

# Dewpoint guard to $-45\text{ }^{\circ}\text{C}_{\text{td}}$

## testo 6721

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Measurement of dewpoints in the measuring range  $-45$  to  $+30\text{ }^{\circ}\text{C}_{\text{td}}$

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2 switch outputs for monitoring limit values

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Long term stable and condensation-proof Testo humidity sensor (polymer sensor) guarantees highest process security

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

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Low-budget solution for monitoring refrigeration dryers

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Compact design allows easy integration into a refrigeration dryer or pneumatic machine

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$^{\circ}\text{C}_{\text{td}}$

The testo 6721 is a low-budget dewpoint guard with two switch contacts for controlling and monitoring refrigeration and adsorption dryers.

The continuous monitoring and control of compressed air dryers was up to now often not economically viable. The testo 6721 closes this gap. Whether integrated as a

component in the dryer or pneumatic machine, or installed by the customer: With this compact solution, you increase the efficiency of your dryer. At the same time, you avoid follow-on damage to systems and products caused by excessive humidity in the compressed air.

# Technical data

## Parameters

### Dewpoint/trace humidity

Units	$^{\circ}\text{C}_{\text{td}}$ / $^{\circ}\text{F}_{\text{td}}$
Meas. range	-30 to +30 $^{\circ}\text{C}_{\text{td}}$ (-22 to +86 $^{\circ}\text{F}_{\text{td}}$ ) -45 to +30 $^{\circ}\text{C}_{\text{td}}$ (-49 to +86 $^{\circ}\text{F}_{\text{td}}$ )
Measurement inaccuracy	$\pm 8 \text{ K} > -40 \text{ }^{\circ}\text{C}_{\text{td}}$ (-40 $^{\circ}\text{F}_{\text{td}}$ ) $\pm 4 \text{ K} > -30 \text{ }^{\circ}\text{C}_{\text{td}}$ (-22 $^{\circ}\text{F}_{\text{td}}$ ) $\pm 3 \text{ K} > -20 \text{ }^{\circ}\text{C}_{\text{td}}$ (-4 $^{\circ}\text{F}_{\text{td}}$ ) $\pm 2 \text{ K} > -10 \text{ }^{\circ}\text{C}_{\text{td}}$ (+14 $^{\circ}\text{F}_{\text{td}}$ ) $\pm 1 \text{ K} > 0 \text{ }^{\circ}\text{C}_{\text{td}}$ (32 $^{\circ}\text{F}_{\text{td}}$ )
Reaction time	$\leq 1 \text{ s}$
Sensor	Testo humidity sensor with special trace humidity adjustment (polymer sensor)
Sensor protection	Stainless steel sintered filter (12 mm)
<b>Temperature</b>	
Sensor	NTC

## Inputs and outputs

### Outputs

Switch outputs	2 x potential-free, switch voltage 24 VDC / VAC, switch current 0.5 A, optional wiring as NC contact or NO contact
Hysteresis and limit values	Free selection within measurement range through Order code, or set using P2A software
Measurement rate	1/s
Resolution switch output	0.1 $^{\circ}\text{C}_{\text{td}}$ or 0.1 $^{\circ}\text{F}_{\text{td}}$
<b>Further outputs</b>	
Digital	Mini DIN interface (serial) for parameterization/adjustment/analysis through P2A software
<b>Power</b>	
Voltage supply	24 VAC / VDC (20 to 30 VAC / VDC max.)

### Current consumption

Outputs	AC or DC	Supply voltage [V]	Current consumption [mA]
2-wire current 4 to 20mA	DC	20 / 24 / 30	20 / 20 / 20
4-wire voltage	DC	24 / 30 / 20	7 / 7 / 20
	AC	24 / 30	22 / 28

## General technical data

### Design

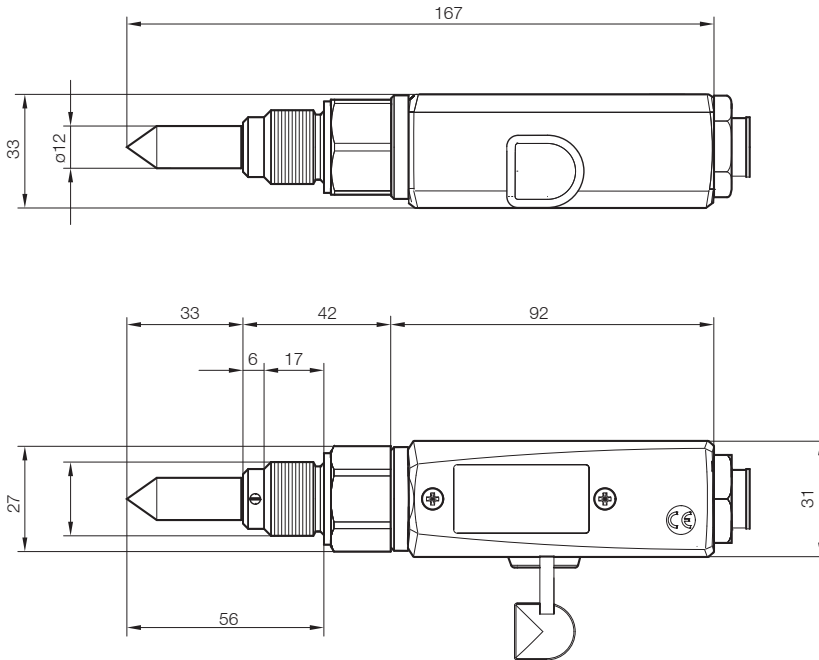
Material	Plastic PAA GF30
Dimensions	167 x 33 x 33 mm
Weight	240 g
<b>Installation</b>	
Thread / process connection	G $\frac{1}{2}$ thread (Order code A01) or NPT $\frac{1}{2}$ " thread (Order code A02)
<b>Other features</b>	
Protection class	IP65
EMC	In accordance with EU guideline 89/336/EEC

## Operating conditions

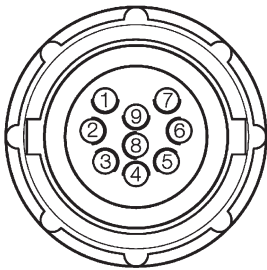
Operating temperature (housing)	0 to +50 $^{\circ}\text{C}$ (32 to +122 $^{\circ}\text{F}$ )
Storage temperature	-40 to +70 $^{\circ}\text{C}$ (-40 to +158 $^{\circ}\text{F}$ )
Measuring medium	Compressed air (filtered and dried, ISO 8573-classes 2-4-2)
Process pressure	max. 50 bar (abs.)

# Technical drawings / Connection plan

## Technical drawings

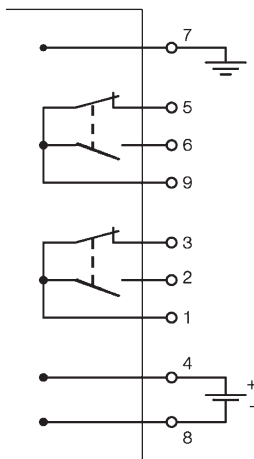


## Connection plan



### Pin allocation

- 1 Root switch contact 1
- 2 Closer switch contact 1
- 3 Opener switch contact 1
- 4 Supply +
- 5 Opener switch contact 2
- 6 Closer switch contact 2
- 7 Function earth
- 8 Supply -
- 9 Root switch contact 2



# Options / Ordering example

The following options can be specified for the testo 6721:

AXX Process connection  
 BXX Measuring range  
 FXX Unit dewpoint / min. max. limit value / hysteresis (pre-setting)

## AXX Process connection

A01 Process connection G $\frac{1}{2}$   
 A02 Process connection NPT  $\frac{1}{2}$ "

## BXX Measuring range

B01 Measuring range -30 ... +30 °C<sub>td</sub>  
 B02 Measuring range -45 ... +30 °C<sub>td</sub>

## FXX Unit dewpoint / min. max. limit value / hysteresis (pre-setting)

F01 Dewpoint °C<sub>td</sub> / LV 1 / LV2 / hysteresis  
 F02 Dewpoint °F<sub>td</sub> / LV 1 / LV2 / hysteresis

## Ordering example

Order code for testo 6721 with the following options:

- G $\frac{1}{2}$  thread
- Dewpoint in °C<sub>td</sub>
- Measuring range -30 °C<sub>td</sub>
- Lower limit value at 5 °C<sub>td</sub>
- Upper limit value at 14 °C<sub>td</sub>
- Hysteresis = 1 K

0555 6721 A01 B01 F01 5 14 1

**Limit values:** Without specification, default limit values are +5 °C<sub>td</sub> / +10 °C<sub>td</sub> at 1 Kelvin hysteresis (for unit °F: 45 °F<sub>td</sub> / 55 °F<sub>td</sub> / 2 °F hysteresis). They can be set to customer requirements with the help of the Order code, cf. Order example.