

WIND VANE

NRG 200P



ORDER - N°	ELECTRICAL OUTPUT	ELECTRICAL SUPPLY	HEATING SUPPLY	MODEL IN EOL MANAGER
NRG 200P	Pot: 10 k Ω	1...15 VDC	-	NRG 200P/THIES 10K

APPLICATION

- Wind resource assessment
- Meteorological studies
- Environmental monitoring
- Simple, durable design
- Corrosion-resistant materials

CONSTRUCTION AND MODE OF OPERATION

The thermoplastic and stainless steel components resist corrosion and contribute to a high strength-to-weight ratio. The vane is directly connected to a precision conductive plastic potentiometer located in the main body.

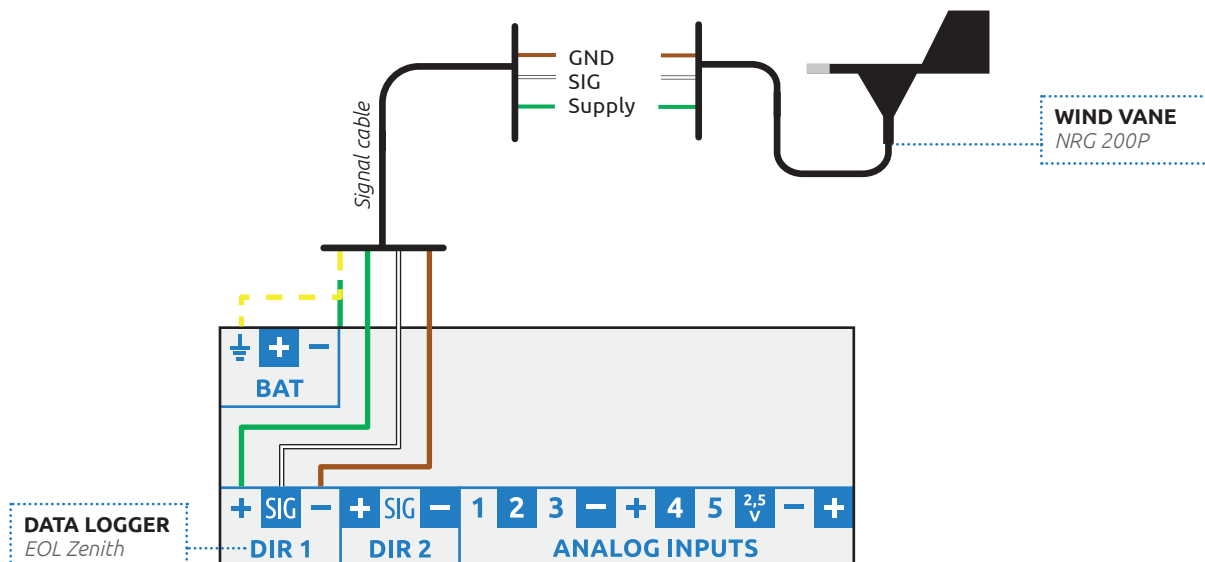
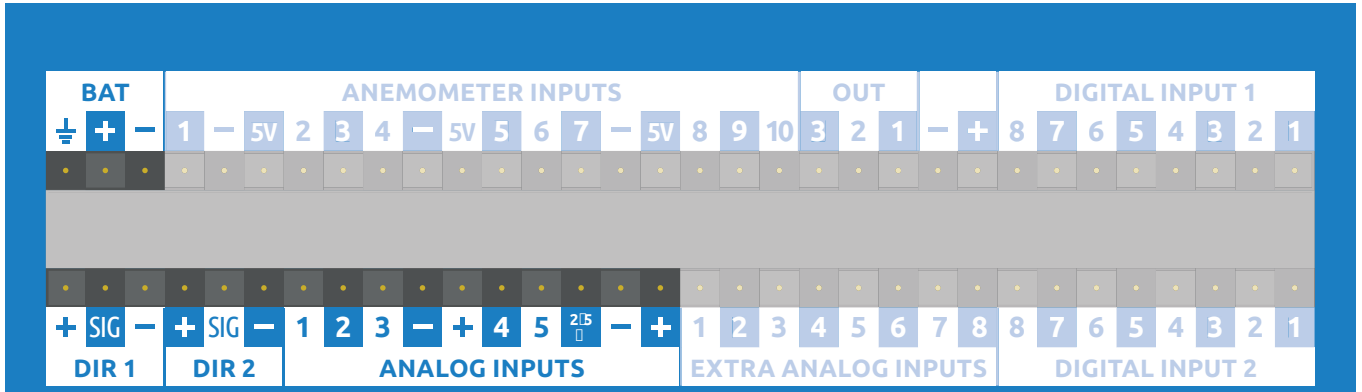
An analog voltage output directly proportional to the wind direction is produced when a constant DC excitation voltage is applied to the potentiometer. A rubber terminal boot is included.

TECHNICAL DATA

CHARACTERISTIC	DESCRIPTION / VALUE
Sensor range	360° mechanical, continuous rotation
Signal type	Analog DC voltage from conductive plastic potentiometer, 10 kΩ
Transfer function	Output signal is a ratiometric voltage
Accuracy	Potentiometer linearity within 1%
Dead band	8° Maximum, 4° typical
Supply voltage	Regulated potentiometer excitation of 1...15 VDC
Output signal range	0 V to excitation voltage (excluding deadband)
Threshold	1 m/s
Operating temperature range	-55...+60 °C
Operating humidity range	0...100 %RH
Lifespan	50 million revolutions (2-6 years normal operation)
Weight	0.14 kg

INSTRUCTIONS

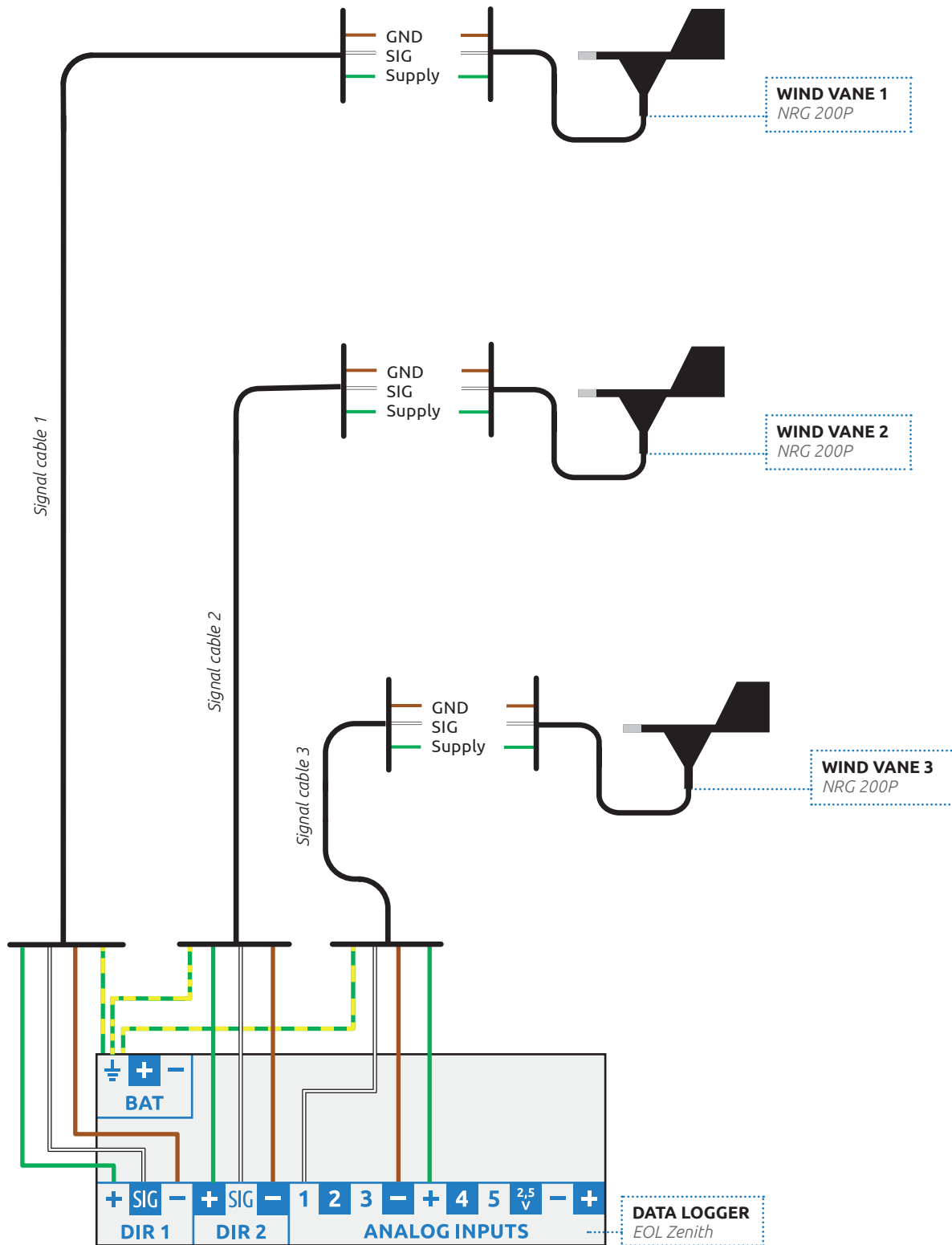
Use the following input channels on the logger to connect this sensor. See highlighted input channels marked here below. The wire colors used in the connection diagram below only applies in case the cable is supplied by Kintech Engineering.
For additional wiring & shielding information see the chapter "IMPORTANT" at the end of this dataheet.



SENSOR PIN DESCRIPTION	DATA LOGGER INPUT CHANNEL	
Supply	DIR 1	(+)
GND	DIR 1	(-)
SIG	DIR 1	SIG
Shield	BAT	GND

KINTECH COLOR CODES		MANUFACTURER COLOR CODES	
	Green		Red
	Brown		Black
	White		White
	Yellow - Green		Yellow - Green

HOW TO CONNECT MORE THAN ONE OF THIS SENSOR (EXAMPLE)



HOW TO CONFIGURE THE SENSOR 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:

- **Section:** Wind Vanes
- **Type:** Windvane
- **Model:** NRG 200P/THIES 10K

Offset value: Tick the “Std Cal” if the north marking on the wind vane is aligned exactly towards North (in this case the offset is zero (0)). Otherwise the angle (in degrees) must be typed in the offset.

The screenshot shows a table titled "Wind Vanes" with the following columns: Ignore, Channel, Type, Model, Units, Serial Number, Height, Username, Std Cal, Slope, Offset, Std Dev, Max, and Min. Two rows are visible: D1 and D2. Row D1 is selected. Below the table, four callout boxes point to specific cells: "SENSOR SELECTION" points to the "Type" cell, "MODEL SELECTION" points to the "Model" dropdown, "DATASHEET DOWNLOAD" points to the download icon, and "STANDARD CALIBRATION" points to the "Std Cal" checkbox.

Ignore	Channel	Type	Model	Units	Serial Number	Height	Username	Std Cal	Slope	Offset	Std Dev	Max	Min
<input type="checkbox"/>	D1	Windvane	NRG 200P / THIE...			0	Windvane1	<input checked="" type="checkbox"/>	1,000000	0,000000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	D2	Windvane	---			0	Windvane2	<input type="checkbox"/>	1,000000	0,000000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

IMPORTANT

- After configuring the sensor in EOL Manager make sure to upload the configuration file to your EOL Zenith data logger. See the “Quick User Guide” how to upload configuration files to the data logger.
- All sensor wire shields must be connected to the data logger GND terminal.
- The data logger should always be connected to a separated ground rod. **Not** to the lightning rod of the tower.
- There are two exclusive inputs in the logger for the wind vanes (DIR1 & DIR2). Connecting the 3rd – 7th wind vane use “ANALOG INPUTS” of the logger.
- Wind vanes connected to the “ANALOG INPUTS” of the logger must be connected to exclusive (+) and (-) terminals. The terminals (+) and (-) can consequently **not** be shared between wind vanes.
- Wind vanes **cannot** be connected to the “EXTRA ANALOG” channels of the logger.
- To store data such as Std Dev, Max and Min you should tick the corresponding boxes next to each anemometer channel when setting up your site file. Otherwise these parameters will not be stored.
- Cable recommendation:

Sensor	Signal cable 3x0.5 mm ²
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