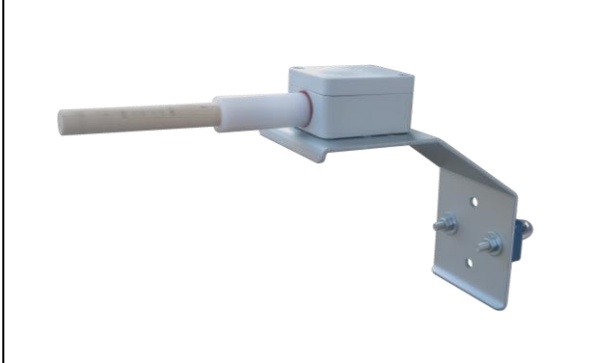


### SFTH – Temperature-moisture sensor for fire forest monitoring (Rev.2 010819)



#### Description

The SFTH sensor allows to monitor the moisture and temperature conditions of the wood litter, where it often occurs the first trigger of the forest fires. If the sensor is connected to a datalogger with remote data transmission, allows to the to check the changing of the vegetation microclimatic conditions preventing phenomena in which the undergrowth can be transformed into a potential natural fuel. The moisture and temperature measurements are detected inside a particular wooden stick made of certified ponderosa pine simulating the wood litter conditions. The wooden sticks are accurately calibrated in aswerring to the Standard of US Forest Bureau. The sensor is available in the version with linearized analog outputs both for moisture and temperature measurements in a lonely stick.

#### Moisture sensor (fuel moisture stick)

The moisture sensor for the fuel forest material consists of a capacitive transducer that it's inserted in a small diameter stick made of Ponderosa pine. This stick is exposed in open air and under the sun in proximity to the forest to monitor (significant duration 10 hours). The sensor is normally calibrated in the range: 0-100%. The sensor estimates the wood litter incendiability as relative humidity percentage detected inside the wooden stick.

#### Temperature Sensor (fuel temperature stick)

The sensor consists of a precision calibrated thermometer, inserted in the ponderosa pine stick. The sensor measures the wood litter temperature and it must be installed over a significant forest materials which simulates the wood litter.



#### Technical features

Model:	SFTH-V
Typical Range	Temperature: -40...+60 °C Moisture: 0...100%
Transducer	Temperature: Pt100 1/3DIN Moisture: Capacitive
Electrical output	Out1 (T): 0...5Vdc Out2 (RH): 0...5Vdc
Power supply	+9...24Vdc
Consumption	5mA max
Accuracy	Temperature: ±0.2°C; Moisture: ±1.5%
Resolution	Temperature: 0.01°C; Moisture: 0.01%
Repeatability:	Temperature: ±0.1°C
Hysteresis:	Moisture: ±1%
Long-term stability	Temperature: <0,04°C/year; Moisture: <0,5%RH/year
Sampling rate	1s
Response time (63%)	<8s
Maintenance	Check >24 months and possible stick replacement every 6 months
Working Temperature	-50...+85°C
Connector	IP68 quick plug (cable excluded)
Housing	Ponderosa pine stick
Materials	Ponderosa pine stick, seasoned and treated in accordance with US standards, plastic material
Dimensions and weight	300x180x90mm 190g (Stick: ø13x140mm)