

# AIR TEMPERATURE



## Air Temperature Sensor

A precision digital temperature probe with accuracy up to  $\pm 0.1^{\circ}\text{C}$  (RTD 1/3 DIN). The platinum temperature resistor can achieve excellent long-term stability. With the direct measurement of the digital temperature output is a cost-effective choice for meteorological observation systems, civil aviation, marine, plant protection, agriculture, etc. Also available with 4-wire platinum resistance analog output.



### Features

- Temperature Sensor PT100 RTD
- Accurate Temperature measurements ( $0.1^{\circ}\text{C}$ )
- High long-term stability
- Analogue and Digital outputs depending upon models
- Highly efficient radiation shield
- Design and performances addressed to meteorological applications

### Applications

Weather Stations, Agriculture, etc.

### Technical Specifications

	SS-AT-01	SS-AT-02
Temperature Measuring Range	$-50^{\circ}\text{C}$ to $+150^{\circ}\text{C}$	$-50^{\circ}\text{C}$ to $+150^{\circ}\text{C}$
Output	Digital: RS485	Analog: 4-wire platinum resistor $0.385\ \Omega / ^{\circ}\text{C}$
Input Power	5 – 28 VDC	5 – 28 VDC


### Common Technical Specifications

Temperature	Sensor Type	PT100 1/3DIN
	Accuracy	$\pm 0.1^{\circ}\text{C}$ (@ $23^{\circ}\text{C} \pm 2^{\circ}\text{C}$ ), $\pm 0.2^{\circ}\text{C}$ (Full Scale)
	Resolution	$0.01^{\circ}\text{C}$
	Long Term Stability	$< 0.1^{\circ}\text{C}/\text{Year}$
General Specifications	ESD Protection	$\pm 25\ \text{KV}$
	Cable	2m Standard
	Protection (without shield)	IP64
	Storage Temperature	$-60^{\circ}\text{C}$ to $+90^{\circ}\text{C}$
	Housing	ABS+PC, flame resistant, toxicity and halogen free
	Dimensions (Probe only)	$\Phi 8 \times 74.4\ \text{mm}$
Weight (Probe only)	16g	

## Thermo-Hygrometer



### Accessories

	<b>SS-TH-RS</b>	SS-TH-RS is a natural ventilated all weather radiation shield made of 10 nos. thermoplastic louvered plates. Complete with all accessories such as aluminium mounting bracket (boom) with suitable provision for fitting shield on the boom at desired heights and stainless-steel U bolt clamp.
	<b>Calibration Certificate</b>	Calibration certificate from India Meteorological Department or any other NABL accredited national laboratory
	<b>SS-TH-C1</b>	3m Cable
	<b>SS-TH-C2</b>	5m Cable

## Air temperature sensor (Pt100 output)



- ▶ Accurate Temperature measurements (0,1°C)
- ▶ 4-wires technology for long distance sensor cable
- ▶ Radiant screen units availability for outdoor measurement in direct sunlight and in meteorological applications
- ▶ Forced ventilation radiant screen availability
- ▶ Converters for 4-20 mA and RS485 Modbus-RTU outputs
- ▶ In house ISO17025 accreditate calibration laboratory

Pt100 Air temperature sensor for indoor use and, coupled with a radiant screen, for meteorological applications. A 4-wire, Pt100 1/3 DIN B sensing element guarantees very good accuracy over an extended temperature range. This sensor is ideal for virtually any kind of environmental application.

### Technical Specifications




Order numb.	DMA033	DMA033.1	EST033
<b>Connector</b>	Free wires (4-wire)	Male connector for DWA5nn cables	Mini-Din connector
<b>Cable</b>	L. = 5 m.	L. = 5 m.	L. = 2 m.
<b>Data logger compatibility</b>	M-Log (ELO008) Alpha-Log/E-Log	Using DWA5nn extension cable: M-Log (ELO008) Alpha-Log/E-Log	M-Log (ELO009) R-Log (ELR510)

### Common Technical Specifications

<b>Temperature</b>	Principle	Pt100 1/3 DIN B Class AA (Class AA EN60751)
	Type	RTD 4 wires
	Measuring range	-50÷70°C
	Accuracy	0,10°C (@0°C)
	Output	Pt100 DIN-IEC 751 table (EN 60751)
	Resolution	0,01°C (A/E/M/R-Log)
	Response time (T90 air)	30 s. without protective filter, 6 min. with protective filter

<b>General Information</b>	Protection type	IP54 (IP65 when radiant screen is used)
	Protective filter for sensitive element	Removable porous filter
	Power consumption	None
	Operative temperature	-40÷80°C
	Dimensions	L. = 168 mm. Ø 18 mm.
	Input type on A/E/M/R-Log	Analog

### Accessories

	<b>DYA230</b>	N.7 Luran made plates natural ventilation radiant screen. Complete with arm. Black paint on the bottom side to increase natural air circulation inside the screen. DYA049 collar required to fix it on the lateral side of Ø 45÷65 mm poles.  Dimensions: H.156 mm. Diameter 124 mm
	<b>DYA233</b>	N.7 Luran made plates natural ventilation radiant screen for DY-A046 arm. Complete with arm. Black paint on the bottom side to increase natural air circulation inside the screen.  Dimensions: H.156 mm. Diameter 124 mm
	<b>DYA231</b>	N.7 Luran made plates forced ventilation radiant screen. 12 Vdc power supply.  Complete with arm. Air speed inside the screen. DYA049 collar required to fix it on the lateral side of Ø 45÷65 mm poles.
	<b>DYA049</b>	Mast-mounting device for Ø 45-65 mm. pipe
	<b>SVICA0003</b>	ISO9001 type calibration certificate
	<b>SVACA0006</b>	ISO17025-ACCREDIA type calibration certificate



► LSI LASTEM is an ISO17025 accredited laboratory for temperature measurements. All sensors manufactured are tested inside our laboratory. LSI LASTEM provides Test report for any sensor and, under request, ISO17025 or ISO9001 calibration certificates (see Accessories list).