Tensiometer Transducer

TRANSDUCER SPECIFICATIONS

Range: 0–100 kPa

Signal:

0 kPa = 0 +/- 3 mV and

100 kPa = 100 +/- 3 mV

Temperature shift: temperature compensated in the range 0–50˚C—typical shift 0.5% full scale.

Voltage output: transducer has a 4 wire output signal. Data transfer for 30+ meters.

Resolution: 0.1 kPa

Accuracy: ±1.0% span

Power Requirements:

Power Supply: 10.0 V DC, stabilised

Current consumption: 1.3 mA @ 10.0 V

Cable:

A one meter cable is standard.

Transducer Thread:

¼ inch NPT suitable for Soilmoisture Equipment Corp. Tensiometers.

Measuring Principle

The soil water tension is transmitted via the ceramic cup into the tensiometer. The vacuum inside the tensiometer is measured by a pressure transducer, which gives a continuous analogue output signal.

Resolution and Accuracy

A resolution of 0.1 kPa (0.97 mbar) can be attained for the 5302 Tensiometer Transducer. The accuracy actually obtained is related to the calibration and resolution of the AD converter.

In field applications the values obtained should consider the shaft/cup length of the tensiometer: 1 cm = 0.1 kPa.

Transducer 5302 connection

V+ **Red**

S+ **Yellow**

G **Green**

S- **White**

Red: +10 V power supply
Yellow: Signal output "+"
Pressure change from 0–100 kPa
Output from 0–100 mV
Green: Battery ground
White: Signal output "-"

Ordering Information

5302 Transducer with ¼ inch NPT thread, 1 m cable

Note:

Customers requiring cable lengths greater than 1 m are requested to source cable locally. Standard 4 wire cable is required.

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