



**kintech**  
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**DATASHEET**

# **K307T**

**TEMPERATURE SENSOR**

The K307T Temperature sensor is developed and manufactured by Kintech Engineering specifically for wind & solar resource assessment applications.

# K307T | TEMPERATURE SENSOR

## DESCRIPTION

The K307T Temperature sensor is developed and manufactured by Kintech Engineering specifically for wind & solar resource assessment applications with a power consumption below 0.3mA. It's a solid and highly reliable PT1000 (Class A) sensor offering a measurement accuracy of  $\pm 0.3^{\circ}\text{C}$  at  $20^{\circ}\text{C}$  /  $\pm 0.5^{\circ}\text{C}$  at  $-35..70^{\circ}\text{C}$  and a temperature operating range from  $-35^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$ . The K307T sensor is built into a strong aluminum housing and has the same physical design as our K307TH Temperature & Humidity sensor which means that both sensors can be used with our 10 plate solar radiation shield.

## APPLICATIONS

Wind resource assessment, solar resource assessment, solar monitoring. The sensor output is used for energy density calculations; monitoring air temperature; calculating atmospheric stability conditions; identifying icing conditions in cold climates.

## FEATURES

### Temperature

Sensor	Pt1000 RTD element (DIN A)
Analogue output	0...5 V
Accuracy	$\pm 0.3^{\circ}\text{C}$ at $20^{\circ}\text{C}$ / $\pm 0.5^{\circ}\text{C}$ at $-35..70^{\circ}\text{C}$
Signal	Linear analog voltage
Measurement range	$-35...+70^{\circ}\text{C}$
Transfer function	Slope = $22.12729^{\circ}\text{C/V}$ Offset = $-39.057^{\circ}\text{C}$

### General

Supply voltage	5–30V (DC or Pulsating)
Current consumption	5V DC: Typically $< 2.5\text{mA}$ / 5V pulsating: Typically $< 0.3\text{mA}$
Housing	Aluminum
IP	IP65
Sensor protection	Sintered porous metal filter
Cable recommendation	Signal cable $4 \times 0.5 \text{ mm}^2$ + shield
Cable length	3 m
Compatibility	All Kintech Engineering data loggers
Manufacturer	Kintech Engineering

### Radiation shield

Material	Highly resistant thermoplast
Dimension	120 mm x 140 mm
Mounting	Attaches to mast with included support brackets

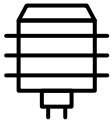

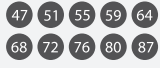


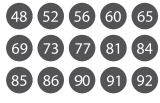





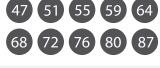






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## CABLE RECOMMENDATION

Signal cable up to 150m: **4x0.5 mm<sup>2</sup> + shield**. For longer cable, please consult sensor manufacturer.

## SENSOR WIRING TABLE

Sensor Model	Sensor Pin		Kintech Cable Colors		Orbit 360			EOL Zenith	
					Section	Terminal	Type	Section	Terminal
	Us (-)	Supply (-)		Brown	Analog Channels		(-)	Analog Inputs	
	Temp (+)	Temperature		White	Analog Channels		Signal	Analog Inputs	
	Us (+)	Supply (+)		Green	Analog Channels		5p	Analog Inputs	
	Ref.	Reference		Yellow	Analog Channels		(-)	Analog Inputs	
		Shield		Yellow Green	Power Input	BAT		BAT	

**Note:** \*5p,  = Pulsating 5V with current limited (4mA). Only 1 sensor must be powered.

## REQUIRED DATA LOGGER VERSION

Minimum data logger required: **ORBIT 360 BASIC PLUS**.

Minimum **firmware** required: **2.13**. If your data logger has an older firmware version (<2.13), please configure the sensor as a generic sensor (voltage) in both Atlas software and the data logger. Remember to fill in both the slope and the offset for the temperature sensor.

## HOW TO CONFIGURE IN ATLAS

Start Atlas and open the data logger you are working on. Now go to Site settings and scroll down to the Channels section and select the following type and model:

- Group: Analog channels
- Sensor Type: Temperature
- Sensor Model: **K307T**

**Important!** Please make sure you are working with the latest version of Atlas. To check for new updates click the Check for updates button in the left-hand menu located in the main dashboard.

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### HOW TO CONFIGURE THIS SENSOR ON SITE

We recommend performing the entire sensor configuration using Atlas at the office before installing sensors onsite. Once the sensor is correctly setup in Atlas, use the Upload settings tool, to upload the sensor configuration to the data logger.

In case you are already on site and need to configure the sensor directly on the data logger, follow these steps:

1. Turn on the data logger.
2. Using the keypad on the data logger, navigate the menu until you see Sensor model, then click the “right arrow” on the keypad.
3. Now scroll down to the channel you are going to connect the sensor to, and click the “right arrow” on the keypad.
4. Now click “Set” on the keypad and scroll up in the menu to set the sensor model type according to the table here below. Once you have found the correct sensor model, click the “right arrow” key twice to select it and save.
5. Click the “left arrow” several times to go back to the main menu.

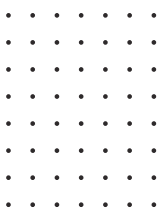
Data logger model	Firmware version	Sensor model type on data logger		
		Magnitude	Number	Name
ORBIT 360	< 2.13	Temperature	01	milliVolts
	≥ 2.13	Temperature	09	TEMP K307 - TH
EOL ZENITH	any	Temperature	01	miliVolts

**Keep in mind:** if the sensor channel has been configured as milliVolts, the output values on data logger display will always be shown in milliVolts. Remember to fill in both the slope and the offset for the temperature asensor to see real sensor values in °C in your data-sets during a real-time connection with the data logger (from either Atlas or Atlas Mobile).

### HOW TO CONFIGURE IN EOL MANAGER

Open EOL Manager and go to Settings of the data logger you are working on. Open the Inputs tab and select the following type and model:

- Group: Analog Inputs
- Sensor Type: Voltmeter
- Sensor Model: **Generic Voltimeter**
- Slope: 22.12729
- Offset: -39.057



Last modified: 16.06.2021