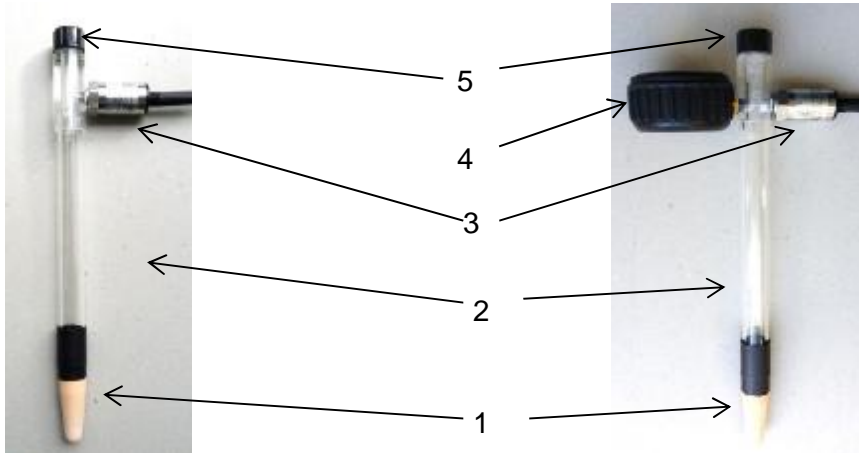


Supplementary Manual Tensiometer Model TX-E - ratiometric Version

Two Models: TX-E without Manometer / TX-E with Manometer



Components

1. Ceramic Tip with fine Pores
2. Transparent Shaft (in use filled with water)
3. Electronic Pressure Transducer with 3m Cable
4. Manometer with self-explanatory color coding (-1000 to 0 hPa) and protective Rubber cap
5. Screw cap

The electronic Pressure Transducer measures low Pressure between -1000 and 0 hPa

The optional Manometer measures low pressure in the range between -1000 to 0 hPa (= mbar). It is a device of accuracy class 1,6 i.e. max. deviation is $\pm 1,6$ % of the measured value.

Technical Data of the electronic Pressure Transducer:

Measurement Range:	-1000 to 0 hPa
Resolution:	1 hPa
Accuracy:	$\pm 1\%$
Measurement Principle:	relative – Measurement of low Pressure against Atmosphere
Temperature Compensation:	between -10 and 85°C
Protection:	IP67
Material:	Stainless Steel
Cable:	3m, open wire leads
Supply Voltage:	2.7 to 5,0 VDC
Power uptake:	typical 1,5mA
Signal:	10 to 90% of supply voltage, 3-wire
	Example 5.0 V supply: 4.50V = 0 hPa; 0.500V = -1000 hPa (4mV = 1 hPa)
	Example 2.7 V supply: 2.43V = 0 hPa; 0.270V = -1000 hPa (2.16mV = 1 hPa)
Wiring:	+ Power Supply = White
	- Power Supply = brown
	+ Signal = green
	Shield = green-yellow

Precautions

To avoid damages to the electronic Pressure Transducer, following points must be observed:

- Do never submerge the electronic Pressure Transducer completely in Water
- Never close the air-vent for relative measurement
- Air Vent Opening must always point downwards
- Air Vent Opening is protected by Gore-Tex Membrane – do not pierce or damage otherwise
- Never exceed the supply Voltage (between 2,7 and 5,0 VDC)

Picture of electronic Pressure Transducer from below:



Air Vent Opening:

- Never close this Opening
- Never submerge in Water
- Never pierce this Opening

To avoid damages to your Tensiometer, following points must be observed:

- The components of the Tensiometer must be protected from shocks (do not drop on the ground; do not beat the instrument with a hammer into the soil etc.)
- The Tensiometer may not be exposed to temperatures below 0° degrees Celsius as long as it is filled with water
- The Tensiometer ceramic mustn't come into touch with grease, oil or other substances which could close the pores

Field of application

The TX-E Tensiometer is intended for use with Data loggers and IoT data acquisition devices, which can read a Voltage-Signal and do provide a stabilized supply voltage