Features

- Pressure measurement and regulation in a device
- Accurate measurement of differential pressure with automatic zero-point correction and high overload protection
- Switching outputs can be used as 2-point regulator (pressure switch), for activating/deactivating a final control element (e.g. pump), with relay hysteresis
- Switching outputs can be used as a 3-point regulator (e.g. ON 1 - OFF - ON 2) for activating/deactivating two final control elements, (e.g. air intake/outflow fans), with relay hysteresis
- Asymmetry also possible, e.g. -10..40 mbar
- Housing: control panel housing (installed)

Panel housing / control panel installation

Measurement ranges
others available upon request

<table>
<thead>
<tr>
<th>Measurement range</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>50/100/250/500 Pa</td>
<td>1</td>
<td>1/2.5/5/10/20/50/100 kPa</td>
<td>± 0.5 % of max. value or ± 1 % of max. value</td>
<td>± 0.5 % of max. value for the reference</td>
<td>± 0.5 % of max. value or ± 1 % of max. value</td>
</tr>
</tbody>
</table>

Margin of error
(0.3 Pa margin of error for the reference)

| Temperature coefficient span | 0.04 % of max. value/K (10 .. 60 °C) |
| Temperature coefficient zero point | ± 0 % (cyclical zero-point correction) |

Overload capacity
200 X for measurement ranges < 2.5 kPa
600 kPa for measurement ranges ≥ 2.5 kPa

Medium
air, all non-aggressive gases

Max. system pressure
10 kPa for measurement ranges ≤ 10 kPa
max. nominal pressure of sensor for measurement ranges above 10 kPa

Sensor response time
20 ms

Display
4 ½ digit

Time constants
adjustable up to 10 s

Operating temperature
10 .. 60 °C

Storage temperature
-10 .. 70 °C

Power consumption
approx. 5 VA

Weight
approx. 0.8 kg

Pressure ports
for tubing NW 6 mm

Protection class
IP 50 (installed)

Certificates
CE

Output

<table>
<thead>
<tr>
<th>Output</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 .. 10 V (R_L ≥ 2 kΩ)</td>
<td>1</td>
<td>0</td>
<td>05</td>
<td>24D</td>
<td>R</td>
</tr>
<tr>
<td>± 5 V (R_L ≥ 2 kΩ)</td>
<td>5</td>
<td>0</td>
<td>06</td>
<td>24A</td>
<td>T</td>
</tr>
<tr>
<td>0 .. 20 mA (R_L ≤ 500 Ω)</td>
<td>0</td>
<td>0</td>
<td>06</td>
<td>115</td>
<td>–</td>
</tr>
<tr>
<td>4 .. 20 mA (R_L ≤ 500 Ω)</td>
<td>4</td>
<td>0</td>
<td>06</td>
<td>230</td>
<td>–</td>
</tr>
</tbody>
</table>

Measurement range
(e.g. 0 .. 100 Pa, -10 .. 40 mbar, 0 .. 200 mmHg etc.)

Margin of error

<table>
<thead>
<tr>
<th>Margin of error</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>± 0.5 % of max. value</td>
<td>05</td>
</tr>
<tr>
<td>± 1 % of max. value (standard)</td>
<td>1</td>
</tr>
</tbody>
</table>

Power supply

<table>
<thead>
<tr>
<th>Power supply</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 VDC, + 20 %/-15 %</td>
<td>24D</td>
</tr>
<tr>
<td>24 VAC, + 6 %/-15 % (50/60 Hz) (with galvanic separation)</td>
<td>24A</td>
</tr>
<tr>
<td>115 VAC, + 6 %/-15 % (50/60 Hz)</td>
<td>115</td>
</tr>
<tr>
<td>230 VAC, + 6 %/-15 % (50/60 Hz)</td>
<td>230</td>
</tr>
</tbody>
</table>

Contact points

<table>
<thead>
<tr>
<th>Contact points</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 relays with floating changeover contacts</td>
<td>R</td>
</tr>
<tr>
<td>2 transistors with open collector</td>
<td>T</td>
</tr>
</tbody>
</table>

Order code
A B C D E
REG 21 – – – – –

Can be pre-set on request:
Time constant, relay parameter, deactivation of the cyclic zeroing
MEASUREMENT OF DIFFERENTIAL PRESSURE

Measurement of differential pressure is useful in a broad range of applications. It is used in ventilation and air-conditioning technology but also in many areas of air handling process technology. The next pages show a number of these.

halstrup-walcher offers a wide range of products for stationary measurement of differential pressure:

<table>
<thead>
<tr>
<th>Product</th>
<th>PUC24</th>
<th>PUC28(K)</th>
<th>P26</th>
<th>P34</th>
<th>P29</th>
<th>PU / PI / PIZ</th>
<th>PS27</th>
<th>REG21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Details on</td>
<td>p. 14</td>
<td>p. 15</td>
<td>p. 16</td>
<td>p. 17</td>
<td>p. 18</td>
<td>p. 19</td>
<td>p. 20</td>
<td>p. 21</td>
</tr>
</tbody>
</table>

Application
Process monitoring for cleanrooms (Pa, °C, % rH), with stainless steel front
Process monitoring panel aluminium, anodised (optional: with calibration port) (Pa, °C, % rH)
High precision, freely scalable pressure transmitter for critical applications
Measuring transmitter with very small dimensions – ideal for the control cabinet
High precision, freely scalable pressure transmitter for natural gas
For standard applications. PIZ in two wire technology
A basic sensor for simple applications
Measurement and regulation of pressure

Housing installation
Installed in wall (panel) Mounted on a wall/top-hat rail Rack

Max. measurement range
± 250 Pa
± 100 kPa

Min. measurement range
± 100 Pa
± 10 Pa
± 250 Pa
± 50 Pa

Degree of measurement uncertainty (0.3 Pa margin of error for the reference)
± 0.5 % 1)
(standard)
± 0.2 % 1)
(optional)
± 0.5 % 1)
(standard)
± 0.2 % 1)
(optional)
± 0.5 % 1)
(standard)
± 0.2 % 1) (0.5 %)
± 0.5 % 1)
± 1 % 1)
± 2 % 1) (≥ 100 Pa)
or
± 3 % 1) (for 50 Pa)

Square-root (volume flow)
- - ✓ ✓ 3) ✓ - - -

Display ✓ ✓ optional - optional optional optional ✓

1) of max. value
2) for measurement ranges ≥ 250 Pa
3) optionally with stat. pressure sensor and temperature analogue output for compensation

ACCESSORIES

Certificates (see p. 42)
DÄkkS calibration certificate (German)
DÄkkS calibration certificate (English)
ISO factory calibration certificate

Order no.
9601.0003
9601.0004
9601.0002

User software

You can set the parameters for our instruments or monitor and record measurements using a PC via a USB or RS232 interface. These features are supported by our free user software. This also allows you to transfer your settings to other devices by saving and reusing them.

Our user software is compatible with the following pressure transmitters: PUC24, PUC28(K), P26, P34 and P29.

You can download the file here:
www.halstrup-walcher.de/en/software

Connecting components
Silicone tubing ID 5 mm, OD 9 mm, red (please state length required)
Silicone tubing ID 5 mm, OD 9 mm, blue (please state length required)
Norprene tubing (please state length required)
Y-piece for tubing

Order no.
9601.0160
9601.0161
9061.0132
9601.0171

Pressure ports
We can supply a wide range of customer-specific pressure ports, e.g. various cutting ring couplings or hose connectors.