



Temp/Humidity Probe Model 5191

allweatherinc



- Accurate and Dependable in any weather
- FAA Certified
- Transport Canada Approved

Overview

The Model 5191 Temperature/Relative Humidity Probe is designed for a variety of environmental monitoring applications. Possible applications include All Weather Inc.'s Automated Weather Observing Systems (AWOS). The 5191 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 voltage output signals.

Parameter	Output Voltage	Range
RH	0–1.0 V DC	0–100% RH
Temperature	0–1.0 V DC	-60°C to +200°C

The Model 5191 is Federal Aviation Administration (FAA) and Transport Canada certified, meeting all of the most current regulatory requirements.

SENSORS

SPECIFICATIONS

Parameter	Specification
Humidity Sensor	Thin-Film Capacitor
Temperature Sensor	Pt100 RTD
Operating Temperature Limits	-70°C to +70°C
Humidity Measurement Range	0–100% RH
Temperature Measurement Range	-70°C to +70°C
Storage Temperature Range	-50°C to +100°C
Accuracy (at 23°C)	±0.8% RH ±0.1°C
First Signal After	1.5 s
Measurement Interval	1.0 s
Digital Serial Output	RS-485 (half duplex)
Serial Output Baud Rate	19200 bps
Serial Port Parameter Setting	8-N-1 (8 data bits, no parity, 1 stop bit) (no flow control)
Supply Voltage	5–24 V DC
Current Consumption	< 10 mA
Sensor Protection	Wire mesh filter

ORDERING INFORMATION

Part Number	Description
5191	Temperature and Humidity Probe
8195	Motor-Aspirated Radiation Shield

Dimensions	
Dimensions (without cable)	100 mm × 15 mm diameter (3.9" × 0.6" diameter)
Weight (without cable)	70 g (0.15 lb)
Cable Length	5 m (16 ft), tinned ends
Cable Weight	400 g (0.9 lb)

Electromagnetic Compatibility

EMC Directive 2004/108/EG	EN 61000-6-1: 2001 EN 61000-6-2: 2005 EN 61000-6-3: 2005 EN 61000-6-4: 2001 + A11
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