

Pressure range  
0 ... 1 – 60 bar



The compact type 527 pressure transmitter is based upon the well proven ceramic technology developed by Huba Control over 20 years ago.

These transmitters are suitable for applications across a broad spectrum of industries and shipbuilding.

- Compact, rugged construction
- Negligible temperature influence on accuracy
- Certified for shipbuilding with:
  - Germanischer Lloyd
  - American Bureau of Shipping
  - Bureau Veritas
  - Det Norske Veritas
  - Lloyd's Register

## Technical overview

### Pressure range

|          |                  |
|----------|------------------|
| Relative | 0 – 60 bar       |
| Absolute | 0 ... 1 – 16 bar |

### Operating conditions

|                                       |         |                         |
|---------------------------------------|---------|-------------------------|
| Medium                                |         | Liquids and gases       |
| Temperature                           | Medium  | FPM -15 ... +125 °C     |
|                                       |         | EPDM -40 ... +125 °C    |
|                                       |         | NBR -20 ... +100 °C     |
|                                       |         | Ambient -30 ... +85 °C  |
|                                       |         | Storage -50 ... +100 °C |
| Tolerable overload / Rupture pressure | ≤ 4 bar | 3.0 x fs                |
|                                       | > 4 bar | 2.5 x fs                |

### Materials

|                                  |                     |  |
|----------------------------------|---------------------|--|
| Cover                            |                     | Stainless steel 1.4404 / AISI 316L           |
| Plug accommodation               |                     | Polyarylamide 50% GF V0                      |
| Materials in contact with medium | Pressure connection | Stainless steel 1.4404 / AISI 316L           |
|                                  | Sensor              | Ceramic Al <sub>2</sub> O <sub>3</sub> (96%) |
|                                  | Sealing material    | FPM, EPDM, NBR                               |

### Electrical overview

|                              | Output   | Power supply  | Load  | Current consumption |
|------------------------------|--|---------------|---|---------------------|
| 2 wire                       | 4 ... 20 mA  | 7 ... 33 VDC  | $< \frac{\text{supply voltage} - 7 \text{ V}}{0.02 \text{ A}}$ [Ohm]  | < 23 mA             |
| 2 wire (Ex)                  | 4 ... 20 mA  | 10 ... 30 VDC | $< \frac{\text{supply voltage} - 10 \text{ V}}{0.02 \text{ A}}$ [Ohm] | < 23 mA             |
| 3 wire                       | 0 ... 10 V   | 12 ... 33 VDC | >10 kOhm / < 100 nF   | < 7 mA              |
| Polarity reversal protection | Short circuit proof and protected against polarity reversal. Each connection is protected against crossover up to max. supply voltage. |               |   |                     |

### Protection class

|                      |
|----------------------|
| Protection class III |
|----------------------|

### Dynamic response

|               |                   |
|---------------|-------------------|
| Response time | < 2 ms, 1 ms typ. |
| Load cycle    | < 100 Hz          |

### Protection standard

|                                  |       |
|----------------------------------|-------|
| Connector DIN EN 175301-803-A    | IP 65 |
| Swift connector, Connector M12x1 | IP 67 |

### Electrical connection

|  |
|--|
| Swift connector with cable 1.5 m (PVC spec.) |
| Connector DIN EN 175301-803-A                |
| Connector M12x1                              |

### Pressure connection

|                |               |  |
|----------------|---------------|--|
| Inside thread  | 7/16 - 20 UNF |  |
|                | 1/2 - 14 NPT  |  |
| Outside thread | 7/16 - 20 UNF |  |
|                | 1/4 -18 NPT   |  |
|                | G 1/4         | sealed at back DIN 3852 form E with Profile seal ring in FPM spec. (-30 ... +135 °C)       |
|                | G 1/2         | sealed at back and manometer (combi) with Profile seal ring in FPM spec. (-30 ... +135 °C) |
|                | M20x1.5       |  |
|                | G 1/2         | sealed at front  |

### Installation arrangement

|              |
|--------------|
| Unrestricted |
|--------------|

### Tests / Admissions

|                                 |   |
|---------------------------------|---|
| Electromagnetic compatibility   | CE conformity acc. EN 61326-2-3   |
| Shock acc. IEC IEC 68-2-27      | 100 g, 11 ms half sine wave, all 6 directions, free fall from 1 m on concrete (6x)                          |
| Constant shock acc. IEC 68-2-29 | 40 g for 6 ms, 1000x all 3 directions   |
| Vibration acc. IEC 68-2-6       | 20 g, 15 ... 2000 Hz, 15 ... 25 Hz with amplitude ± 15 mm, 1 Octave/min. all 3 directions, 50 constant load |
| Shipbuilding                    | Germanischer Lloyd  |
|                                 | American Bureau of Shipping   |
|                                 | Bureau Veritas  |
|                                 | Det Norske Veritas  |
|                                 | Lloyd's Register  |

### Protection against explosion

|   |  |
|---|--|
| Intrinsic safety «i» (with current output only)   | Ex II 1/2 G Ex ia IIC T4 Ga/Gb<br>Ex II 1/2 D Ex ia IIC T125°C Da/Db |
| EC type examination certificate   | SEV 10 ATEX 0145   |
| Connection to certified intrinsically safe resistive circuits with maximum values                           | Ui = 30 VDC; Ii = 100 mA = Pi = 0.75 W                               |
| Effective internal inductance and capacitance for versions with plugs complying with EN 175301-803 or M12x1 | Li = 0 nH; Ci = 0 nF   |

### Weight

|        |
|--------|
| ~ 90 g |
|--------|

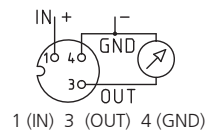
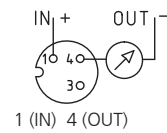
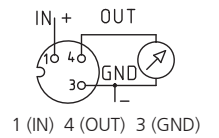
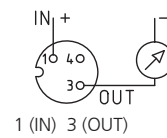
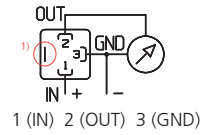
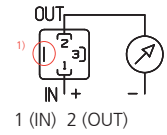
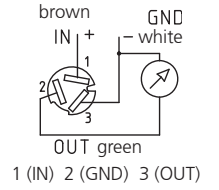
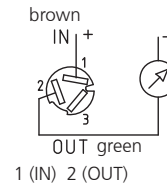
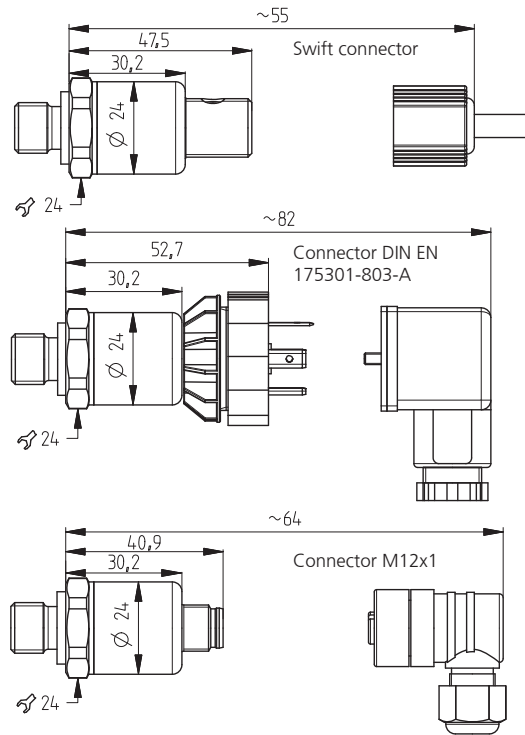
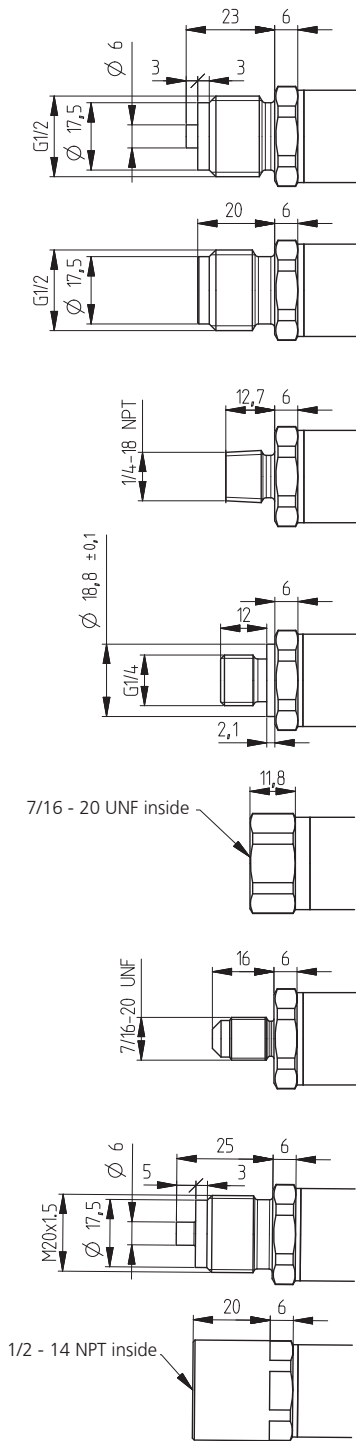
### Packaging (Please state on order)

|  |                        |
|--|------------------------|
| Single packaging in cardboard            | accessories integrated |
| Multiple packaging in cardboard (25 pcs) |                        |









**Ex**

Device design with explosion protection: 4 ... 20 mA  
The grounding connection is conductively connected to the transmitter housing.

|   |   |
|---|---|
| <p>Connector DIN<br/>EN 175301-803-A (Ex)</p> <p>1 (IN) 2 (OUT)</p> | <p>Connector M12x1 (Ex)</p> <p>1 (IN) 3 (OUT) 4 (GND)</p> |
|---|---|