

Dewpoint transmitter to $-60\text{ }^{\circ}\text{C}_{\text{td}}$

testo 6740



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

%RH

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

Measurement of dewpoints in the range from $-60\text{ }^{\circ}\text{C}_{\text{td}}$ to $+30\text{ }^{\circ}\text{C}_{\text{td}}$

Testo polymer humidity sensor with high accuracy and long-term stability

Convenient operation via the display menu

Analog output 4 to 20 mA (2-wire) and optional alarm plug with 2 integrated switch outputs

Compact design with rotatable housing by 350° for optimum positioning of display

Display with operating menu (optional)

Trace humidity adjustment without reference measuring instrument possible on site with accessory (2-point adjustment device)

The testo 6740 was especially developed for trace humidity measurement in compressed or dry air (e. g. granulate dryers). Thanks to a special adjustment, optimum accuracy in the trace humidity range has been achieved.

For the display of the relevant trace humidity parameters, a freely scalable analog output is available, optionally with a switch contact plug for MAX monitoring. In addition to this, the testo 6740 stands out thanks to its compact and user-friendly design, such as the rotatability of the housing by 350° for the optimum positioning of the display.

Technical data

Measurement parameters

Dewpoint/trace humidity

Units	%RH, °C
Calculated parameters	°C _{td} , °F _{td} , °CtA, °FtA, ppmv, mg/m ³ , °F
Measuring range	-60 °C _{td} to +30 °C _{td} -80 °C _{tdA} to +15 °C _{tdA}
Measurement uncertainty	± 2 °C _{td}
Response time	t90 (<= 60 sec for change from 13.2 °C _{td} to -32.1 °C _{td} t90 (<= 17sec for change from -32.2 °C _{td} to 13 °C _{td})
Sensor	Polymer humidity sensor with protocolized trace humidity adjustment at -40 °C _{td} (-40 °F _{td})

Normed atmospheric dewpoint

Measuring range	-70 to -15 °C _{tdA} (-112 to -5 °F _{tdA}) (at 30 bar rel./ 435 psi) -54 to +10 °C _{tdA} (-94 to +50 °F _{tdA}) (at 3 bar rel./43.5 psi) -60 to +30 °C _{tdA} (-76 to +86 °F _{tdA}) (at 0 bar rel./0 psi)
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Temperature

Measuring range	0 to 50 °C (32 to +122 °F)
Measurement uncertainty	±0.5 °C (0 to 50 °C/32 to 122 °F)
Sensor	NTC

Inputs and outputs

Analog outputs

Current/accuracy	4 to 20 mA (2-wire) / ±40 µA
Measurement rate	2 s
Resolution	12 bit
load	12 V DC: max. 100 Ω, 24 V DC: max. 650 Ω, 30 V DC: 950 Ω
Scaling	Freely scalable via display buttons

Switch outputs (opt. alarm plug, 0554 3302)

Contacts	2 closer contacts, pot.-free, max. 30V/0.5A
Switch thresholds	Standard 6 °C _{td} /12 °C _{td} , freely programmable with display

Supply

Voltage supply	24 V DC (12 to 30 V DC permitted); with alarm plug (0554 3302) 20 to 28 V DC
Current consumption	21 mA (without alarm plug) 65 mA (with alarm plug)

General technical data

Design

Material/colour	Plastic, polyacrylamide
Dimensions	199.5 x 37 x 37 mm (with standard plug) 203.5 x 37 x 37 mm (with plug 0554 3302)
Weight	Approx. 300 g

Display

Display	High intensity 7-segment display	
Resolution	°C: 0.1 RH: 0.1 °C _{td} : 0.1 °F _{td} : 0.1 °CtA: 0.1 °FtA: 0.1	ppmv: 1 / 10 / 100 (dep. on meas. value) mg/m ³ : 1 / 10 / 100 (dep. on meas. value) °F: 0.1

Rotatability (display positioning)	350° around housing axis
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Installation

Thread / process connection	G½ thread or NPT½" thread
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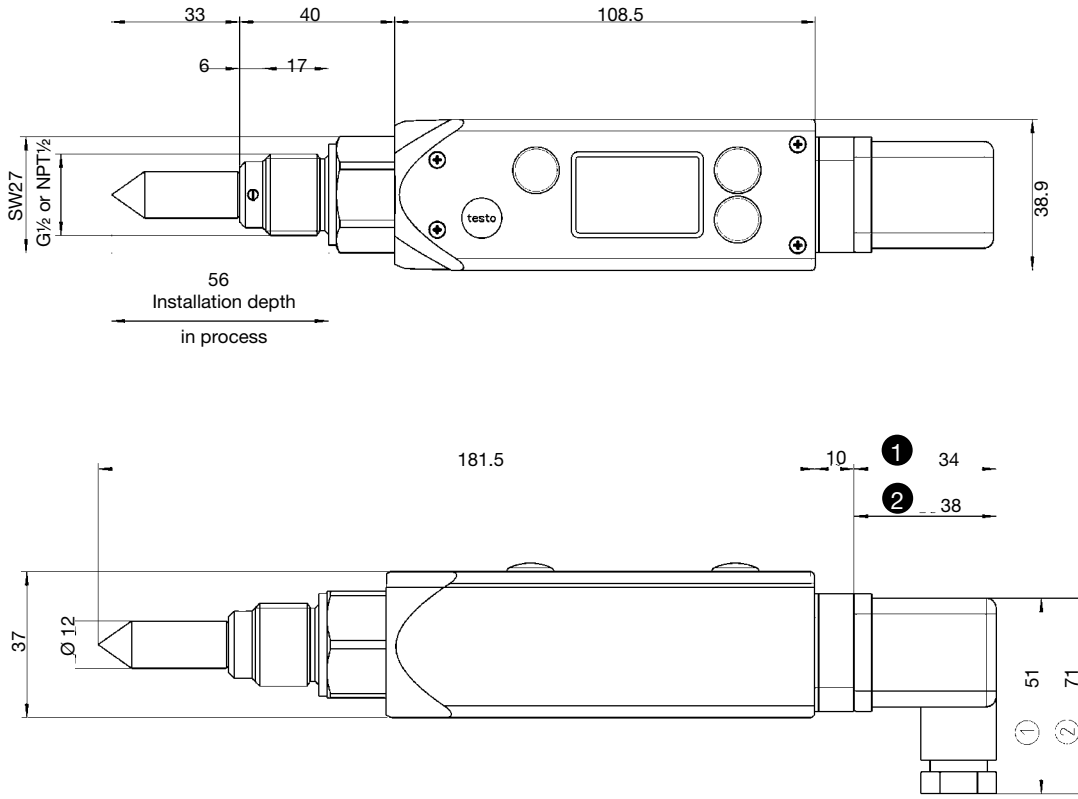
Miscellaneous

Protection class	IP65 (with plug attached and wire connected)
EMC	According to guideline 89/336 EEC

Operating conditions

Operating temperature (housing)	-20 to +70 °C (+4 to +158 °F)
Storage temperature	-40 to +80 °C (-40 to +176 °F)
Process pressure	max. 50 bar (725 psi)

Technical drawings

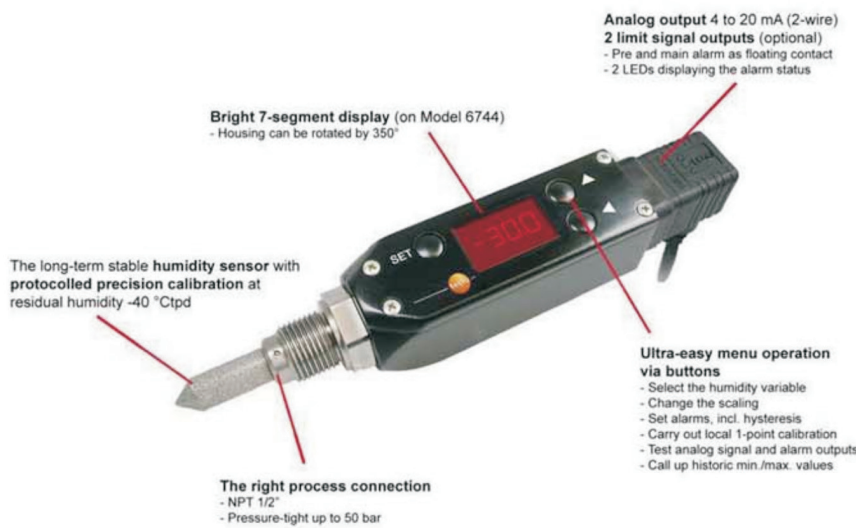
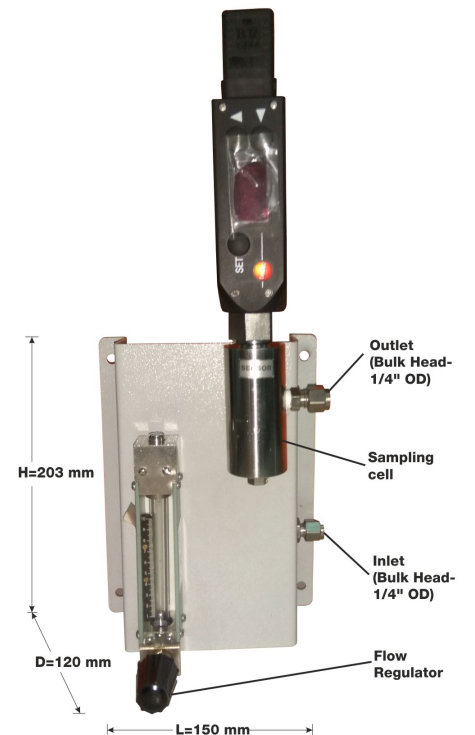


1 Standard connection plug (4 to 20 mA – 2-wire)

2 Switch contact plug: cable connection plug for supply/ analog output (4 to 20 mA – 2-wire)

Optional Sampling Panel

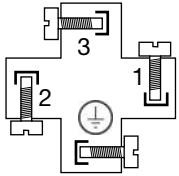
Part no. 540002 0040



Connection plan / Ordering example

Connection plan

With standard plug (included in delivery 0555 674x):

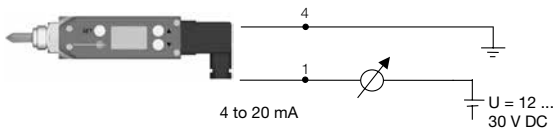


Pin plug terminals

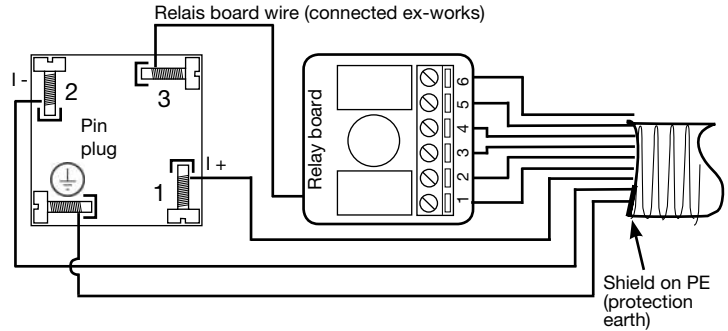
- 1: + (4 to 20 mA), Supply 12 to 30 VDC
- 2: - (4 to 20 mA)
- 3: Not used
- 4: Measurement earth (cable shield)

Standard plug

This version provides a 4 to 20 mA analog output in 2-wire technology.



With switch contact plug (0554 3302)



Pin plug terminals

- 1: **(A)** I + (4 to 20 mA)
- 2: **(B)** I - (4 to 20 mA)
- 3: (connected with relay board ex-works)
- ⊥: Connect shield

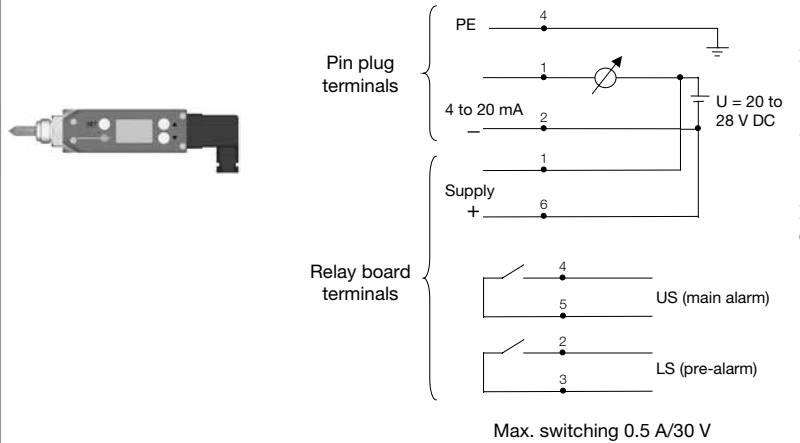
Relay board terminals

- 1: 20 to 28 V DC **(A)**
- 2: LS +
- 3: LS -
- 4: US +
- 5: US - **(B)**
- 6: 0 V DC

The supply connections must be galvanically connected, i. e. make connection **(A)-(A)** or **(B)-(B)**!

Switch contact plug (0554 3302)

4 to 20 mA, 2-wire as well as 2 potential-free switch contacts + 2 LED



Max. switching 0.5 A/30 V

Order data testo 6740

Part no.

Basic instrument (incl. plug for analog signal output)	
testo 6741, G½ thread, without display	0555 6741
testo 6742, NPT½ thread, without display	0555 6742
testo 6743, G½ thread, with display	0555 6743
testo 6744, NPT½" thread, with display	0555 6744
Sampling Panel (optional)	540002 0040

Subject to change without notice.

