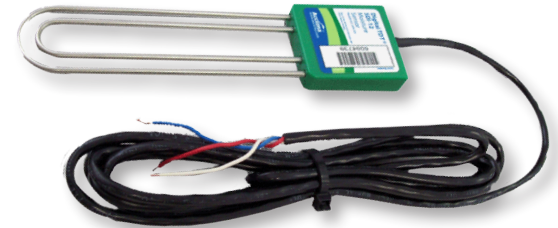


Digital SDI Soil Moisture Sensor



SPECIFICATIONS	
<i>Specifications subject to change without notice</i>	
PHYSICAL CHARACTERISTICS	
Width	2 1/8" (5.4 cm)
Height	9/16" (1.4 cm)
Length	8" (20.3 cm)
Wire Length	25' (7.62 m)
Weight (with 3m cable)	220 g
Composition (exposed to soil)	Type 304 Stainless Steel, crystalline-epoxy, polyethylene (insulation)
Cable Type & Length	3 conductor, 18 Ga. PE sheath, 6m length
ENVIRONMENTAL	
Operating Temperature	1°C to 50°C
Storage Temperature Range	-20°C to 75°C
Lightning & Surge Protection	6kV @ 3kA, 8/50us
OPERATIONAL	
Volumetric Water Content	0 to 100%
Resolution	0.06% VWC
Absolute WVC Accuracy	+/-2% (typical)
VWC Temperature Stability	+/-1% of full scale 1°C to 50°
VWC Soil EC Stability	+/-1% of full scale 0 to 5 dS/m Bulk EC
Temperature Reporting Accuracy	+/-2°C, 0 to 70°C
EC Reporting Accuracy	+/-0.2 dS/m, 0 to 5.0 dS/m BEC
ARCHITECTURAL	
Technology	Waveform Digitizing Time Domain Transmissometer
Acquisition Bandwidth	200 Giga-samples/sec.
Propagation Time Resolution	5 ps
Waveform Propagation Resolution	1.5mm in air, 0.16mm in water
Waveguide Length	30cm
Permittivity to VWC Calculation	Modified Dielectric Mixing model
Propagated Waveform Bandwidth	>2 GHz
COMMUNICATIONS	
Communications Protocol	SDI-12 Revision 1.3
Maximum Cable Length	60 meters (200ft)
Maximum Devices /Cable	50
ORDERING	
5600-0082-25	Digital SDI Soil Moisture Sensor



Overview

The Digital SDI Soil Moisture Sensor represents a revolutionary advance in the irrigation industry and is now available as a research tool. The digital sensor is a very effective tool to log moisture data for a variety of applications.

Features

- ▶ Reads the absolute volumetric water content
- ▶ Reads soil temperature and soil conductivity
- ▶ Industry's most accurate and stable soil moisture sensor
- ▶ Operates accurately in all environmental soil conditions in which crops will grow
- ▶ Large 100 ml soil sample volume
- ▶ No maintenance, simple installation
- ▶ Sturdy construction to ensure long-term reliability in any soil
- ▶ Moisture readings remain stable as soil salinity and fertilizer content change
- ▶ Moisture readings remain stable as soil temperature changes

POWER	
Operating Voltage	4-15 VDC
Listening/Sleep Mode Current	15 uA (18 uA at 50C)
Communications Current	2.5 mA typical, 4 mA max
Read Moisture Comm Time	425 ms total for each read cycle
Moisture Sense Current	30 mA at 12 VDC input voltage
	55 mA at 6 VDC input voltage
	75 mA at 4 VDC input voltage
Moisture Sense Time	450 ms for each moisture sensing operation