

AX-WSD-V

Wind Speed and Direction Sensor - Voltage Output

AXIO



Product Overview

The Axio AX-WSD-V provides an analogue voltage output relating to the wind speed and direction. The sensor units are manufactured from anodised aluminium alloy, UPVC and stainless steel with moulded polypropylene cups, and are lightweight. The interface board is supplied in a transparent box through which LED indicators of speed and direction can be observed, and features high quality rising clamp terminals for ease of connection. The AX-WSD-V is supplied complete with connecting cables

Features

- Wind Speed and Direction analogue outputs
- Sintered bronze bearings used on wind speed cups
- Precision conductive potentiometer for long life
- Output selectable 0-5V or 0-10V
- 24Vac/dc powered
- High quality rising clamp terminals on interface board

Product Specifications

Wind Speed Output:	Scaling for 0-10V	0-5Vdc or 0-10Vdc at 5mA maximum
	Accuracy	0V = 0m/sec. 10V = 50m/sec
	Resolution	5% or 1.5m/sec
	Threshold	Better than 0.5m/sec
Wind Direction Output:		<0.5m/sec
	Scaling for 0-10V	0-5Vdc or 0-10Vdc at 5mA maximum
	Accuracy	0V = 0-10°, 5V = 180° South, 10V = 360° North
	Resolution	±5° typical (±10° worst case)
	Minimum wind speed for movement	Generally <1° (±10° at North)
Supply Voltage:		<0.5m/sec
		24Vac ±15% (at 50mA maximum) or
Terminals:		24Vdc ±10% (at 30mA maximum)
Ambient Temperature Range:	Head unit	Rising Clamp for 0.5-2.5mm ² cable
	Interface unit	-20°C to 60°C
Weight:		0°C to 50°C
Country of Origin:		<250 grams (Head unit only)
		United Kingdom

Order Codes

AX-WSD-V Wind Speed and Direction Sensor - Voltage Output
AX-WSD-2M-MAST 2 Metre Mast for Wind Speed Indicator

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Installation

The AX-WSD-V should be installed by a suitably qualified technician in conjunction with any guidelines for the equipment it is to be connected to and any local regulations. Field wiring should be installed to satisfy the requirements set out by the manufacturer of the equipment that the module is being connected to.

Operation and Connections

It is important to choose a site carefully to mount the Head unit. Sheltered sites should be avoided, as should exposed sites unless there is a requirement to measure wind speed under exposed conditions. Mounting on the wall of a building may also shelter the unit, leading to inaccurate readings. It should be noted that the wind speed increases exponentially with the height above the ground, for the first 20 metres. It follows that mounting on a tall mast will lead to higher wind speeds. A good recommended height is between 2 and 9 metres above ground, where possible. Mounting on a flat roof should also be avoided as this can lead to inaccurate readings due to turbulence and eddies.

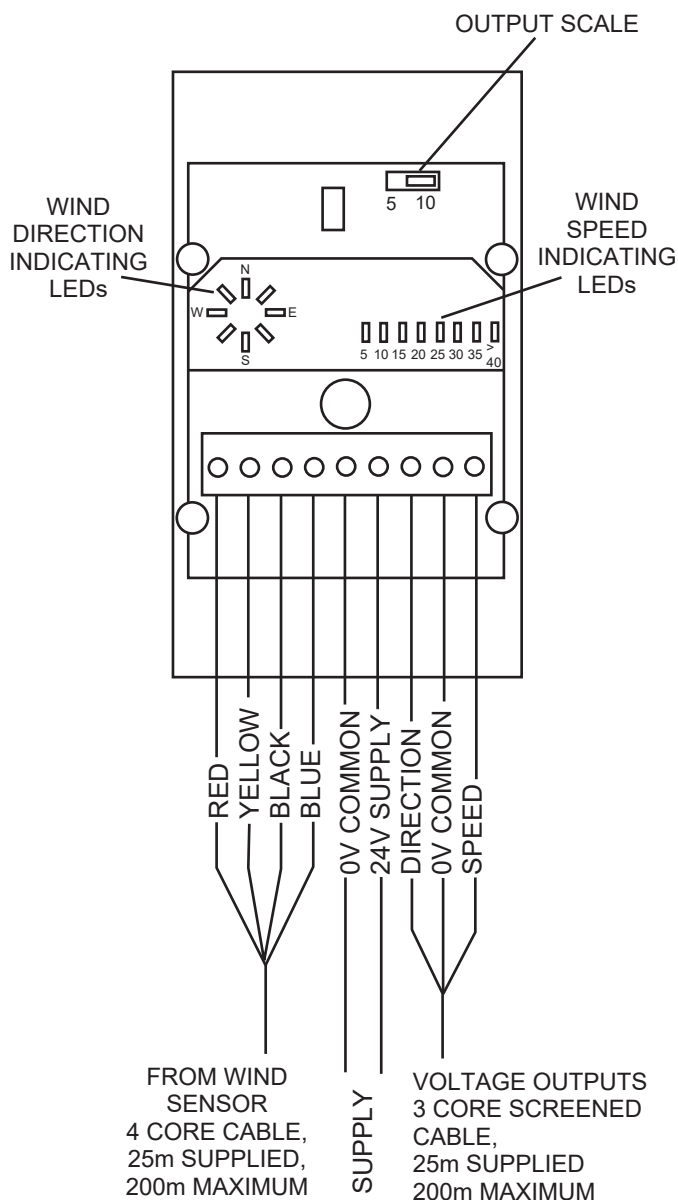
If the Head unit is to be mounted near to the ground, anti-vandalism measures may be required. Any protection of this nature should not obstruct the wind flow to the unit.

The Head unit must be mounted with the direction vane at the top and the speed cups at the bottom. The unit should be mounted to a mast of between 30 - 50mm diameter by means of the V-shaped clamp and bracket. The horizontal part of the arm must be oriented Northwards using the compass provided. This is the only set up required.

The interface unit must be mounted in an area not exposed to the elements. 25 metres of 4-core cable is supplied for connection to the wind sensor. Note the correct sequence of wire colours at each end of this cable - to the Head unit and the Interface unit. Adhesive pads are provided with the unit to mount the box to a suitable surface.

The jumper at the top of the board should be moved to select both of the outputs scaled at either 0-10V or 0-5V according to requirement.

The LEDs on the interface unit can be used as a quick check that the unit is operating correctly.



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