

E-sensors

E-sensors are electronic pressure sensors for tensiometers that continually record the negative pressure and, thus, the suction tension of the soil or substrate. The sensors require a power supply and are designed with an analogue current output (4 – 20mA) or analogue voltage output (0.3 – 3.0 VDC), depending on the application.

The pressure sensor is housed in a ventilated plastic enclosure with encapsulated electronics. The sensors are interference-proof according to CE and protected against polarity reversal. The electrical connection is made via an attached cable outlet. The advantage of the E-sensors is their compact form and low weight.

In the application, the E-sensors are connected to digital units such as data loggers, switching gear with analogue unit, PLC (TensioController), or wireless units.

The electronic tensiometers always consist of an E-sensor and the tensiometer base component, which depends on the desired size or insertion depth. The sensor alone only shows the measured value for the zero point without the suction tension. After the E-sensor is screwed onto a prepared tensiometer base and inserted into the soil, the suction tension is then transmitted to a higher-level evaluation system by means of an analogue measuring signal.

The continually acquired measurement data can be used to determine a humidity curve. The humidity curve can then provide information about the water available for the plants. It can be used to optimize and monitor the irrigation settings.

TECHNICAL SPECIFICATIONS:	
Power supply:	ES-A: 17 to 24 V ES-V: 4 to 15 V ES-3V: 3.3 V
Accuracy:	± 1.5%
Connection:	5 metre attached cable
Cable:	ES-V: 3 x 0.14 mm² ES-A: 2 x 0.14 mm²
Connection Tensio:	Screw cap GL14
Dimensions:	26 x 70 mm
Weight without cable:	20 to 25 g



	Type ES-A	Type ES-V	Type ES-3V
Measurement range			
0 to 500 hPa	501604500	501606500	501608500
0 to 1000 hPa	5016041000	5016061000	5016081000