Differential pressure transmitter in cleanroom-conform panel design
testo 6383

- Measurement of differential pressure; optional: humidity and temperature
- Flat housing allows flush surface integration in the cleanroom wall
- Ethernet, relay and analog outputs allow optimum integration into individual automation systems
- Self-monitoring of the transmitter and early warning function guarantee high system availability
- The P2A software for parameterization, adjustment and analysis saves time and costs in commissioning and maintenance
- Configurable alarm management with adjustable response delay and alarm acknowledgement

The differential pressure transmitter testo 6383 was developed specially for monitoring low differential pressures in the measuring range from 10 Pa to 10 hPa. In cleanroom technology, the maintenance of positive pressure prevents the entry of contaminated air in critical zones. Thanks to an optional internal or external probe from the probe series 6610, the additional recording of humidity and temperature with one instrument is also possible.

The testo 6383 is particularly outstanding thanks to the automatic zero-point adjustment which ensures high accuracy and long-term stability.

The integrated self-monitoring and early warning function also guarantees the operator high system availability.

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## Technical data

### Differential pressure

**Measuring range**
- 0 to 10 Pa
- 0 to 50 Pa
- 0 to 100 Pa
- 0 to 500 Pa
- 0 to 10 hPa

**Measurement uncertainty**
- ±0.3% of measurement range final value
- ±0.3 Pa

**Temperature drift**
- ±0.02% of measuring range per Kelvin deviation from nominal temperature 22 °C

**Zero point drift**
- ±0% (due to cyclic zero-point adjustment)

**Selectable units**
- Differential pressure in Pa, hPa, kPa, mbar, bar, mmH₂O, kg/cm², PSI, inch H₂O, inch H₂O₂, % Vol

**Sensor**
- Piezoresistive sensor

**Overload**
- Measuring range

### Humidity/temperature

**Probe**
- testo 6613
- testo 6614
- testo 6615
- testo 6617

**Parameters**
- Relative humidity (%RH)
- Temperature (°C or °F)
- Dewpoint (°Ctd or °Ftd)
- Humidity (g/kg or gr/lb)
- Mass density of water vapor (g/m³)
- Partial pressure of water vapor (gr/ft³, ppmV)
- Temperature wet bulb (°Cwb or °Fwb)
- Temperature dry bulb (°C or °F)
- Specific humidity (kJ/kg, kJ/m³)

**Meas. range**
- Humidity / trace humidity
- Temperature

**Measurement uncertainty**
- Relative humidity (±1.5 + 0.007 * MV) %RH
- Temperature (±0.007°C / ±0.01 °F)

**Dewpoint**
- ±15 °C / ±32.2 °F

**Temperature**
- ±0.15 °C / ±32.2 °F

### Analog outputs

**Quantity**
- Standard: 1
- with optional humidity probe: 3

**Output type**
- 0/4 to 20 mA (4-wire) (24 VAC/DC)
- 0 to 1/5 to 10 V (4-wire) (24 VAC/DC)

**Scaling**
- Differential pressure: scalable ±50% of measuring range final value; freely scalable within measuring range

**Meas. cycle**
- 1/sec

**Resolution**
- 12 bit

**Max. load**
- max. 500 Ω

### General technical data

**Material**
- Front plate stainless steel, housing plastic

**Dimensions**
- without humidity/temperature: 246 x 161 x 47 mm
- with humidity/temperature: 396 x 161 x 78 mm

**Weight**
- Version without humidity: 0.9 kg
- Version with integrated humidity probe: 1.35 kg
- Version with preparation for external humidity probe: 1.26 kg

**Display**
- 3-line LCD with multi-language operating menu

**Resolution**
- Differential pressure

**Humidity**
- 0.1 %RH

**Temperature**
- 0.01 °C / 0.01 °F

**Protection class**
- IP 65

**Miscellaneous**
- Connection nipple: Ø 6 mm --> suitable hoses 4 mm + 4.8 mm

### Operating conditions

**Operation temperature**
- -5 to +50 °C / +23 to +122 °F

**Storage temperature**
- -20 to +60 °C / -4 to +140 °F

**Process temperature**
- -20 to +65 °C / -4 to +128 °F
The determination of measurement uncertainty takes place according to GUM (Guide to the Expression of Uncertainty in Measurement):
For the determination of measurement uncertainty, the accuracy of the measuring instrument (hysteresis, linearity, reproducibility), the uncertainty contribution of the test site as well as the uncertainty of the adjustment site (works calibration are taken into account. For this purpose, the value of $k=2$ of the extension factor, which is usual in measurement technology is used as a basis, which corresponds to a trust level of 95%.
Measurement uncertainty differential pressure $\pm 0.5\%$ of measuring range final value $\pm 0.3$ Pa
# Options / Ordering example

The following options can be specified for the testo 6383:

<table>
<thead>
<tr>
<th>AXX</th>
<th>Measuring range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A01</td>
<td>0 to 10 Pa</td>
</tr>
<tr>
<td>A02</td>
<td>0 to 50 Pa</td>
</tr>
<tr>
<td>A03</td>
<td>0 to 100 Pa</td>
</tr>
<tr>
<td>A04</td>
<td>0 to 500 Pa</td>
</tr>
<tr>
<td>A05</td>
<td>0 to 10 kPa</td>
</tr>
<tr>
<td>A21</td>
<td>-10 to 10 Pa</td>
</tr>
<tr>
<td>A22</td>
<td>-50 to 50 Pa</td>
</tr>
<tr>
<td>A23</td>
<td>-100 to 100 Pa</td>
</tr>
<tr>
<td>A24</td>
<td>-500 to 500 Pa</td>
</tr>
<tr>
<td>A25</td>
<td>-10 to 10 kPa</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BXX</th>
<th>Analog display/supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>B01</td>
<td>0 to 1 V (4-wire, 24 VAC/DC)</td>
</tr>
<tr>
<td>B02</td>
<td>0 to 5 V (4-wire, 24 VAC/DC)</td>
</tr>
<tr>
<td>B04</td>
<td>0 to 10 V (4-wire, 24 VAC/DC)</td>
</tr>
<tr>
<td>B05</td>
<td>0 to 20 mA (4-wire, 24 VAC/DC)</td>
</tr>
<tr>
<td>B06</td>
<td>4 to 20 mA (4-wire, 24 VAC/DC)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CXX</th>
<th>Display / menu language</th>
</tr>
</thead>
<tbody>
<tr>
<td>C02</td>
<td>with display/English</td>
</tr>
<tr>
<td>C03</td>
<td>with display/German</td>
</tr>
<tr>
<td>C04</td>
<td>with display/French</td>
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<tr>
<td>C05</td>
<td>with display/Spanish</td>
</tr>
<tr>
<td>C06</td>
<td>with display/Italian</td>
</tr>
<tr>
<td>C07</td>
<td>with display/Japanese</td>
</tr>
<tr>
<td>C08</td>
<td>with display/Swedish</td>
</tr>
</tbody>
</table>

### GXX opt. Analog output for humidity probe connection (probe series testo 6610) units (pre-set)**

| G01 | %RH / min / max |
| G02 | °C/Min/Max       |
| G03 | °F/Min/Max       |
| G04 | °Ftd / min / max |
| G05 | g/kg / min / max |
| G06 | g/kg / min / max |
| G07 | g/m² / min / max |
| G08 | kg/m³ / min / max |
| G09 | g/lb / min / max |
| G10 | ppmV / min / max |
| G11 | °Cwb / min / max |
| G12 | °Fwb / min / max |
| G13 | kJ/kg / min / max |
| G14 | mbar / min / max |
| G15 | inch H₂O / min / max |
| G16 | °Ctm (mixture dewpoint for H₂O) |
| G17 | °Ftm (mixture dewpoint for H₂O) |
| G18 | % Vol             |

**only possible when D04 or D05 selected

### Ordering example

Order code for transmitter testo 6383 with the following options:

- Measuring range -10 to 10 Pa
- Analog output 4 to 20 mA (4-wire, 24 VAC/DC)
- German display
- preparation for external humidity/ temperature probe testo 6610
- with Ethernet module
- Differential pressure unit kg/cm² / min / max
- % Vol
- without relay
- Unit channel 3 g/m³ / min / max

0555 6383 A21 B06 C03 D05 E01 F09 G04 H00 I08

Subject to change without notice.

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