WATER & SOIL

Electronic Tensiometers

- Ideal for automatic soil moisture measurement
- Suitable for soil, peat and other mediums
- No correction factors needed for different soils or mediums
- Easy top up without removal from soil
- Robust, corrosion free design
- Compatible with most dataloggers including Skye's DataHog loggers and HydroSense meters

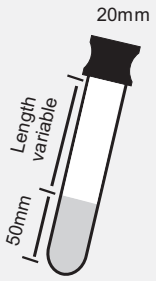
Skye automatic electronic tensiometers are precision made devices for measuring soil moisture pressure or water potential. They measure directly in HectoPascals (or mbar) the suction pressure required to utilise the water in the measured area, and hence the water available to the plant.

The head of the instrument, which houses the pressure transducer, is machined from acrylic and is fully sealed for outdoor use. The shaft, which is filled with water, is also of acrylic and again is fully sealed into the porous ceramic bulb which allows the transfer of water for the pressure to be measured. The shaft can be topped up, without disturbance of the soil, using a syringe and silicon tubing, via an aperture in the acrylic head, which is then sealed with an 'O' ring and screw.

These units can be left in situ and either connected to the Skye DataHog (or other datalogger) or the Skye HydroSense for continuous recording or instantaneous readings of soil moisture measurements.

Skye Instruments family of soil moisture measurement equipment, includes Mini Tensiometers, Analogue Dial Gauge Tensiometers and Septum Tensiometers. Please ask for separate datasheets for full specifications.

SPECIFICATIONS

Shaft dimensions	Operating range	Cable length	Measurement range	Output Details
	0 to 70°C (Precautions required for operation in below zero conditions)	3m standard (longer if required) screened cable	0 - 850 hPa (0 - 850mbar) (minus shaft length - ie. For 30cm shaft length the range is 0 - 820 hPa)	The tensiometer is fitted with a low pressure transducer stabilised for temperature and linearity. 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 voltage inputs. DataHogs and the HydroSense are designed for these sensors.

Excitation voltage	Sensor excitation Voltage	Typical output	Typical calibration Data	Linearity & hysterisis Error
1 to 15 volts DC	1.25mA at 5 volts	0-50mV D.C. At 5 volt excitation	1mV per 20 hPa at 5 volt excitation	Typically less than 0.4% to 50°C

Thermal error Of span	Null offset shift	Long-term stability
Typically less than 0.4% to 50°C	Typically less than 0.2mV to 50°C	0.1% per year typically

NOTES ON SPECIFICATIONS

(1) 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 can be built into the tensiometer

ORDERING INFORMATION

Tensiometers

SKT 600 Series	Electronic Tensiometers (lengths 20cm to 1metre) with 3 metres cable
SKT 600/I Series	Electronic Tensiometers with 3 metres cable and connector for DataHog or SpectroSense
/S	Stabilised power supply for electronic tensiometers

Loggers & Meters

SDL 5000 Series	DataHog loggers
SKT 660	HydroSense logging meter

Recommended Accessories

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

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