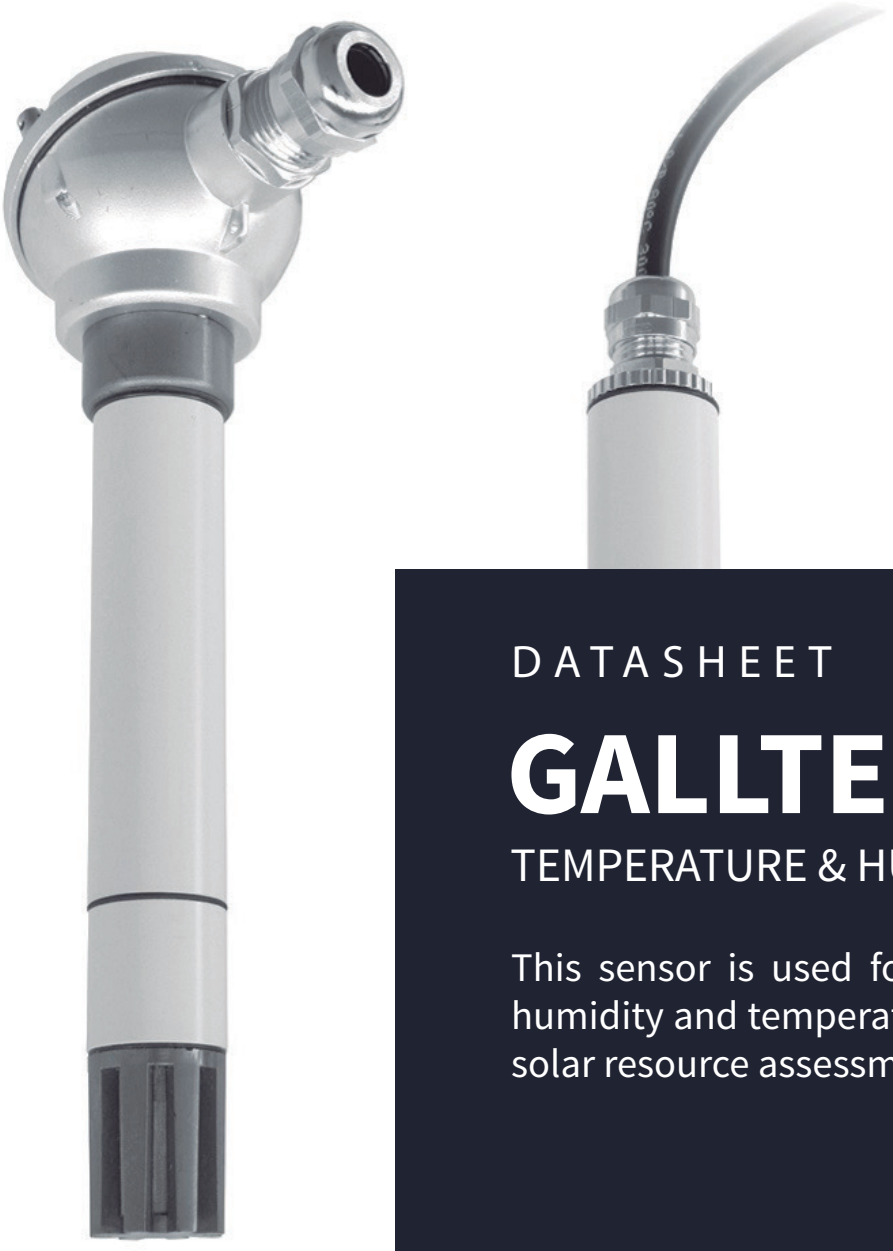
kintech engineering



DATASHEET

GALLTEC KPC ⅕

TEMPERATURE & HUMIDITY

This sensor is used for measuring relative humidity and temperature in both wind and solar resource assessment studies.

DESCRIPTION

The Galltec temperature & humidity sensors is a compact versatile sensor with a rod-type design. The sensor is available with a 1.5 m connecting cable (PC series), without cable (PK series) or with a robust aluminum connecting head and terminal screws (RC series).

Note: The sensor should be mounted inside a radiation shield protecting the sensor against rain and direct radiation.

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 as well as identifying icing conditions in cold climates.

IMPORTANT

Temperature and air pressure significantly affect the AEP (Annual Energy Production) which is why you should be careful not to touch the highly sensitive sensor element in case you screw the filter off. If necessary, soiled filters can be screwed off and rinsed. When you screw them back on, bear in mind that sensors will not measure accurately again until they are completely dry.

FEATURES

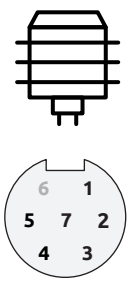
Relative humidity	
Measure range	0…100% rh
Accuracy	(5…95% rh at +10…+40 °C) ±2% rh
Influence of temperature	<+10 °C, >+40 °C; <+0.1%/°C additional

Temperature	
Measuring element (ref. DIN EN 60751)	Pt100 class B (class 1/3 DIN on request)
Measuring range	-30…+70 °C
Accuracy	0…1 V (-27…+70 °C) → ±0.2 °C
Influence of temperature	<+10 °C, >+40 °C; ± 0.007 °C/°C additional

General	
Ambient temperature	-40…+80 °C
Degree of protection sensor/electronic	IP 30/IP 65
Operating voltage	6…30 V
Load resistance	≥2 kΩ
Power consumption	<1 mA
Minimum air speed always across the sensor	≥0.5 m/s
Self-heating Pt100	(v=2 m/s in the air); +0.2 °C/mW
Directive about electromagnetic compatibility 2004/108/EG	DIN EN 61326-1…issue10/06 DIN EN 61326-2-3…issue05/07
Weight	145 g PC series 81 g PC.S-ME series (meteorological)
Cable option	KPC: sensor with 5m cable KPK: sensor without cable
Filter option	1/5: membrane filter ZE20 1/6: sintered high-grade steel filter ZE21

GALLTEC KPC 1/5 | TEMPERATURE & HUMIDITY

SENSOR WIRING TABLE

Sensor Model	Sensor Pin	Manufacturer Cable Colors		Kintech Cable Colors		Orbit 360			EOL Zenith	
						Section	Terminal	Type	Section	Terminal
	5	Green	Temp (-)	Green		Analog Channels	47 51 55 59 64 68 72 76 80 87	(-)	Analog Inputs	– –
	7	Yellow	Temp (+)	Yellow		Analog Channels	48 52 56 60 65 69 73 77 81 84 85 86 90 91 92	Signal	Analog Inputs Extra Analog	1 2 3 4 5 1 2 3 4 5 6 7 8
	4	Red	Supply (+)	Pink		Analog Channels	49 53 57 61 66 70 74 78 82 88	*(+)	BAT	+
	1	Brown	Supply (-)	Brown		Analog Channels	47 51 55 59 64 68 72 76 80 87	(-)	BAT	–
	2	Orange	RH (-)	White		Analog Channels	47 51 55 59 64 68 72 76 80 87	(-)	Analog Inputs	– –
	3	Black	RH (+)	Grey		Analog Channels	48 52 56 60 65 69 73 77 81 84 85 86 90 91 92	Signal	Analog Inputs Extra Analog	1 2 3 4 5 1 2 3 4 5 6 7 8
	6			Do no connect						
	Shield			Yellow Green		Power Input	BAT	⏚	BAT	⏚

Note: Base sensor view / Soldering connector view.
*(+) = Bat+ with current limited (12mA). Only 1 sensor must be powered.

HOW TO CONFIGURE IN ATLAS

Open Atlas and go to the data logger you are working on. Scroll to the “channels” section and select the following type and model:

- Group: Analog channels
- Sensor Type: Temperature
- Sensor Type: Relative Humidity
- Sensor Model: **GALLTEC KPC 1/5**

HOW TO CONFIGURE IN EOL MANAGER

Open EOL Manager and go to the data logger you are working on. Open the “inputs” tab and select the following type and model:

- Group: Analog Inputs
- Type: Temperature
- Type: Rel. Humidity
- Model: **GALLTEC KPC 1/5**

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For more information please contact **support@kintech-engineering.com**
or visit our website **www.kintech-engineering.com**

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