kintech engineering

DATASHEET

THIES FC ADVANCED II

CUP ANEMOMETER

The Thies First Class Advanced II cup anemometer is designed for wind resource assessment, site calibration and power performance studies.

DESCRIPTION

The Thies First Class anemometer is designed for the acquisition of the horizontal component of the wind velocity and is ideal for both wind resource assessment, site calibration as well as power performance. The cup anemometer is classified according to the requirements of the IEC 61400-12-1 Edition 2.0.

Class A classification result (Heating ON): A 1.8
Class B classification result (Heating ON): B 2.0
Class C classification result (Heating ON): C 1.8
Class D classification result (Heating ON): D 2.0
Class S classification result (Heating ON): S 0.9

Class A classification result (Heating OFF): A 2.3
Class B classification result (Heating OFF): B 2.7
Class C classification result (Heating OFF): C 4.4
Class D classification result (Heating OFF): C 4.6
Class S classification result (Heating OFF): S 1.7

Heated version: The Thies First Class Advanced II anemometer can be supplied in a heated version to improve performance under cold climate conditions.

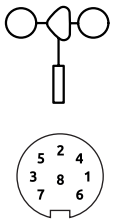
APPLICATIONS

Wind resource assessment, solar resource assessment, site calibration, power performance studies, solar monitoring and meteorology.

FEATURES (4.3352.00.000)

Technical Data	
Measuring range	0 ... 75 m/s
Accuracy	< 1 % of meas. value (0.3 ... 50 m/s)
	or < ±0.2 m/s
Linearity	r > 0.99999 (4 ... 20 m/s)
Inclined flow	< 0.1% (mean deviation from cosinus line at12 m/s ; ±20 °)
Delay distance	< 3 m (aac. to ASTM D 5096-96)
Data output digital	
Frequency	1082 Hz @ 50 m/s
Operating voltage	
Electronic	3.3 ... 48 V DC
	130 µA from 3,3 ... 15 V
	180 µA > 15 V ... 48 V
Heating	24 V AC/DC, max 25 W
General	
Ambient temp.	-50 ... +80 °C
Electr. connection	8 pol. plug connection
Mounting	onto mast tube Ø 1``
Protection	IP 55
Survival speed	80 m/s (min. 30 minutes)
Weight	0.5 kg
Fixing boring	Ø 35 x 25 mm
Matirial housing	aluminium, anodised
Material cup star	carbon-fiber glass reinforced

SENSOR WIRING TABLE

Sensor Model	Sensor Pin		Kintech Cable Colors		Orbit 360			EOL Zenith	
					Section	Terminal	Type	Section	Terminal
	1	Signal	○	White	Frequency Channels	2 5 8 11 14 17 20 23 26 29	Signal	Anemometer Inputs	1 2 3 4 5 6 7 8 9 10
	2	Reference	●	Brown	Frequency Channels	1 4 7 10 13 16 19 22 25 28	(-)	Anemometer Inputs	– –
	3	Us (+)	●	Green	Frequency Channels	3 6 9 12 15 18 21 24 27 30	5V	Anemometer Inputs	5V 5V
	4		Do not connect						
	5		Do not connect						
	6		Do not connect						
	Shield		◐	Yellow Green	Power Input	⏚		BAT	⏚
	7	Heating (+)	●	Brown	Independent power supply 24 AC/DC				
	8	Heating (-)	●	Blue					

Note 1: *Base sensor view / Soldering connector view.*

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: Frequency channels
- Sensor Type: Anemometer
- Sensor Model: **THIES FIRST CLASS ADVANCED**

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: Anemometers/Frequency
- Type: Anemometer
- Model: **THIES FC Advanced**

Last modified: 01.04.2020