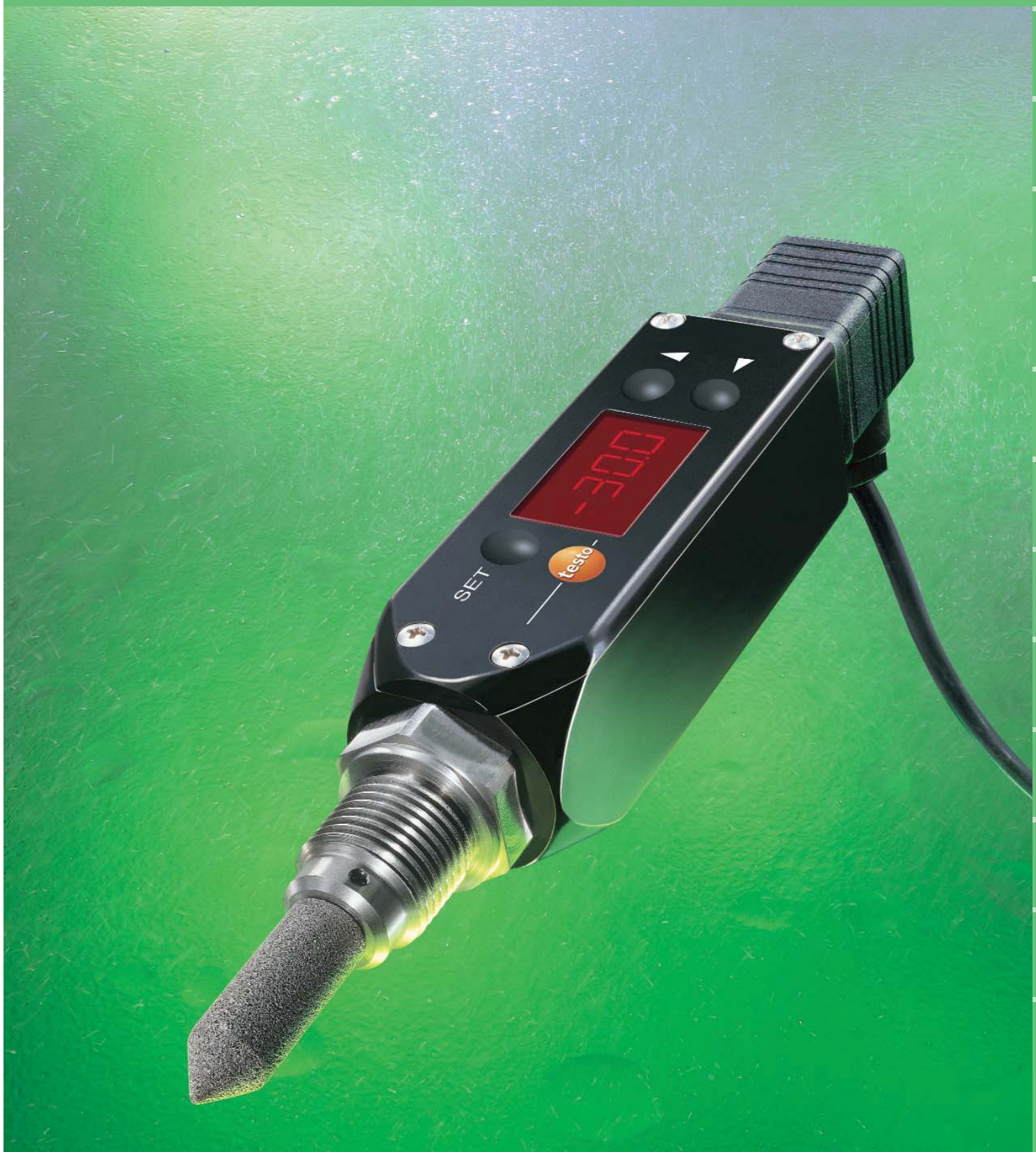
testo 6740

Reliable measurement of trace humidity

Pressure-tight up to 70 bar/1000 psi



°C tpd

°F tpd

°C td_{atm}

°F td_{atm}

%RH

ppm_{V}

mg/m^3

°C / °F

At a glance

testo 6740

- **Highly reliable**
  - Long-term stability, testo humidity sensor tried and tested 100,000 times over
  - Conservative statement of measurement range and accuracy data
  - Highest manufacturing quality

- **Convenient operation**
  - With display menu and buttons
  - Without display via the internal interface and software tool
  - Local 1 point adjustment

- **Calculation of the most important trace humidity variables**

- **Adjustment protocol (retraceable)**

Bright 7 segment display (optional)
- Can be rotated by 350°
- Flashes when main alarm is activated

The long-term stable testo humidity sensor with protocolled fine adjustment at trace humidity of -40 °Ctpd/6 bar

Easy menu operation via buttons
- Select different humidity variables
- Change the scale
- Set alarms incl. hysteresis
- Local 1 point adjustment
- Test analog signal
- Call up historic min/max values

The perfect process connection
- G $^1/_2$ or NPT $^1/_2$“
- Pressure-tight up to 70 bar/1000psi
- Optional with measurement chamber

Fit for your application

testo 6740

- Analog output 4 to 20 mA (2 wire)
- 2 limit signal outputs (optional)
  - Pre- and main alarm as potential-free contact
  - 2 LED, display of alarm status

Pressure dew point transmitter

- Monitor trace humidity in compressed air systems and gas networks.
- Control (compressed air) driers
- Monitor compressed air humidity in transportation
- Monitor humidity and temperature in medical compressed air

What is trace humidity ?

Air and gases are used in all areas of industry and in hospitals. Only low levels ("trace humidity") are tolerated, e.g. <-20 °Ctpd. The "pressure dew point" indicates, at the respective pressure, the dew point temperature above which the humidity contained condenses.

Why trace humidity measurement?

The picture below is an example of the damage which can occur if trace humidity is not monitored. At the same time, monitoring trace humidity reduces drying costs.

Why the capacitive testo humidity sensor on polymer basis?

Dew point mirrors are usually too impractical and too expensive. Al_2O_3 ceramic sensors are generally not resistant to condensation. Other capacitive polymer sensors do not show the long-term stability typical of testo.

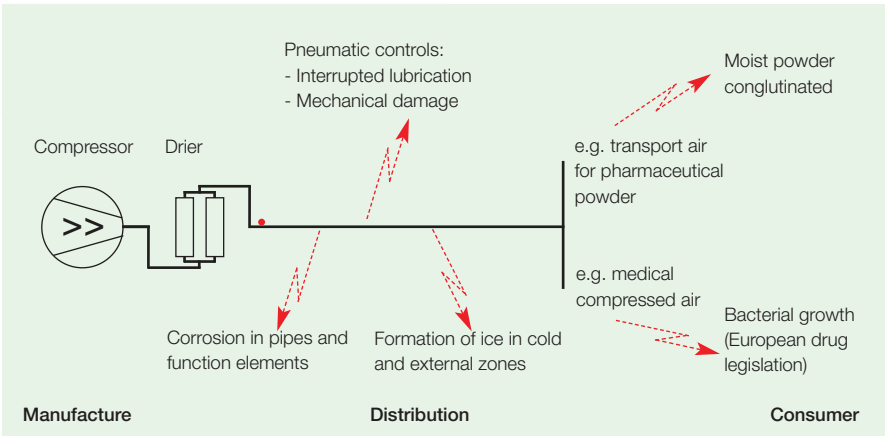
Industrial drying processes: dry air is a requirement for product quality

Compressed air systems: Monitor drier to avoid damage caused by humidity

Medical compressed air: Minimum trace humidity as hygiene requirement

Gas engineering: Humidity causes damage and reduces value of the gas in the system

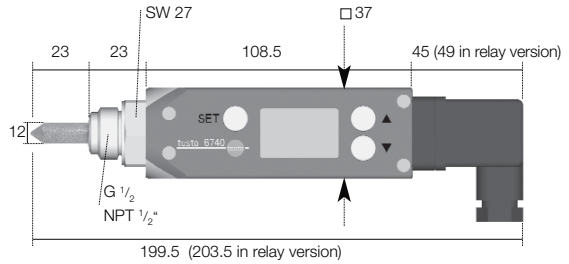
What happens when trace humidity is not monitored, e.g. in compressed air networks?



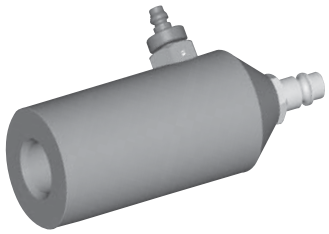
• Therefore testo 6740 for efficient trace humidity measurement

Technical data/Ordering data testo 6740

Dimensions of testo 6740



Measurement chamber



Cooling coil

Subject to change without notice

Technical data testo 6740

Housing	
Dimensions	199.5x37x37 (with analog output plug) 203.5x37x37 (with relay output plug)
Ambient temperature	-20 to 70 °C (measurement range 0 to 50 °C)
Storage temperature	-40 to 80 °C
Protection class	IP 65
Rotation	By 350° (to align display)
Sensor and sensor protection	
Humidity sensor	testo humidity sensor with protocolled trace humidity adjustment at -40° Ctpd/6 bar
Temperature sensor	NTC
Sensor protection	Stainless steel sintered cap
Measurement range	
Pressure dew point temperature	- 60 to +30 °Ctpd
Temperature	0 to 50 °C
Pressure resistance	- 1 bar relative to 70 bar absolute (1000 psi)
Measurement range of atmospheric dew point	- 80 to - 15 °Ctd (at 30 bar rel.) - 70 to + 10 °Ctd (at 3 bar rel.) - 60 to + 30 °Ctd (at 0 bar rel.)

Measurement inaccuracy	
Humidity	+/- 1 K from -10 to 30 °Ctpd +/- 3 K at -40 °Ctpd (at 25 °C)
Temperature	+/- 0.3 K (0 to 50 °C)
Analog output	
Signal	4 to 20 mA, two-wire
Scaling	Freely scalable via display/buttons Standard: 4 to 20 mA = -60 to +30 °Ctpd
Output variables	°Ctpd, °Ftpd, °Ctd, °Ftd, %rh, ppm_V, mg/m^3, °C, °F
Accuracy	+/- 40 µA
Power	
Voltage	24 VDC (10 to 30 VDC allowed)
Max. load	10 VDC: 100 Ohm, 30 VDC: 500 Ohm
Limit signal outputs (optional)	
Contacts	2 potential-free contacts, floating, max. 48V/1A
EMC	According to 89/336 EEC guideline

Ordering data testo 6740

	Part no.
Basic instrument (without plug for analog signal output)	
Process connection G 1/2, without display	0555 6741
Process connection NPT 1/2", without display	0555 6742
Process connection G 1/2, with display	0555 6743
Process connection NPT 1/2", with display	0555 6744
Accessories	
Cable connection plug for power/analog output 4 to 20 mA	0554 3301
Cable connection plug for power/analog output 4 to 20 mA, with 2 floating switch contacts and LED (limit signal output, alarm output)	0554 3302
Measurement chamber for optimum flow on humidity sensor	0554 3303
Cooling down path for process temperatures above 50 °C (up to 200 °C)	0554 3304
ISO calibration certificate/pressure dew point (-40° to 0° Ctpd at 6 bar)	0520 0116

Address

FLOWING
Yanet Montes de Oca González
Tel. 6830-0656
Cel. 55 3452-1792
Email: yanetm@flowingmexico.com

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