

**A6 6 Specifications**
**6.2 testo 6681 and probe series testo 6610**
**Basic versions:**

testo 6681 housing + probe from series 6610

**Measuring range:** Dependent on probe

Humidity: 0 %RH to 100 %RH  
 Trace humidity: -60 to +30 °C<sub>tpd</sub> (-76 to +86 °F<sub>tpd</sub>)  
 Temperatur: 6611: -20 to +70 °C (-4 to +158 °F)  
 6612: -30 to +150 °C (-22 to +302 °F)  
 6613: -40 to +180 °C (-40 to +356 °F)  
 6614: -40 to +180 °C (-40 to +356 °F)  
 6615: -40 to +120 °C (-40 to +248 °F)  
 6617: -40 to +180 °C (-40 to +356 °F)

**Additional alternative measurement parameters:**

Humidity measurement parameters:  
 °C<sub>td</sub>/°F<sub>td</sub>, °C<sub>tpd</sub>/°F<sub>tpd</sub>, g/m<sup>3</sup>/gr/ft<sup>3</sup>, g/kg/gr/lb, kJ/kg/BTU/lb, °C<sub>tw</sub>/°F<sub>tw</sub>, hPa, inch H<sub>2</sub>O, ppm vol%, %vol, °C<sub>m</sub> (H<sub>2</sub>O<sub>2</sub>)/°F<sub>m</sub> (H<sub>2</sub>O<sub>2</sub>)

**Operating temperature:** housing surroundings

without display: -40 to +70 °C (-40 to +158 °F)  
 with integrated relay: -40 to +60 °C  
 with display: 0 to +50 °C (-32 to +122 °F)  
 Process (probe): -40 to +180 °C (-40 to +356 °F)

**Signal output:**

Two analog output signals (standard), optionally three:  
 4 to 20 mA ± 0.03 mA (2-wire) not with relay and probes 6614/6615  
 0 to 20 mA ± 0.03 mA (4-wire)  
 4 to 20 mA ± 0.03 mA (4-wire)  
 0 to 1 V ± 1.5 mV (4-wire)  
 0 to 5 V ± 7.5 mV (4-wire)  
 0 to 10 V ± 15 mV (4-wire)

**Digital output:**

- Mini-DIN for the P2A software from Testo
- 4 relay outputs (opt.)- Profibus-DP (opt.)
- Ethernet (opt.)

**Optimum sensor protection with suitable filters**

- Stainless steel protective cap
- Wire mesh protective cap
- PTFE protective cap
- Open metal protective cap
- PTFE protective cap with drip hole
- Condensation protection
- H<sub>2</sub>O<sub>2</sub> filter

**Supply:**

- 2-wire (4 to 20 mA): 24 VDC ±10 %
- 4-wire (0 to 1 V / 0 to 5 V / 0 to 10 V / 0 to 20 mA / 4 to 20 mA): 20 to 30 VAC/VDC
- Current consumption: 200 mA

**Display functions:**

2-line LCD with information line (optional)  
 Humidity resolution: 0,1 %RH  
 Temperature resolution: 0.01 °C / 0.01 °F  
 Refresh-Rate: 1/s

**Basic measurement inaccuracy humidity:**

±1.0 %RH (0 to 90%) (testo 6614 only: 0 to 100%)/ ±1.4 %RH (90 to 100%) for testo 6611/12/13  
 ±1.2 %RH (0 to 90%)/ ±1.6 %RH (90 to 100%) for testo 6617

**Measurement inaccuracy pressure dewpoint for probe testo 6615:**

±1 K at 0° C<sub>tpd</sub>  
 ±2 K at -40° C<sub>tpd</sub>  
 ±4 K at -50° C<sub>tpd</sub>

**Measurement inaccuracy temperature:**

0.15 °C (at +25 °C)  
 0.27 °F (at +77 °F)

**Housing material:**

Metal

**Cable screw fitting:**

M 16 x 1.5 (2x) with inner diameter 4-8 mm  
 M 20 x 1.5 (2x) with inner diameter 6-12 mm

**Protection class:**

IP65

**Dimensions:**

122 x 162 x 77 mm  
 Probe see drawing

**Interesting accessories:**

- 1) Parameterization, adjustment and analysis software (P2A software incl.adapter cable USB to Mini-DIN) [Order no. 0554 6020]
- 2) testo 400, multifunction measuring instrument incl. measurement value store up to 500.000 readings, VAC module, battery, Li-celle and calibration protocol [Order no. 0563 4001]  
 Highly precise reference humidity/temperature probe incl. calibration certificate [Order no. 0636 9741]  
 Adjustment adapter (for 1-point adjustment with testo 400/650) [Order no. 0554 6022]
- 3) Extension and dajustment cable, 10m [Order no. 0554 6610]
- 4) Control and adjustment set for 2-point adjustment (11.3 % and 75.3 %RH) [Order no. 0554 0660]
- 5) Control and adjustment set for 1-point adjustment at 94.5 %RH [Order no. 0554 0662]
- 6) Mains unit (desktop), 90 to 264 VAC / 24 VDC (3 A) [Order no. 0554 1748]
- 7) ISO calibration certificate at 11.3 % and 75.3 %RH [Order no. 0520 0076]  
 DKD calibration certificate at 11.3 % and 75.3 %RH [Order no. 0520 0246]
- 8) Profibus intermediary layer [Order no. 0554 6686]
- 9) Ethernet intermediary layer [Order no. 0554 6656]
- 10) All plug connections

\* For more details on determining measurement uncertainty humidity according to GUM see page 20.