



testo 6383

Differential pressure transmitter in cleanroom-conform panel design



SPECIFICATIONS

testo 6383




The differential pressure transmitter testo 6383 was developed specially for monitoring low differential pressures in the measuring range from 10 Pa to 10 hPa. In cleanroom technology, the maintenance of positive pressure prevents the entry of contaminated air in critical zones. Thanks to an optional internal or external probe from the probe series 6610, the additional recording of humidity and temperature with one instrument is also possible.

The testo 6383 is particularly outstanding thanks to the automatic zero-point adjustment which ensures high accuracy and long-term stability.

The integrated self-monitoring and early warning function also guarantees the operator high system availability.

Areas of application:

- Monitoring positive and negative pressure in cleanrooms, operating theatres and isolation rooms
- Optional monitoring of humidity and temperature in cleanrooms



SPECIFICATIONS

testo 6383

<ul style="list-style-type: none"> • Measurement of differential pressure; optional: humidity and temperature • Automatic zero-point adjustment guarantees high, temperature-independent accuracy and long-term stability • Low measurement range up to 10 Pa ensures highest precision at lowest pressures • Flat housing allows flush surface integration in the cleanroom wall • Display with multi-language operating menu and optical alarm display • Ethernet, relay and analog outputs allow optimum integration into individual automation systems • Self-monitoring of the transmitter and early warning function guarantee high system availability • The P2A software for parameterization, adjustment and analysis saves time and costs in commissioning and maintenance • Scalability of ± 50 percent of the measuring range final value and free scalability within the measuring range • Configurable alarm management with adjustable response delay and alarm acknowledgement 	<p>Areas of application:</p> <ul style="list-style-type: none"> • Monitoring positive and negative pressure in cleanrooms, operating theatres and isolation rooms • Optional monitoring of humidity and temperature in cleanrooms
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Technical data

Parameters			
Differential pressure			
Measuring range	0 to 10 Pa 0 to 50 Pa 0 to 100 Pa 0 to 500 Pa 0 to 10 hPa	-10 to +10 Pa -50 to +50 Pa -100 to +100 Pa -500 to +500 Pa -10 to +10 hPa	
Measurement uncertainty*	±0.3% of measurement range final value ±0.3 Pa Temperature gain drift: 0.02% of measuring range per Kelvin deviation from nominal temperature 22 °C Zero point drift: 0% (thanks to cyclic zero-point adjustment)		
Selectable units	Differential pressure in Pa, hPa, kPa, mbar, bar, mmH ₂ O, kg/cm ² , PSI, inch HG, inch H ₂ O		
Sensor	Piezoresistive sensor		
Autom. Zero-point adjustment	via magnetic valve Frequency adjustable: 15 sec, 30 sec, 1 min, 5 min, 10 min		
Overload	Measuring range	Overload	
	0 to 10 Pa	20000 Pa	
	0 to 50 Pa	20000 Pa	
	0 to 100 Pa	20000 Pa	
	0 to 500 Pa	20000 Pa	
	0 to 10 hPa	200 hPa	
	-10 to 10 Pa	20000 Pa	
	-50 to 50 Pa	20000 Pa	
	-100 to 100 Pa	20000 Pa	
	-500 to 500 Pa	20000 Pa	
	-10 to 10 hPa	200 hPa	

Inputs/outputs	
Analog outputs	
Quantity	Standard: 1; with optional humidity probe: 3
Output type	0/4 to 20 mA (4-wire) (24 VAC/DC) 0 to 1/5 to 10 V (4-wire) (24 VAC/DC)
Scaling	Differential pressure: scalable ±50% of measuring range final value; freely scalable within measuring range
Meas. cycle	1/sec
Resolution	12 bit
Max. load	max. 500 Ω
Other outputs	
Ethernet	Optional
Relay	Optional: 4 relays (free allocation to measurement channels or as collective alarm in operating menu/P2A), up to 250 VAC/3A (NO or NC)
Digital	Mini-DIN for P2A software
Supply	
Voltage supply	20 to 30 VAC/DC, 300 mA current consumption, galvanically separate signal and supply line

Parameters					
Humidity/temperature optional					
Probe	Integrated probe	testo 6613	testo 6614	testo 6615	testo 6617
Type	Channel	Duct heated	Cable trace humidity	Cable with cover electrode monitoring	
Parameters	%RH / °C/°F / °C _{td} / °F _{td} / g/kg / gr/lb / g/m ³ / gr/ft ³ / ppmV / °Cwb / °Fwb / kJ/kg / mbar / inch H ₂ O / °Ctm (H ₂ O) ₂ / °Ftm (H ₂ O) ₂ / % Vol				
Meas. range					
Humidity / trace humidity	0 to 100 %RH		-60 to +30 °C td	0 to 100 %RH	
Temperature	-20 to +70 °C -4 to +158 °F	-40 to +180 °C -40 to +356 °F	-40 to +120 °C -40 to +248 °F	-40 to +180 °C -40 to +356 °F	
Measurement uncertainty*					
Humidity	Integrated probe	testo 6613	testo 6614	testo 6615	testo 6617
	±(1,0 + 0,007 * MV) %RH for 0 to 90 %RH ±(1,4 + 0,007 * MV) %RH for 90 to 100 %RH		±(1,0 + 0,007 * MV) %RH for 0 to 100 %RH		±(1,2 + 0,007 * MV) %RH for 0 to 90 %RH ±(1,6 + 0,007 * MV) %RH for 90 to 100 %RH
	for deviations from media temp. ±25 °C: ±0.02 %RH/K				
Dewpoint				±1 K at 0 °C _{td} ±2 K at -40 °C _{td} ±4 K at -50 °C _{td}	
Temp. at +25 °C / +77 °F	±0.15 °C / 32.2 °F Pt1000 Class AA		±0.15 °C / 32.2 °F Pt100 Class AA	±0.15 °C / 32.2 °F Pt1000 Class AA	

General technical data		
Model		
Material	Front plate stainless steel, housing plastic	
Dimensions	without humidity/temperature: 246 x 161 x 47 mm with humidity/temperature: 396 x 161 x 78 mm	
Weight	Version without humidity: 0.9 kg; Version with integrated humidity probe: 1.35 kg; version with preparation for external humidity probe: 1.26 kg	
Display		
Display	optional: 3-line LCD with multi-language operating menu	
Resolution		
Differential pressure	Measuring range	Resolution
	0 to 10 Pa	0.1 Pa
	0 to 50 Pa	0.1 Pa
	0 to 100 Pa	0.1 Pa
	0 to 500 Pa	0.1 Pa
	0 to 10 hPa	0.01 hPa
	-10 to 10 Pa	0.1 Pa
	-50 to 50 Pa	0.1 Pa
	-100 to 100 Pa	0.1 Pa
	-500 to 500 Pa	0.1 Pa
	-10 to 10 hPa	0.01 hPa
Humidity	0.1 %RH	
Temperature	0.01 °C / 0.01 °F	
Miscellaneous		
Protection class	IP 65	
Connection nipple	Ø 6 mm --> suitable hoses 4 mm + 4.8 mm	
Operating conditions		
Mit / ohne	Operation temperature	-5 to +50 °C / +23 to +122 °F
Display	Storage temperature	-20 to +60 °C / -4 to +140 °F
	Process temperature	-20 to +65 °C / -4 to +149 °F

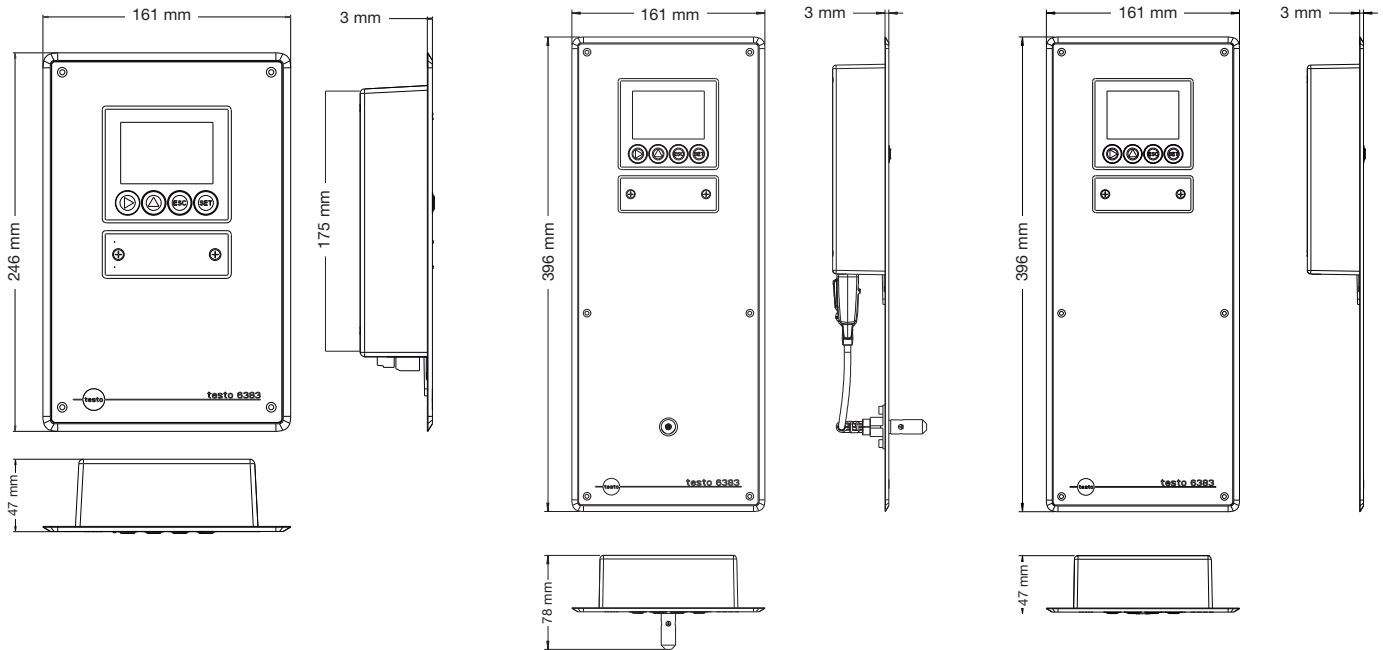
The determination of measurement uncertainty takes place according to GUM (Guide to the Expression of Uncertainty in Measurement):
For the determination of measurement uncertainty, the accuracy of the measuring instrument (hysteresis, linearity, reproducibility), the uncertainty contribution of the test site as well as the uncertainty of the adjustment site (works calibration are taken into account. For this purpose, the value of k=2 of the extension factor, which is usual in measurement technology is used as a basis, which corresponds to a trust level of 95%.
Measurement uncertainty differential pressure ±0.5% of measuring range final value ±0.3 Pa

Subject to change without notice.

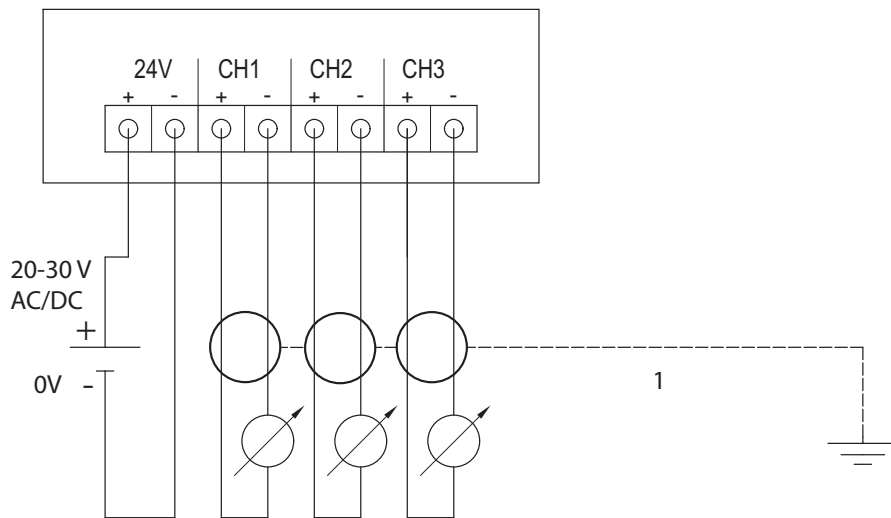


Differential pressure transmitter in cleanroom-conform panel design

Technical drawings



Connection plan





Differential pressure transmitter in cleanroom-conform panel design

The following options can be specified for the testo 6383:

AXX Measuring range	AXX Measuring range	GXX opt. Analog output for humidity probe connection (probe series testo 6610) units (pre-set)
BXX Analog display/supply	A01 0 to 10 Pa	G01 %RH / min / max
CXX Display / menu language	A02 0 to 50 Pa	G02 °C/Min/Max
DXX Integrated humidity probe	A03 0 to 100 Pa	G03 °F/Min/Max
EXX Ethernet	A04 0 to 500 Pa	G04 °Ctd / min / max
FXX Differential pressure unit (pre-set)	A05 0 to 10 hPa	G05 °Ftd / min / max
GXX opt. Analog output for humidity probe connection (probe series testo 6610) units (pre-set)	A21 -10 to 10 Pa	G06 g/kg / min / max
HXX Relay	A22 -50 to 50 Pa	G07 gr/lb /Min/Max
IXX Units channel 3 (pre-set, only if opt. humidity probe connection available)	A23 -100 to 100 Pa	G08 g/m ³ / min / max
	A24 -500 to 500 Pa	G09 gr/ft ³ / min / max
	A25 -10 to 10 hPa	G10 ppmV / min / max
		G11 °Cwb / min / max
	BXX Analog display / supply	G12 °Fwb / min / max
	B02 0 to 1 V (4-wire, 24 VAC/DC)	G13 kJ/kg / min / max (enthalpy)
	B03 0 to 5 V (4-wire, 24 VAC/DC)	G14 mbar / min / max (water vapour partial pressure)
	B04 0 to 10 V (4-wire, 24 VAC/DC)	G15 inch H ₂ O / min/ max (water vapour partial pressure)
	B05 0 to 20 mA (4-wire, 24 VAC/DC)	G16 °Ctm (mixture dewpoint for H ₂ O ₂)
	B06 4 to 20 mA (4-wire, 24 VAC/DC)	G17 °Ftm (mixture dewpoint for H ₂ O ₂)
		G18 % Vol
	CXX Display / menu language	HXX Relay
	C00 without display	H00 without relay
	C02 with display/English	H01 4 relay outputs, limit value monitoring
	C03 with display/German	H02 4 relay outputs, channel 1 limit values and collective alarm
	C04 with display/French	
	C05 with display/Spanish	
	C06 with display/Italian	
	C07 with display/Japanese	
	C08 with display/Swedish	
	DXX Integrated humidity probe	IXX Units channel 3 (pre-set, only if opt. humidity probe connection available)
	D00 no humidity/temperature probe	I01 % RH/Min/Max
	D04 humidity probe integrated in panel	I02 °C/Min/Max
	D05 preparation for external humidity/temperature probe testo 6610	I03 °F/Min/Max
		I04 °Ctd / min / max
	EXX Ethernet	I05 °Ftd / min / max
	E00 without Ethernet module	I06 g/kg / min / max
	E01 with Ethernet module	I07 gr/lb /Min/Max
		I08 g/m ³ / min / max
	FXX Differential pressure unit (pre-set)	I09 gr/ft ³ / min / max
	F01 Pa / min / max	I10 ppmV / min / max
	F02 hPa / min / max	I11 °Cwb / min / max
	F03 kPa / min / max	I12 °Fwb / min / max
	F04 mbar / min / max	I13 kJ/kg / min / max (enthalpy)
	F05 bar / min / max	I14 mbar / min / max (water vapour partial pressure)
	F06 mmH ₂ O / min / max	I15 inch H ₂ O / min/ max (water vapour partial pressure)
	F07 mmH ₂ O / min / max	I16 °Ctm (mixture dewpoint for H ₂ O ₂)
	F08 inch HG / min / max	I17 °Ftm (mixture dewpoint for H ₂ O ₂)
	F09 kg/cm ² / min / max	I18 % Vol
	F10 PSI / min / max	

Example:

Order code for transmitter testo 6383 with the following options:

- Measuring range -10 to 10 Pa
- Analog output 4 to 20 mA (4-wire, 24 VAC/DC)
- with German display
- preparation for external humidity/temperature probe testo 6610
- with Ethernet module
- Differential pressure unit kg/cm² / min / max
- opt. Analog output for °Ctd / min / max
- without relay
- Unit channel 3 g/m³ / min / max

Scaling: 50% of measuring range final value; freely selectable within measuring range

only possible when D04 or D05 selected

only possible when D04 or D05 selected

0555 6383 A21 B06 C03 D05 E01 F09 G04 H00 I08