

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


HEATING	GENERAL INTERFACE	RS422 CONFIG	INPUT/OUTPUT	BAYERN - HESSEN TELEGRAM	OTHERS
0 Arms	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 Reserved	2 Half duplex, analog (V)	2 Baud rate 4800/N81	2 Input 0-10 V	2 BH 2	Reserved
3 Arms & Transducers	3 Half duplex / Bayern-Hessen telegram	3 Baud rate 9600/N81	3 Telegram VD	3 BH 3	Reserved
4 Arms & Transducers & Shaft	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.

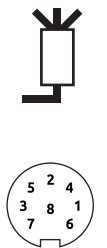








Supply/heating cable cross-section should be calculated based on the power system requirements (Volts and Amps) and the cable length. Recommended order by Kintech Engineering (4.3820.32.300) has 80W of power consumption. Please use a wire sizing tool for selecting the most suitable cable.

SENSOR WIRING TABLE

Sensor Model	Sensor Pin		Kintech Cable Colors	Orbit 360		
				Section	Terminal	Type
 Base sensor view / Soldering connector view.	1		Do not connect			
	2	TX- / RX-	White	RS485	34 38 42	B1, B2, B3
	3	ADIO	Yellow	Heating SIGNAL control		
	4		Do not connect			
	5	TX+ / RX+	Brown	RS485	33 37 41	A1, A2, A3
	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.

THIES 2D | ULTRASONIC ANEMOMETER

Sensor Model	Sensor Pin		Kintech Cable Colors		ADAM	Charge regulator	*EOL Zenith	
							Section	Terminal
 Base sensor view / Soldering connector view.	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 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**

Sensor response time: **43ms.**

The sum of the response times of all the sensors connected to the same bus must not exceed 850ms.

Last modified: 09.10.2023