

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:

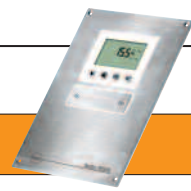
- Monitoring positive and negative pressure in cleanrooms, operating theatres and isolation rooms
- Optional monitoring of humidity and temperature in cleanrooms



SPECIFICATIONS

testo 6383

- 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



Differential pressure transmitter in cleanroom-conform panel design

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	

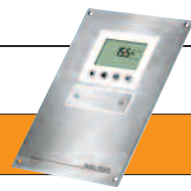
Parameters					
Humidity/temperature optional					
Probe	Integrated probe	testo 6613	testo 6614	testo 6615	testo 6617
Type	Channel	Duct heated	Cable trace humidity	Cable with cover electrode monitoring	
Parameters	%RH / °C/°F / °C _{td} / °F _{td} / g/kg / gr/lb / g/m ³ / gr/ft ³ / ppmV / °Cwb / °Fwb / 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 %RH for 0 to 90 %RH / ±1.4 %RH for 90 to 100 % RH		±1.0 %RH for 0 to 100 %RH		±1.2 %RH for 0 to 90 %RH / ±1.6 %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 1/3 Class B		±0.15 °C / 32.2 °F Pt100 1/3 Class B	±0.15 °C / 32.2 °F Pt1000 1/3 Class B	

Subject to change without notice.

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

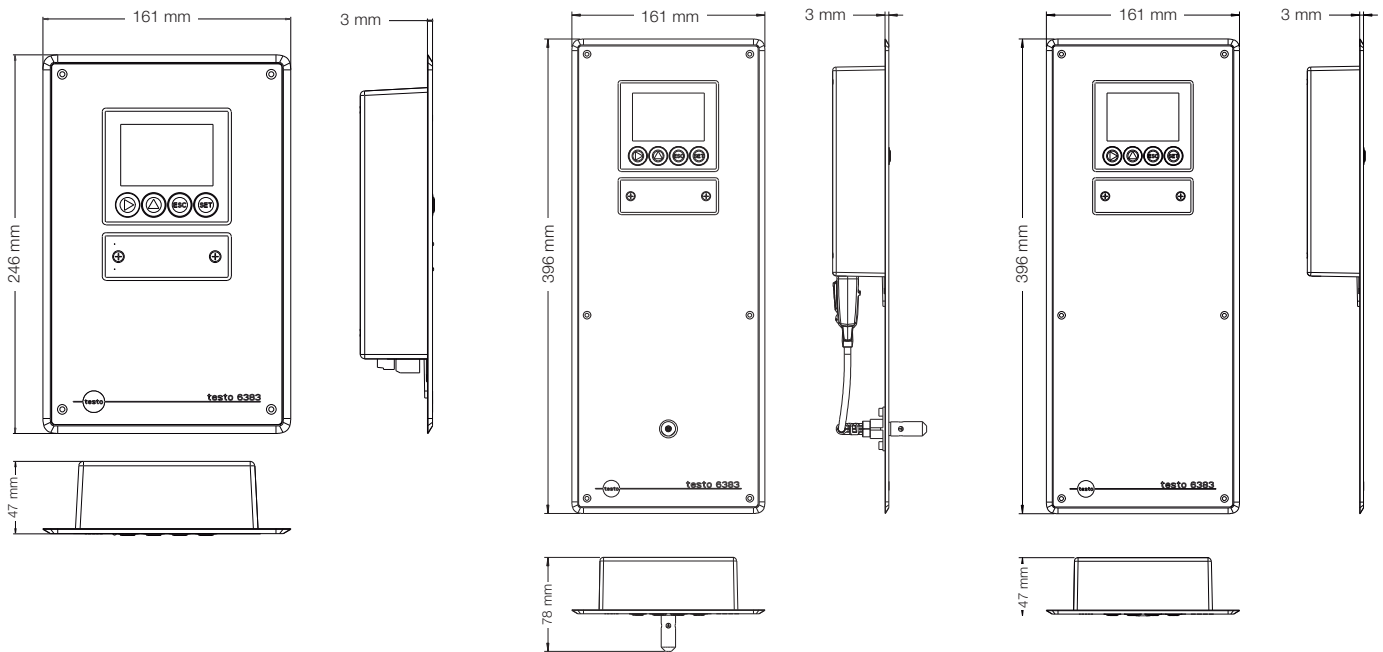
General technical data		
Model		
Material	Front plate stainless steel, housing plastic	
Dimensions	without humidity/temperature: 246 x 161 x 47 mm with humidity/temperature: 396 x 161 x 78 mm	
Weight	Version without humidity: 0.9 kg; Version with integrated humidity probe: 1.35 kg; version with preparation 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	
Operating conditions		
With / without Operation temperature display	-5 to +50 °C / +23 to +122 °F	
Storage temperature	-20 to +60 °C / -4 to +140 °F	
Process temperature	-20 to +65 °C / -4 to +149 °F	

* Measurement inaccuracy according to GUM. **For differential pressure:** 0.5% of measurement range final value ±0.3 Pa; **For humidity:** Additional humidity-dependent inaccuracy contribution +0.007 * MW (in %RH). **GUM (Guide to the Expression of Uncertainty in Measurement):** ISO guideline for the determination of measurement inaccuracy, in order to make measurements comparable worldwide. The following inaccuracies are used for the determination: hysteresis, linearity, reproducibility, long-term stability (only for differential pressure), adjustment site/factory calibration, test site.

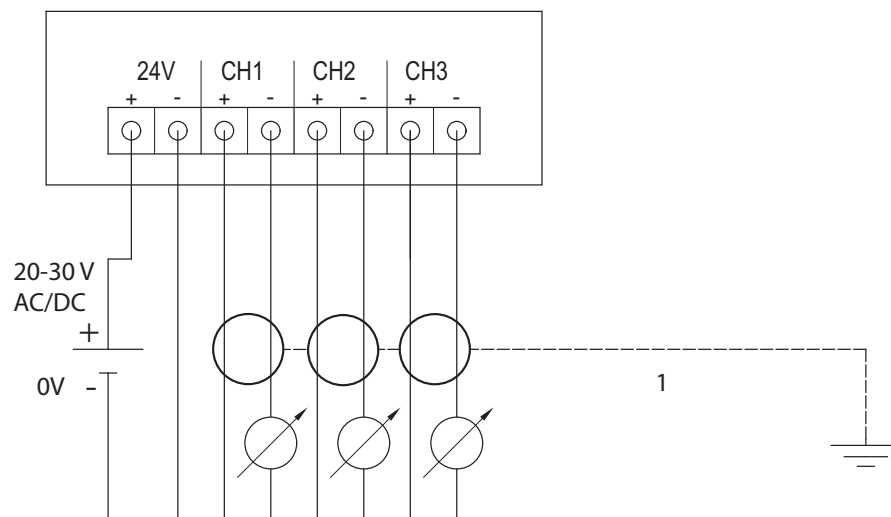


Differential pressure transmitter in cleanroom-conform panel design

Technical drawings



Connection plan



Subject to change without notice.

