

Model 905

ATMOSPHERIC TEMPERATURE SENSOR

Applications

- AIRPORTS
- METEOROLOGY
- BOTANY
- HORTICULTURE
- FORESTRY
- BUILDING RESEARCH

Features

- WMO STANDARD
- RUGGED
- SENSITIVE
- ENVIRONMENTALLY PROVEN

Description

The 905 Atmospheric Temperature Sensor comprises a platinum resistance temperature sensor, mounted in a multiplate screen. The 905 has a naturally ventilated version and an aspirated version. The flexible mounting bracket allows a number of mounting arrangements.

Operation

The Aspirated 905 sensor requires a 12V DC supply from the data-logger or Data telemetry unit to drive the aspiration fan.

A 3 wire direct connection to the platinum resistance element can be made, with a usable range within -50 to +80 degrees C.



Construction

The 905 is constructed from non hygroscopic aluminium plates, and a robust mounting bracket. The sensor element can be unplugged for easy replacement. The forced aspiration version features a built in 12 Volt DC fan.

Calibration: Yearly calibration is recommended.

Application

All versions of the 905 are fully compatible with the MTECH 2060 Automatic Weather Station telemetry Unit

Model Variations

- | | |
|------------|--|
| 905-M1 | (Naturally ventilated) |
| 905-M1-ASP | (Aspirated housing) |
| 905-M2 | (High Precision, Naturally ventilated) |
| 905-M2-ASP | (High Precision, Aspirated housing) |

Specifications:

General

Parameter	905M1 and M2	
Excitation Supply	12V DC for ASP versions	
Excitation Current	Natural Version	ASP Version
	Nil	250mA
MTBF	Depends on environmental conditions typically 500000 hrs	Typically 45,000 hrs fan only.
Operating Temperature	-50 to +60C, 0-100% RH	
Connection	4 core cable, 3 metres long	
Materials, Plates	Powder Coated Aluminium	
Materials Base Bracket	304 Stainless steel	
Bracket Mounting.	2 holes, 6 mm diameter on 65 mm centres.	
Accessories	U bolt for 63 mm diameter pole	
Optional Extras	905-AP Adapter Plate for alternative U Bolt sizes	

Temperature

Parameter	905-M1	905-M2
Sensor Type	Platinum RTD,	Platinum RTD
Range	-40 to +60°C	-50 to +80°C
Accuracy	±0.25 K at 0°C *	±0.1 K at 0°C *
Reproducibility	α: +0.00003%	α: +0.00003%
Long Term Stability	Ro< 0.2% per year	Ro< 0.05% per year
Sensor Time Constant - Natural Ventilated	<30Seconds	<30Seconds
Sensor Time Constant - Aspirated	<10 seconds	<10 seconds
Output Characteristic	DIN 60751 3 wire	DIN 60751 1/3 Pt. 3 wire

* For greater accuracy, DIN 1/5 or 1/10 grades available on special order

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