



kintech
engineering



DATASHEET

K846TH

TEMPERATURE & HUMIDITY

The sensor K846TH is a highly accurate and reliable temperature and humidity sensor with short start-up time and low power consumption.

K846TH | TEMPERATURE & HUMIDITY

DESCRIPTION

The sensor K846TH is a highly accurate and reliable temperature and humidity sensor with short start-up time and low power consumption. The K846TH is fitted in a small sized polycarbonate housing and supplied together with our 10 plate solar radiation shield.

The radiation shield ensure correct ventilation of the sensor and avoid false measures caused by over heating and excess solar radiation, while offering mechanical protection against impacts as well as corrosive effects of rain.

Ideal sensor for both wind & solar resource assessment. **This sensor is NOT recommended with cable length > 10m.**

APPLICATIONS

Meteorological monitoring and wind and solar resources assessment.

FEATURES

Relative humidity

Working range	0...100% TH
Analogue output	0...1 V
Accuracy at 20°C and 12V DC	±2% RH (0...90% RH) ±3% RH (90...100% RH)
Temperature dependence	typ. 0.03% RH/°C

Temperature

Sensor	Pt1000 (DIN A)
Analogue output	0...1 V
Accuracy	+/- 0.2°C at 20°C
Signal	Linear analog voltage
Measurement range	-40...+60 °C

General

Supply voltage	7...30 V (DC)
Current consumption	Typically < 1.3mA
Housing	Polycarbonate
IP	IP65
Sensor protection	Metal grid filter
Cable recommendation up to 10m cable length	Signal cable 4x0.5 mm ² + shield
Cable length	1 m
Compatibility	All Kintech Engineering data loggers
Manufacturer	Elektronik

Radiation shield

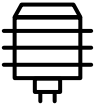














Material	Highly resistant thermoplast
Dimension	120 mm x 140 mm
Mounting	Attaches to mast with included support brackets

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CABLE RECOMMENDATION

Signal cable up to 10m: **4x0.5 mm² + shield**. For longer cable, please consult sensor manufacturer.

SENSOR WIRING TABLE

Sensor Model	Sensor Pin		Kintech Cable Colors				Orbit 360			EOL Zenith																					
			Cable directly from sensor		Cable extension		Section	Terminal	Type	Section	Terminal																				
	SIG (-)	Ref		Pink		Brown	Analog Channels	<table border="1"> <tr><td>47</td><td>51</td><td>55</td><td>59</td><td>64</td></tr> <tr><td>68</td><td>72</td><td>76</td><td>80</td><td>87</td></tr> </table>	47	51	55	59	64	68	72	76	80	87	(-)	BAT											
	47	51	55	59	64																										
	68	72	76	80	87																										
	Temp (+)	Temp		Grey		Green	Analog Channels	<table border="1"> <tr><td>48</td><td>52</td><td>56</td><td>60</td><td>65</td></tr> <tr><td>69</td><td>73</td><td>77</td><td>81</td><td>84</td></tr> <tr><td>85</td><td>86</td><td>90</td><td>91</td><td>92</td></tr> </table>	48	52	56	60	65	69	73	77	81	84	85	86	90	91	92	Signal	Analog Inputs	<table border="1"><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr></table>	1	2	3	4	5
	48	52	56	60	65																										
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Us (+)	Supply (+)		Red		White	Analog Channels	<table border="1"> <tr><td>49</td><td>53</td><td>57</td><td>61</td><td>66</td></tr> <tr><td>70</td><td>74</td><td>78</td><td>82</td><td>88</td></tr> </table>	49	53	57	61	66	70	74	78	82	88	* (+)	BAT												
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RH (+)	RH		Yellow		Yellow	Analog Channels	<table border="1"> <tr><td>48</td><td>52</td><td>56</td><td>60</td><td>65</td></tr> <tr><td>69</td><td>73</td><td>77</td><td>81</td><td>84</td></tr> <tr><td>85</td><td>86</td><td>90</td><td>91</td><td>92</td></tr> </table>	48	52	56	60	65	69	73	77	81	84	85	86	90	91	92	Signal	Analog Inputs	<table border="1"><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr></table>	1	2	3	4	5	
48	52	56	60	65																											
69	73	77	81	84																											
85	86	90	91	92																											
1	2	3	4	5																											
	Shield		Yellow Green		Yellow Green	Power Input	BAT		BAT																						

Note:

Data logger hardware version < 3, (+) = Bat+ with current limited (12mA). Only 1 sensor must be powered on each output terminal.

Data logger hardware version ≥ 3, (+) = Bat+ with current limited (50mA). Only 1 sensor must be powered on each output terminal.

REQUIRED DATA LOGGER VERSION

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

Minimum **firmware** required: **2.40**. If your data logger has an older firmware version (<2.40), 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 both the temperature and the humidity 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: **K846TH**
- Group: Analog channels
- Sensor Type: Relative Humidity
- Sensor Model: **K846TH**

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	< 2.40	Temperature	01	milliVolts
		Relative humidity	01	milliVolts
	≥ 2.40	Temperature	07	TEMP K846TH/EE8
		Relative humidity	39	HUM K846TH/EE8
EOL ZENITH	any	Temperature	01	miliVolts
		Relative humidity	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 both the temperature and the humidity sensor to see real sensor values in °C and % in your datasets 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:

TEMPERATURE

- Group: Analog Inputs
- Sensor Type: Voltmeter
- Sensor Model: **Generic Voltmeter**
- Slope: 100
- Offset: -40

RELATIVE HUMIDITY

- Group: Analog Inputs
- Sensor Type: Voltmeter
- Sensor Model: **Generic Voltmeter**
- Slope: 100
- Offset: 0



Last modified: 03.04.2023