



Mini Tensiometer SKTM 600

The Mini Tensiometer is a small version of Skye's successful field tensiometer range. Tensiometers measure the water availability to plant roots, and so can be used in irrigation scheduling and crop management.

The Mini Tensiometer version is suitable for installing in plant pots, containers or grow bag systems. Its small size minimises intrusion and root disturbance.

Tensiometers are designed to be permanently installed in the growing medium, which they equilibrate with and measure the 'soil suction'. Plant roots need to exert a suction to remove water from the soil, it is this suction which is measured by the tensiometers.

The tensiometer itself consists of a shaft of clear acrylic plastic (length variable depending on depth of measurement required), with a porous ceramic bulb at the lower end. The top is sealed with a rubber stopper, and fitted with an electronic pressure transducer.

This shaft is totally filled with water before installation into the growing medium to be measured. The water is able to flow in or out of the tensiometer via the ceramic bulb, as the suction inside the instrument equilibrates with the soil suction. The suction (or negative pressure) is measured by the electronic pressure transducer fitted into the top.

The tensiometer pressure reading can be displayed and monitored using the HydroSense logging meter, or can be automatically recorded using a Skye DataHog datalogger. The DataHog system can also be used for switching on automatic irrigation systems if required.



Small design allows insertion into soil without damaging nearby plant roots

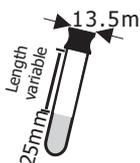
Ideal for irrigation management of glasshouse crops

Small design suitable for use in plant pots and grow bags

No correction factors for different soils or mediums

SKTM 600 SPECIFICATIONS

Shaft Dimensions



Shaft Construction: Porous ceramic bulb. Clear acrylic shaft lengths 10cm to 50cm with rubber septum stopper.

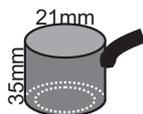
Cable Length: Screened cable, 3m standard. Longer if required.

Weight: 20-50g

Typical Output (1): 0-50mV D.C at 5 volts excitation.

Excitation Voltage (2): 5 to 10 Volts

Electronic Dimensions



Material Dupont 'Delrin'

Thermal error of span: Typ. <0.4% 0 to 50c

Null offset shift: Typ. <0.2mV 0 to 50c

Long-term stability: 0.1% per year typ.

Operating range: 0 to +70°C (precautions required for operation in below zero conditions)

Measurement range: 0-850 hPa (0-850 mbar) (minus shaft length - i.e. for 30cm shaft length the range is 0-820 hPa)

Senor excitation current: 1.25mA at 5 Volts

Linearity and hysteresis error: Typ. <0.1%

ORDERING INFORMATION

Sensor

SKTM 650 Series - Mini electronic tensiometer. Please state shaft length required.

SKTM 690 - Replacement ceramic bulb and shaft. Please state shaft length required.

Meters & Datalogger

SKT 660 - HydroSense logging meter

SDL5000 Series - DataHog datalogger

Recommend Accessories

TEN/5 Syringe and filling tube - recommended for filling and installing all tensiometers

NOTES ON SPECIFICATIONS

(1) The output is ratiometric for excitation voltage, but is usually calibrated at 5 volts. The transducer behaves as a 'bridge' type sensor and is suitable for connection to any meter or logger with differential inputs. DataHogs and the HydroSense are designed for these sensors

(2) Tensiometers require a stabilised power supply which is provided by the DataHog datalogger and HydroSense meter. Other dataloggers may not give a stabilised power supply. In this instance, an optional stabilised power supply may be supplied.