TRANSDUCER SPECIFICATIONS

Range: 0 to –7 kPa

Signal:

At input 10.0 V output signal is:

0 kPa = 0 +/- 1.5 mV and

-7 kPa = -20 +/- 1.5 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.

Resolution:

0.1 kPa = 1 cm H_2O

Accuracy: ±1.0% span

Power Requirements:

Power Supply:

10.0 V DC typical,

16.0 V maximum

stabilised

Current consumption:

1.3 mA @ 10.0 V

Cable:

A one meter cable is standard.

Transducer Thread:

¼ inch NPT suitable for Tensiometers such as Soilmoisture Equipment Corp.

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DocRef: Ver1.3

Tensiometer Transducer

GT3-1 0 to –7 kPa

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 (1 cm H_2O) can be attained for the GT3 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 GT3-1 connection

V+ **Red**

S+ **Yellow**

G **Black**

S- **Blue**

Red: +10 V power supply
Yellow: Signal output "+"
Pressure change from 0–7 kPa
Output from 0–20 mV
Black: Battery ground
Blue: Signal output "-"

Do not connect signal output "-" to battery ground

Ordering Information

GT3-1 Transducer with ¼ inch NPT thread, 1 m cable

Note:

- Customers requiring cable lengths greater than 1m are requested to source cable locally. Standard 4 wire cable is required.
- It is not recommended to locate transducer more than 10m from data logger. The analogue output of 0 to -20 mV is subject to voltage drop.
- A very stable reference voltage such as 5V or 10V DC is necessary as output voltage is ratiometric to input voltage.