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Humidity/temperature measuring instrument

testo 635 – Measurement technology for humidity measurement

- Connection of 2 plug-in probes and 3 wireless probes
- Measurement of temperature, air humidity, material equilibrium moisture, pressure dewpoint, absolute pressure and U-value
- Display of dewpoint distance, min., max. and mean values
- Illuminated display
- Protection class IP 54
- Instrument store for 10000 measurement values (testo 635-2 only)
- PC software for archiving and documenting measurement data (testo 635-2)

°C

%RH

hPa

The testo 635 offers the possibility of testing and analyzing air humidity, material moisture, U-value and the dewpoint in compressed air systems.
In addition to measurement with classical probes, a wireless measurement over up to 20 m distance is also possible with the testo 635. This eliminates damage to the cable or difficulties in handling.The wireless probes are available for the measurement parameters temperature and humidity, up to three wireless probes can be recorded and displayed by the testo 635. The optional plug-in radio module can be retrofitted at any time.

The testo 635 stands out thanks to its intuitive operation and clear menu structure. For example, for measurements at different measurement sites, the testo 635-2 provides the advantage that the measurement values can be allocated to the respective measurement site. For long-term measurements and material moisture measurements, the instrument can be switched between different user profiles. The testo 635 is available in two versions. The version testo 635-2 has extended instument functions such as an instrument store, PC software, direct display of material humidity and the possibility of connecting a U-value probe

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Technical data

testo 635-1

testo 635-1 thermohygrometer incl. battery and calibration protocol

Part no. 0560 6351

testo 635-2

testo 635-2 humidity/temperature measuring instrument with measurement value store, PC software and USB-cable incl. battery and calibration protocol

Part no. 0563 6352

General technical data

Operating temperature	-20 to +50 °C
Storage temperature	-30 to +70 °C
Battery type	Alkali manganese, mignon, Type AA
Battery life	200 h
Dimensions	220 x 74 x 46 mm
Weight	428 g
Housing material	ABS/TPE/Metal

Common advantages

- Connection of 3 radio probes
- Measurement of air humidity, material equilibrium moisture and pressure dew point in compressed air systems
- Display of dew point difference, min, max and mean values
- Print data on Testo printer (optional)
- Backlit display
- Protection type IP 54

Advantage testo 635-1

- Cyclic printing of readings on testo printer, e.g. once per minute

Advantages testo 635-2

- Instrument store for 10000 readings
- PC software for filing and documenting measurement data
- Direct display of material moisture due to storable characteristics curves (Basis: material equilibrium moisture)
- U-value probe connection possible
- Storage of single measurements or measurement series by measurement site
- Quick access to the most important functions via user profiles

Sensor types

	Type K (NiCr-Ni)	NTC (humidity probe)	Testo humid. sensor, cap.	Absolute pressure probe
Measuring range	-200 to +1370 °C	-40 to +150 °C	0 to +100 %RH	0 to 2000 hPa
Accuracy ±1 digit	±0.3 °C (-60 to +60 °C) ±(0.2 °C + 0.5% of m.v.) (remaining range)	±0.2 °C (-25 to +74.9 °C) ±0.4 °C (-40 to -25.1 °C) ±0.4 °C (+75 to +99.9 °C) ±0.5% of m.v. (remaining range)	See probe data	See probe data
Resolution	0.1 °C	0.1 °C	0.1 %RH	0.1 hPa

Accessories

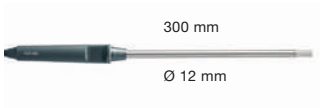
Transport and Protection	Part no.	
Service case for measuring instrument, probe and accessories, dimensions 454 x 319 x 135 mm	0516 1035	

Additional accessories and spare parts		
Control and adjustment set for Testo humidity probes, salt solution with 11.3% RH and 75.3% RH, incl. adapter for Testo humidity probes	0554 0660	
Sintered PTFE filter, Ø 12 mm, for corrosive media High humidity range (long-term measurements), high flow velocities.	0554 0756	
Stainless steel sintered filter, pore size 100 µm, probe protection in dusty atmospheres or higher flow velocities	0554 0641	
Cap for bore holes, for humidity probe Ø 12 mm Measures equilibrium moisture in bore holes	0554 2140	
Plug-in mains adapter, 5 VDC 500 mA with European adapter, 100-250 VAC, 50-60 Hz	0554 0447	
Lithium battery button cell, CR2032 AA batteries for radio handle	0515 5028	
Adhesive material for fixing and sealing	0554 0761	

Printer and Accessories		
Testo fast printer IrDA with wireless infrared interface; 1 roll thermal paper; 4 AA batteries	0554 0549	
Spare thermal paper for printer (6 rolls), permanent ink	0554 0568	

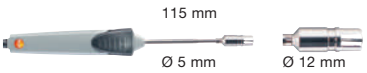
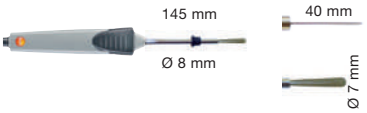
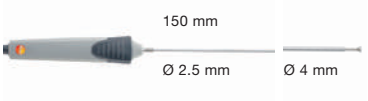
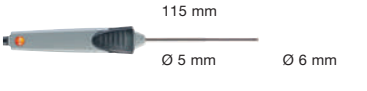
Calibration Certificates		
ISO calibration certificate humidity, Calibration points 11.3 %RH and 75.3 %RH at +25 °C	0520 0006	
ISO calibration certificate/temperature, meas. instr. with surface probe; calibration points +60°C; +120°C; +180°C	0520 0071	
ISO calibration certificate dewpoint, two adjustment points -10/-40 °Ctd at 6 bar	0520 0136	
ISO calibration certificate/humidity cal. points freely selectable from 5 to 95%RH at +15 to +35°C or at -18 to +80°C	0520 0106	
ISO calibration certificate/humidity, saturated saline solutions: calibration point 11.3%RH	0520 0013	
ISO calibration certificate/humidity, saturated saline solutions, calibration point 75.3%RH	0520 0083	
DAkkS calibration certificate/humidity, electronic hygrometers; calibration points 11.3%RH and 75.3%RH at +25°C	0520 0206	
ISO calibration certificate/U-value probe	0520 0481	
DAkkS calibration certificate/U-value probe	0520 0981	

Probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t_{99}	Part no.
Humidity probes					
Humidity/temperature probe	 Ø 12 mm	0 to +100 %RH -20 to +70 °C	±2 %RH at +25 °C (2 to 98 %RH) ±0.03 %RH/K (k=1) Long-term stability: ±1 %RH / year The probe accuracy corresponds to the system accuracy. ±0.3 °C		0636 9735
Robust humidity probe for meas. up to +125 °C, short-term up to +140 °C, Ø 12 mm, e.g. exhaust ducts, and for meas. of material equilibrium moisture, e.g. bulk goods	 300 mm Ø 12 mm	0 to +100 %RH -20 to +125 °C	±2 %RH at +25 °C (2 to 98 %RH) ±0.1 %RH/K (k=1) Long-term stability: ±1 %RH / year The probe accuracy corresponds to the system accuracy. ±0.2 °C		0636 2161
Thin humidity probe with built-in electronics, incl. 4 attachable PTFE protection caps for material moisture equilibrium measurement	 60 mm Ø 4 mm	0 to +100 %RH 0 to +40 °C	±2 %RH at +25 °C (2 to 98 %RH) ±0.15 %RH/K (k=1) Long-term stability: ±1 %RH / year The probe accuracy corresponds to the system accuracy. ±0.2 °C		0636 2135
Scatter field probe for fast and damage-free material moisture measurement, with probe cable 1.2 m		Woods: <50 % Building materials: <20 %			0636 6160
Pressure dewpoint probes					
Pressure dewpoint probe for measurements in compressed air systems, Fixed cable	 300 mm	0 to +100 %RH -20 to +50 °C tpd	±0.9 °C tpd (+5 to +50 °C tpd) ±1 °C tpd (0 to +4.9 °C tpd) ±2 °C tpd (-5 to -0.1 °C tpd) ±3 °C tpd (-10 to -5.1 °C tpd) ±4 °C tpd (-20 to -10.1 °C tpd)	300 s	0636 9835
Precision pressure dewpoint probe for measurements in compressed air systems, including certificate with test point -40 °C tpd, Fixed cable	 300 mm	0 to +100 %RH -40 to +50 °C tpd	±0.8 °C tpd (-4.9 to +50 °C tpd) ±1 °C tpd (-9.9 to -5 °C tpd) ±2 °C tpd (-19.9 to -10 °C tpd) ±3 °C tpd (-29.9 to -20 °C tpd) ±4 °C tpd (-40 to -30 °C tpd)	300 s	0636 9836
Air probes					
Robust air probe, T/C Type K, Fixed cable	 115 mm Ø 4 mm	-60 to +400 °C	Class 2 [1]	200 s	0602 1793

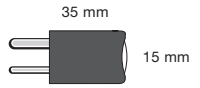
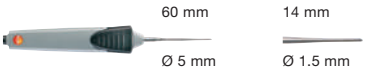
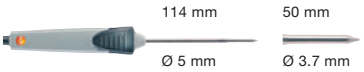
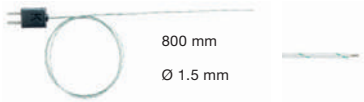
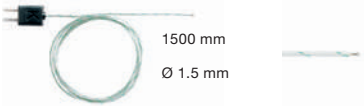
1) According to standard EN 60584-1, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), Class 2 to -40 to +1200 °C (Type K), Class 3 to -200 to +40 °C (Type K).

Probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t_{99}	Part no.
Surface probes					
Fast-action surface probe with sprung thermocouple strip, also for uneven surfaces, measurement range short-term to +500°C, TC Type K, Fixed cable		-60 to +300 °C	Class 2 [1]	3 s	0602 0393
Temperature probe to determine U-value, triple sensor system for measuring wall temperature, modelling clay included		-20 to +70 °C	Class 1 [1] U-value: ±0.1 ±2% of fsv*		0614 1635
		An additional probe for measuring outer temperatures is required when determining the U-value e.g. 0602 1793 or 0613 1002. *when used with an NTC or wireless humidity probe for measuring outside temperature and 20 K difference between the air inside and outside			
Fast-reaction paddle surface probe, for measurements in inaccessible places, e.g. narrow apertures and slots, TC Type K, Fixed cable		0 to +300 °C	Class 2 [1]	5 s	0602 0193
Fast-action surface probe with sprung thermocouple strip, bent, also for uneven surfaces, measurement range short-term to +500°C, TC Type K, Fixed cable 1.2 m		-60 to +300 °C	Class 2 [1]	3 s	0602 0993
Efficient, waterproof surface probe with small measurement head for flat surfaces, TC Type K, Fixed cable 1.2 m		-60 to +1000 °C	Class 1 [1]	20 s	0602 0693
Flat head surface probe with telescopic handle max. 680 mm for measurements at hard-to-access points, TC Type K, Fixed cable 1.6 m (correspondingly shorter when telescope extended)		-50 to +250 °C	Class 2 [1]	3 s	0602 2394
Magnetic probe, adhesive force approx. 20 N, with magnets, for measurements on metal surfaces, TC Type K, Fixed cable 1.6 m		-50 to +170 °C	Class 2 [1]	150 s	0602 4792
Magnetic probe, adhesive force approx. 10 N, with magnets, for higher temp., for measurements on metal surfaces, TC Type K, Fixed cable		-50 to +400 °C	Class 2 [1]		0602 4892
Waterproof surface probe with widened measurement tip for flat surfaces, T/C Type K, Fixed cable 1.2 m		-60 to +400 °C	Class 2 [1]	30 s	0602 1993

1) According to standard EN 60584-1, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), Class 2 to -40 to +1200 °C (Type K), Class 3 to -200 to +40 °C (Type K).

Probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t_{99}	Part no.
Surface probes					
Pipe wrap probe with velcro strip; for temperature measurement on pipes with diameter up to max. 120 mm; Tmax. +120 °C; TC Type K , Fixed cable		-50 to +120 °C	Class 1 [1]	90 s	0628 0020
Pipe wrap probe for pipe diameter 5 to 65 mm, with exchangeable measuring head. Meas. range short-term up to +280 °C, TC Type K, Fixed cable		-60 to +130 °C	Class 2 [1]	5 s	0602 4592
Spare meas. head for pipe wrap probe, TC Type K		-60 to +130 °C	Class 2 [1]	5 s	0602 0092
Clamp probe for measurements on pipes, pipe diameter 15 to 25 mm (max. 1“), meas. range short-term up to +130°C, TC Type K, Fixed cable		-50 to +100 °C	Class 2 [1]	5 s	0602 4692
Immers./penetr. probes					
Efficient and fast-action immersion probe, waterproof, TC Type K, Fixed cable 1.2 m		-60 to +1000 °C	Class 1 [1]	2 s	0602 0593
Fast-action, waterproof immersion/ penetration probe, TC Type K, Fixed cable 1.2 m		-60 to +800 °C	Class 1 [1]	3 s	0602 2693
Immersion tip, flexible, TC Type K		-200 to +1000 °C	Class 1 [1]	5 s	0602 5792
Waterproof immersion/penetration probe, TC Type K, Fixed cable 1.2 m		-60 to +400 °C	Class 2 [1]	7 s	0602 1293
Thermocouples					
Thermocouple with TC adapter, flexible, 800 mm long, fibre glass, TC Type K		-50 to +400 °C	Class 2 [1]	5 s	0602 0644
Thermocouple with TC adapter, flexible, length 1500 mm , fibreglass, TC Type K		-50 to +400 °C	Class 2 [1]	5 s	0602 0645
Thermocouple with TC adapter, flexible, 1500 mm long, PTFE, TC Type K		-50 to +250 °C	Class 2 [1]	5 s	0602 0646

1) According to standard EN 60584-1, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), Class 2 to -40 to +1200 °C (Type K), Class 3 to -200 to +40 °C (Type K).

Radio probes

Radio handles and probe head for air-/ immersion-penetration-meas.	Part no.
Radio handle for plug-in probe heads, incl. T/C adapter, approval for the countries: DE, FR, UK, BE, NL, ES, IT, SE, AT, DK, FI, HU, CZ, PL, GR, CH, PT, SI, MT, CY, SK, LU, EE, LT, IE, LV, NO; Radio freq. 869.85 MHz FSK	0554 0189
T/C probe head for air/immersion/penetration measurement (T/C Type K)	0602 0293
Radio handle for plug-in probe heads, incl. T/C adapter, approval for USA, CA, CL; Radio freq. 915.00 MHz FSK	0554 0191
T/C probe head for air/immersion/penetration measurement (T/C Type K)	0602 0293

Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	Resolution	t_{99}
	-50 to +350 °C Short-term to +500 °C	Radio handle: ±(0.5 °C +0.3% of m.v.) (-40 to +500 °C) ±(0.7 °C +0.5% of m.v.) (remaining range) T/C probe head: Class 2	0.1 °C (-50 to +199.9 °C) 1.0 °C (remaining range)	t_{99} (in water) 10 s

Radio handles and probe head for surface measurement	Part no.
Radio handle for plug-in probe heads, incl. T/C adapter, approval for the countries: DE, FR, UK, BE, NL, ES, IT, SE, AT, DK, FI, HU, CZ, PL, GR, CH, PT, SI, MT, CY, SK, LU, EE, LT, IE, LV, NO; Radio freq. 869.85 MHz FSK	0554 0189
T/C probe head for surface measurement (T/C Type K)	0602 0394
Radio handle for plug-in probe heads, incl. T/C adapter, approval for USA, CA, CL; Radio freq. 915.00 MHz FSK	0554 0191
T/C probe head for surface measurement (T/C Type K)	0602 0394

Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	Resolution	t_{99}
	-50 to +350 °C Short-term to +500 °C	Radio handle: ±(0.5 °C +0.3% of m.v.) (-40 to +500 °C) ±(0.7 °C +0.5% of m.v.) (remaining range) T/C probe head: Class 2	0.1 °C (-50 to +199.9 °C) 1.0 °C (remaining range)	5 s

Radio probes and humidity probe head	Part no.
Radio handle for plug-in probe heads, incl. T/C adapter, approval for the countries: DE, FR, UK, BE, NL, ES, IT, SE, AT, DK, FI, HU, CZ, PL, GR, CH, PT, SI, MT, CY, SK, LU, EE, LT, IE, LV, NO; Radio freq. 869.85 MHz FSK	0554 0189
Humidity probe head	0636 9736
Radio handle for plug-in probe heads, incl. T/C adapter, approval for USA, CA, CL; Radio freq. 915.00 MHz FSK	0554 0191
Humidity probe head	0636 9736

Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	Resolution
	0 to +100 %RH -20 to +70 °C	±2 %RH (+2 to +98 %RH) ±0.3 °C	0.1 %RH 0.1 °C

Radio handles for attachable T/C probes	Part no.
Radio handle for plug-in probe heads, incl. T/C adapter, approval for the countries: DE, FR, UK, BE, NL, ES, IT, SE, AT, DK, FI, HU, CZ, PL, GR, CH, PT, SI, MT, CY, SK, LU, EE, LT, IE, LV, NO ; Radio freq. 869.85 MHz FSK	0554 0189
Radio handle for plug-in probe heads, incl. T/C adapter, approval for USA, CA, CL; Radio freq. 915.00 MHz FSK	0554 0191

Illustration	Measuring range	Accuracy	Resolution
	-50 to +1000 °C	±(0.7 °C +0.3% of m.v.) (-40 to +900 °C) ±(0.9 °C +0.5% of m.v.) (remaining range)	0.1 °C (-50 to +199.9 °C) 1.0 °C (remaining range)

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Radio probes

Accessories Radio probes	Part no.	
Radio module for measuring instrument, 869.85 MHz, approval for the countries: DE, FR, UK, BE, NL, ES, IT, SE, AT, DK, FI, HU, CZ, PL, GR, CH, PT, SI, MT, CY, SK, LU, EE, LT, IE, LV, NO	0554 0188	
Radio module for measuring instrument, 915.00 MHz FSK, approval for USA, CA, CL	0554 0190	

Technical data Radio probes

Radio immersion/penetration probe, NTC

Battery type	2 x 3V button cell (CR 2032)
Battery life	150 h (meas. rate 0.5 s) 2 months (meas. rate 10 s)

Radio handle

Battery type	2 AAA micro batteries
Battery life	215 h (meas. rate 0.5 s) 6 months (meas. rate 10 s)

Common Technical Data

Measuring rate	0.5 s or 10 s, adjustable on handle
Radio coverage	Up to 20 m (without obstructions)
Radio transmission	Unidirectional
Operating temperature	-20 to +50 °C
Storage temperature	-40 to +70 °C
Protection class	IP54

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