Tensiometer Datasheet
Model PRGEN-TEN

SMARTREK Datasheet TENSIOMETER

Why use the tensiometer A-Link

The A-Link tensiometer is used to obtain live insights into the available water for plants, helping growers to optimize irrigation for maximum crop yield while conserving water and energy. When combined with the Smartrek web applications, it will:

- Improve efficiency and increase crop yields
- Eliminate guesswork from irrigation and simplify irrigation management.
- An easy-to-use online dashboard that enables you to create reports and set automated alarms.

Figure 1: Tensiometer A-Link

Applications

- Smart irrigation

Features

- High-precision transducer
- Built-in barometer compensation
- Absolute transducer
- No venting cable, and no venting at the transducer.
- Robust design for harsh environments

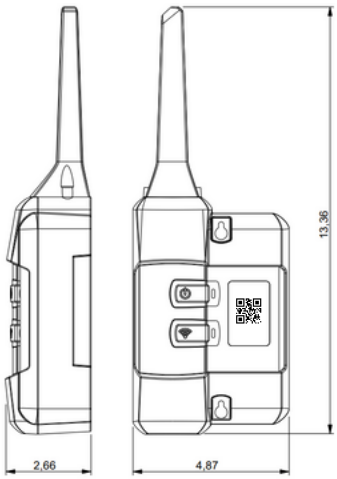
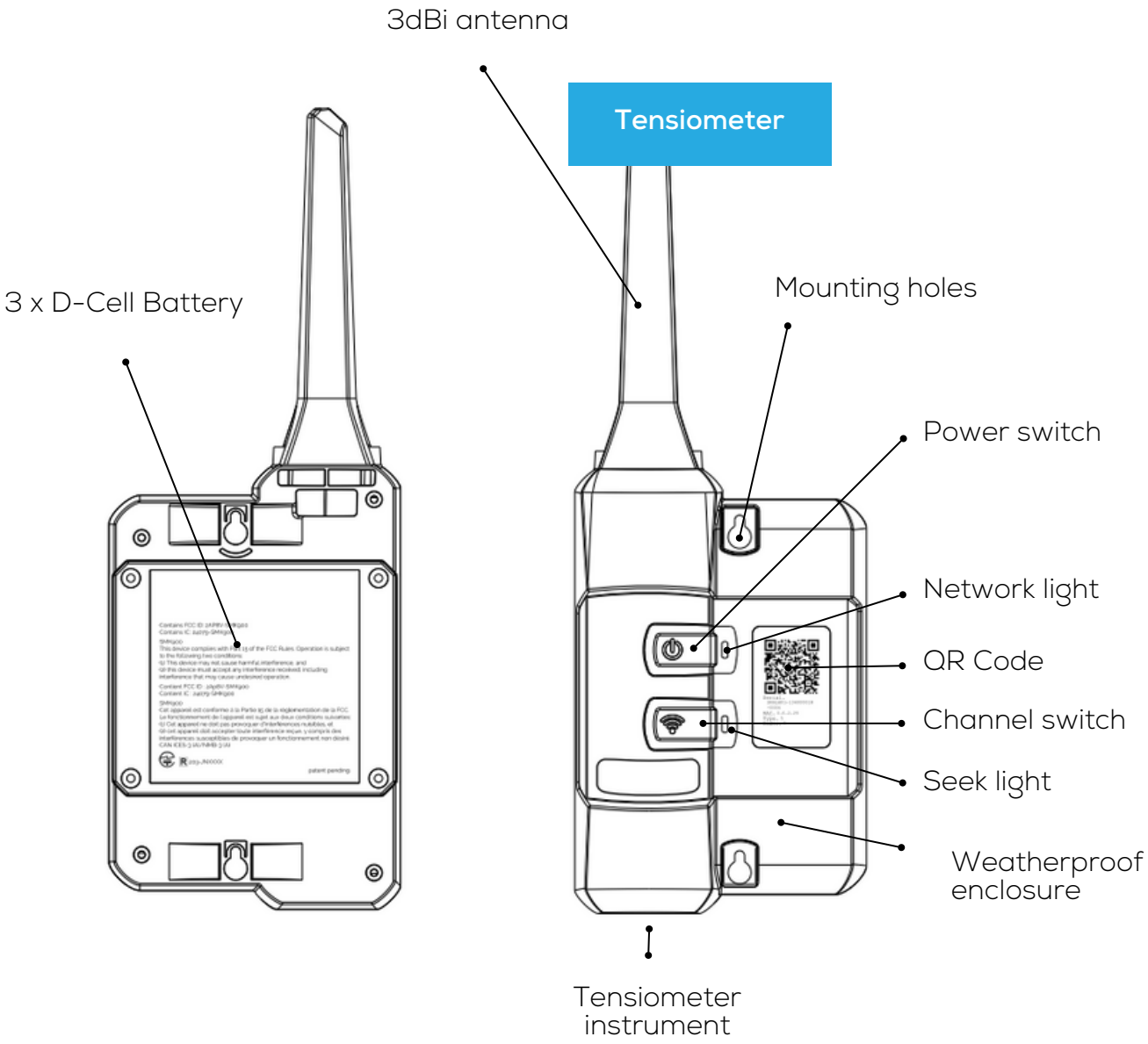


Figure 2: Technical drawing


3dBi antenna
Tensiometer
3 x D-Cell Battery
Mounting holes
Power switch
Network light
QR Code
Channel switch
Seek light
Weatherproof enclosure
Tensiometer instrument

General specifications

Specifications	Performance
Frequency Band	North America: 902-928MHz Europe, Australia/ NZ: 860MHz Japan: 925MHz
Wireless technology	SpiderMesh
Encryption	AES-128
Range	Up to 10km/7Miles (LOS*) 500m average (NOLS**) 300m (decidious forest)
Max hop count	30 (total range is 30x node-to-node range)
Max number of A-Link on network	Unlimited

*LOS: line of sight **NLOS: near line of sight

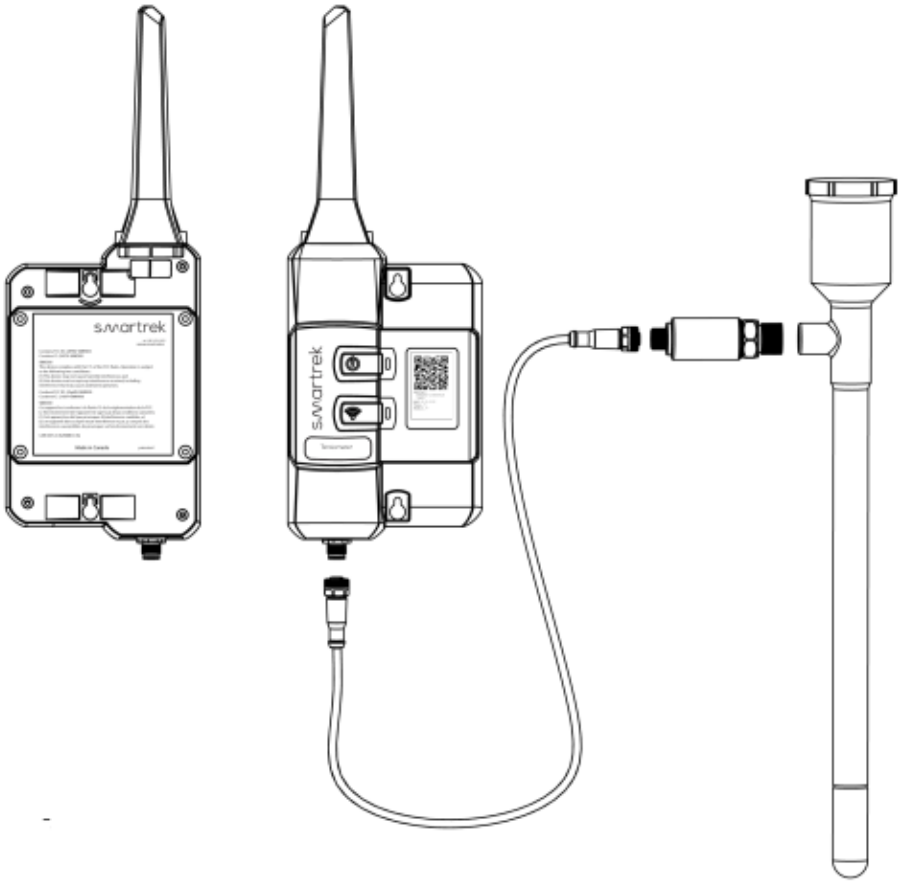
Technical specifications

Specifications	Performance
Sensor type	Absolute pressure sensor combined with a precision barometer for atmospheric compensation
Soil tension range	0 to 100 cbar
Operating temperature of the measured medium	-25°C to 125°C
Operating temperature of the A-Link	18°C to 55°C
Temperature compensation	Yes
Supply	3 x D cell alkaline batteries

Pressure transducer Specifications

Specifications	Performance
Tension resolution	0.1 cbar
Tension Accuracy	± 0.5 cbar
Temperature Accuracy	The measured temperature may not be sufficiently accurate for certain applications due to the fact that the temperature chip resides inside the transducer body (which has a high thermal inertia and is in direct contact with the water contained in the tensiometer).
Material of diaphragm	Ceramic Al2O3
Material of diaphragm	304 Stainless Steel
Pressure transducer port connection	1/4 NPT male Contact us if you require another connection type
Cable type	2 to 3m cable with m12 connectors
Ingress protection	IP67

Tensiometer A-Link connected to transducer



Power consumption

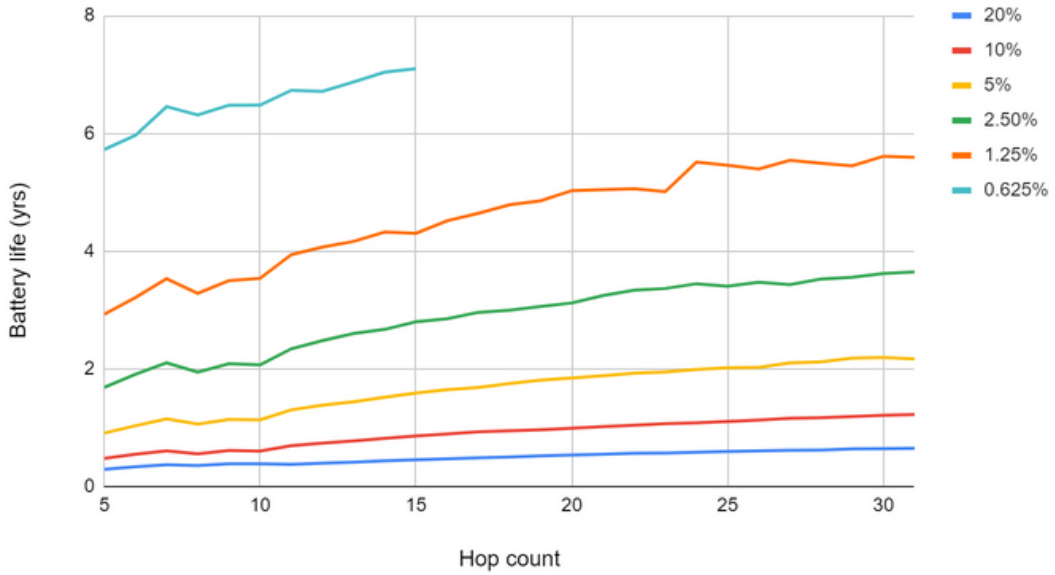


Figure 3: Battery life vs. hop count

Ordering information