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 ±0.1°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	-80°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
Humidity Measurement Range	0–100% RH
Temperature Measurement Range	-80°C to +200°C
Accuracy (at 23ºC)	±0.1ºC ±0.8% RH
Resolution	0.1ºC 1% RH
First Signal After	1.5 s
Measurement Interval	1.0 s
Analog Voltage Output	
Temperature	0–1.0 V DC
RH	0–1.0 V DC
Digital Output	
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)
Digital Output	
Supply Voltage	5–24 V DC
Current Consumption	< 10 mA
Mechanical	
Sensor Protection	Polypropylene mesh filter

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

ORDERING INFORMATION

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

DIMENSIONS

Dimensions (without cable)	100 mm × 15 mm diameter (3.9" x 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)