The μP-regulated, programmable pressure transmitter type 548 has a robust industry design. The parameters are easily adjustable with two function keys in the configuration menu which disposes of up to two programmable switching points.

All systems are equipped with a diagnostic function. The large 4 digit LED display assures a good accuracy of reading. The pressure transmitter type 548 is based upon the well proven ceramic technology developed by Huba Control over 20 years ago.

Pressure range
-1 ... 0 – 40 bar

+ Compact, rugged construction
+ High over pressure
+ Clearly readable display
+ Sensitive operation keys
+ Diagnostic function
+ with analogue signal available
+ by up to 2 programmable switching outputs
Technical overview

Pressure range
Relative
-1 ... 0 bar / 0 ... 40 bar

Operating conditions
Medium
Liquids and gases
Temperature
Medium / ambient
-20 ... + 60 °C
Storage
-40 ... + 80 °C
Overload / Rupture pressure
< 10 bar 4.0 x FS
> 10 bar 3.5 x FS

Materials
Case
Polyarylamid 50% GF black
Materials in contact with medium
Sensor ceramic Al2O3 (96%)
Pressure connection Stainless steel 1.4404 / AISI 316L
Sealing material FPM

Electrical overview
Output
0 ... 10 V
0 ... 20 mA
Switching output for max. 250 mA, contact NO or contact NC
Power supply
17 ... 33 VDC
Load
0 ... 10 V
< 500 Ohm
4 ... 20 mA
< 10 kOhm
Current consumption
max. 50 mA
Polarity reversal protection
Short circuit proof and protected against polarity reversal. Each connection is protected against crossover up to max. supply voltage.

Dynamic response
Response time
≤ 5 ms
Load cycle
≤ 100 Hz

Displays (rotatable by 180°)
7 Segment LED, 4 digits for the indication of pressure measuring values and parameter values.
Point-LED for state indication of switching points.
Point-LED for indication of programmed measuring unit.

Programming
All settings can be made in unpressurised state or during the operation. Ex works with standard setting.

Analogue output: Characteristic line adjustable of 75 ... 125% FS
Digital output: Measuring range
rising pressure
8 ... 100% fs
falling pressure
5 ... 97% fs
P or N-switching, open-close-contact, rise delay time eligible Rise delay time 0 ... 50 s, Switch off delay time 0 ... 50 s, Response time 5 ... 500 ms.

Diagnostic function
Version with diagnostic input (shunt call): feed back with 50% fs signal 12 mA or 5 V.

Electrical connection
Protection standard
Protection class
Connector M12x1 P 65 and IP 67 acc. IEC 60529
III

Pressure connection
Inside thread
G ¼ with O-Ring sealing FPM
7/16 - 20 UNF sealed at front SAE J1926-1, ISO 11926-1
¼ -18 NPT
Outside thread
G ¼ sealed at back DIN EN ISO 1179-2 with profile seal ring FPM
R ¼ EN 10226
7/16 - 20 UNF sealing cone 45°

Installation arrangement
Unrestricted
(Electrical connection not recommended down)

Tests / Admissions
Electromagnetic compatibility
CE conformity acc. EN 61326-1-3
UL acc. 61010-1
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)
Vibration acc. IEC 86-2-6
20 g, 15 ... 2000 Hz, 15 ... 25 Hz with amplitude ± 15 mm, 1 Octave/min, all 3 directions, 50 constant load
Drinking water approval
NSF/ANSI 61/372 acc. MH60087
EAC

Weight
~ 120 g

Packaging
Single packaging in cardboard

Accuracy

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>Test conditions: 25 °C, 45% RH, power supply 24 VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characteristic line</td>
<td>% fs</td>
<td>± 1.0</td>
</tr>
<tr>
<td>Thermal characteristic</td>
<td>% fs/10K</td>
<td>± 0.65</td>
</tr>
<tr>
<td>Long term stability acc. IEC EN 60770-1</td>
<td>% fs</td>
<td>± 0.3</td>
</tr>
</tbody>
</table>

Typical (incl. zero point, full scale, linearity, hysteresis and repeatability) -15 ... 85 °C
### Pressure and flow

#### Pressure range (adjustment in bar)

<table>
<thead>
<tr>
<th>Pressure range</th>
<th>bar</th>
<th>psi</th>
<th>kPa</th>
<th>MPa</th>
</tr>
</thead>
<tbody>
<tr>
<td>0...-1</td>
<td>0</td>
<td>-14.5</td>
<td>0.00</td>
<td>-100</td>
</tr>
<tr>
<td>0...-2.5</td>
<td>0</td>
<td>-36.25</td>
<td>250</td>
<td>0</td>
</tr>
<tr>
<td>0...-5</td>
<td>0</td>
<td>-81.00</td>
<td>500</td>
<td>0</td>
</tr>
<tr>
<td>0...-10</td>
<td>0</td>
<td>-145.00</td>
<td>1000</td>
<td>0</td>
</tr>
<tr>
<td>0...-16</td>
<td>0</td>
<td>-232.00</td>
<td>1600</td>
<td>0</td>
</tr>
<tr>
<td>0...-25</td>
<td>0</td>
<td>-362.50</td>
<td>2500</td>
<td>0</td>
</tr>
<tr>
<td>0...-40</td>
<td>0</td>
<td>-580.00</td>
<td>4000</td>
<td>0</td>
</tr>
</tbody>
</table>

#### Pressure range (adjustment in psi)

<table>
<thead>
<tr>
<th>Pressure range</th>
<th>psi</th>
<th>bar</th>
<th>kPa</th>
<th>MPa</th>
</tr>
</thead>
<tbody>
<tr>
<td>-14.5...0</td>
<td>-1</td>
<td>0</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>0...15</td>
<td>0</td>
<td>1.03</td>
<td>69</td>
<td>0</td>
</tr>
<tr>
<td>0...100</td>
<td>0</td>
<td>6.90</td>
<td>469</td>
<td>0</td>
</tr>
<tr>
<td>0...145</td>
<td>0</td>
<td>10.00</td>
<td>700</td>
<td>0</td>
</tr>
<tr>
<td>0...200</td>
<td>0</td>
<td>13.79</td>
<td>939</td>
<td>0</td>
</tr>
<tr>
<td>0...300</td>
<td>0</td>
<td>20.69</td>
<td>1409</td>
<td>0</td>
</tr>
<tr>
<td>0...500</td>
<td>0</td>
<td>34.48</td>
<td>2348</td>
<td>0</td>
</tr>
</tbody>
</table>

#### Pressure indication

- **bar**
- **psi**
- **kPa**
- **MPa**

<table>
<thead>
<tr>
<th>Output</th>
<th>1 analogue output</th>
<th>4...20 mA</th>
<th>diagnostic input</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0...10 V</td>
<td>diagnostic input</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0...20 mA</td>
<td>1 digital output</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0...10 V</td>
<td>1 digital output</td>
<td></td>
</tr>
</tbody>
</table>

#### Electrical connection

- **M12x1 without digital output**
- **M12x1 NPN**
- **M12x1 PNP**

#### Pressure connection

- **Inside thread**
  - 7/16"-20 UNF sealed at front SAE J1926-1, ISO 11926-1
  - G ¼ with O-ring sealing FPM

- **Outside thread**
  - ¼"-18 NPT
  - G ¼ sealed at back DIN EN ISO 1179-2 with profile seal ring FPM
  - N acc. EN 10226

### Order Code Selection Table

<table>
<thead>
<tr>
<th>Pressure range</th>
<th>1 analog output</th>
<th>4...20 mA</th>
<th>diagnostic input</th>
</tr>
</thead>
<tbody>
<tr>
<td>0...100 V</td>
<td>1 digital output</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0...10 V</td>
<td>1 digital output</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pressure indication</th>
<th>bar</th>
<th>psi</th>
<th>kPa</th>
<th>MPa</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Accessories (supplied loose)

- **Mounting Bracket with screw**
- **Heat sink with outside thread G ¼ - inside thread G ¾**
- **Heat sink with outside thread G ¼ - inside thread G ¼**
- **Straight wire box for connector M12x1 with cable**
  - 5-pole, 200 cm
  - 5-pole, 200 cm

#### Order Number

<table>
<thead>
<tr>
<th>Accessories (supplied loose)</th>
<th>Order Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mounting bracket with screw</td>
<td>118716</td>
</tr>
<tr>
<td>Heat sink with outside thread G ¼ - inside thread G ¾</td>
<td>119573</td>
</tr>
<tr>
<td>Heat sink with outside thread G ¼ - inside thread G ¼</td>
<td>119574</td>
</tr>
<tr>
<td>Straight wire box for connector M12x1 with cable</td>
<td>114564</td>
</tr>
<tr>
<td>Straight wire box for connector M12x1 with cable (with UL admission)</td>
<td>118099</td>
</tr>
<tr>
<td>Calibration certificate (available for analogue output, only)</td>
<td>104551</td>
</tr>
</tbody>
</table>

---

1) Other pressure on request
2) Delivery without female connector

Huba Control Type 548 | Technical data subject to change | Edition 09/2020 | 3/5
Dimensions in mm / Electrical connections

**PNP**

<table>
<thead>
<tr>
<th>Pin</th>
<th>Colour</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>brown</td>
</tr>
<tr>
<td>2</td>
<td>white</td>
</tr>
<tr>
<td>3</td>
<td>blue</td>
</tr>
<tr>
<td>4</td>
<td>black</td>
</tr>
<tr>
<td>5</td>
<td>grey</td>
</tr>
</tbody>
</table>

**NPN**

**Mounting bracket**

**Heat sink**
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