DORGEAN
Beijing Dorgean Electronic Technology Co.,Ltd

Instrument Expert
Original factory packaging
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PRODUCT

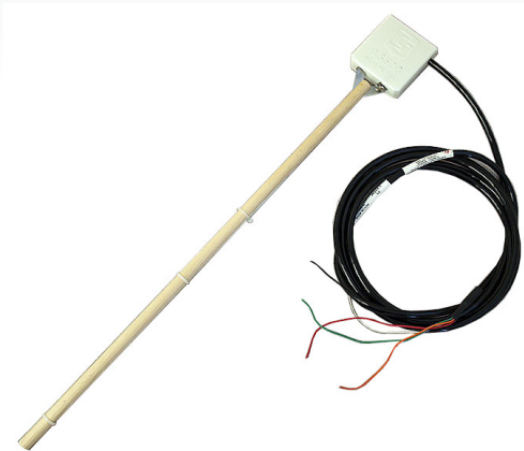## CAMPBELL SCIENTIFIC®
WHEN MEASUREMENTS MATTER

CS506-L
Fuel Moisture Sensor

Remote Measurements

Monitors forest-fire factor; ideal for use with RAWS

Overview

The CS506 is a fuel moisture sensor that measures the moisture content of the 26601 10-hour fuel moisture stick. The 26601 emulates the moisture content of similarly sized twigs on the forest floor. The CS506/26601 combination is used to assess forest fire fuel and is often incorporated in our prewired or custom fire-weather stations.

Note: The image shows a CS506 fuel moisture sensor attached to a 26601 fuel moisture stick. The 26601 is purchased separately.

Benefits and Features

❯ Compatible with most Campbell Scientific data loggers

❯ Companion product to CS205/107 fuel temperature sensor; can be mounted on the same stake

❯ Can automatically monitor changing fuel conditions without having to visit the measurement site

❯ Compatible telemetry options include spread spectrum radios, narrow-band radios, cellular phones, and satellite transmitters

Detailed Description

The CS506 reports the status of small-diameter (10-hour) forest fire fuels as percent moisture by weight (1%=1 g water/100 g dry fuel). It consists of an epoxy-encapsulated electronics package that uses time-domain reflectometry (TDR) technology to measure the moisture content of the 26601 10-hour Fuel Moisture Stick. The sensor produces a ±0.7 Vdc square-wave frequency that is read using an analog or pulse channel on a Campbell Scientific data logger. The data logger then converts the frequency measurement to percent fuel moisture via a quadratic calibration.

Specifications

Operating Range	0 to 70% moisture content	Power Supply	5 to 18 Vdc

For comprehensive details, visit: **www.campbellsci.com/cs506-l**

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Enable Voltage	› on at 5 Vdc (> 4 Vdc; maximum 18 Vdc) › off at 0 Vdc (< 1 Vdc)	Weight	< 0.5 kg (< 1 lb)

Fuel Moisture Accuracy

Current Consumption	› 65 mA (active) › 45 μA (quiescent)	0 to 10% Range	› ±1.25% (worst case) › ±0.74% (RMS error)
Output Signal	±0.7 Vdc square wave (with an output frequency of approximately 31 to 58 kHz)	10 to 20% Range	› ±0.9% (RMS error) › ±2% (worst case)
		20 to 30% Range	› ±3.4% (worst case) › ±1.94% (RMS error)
Dimensions	10.16 x 6.35 x 1.91 cm (4 x 2.5 x 0.75 in.)	30 to 50% Range	› ±2.27% (RMS error) › ±4.11% (worst case)

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