

# ANEMOMETER

*ORNYTION 107A*



ORDER - N°	ELECTRICAL OUTPUT	ELECTRICAL SUPPLY	HEATING SUPPLY	MODEL IN EOL MANAGER
Ornytion 107A	R: 900 $\Omega$	-	-	<b>ORNYTION 107</b>

### APPLICATION

The 107A model is a precision cup anemometer. It is provided with a synchronous generator that needs no power supply.

The output frequency is linearly proportional to wind speed. It is highly immune to electromagnetic interferences (industrial environment degree). It is specially designed to be sensitive to the horizontal component of the wind.

### CONSTRUCTION AND MODE OF OPERATION

The body of the anemometer Ornytion 107A is made of anodized aluminium and the cups are made of polycarbonate.

The 107A anemometer is issued with a fastening accessory that comes with a connector, suitable for placing on support tubes with a 25 mm diameter.

Before installing the anemometer you must wire the connector. We recommend the use of shielded cable with two or more conductors with a section between 0.2 and 0.8 mm<sup>2</sup>. The outer diameter of the cable should not exceed 8 mm.

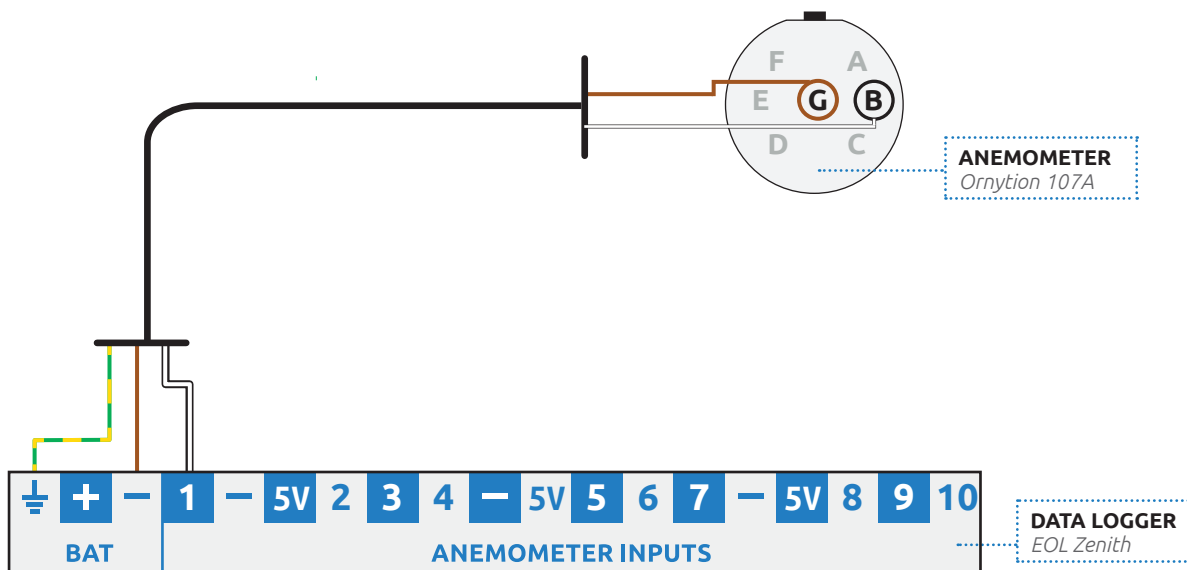
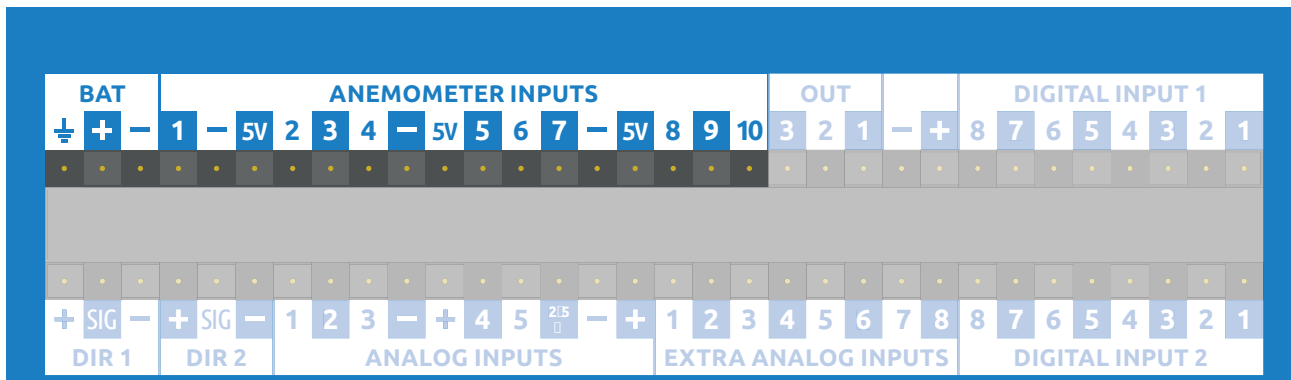
## TECHNICAL DATA

CHARACTERISTIC	DESCRIPTION / VALUE
Air speed	<60 m/s
Temperature	-25...+60 °C
Linearity	Correlation factor r between frequency and wind speed $v(\text{m/s}) = 0.625 * f(\text{Hz}) + 0.20$ typical $r > 0.999975$
Linearty typical error	0.0025 m/s
Starting threshold	<0.3 m/s
Delay constant	1.7 m
Output Signal	Sine wave without DC component
Amplitude	$U(\text{Vpp}) = 0.1 * f(\text{Hz}) (\pm 10\%)$ 10 Vpp Max amplitude (clipped)
Output DC Resistance	900Ω (±10%)
Electromagnetic Compatibility	EN 61000-6-2:2006 EN 61326-1:2006
Weight	0.173 kg
Heigh	202 mm
Body diameter	39.5 mm
Rotor diameter	157 mm

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## 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.**

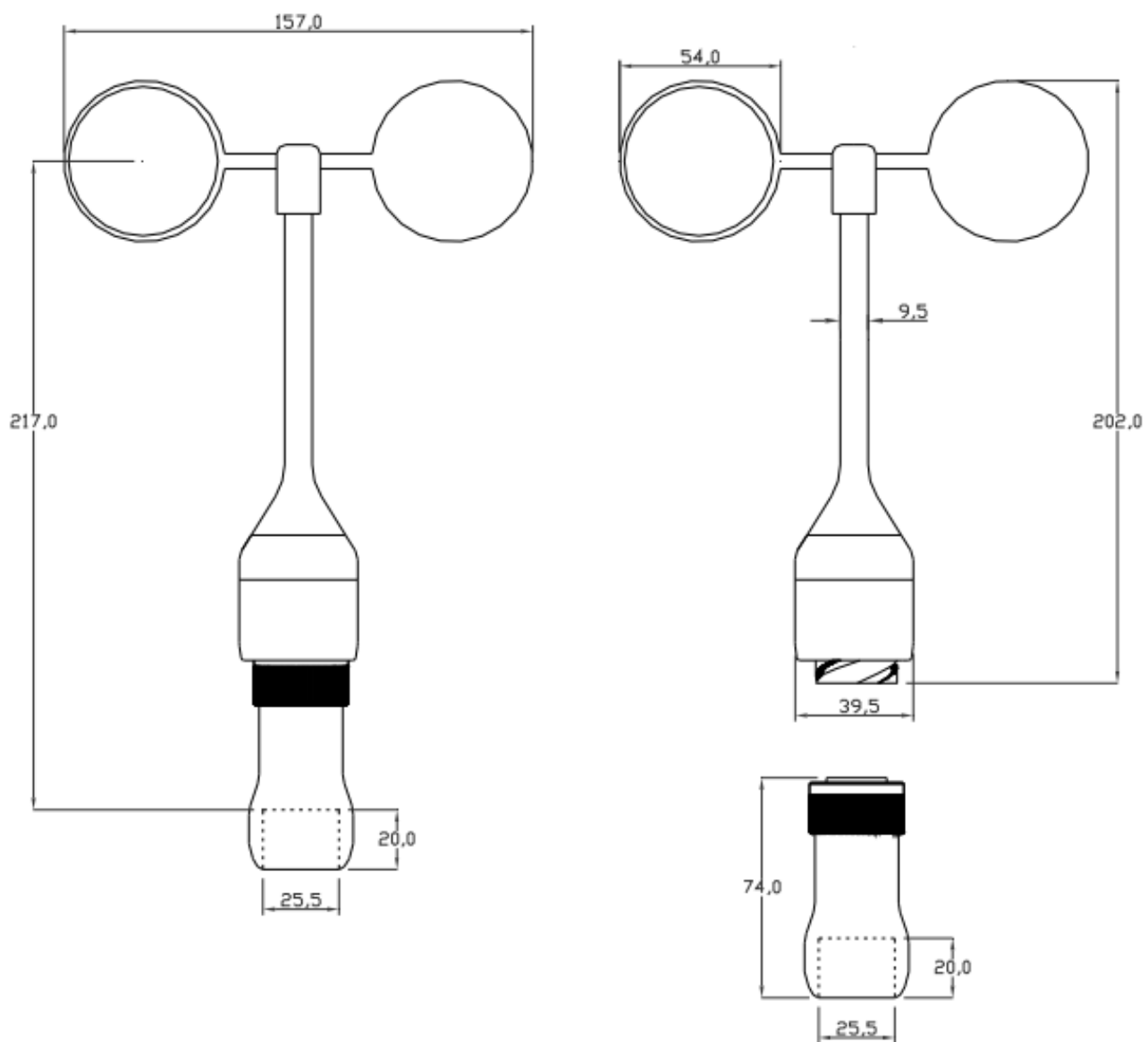


SENSOR PIN DESCRIPTION		DATA LOGGER INPUT CHANNEL	
B	Signal	Anemometer Inputs	1
G	GND	BAT	(-)
-	Shield	BAT	GND

KINTECH COLOR CODES		MANUFACTURER COLOR CODES	
○	White	●	Green
●	Brown	●	Yellow
●	Yellow - Green		

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## SENSOR DIMENSIONS



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## HOW TO CONFIGURE THIS 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: Anemometers/Frequency
- Type: Anemometer
- Model: ORNYTION 107

**Calibration values:** Tick the “Std Cal” to use this sensors standard slope and offset. If you have the Measnet calibration certificate for this sensor insert the slope and offset values from this certificate.

Anemometers/Frequency

Ignore	Channel	Type	Model	Units	Serial Number	Height	Boom	Username	Std Cal	Slope	Offset	Std Dev	Max	Min
<input type="checkbox"/>	ANE1	Anemometer	ORNYTION 107	m/s		0	0	WS1_0_0_ORN...	<input checked="" type="checkbox"/>	0,620000	0,170000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	ANE2	Anemometer	-----	m/s		0	0	Anemo2	<input type="checkbox"/>	0,000000	0,000000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Diagram labels pointing to the table:

- SENSOR SELECTION (points to Type column)
- MODEL SELECTION (points to Model column)
- DATASHEET DOWNLOAD (points to Units column)
- STANDARD CALIBRATION (points to Std Cal column)

## 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.
- The three 5V power supply outputs are completely independent and not associated to any of the signal inputs. The three 5V outputs can therefore be distributed according to needs.
- 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 (up to 150 m cable):

Sensor no heating	Signal cable 2x0.5 mm <sup>2</sup>
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**KINTECH ENGINEERING**

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