



Temp/Humidity Probe Model 5190-FI



Overview

The Model 5190-FI Temperature/Humidity Probe is designed for a variety of environmental monitoring applications, including All Weather Inc.'s Automated Weather Observing Systems (AWOS). The 5190-FI operates with a DC supply voltage and has a low current draw. Relative humidity is measured with a thin-film capacitor sensor, and temperature is measured using a Pt100 RTD with an accuracy of $\pm 0.1^{\circ}\text{C}$. The signals from the sensors are converted into two linearized voltage output signals.

Parameter	Output Voltage	Range
RH	0–1.0 V DC	0–100% RH
Temperature	0–1.0 V DC	-40°C to +60°C

The Model 5190-FI is Federal Aviation Administration (FAA) compliant, meeting all of the most current regulatory requirements.

SENSORS

SPECIFICATIONS

Parameter	Specification
Humidity Sensor	Thin-Film Capacitor
Temperature Sensor	Pt100 RTD
Temperature Output Signal (Linear)	0-1.0 V DC = -40°C to +60°C
Humidity Output Signal (Linear)	0-1.0 V DC = 0-100% RH
Reporting Temperature Limits	-50°C to +100°C
Minimum Load per Output	10 kΩ
Accuracy	±0.1°C , ±0.8% RH
Resolution	Typically 0.01°C, 0.2% RH
First Signal After	2.3 s
Measurement Interval	0.7 s
Response time	3–2 s
Supply Voltage	5–24 V DC
Current Consumption	approx. 4 mA
Cable Length	5 m (16 ft), tinned ends
Sensor Protection	Wire mesh filter

ORDERING INFORMATION

Part Number	Description
5190-FI	Temperture and Humidity Probe
8190	Motor Aspirated Radiation Shield
8141	Self Aspirated Radiation Shield

DIMENSIONS & WEIGHTS

Size	208 mm x 15 mm diameter (8.19" x 0.59" diameter)
Weight	120 g (0.27 lb)
Shipping Dimensions	203 mm x 254 mm x 51 mm (8" x 10" x 2")
Shipping Weight	450 g (1 lb)

CE - Compliant 2007/108/EG



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