Humidity transmitter

testo 6621

Wall version with display

Duct version with display

%RH

°C

Highly accurate testo humidity sensor with long-term stability (±2.0% RH)

Optional 2-line LCD display

P2A software for parameterization, adjustment and analysis, saves time and costs in commissioning and maintenance

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Optimum calibration concept thanks to adjustment of the entire signal chain (1-point, 2-point and analog adjustment)

Adjustment without dismantling the transmitter

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2 analog outputs (humidity/temperature), option of 1 passive humidity and temperature analog output

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A broad variety of the testo 6621 transmitter is available. Depending on the application in a room or in a duct, the corresponding designs can be selected. A display is available as an option. You can choose between the housing colours grey and white. The testo 6621 is persuasive in technical terms thanks to the patented humidity sensors that guarantee the highest accuracy. The sensors and the analog outputs can be adjusted, analyzed and parameterized via the external interface using the P2A software.

The testo 6621 is a high-performance transmitter for a low price. It meets the increasing requirements in automated building services in terms of accuracy, reliability and safety and thereby saves energy costs.

Technical data

	testo 6621 – A01/A03 (wall version)	testo 6621 – A02 (duct version)
Parameters		
Humidity		
Meas. range	0 to 100% RH (>90% RH only briefly) (not for high humidity processes)	
Accuracy*	±2.0 %RH (0 to 90 %RH), ±4 %RH (90 to 100 %RH)	
Temperature dependency/coefficient	Temperature coefficient: 0.05%/K (gap of 25 °C/77 °F)	
Sensor	Testo humidity sensor	
Replaceability of sensor	Through Testo Service	Can be done by customer (s. below, Replacement sensors), subsequent 2-point adjustment required
Temperature		
Meas. range	0 to +60 °C (+32 to +140 °F)	-20 to +70 °C (-4 to +158 °F)
Accuracy	±0,5 °C / 0,9 °F	
Sensor	Active signal output: NTC Passive signal output: NI1000	

Inputs and outputs

Analog outputs

Number of channels	2 channels (humidity and temperature)
Output type	4 to 20 mA (2-wire) 0 to 1/5/10 V (4-wire)
Measuring rate	1/s
Accuracy of analog outputs	4 to 20 mA ±0,05 mA 0 to 1 V ±2,5 mV 0 to 5 V ±12,5 mV 0 to 10 V ±25 mV

Power

Voltage supply	20 to 30 V AC/DC	
Current consumption		
Output	Voltage supply [V]	Current consumption [mA]
2-wire current 4 to 20 mA	20	20
	24	20
	30	30
4-wire voltage 0 to 10V	24	7
	30	7
	20	20
	24	22
	30	28

	testo 6621 – A01/A03 (wall version)	testo 6621 – A02 (duct version)
General		
Housing		
Material / colour	ABS/ pure white (RAL 9010) or light grey	
Dimensions	81 x 81 x 26 mm	81 x 81 x 42 mm see drawing for probe
Weight	80 g / 90 g (A03)	160 g
Display		
Display	2-line LCD (optional)	
Resolution	Humidity: 0.1 %RH Temperature: 0.1 °C/°F	
Operation		
Parameterization	P2A software	
Assembly		
Cable screw connection	None (cable routed through rear wall opening or break-out opening on bottom)	1 x M16 x 1,5
Other features		
Protection class	IP30	IP65
EMC	According to EC directive 2004/108/EEC	
Interfaces	1x mini-DIN for connecting PC	
Reaction time	t90: < 15 s at 2 m/s; For calibration and adjustment, please note: The response time may be considerably higher in static air	
Scaling range	-50 to 100 °C / -58 to 212 °F, 0 to 100 %RH	

Operating conditions

Electronics temperature (housing) (with/without display)	0 to +60 °C/32 to +140 °F (A01/A03), With display: 0 to +50 °C/+32 to +122 °F; -20 to +70 °C/-4 to +158 °F (A02), With display: 0 to +50 °C/+32 to +122 °F
Storage temperature	-40 to +70 °C (-40 to +176 °F)
Measuring medium	Air in air-conditioning systems or air-conditioned rooms

* **The determination of the measurement uncertainty takes place according to GUM (Guide to the Expression of Uncertainty in Measurement):**
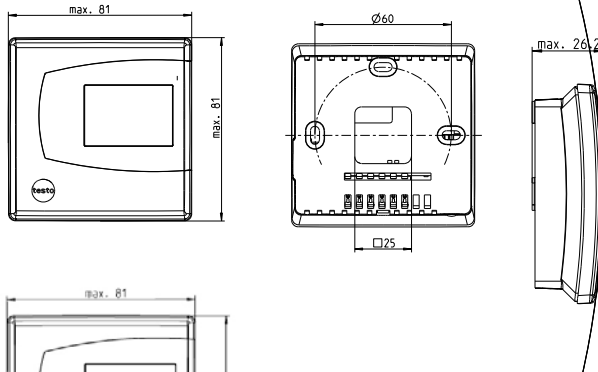In the determination, the accuracy of the measuring instrument (hysteresis, linearity, reproduceability), the uncertainty contribution of the test site as well as the uncertainty of the adjustment site/works calibration are taken into account. For this purpose, k=2 of the extension factor, the usual value in measurement technology, is used as a basis, corresponding to a trust level of 95%.
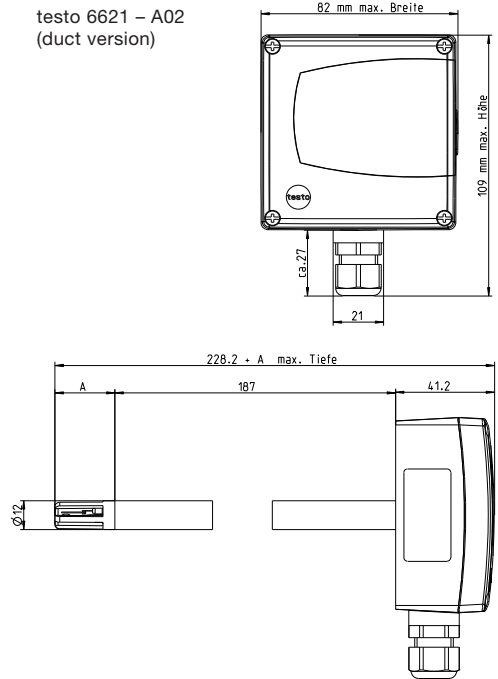
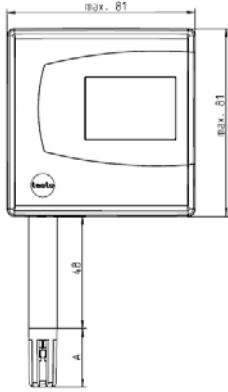# Technical drawings / Connection plan

Technical drawings

testo 6621 – A01
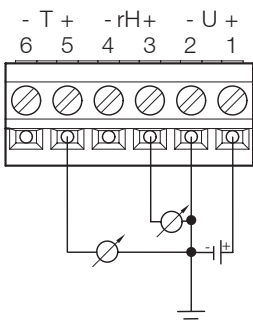(wall version)

testo 6621 – A02
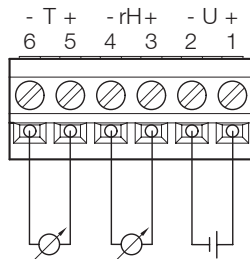(duct version)

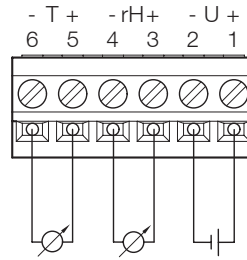testo 6621 – A03
(wall version)

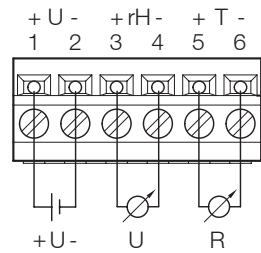## Connection plan

A01 Wiring, 3-wire
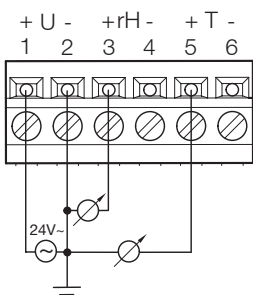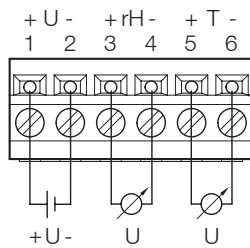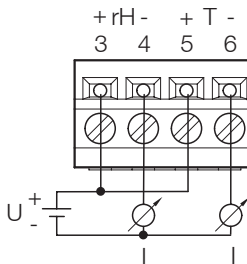

A01 Wiring, active/passive
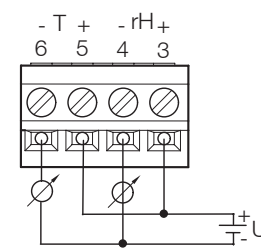

A01 Wiring

A02 Wiring

A02 Wiring, 3-wire

A02 Wiring, active/passive

A02 Wiring, active/passive

A03 Wiring

Be sure. **testo**

Options / Ordering example

The following options can be specified for the testo 6621:

AXX	Version
BXX	Analog output/supply
CXX	Display
FXX	Humidity parameter
GXX	Temperature variable
EXX	Housing colour
MXX	Protective filter

AXX Version

A01 Wall version (not with B01, B05)
A02 Duct version
A03 Wall version with external probes for 4 to 20 mA analog output (only with B01)

BXX Analog output/supply

2 analog outputs (humidity/temperature)
B01 4 to 20 mA (2-wire , 24 VDC)*
B02 0 to 1 V (4-wire, 24 VAC/DC)
B03 0 to 5 V (4-wire, 24 VAC/DC)
B04 0 to 10 V (4-wire, 24 VAC/DC)
Humidity: analog output temperature: passive, Ni1000
B05 4 to 20 mA (2-wire , 24 VDC)
B06 0 to 1 V (4-wire, 24 VAC/DC)
B07 0 to 5 V (4-wire, 24 VAC/DC)
B08 0 to 10 V (4-wire, 24 VAC/DC)

CXX Display

C00 without display
C01 with display

FXX Humidity parameter

F01 Relative humidity (%RH)

GXX Temperature variable only for B01 to B04

G02 Temperature (°C)
G03 Temperature (°F)

EXX Housing colour

E01 Housing colour light grey, incl. Testo logo (coloured)
E02 Neutral housing, white, without Testo logo
E03 Neutral housing, white, incl. Testo logo (black/white)

MXX Protective filter not for A01

M01 Sintered stainless steel filter
M02 Wire mesh protective cap
M03 Sintered PTFE filter
M04 Metal protective cap, open
M05 Plastic cap ABS (open)

Ordering example

Order code for testo 6621 transmitter with the following options:
- Duct version
- 0 to 5 V (4-wire, 24 V AC/DC) 2 analog outputs (humidity/temperature)
- Without display
- Relative humidity parameter (% RH)
- Temperature parameter (°C)
- Neutral housing, pure white, without testo logo
- Metal wire protection cap

  0555 6621 A02 B03 C00 F01 G02 E01 M02