

FULL RANGE TENSIO METER FRT 15D

POLYMER TENSIO METER WITH A WIDE MEASURING RANGE AND SOIL TEMPERATURE

- Covers the entire water tension range relevant to plants up to 1500 kPa (pF 4.2)
- Direct measurement of tension as pressure, not as a derived quantity
- Additional measurement of soil temperature
- Low power consumption
- Reliable measurement even in challenging environments
- Fast response time
- Secure digital data transmission via RS485 with Modbus protocol
- No risk of drying out, no refilling required
- Virtually maintenance-free

APPLICATIONS

Ideal for remote measurement sites:

- No regular maintenance required
- Very low power consumption (<10 mA during operation)
- Secure data transmission even in environments with increased risk of electromagnetic interference and over long distances

ACCESSORIES

- FRT Transport sleeve (strongly recommended)
- Stainless steel pre-drill with a conical profile for easy installation of the tensiometer in the soil and for optimal soil contact with the ceramic
- Standpipe extension (customizable)
- Connection cable (Lengths can be customized)
- 4-pin connector on the connection cable
- Data logger / NB-IoT box



TECHNICAL DATA

PARAMETERS FRT 15D	SPECIFICATIONS
Dimension	Ø 25 mm, length 150 mm (possible extension up to 1000 mm)
Measuring tip	cylindrical
Measurement range tension	-100 ... +1500 kPa accuracy across the measurement range: ± 35 kPa, Temperature range during calibration: 4 ... 30 °C (at 100% water saturation)
Measurement range temperature	0 ... +40 °C accuracy $\pm 0.2\%$, resolution 0.01 °C between 0 and +40 °
Power consumption	6 mA in measurement mode; max. 10 mA
Supply voltage	5 ... 30 V
Output signal	RS485 (Modbus)
Operating temperature	+1 ... +40 °C (ambient soil temperature)
Possible pH value during operation	pH 5 ... pH 9
Cable length	5 m potted
Thread for standpipe extension	M22x1,5

PARAMETERS FOR FRT ACCESSORIES	SPECIFICATIONS
TRANSPORT SLEEVE	
Dimensions	Ø25 x 65 mm
Material	soft PVC
PRE-DRILL LARGE	
Drill groove	Ø 12 mm, length 500 mm
Diameter	Ø 25 mm solid bar
Length without / with impact head	580 mm / 630 mm (extension possible)
Reinforced impact head, screw-on shaft	Ø 40mm x 50mm
Material	special steel alloy
Steel handle with PVC grip	Ø 16 mm x 400 mm
PRE-DRILL SMALL	
Drill groove	Ø 12 mm, length 130 mm (extension possible)
Diameter	Ø 25 mm solid bar
Material	special steel alloy
Features	threaded connection for the handle or extensions