

THIES 2D | ULTRASONIC ANEMOMETER

ORDER KEY

Kintech Engineering recommend using only known and recognized manufacturers of ultrasonic instruments like Gill, Thies Clima or Vaisala.

4 . 3 8 2 0 . 2 2 . 3 0 0 *Recommended Order N° by Kintech Engineering


HEATING		GENERAL INTERFACE		RS422 CONFIG		INPUT/OUTPUT		BAYERN - HESSEN TELEGRAM		OTHERS	
0	Standard heating, stainless-steel caps	0	Full duplex	0	Baud rate 1200/N81	0	0-10 V, 0-20 mA Polling	0	BH 0	Standard	
1	Reserved	1	Half duplex, analog (mA)	1	Baud rate 2400/N81	1	2-10 V, 4-20 mA	1	BH 1	Reserved	
2	PTC Heating	2	Half duplex, analog (V)	2	Baud rate 4800/N81	2	Input 0-10 V	2	BH 2	Reserved	
3	PTC Heating, stainless-steel caps	3	Half duplex / Bayern-Hessen telegram	3	Baud rate 9600/N81	3	Telegram VD	3	BH 3	Reserved	
4	3 Plus additional, chassis heating 42 V	4	Half duplex ADIO	4	Baud rate 19200/N81	4	Telegram VDT	4	BH 4	Reserved	
5	Reserved	5	Full duplex LON	5	Baud rate 38400/N81	5	Telegram V4DT	5	BH 5	Reserved	
6	Reserved	6	Full duplex DWD	6	Baud rate 1200/E71	6	Telegram NMEA default 4800/N81	6	Reserved		
7	Reserved	7	Full duplex ADIO	7	Baud rate 4800/E71	7	Telegram VX/VY	7	Reserved		
8	Reserved	8	Reserved	8	Baud rate 9600/E71	8	Standard deviation	8	Reserved		
9	Reserved	9	Reserved	9	Baud rate 19200/E71	9	Reserved	9	Reserved		

CABLE RECOMMENDATION

Signal cable up to 150m: **2x0.5 mm² + shield**. For longer cable, please consult sensor manufacturer.


Supply/heating cable cross-section should be calculated based on the power system requirements (Volts and Amps) and the cable length. Recommended order by Kintech Engineering (4.3820.22.300) has 80W of power consumption. Please use a wire sizing tool for selecting the most suitable cable.

SENSOR WIRING TABLE

Sensor Model	Sensor Pin	Kintech Cable Colors	Orbit 360			
			Section	Terminal	Type	
 <p>Base sensor view / Soldering connector view.</p>	1	Do not connect				
	2	TX- / RX-	White	RS485	34 38 42	B
	3	ADIO	Yellow	Heating SIGNAL control		
	4	Do not connect				
	5	TX+ / RX+	Brown	RS485	33 37 41	A
	6	AGND	Green	Heating REF control		
		Shield	YellowGreen	Power Input	⏏	
	7	Supply & Heating (+)	Brown	Independent power supply 24 AC/DC		
8	Supply & Heating (-)	Blue				

Note: Sensor pin 3 & 6 are used for remote heating control. Use a signal cable of 4x0.5 mm² + shield up to 150m. If you need more information about this feature and its wiring to Orbit 360, please contact our technical support.

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Sensor Model	Sensor Pin		Kintech Cable Colors		ADAM	Charge regulator	*EOL Zenith	
							Section	Terminal
 <i>Base sensor view / Soldering connector view.</i>	1			Do not connect				
	2	TX- / RX-	○	White	DATA-			
	3			Do not connect				
	4			Do not connect				
	5	TX+ / RX+	●	Brown	DATA+			
	6			Do not connect				
		Shield	●	Yellow -Green			BAT	⊕
	7	Supply & Heating (+)	●	Brown	Vs (+)	Load (+)	Independent power supply 24 AC/DC	
8	Supply & Heating (-)	●	Blue	GND	Load (-)			
					BAT (+)	BAT	+	
					BAT (-)	BAT	-	

Note: This sensor has to be preconfigured before it is configured in Atlas software.

*EOL Zenith should have the Ultrasonic Module installed by Kintech Engineering beforehand.

REQUIRED DATA LOGGER VERSION

Minimum data logger required: **ORBIT 360 PREMIUM.**

Minimum **firmware** required: **2.17**

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. The variables from the digital output signal can be chosen (or assigned) to either a frequency or an analog channel on the Orbit 360 Premium according to the list here below.

Example:

Serial bus 1 baud rate: 9600bps

Bus: Serial 1 >>> ID: A >>> Sensor model: Thies ultrasonic >>> Name: Thies ultrasonic_SERIAL1_A

- Group: Frequency channels
- Sensor Type: Serial device
- Sensor Model: **Thies ultrasonic_SERIAL1_A**
- Sensor Model: **Horizontal Speed**
- Group: Analog channels
- Sensor Type: Serial device
- Sensor Model: **Thies ultrasonic_SERIAL1_A**
- Sensor Model: **Windvane**
- Sensor Model: **Temperature or Obukhov length**

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.

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: Anemometer/Frequency
- Sensor Type: Ultrasonic
- Sensor Model: **Thies A**
- Group: Analog Inputs
- Sensor Type: Ultrasonic
- Sensor Model: **Thies A Windvane**
- Sensor Model: **Thies A Temperature**

Last modified: 01.02.2022