

SPECIFICATIONS

WD2 Output: Wind direction angle (degrees)

WD3 Output: Sine, cosine of wind direction angle, 24-hour standard deviation

WD4 Output: Angle & sigma/theta

Note: WD3 and WD4 use two channels in the data logger

Range: 0.01° to 359.99° (No dead band)

Operating Range: 0-75m/sec (0-270km/h)

Starting Threshold: < 0.2m/s

Resolution: < 1 minute of arc

Accuracy: < +/-0.5°

Temperature Range:

-20°C to +60°C (with heaters)

+1°C to +60°C (without heaters)

-30°C to +75°C (storage)

Humidity Range: 0-100%

Sensor Type: Continuous rotation, microprocessor-controlled position monitor

Reliability: With maintenance, more than 10 years expected

Output: Serial data ASCII

format plus, either voltage 0-1

or 0-2.5V, or frequency +5V

pulse (2-10Hz)

Options: 4-20mA

Power requirements:

Power Supply: 5 to 28V DC

unregulated

Current Drain: < 2mA

Cable lengths:

Standard cable length 0.2m

Maximum cable length 4km

using Monibus communications

Mounting:

Mounts on an MK9 standard

cross-arm. Alternative mounting

options are a 25mm BSP adaptor

or 10mm bolt fitting

Sensor dimensions:

Height: 270mm including

spigot and vane

Length: 450mm tip-to-vane

Weight: 350g (unpacked)

Related Products:

EnviroStation™ Automatic

Weather Station

SL5 Smart Logger

AN2 Anemometer

SI8 PC Interface Module

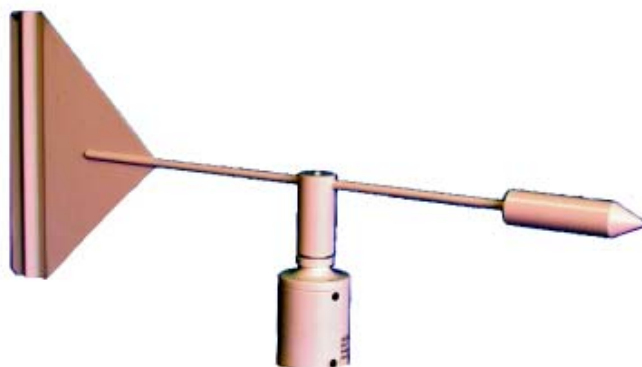
Wind direction sensors

The “smart” WD2 Wind Direction Sensor by ICT International overcomes the “deadband” problem associated with conventional potentiometer type wind direction sensors.

It does this by utilising a design that incorporates a continuous rotation type, microprocessor-controlled sensor to provide an accurate angular reading of the wind direction.

This type of sensor provides the dual advantage of eliminating “deadband” errors while minimising friction within the sensor to give an extremely low starting threshold.

The WD2 sensor does not require re-initialisation after power loss as it can instantly identify bearing to an accuracy of better than $\pm 0.5^\circ$.



Advanced functionality

ICT's WD2 Wind Direction Sensor provides a single output of angle for wind direction, while the WD3 version provides dual outputs for sine and cosine of wind angle. Both sensors can provide a 24-hour standard deviation output which can be logged by the SL5 Smart Logger.

The WD4 version displays angle information and computes the sigma theta directly within the sensor ready for logging by the Smart Logger. This sensor can also provide average wind direction based on a range of user-selectable periods.

The “smart” WDX range of sensors can be used with any data logger and can also be linked to a variety of electromechanical and electronic counters. However, their capability is greatest when operated with an ICT International Smart Logger.

Applications

- Air pollution/plume monitoring
- Automatic weather stations
- Wind profiling
- Crop studies
- Emergency services
- Ecology
- Building construction research

Features

- Low starting threshold
- Corrosion-resistant finish
- 1 minute of arc resolution
- Sine/cosine output option
- Long life operation
- No “deadband” problem
- Water-resistant design

Quality assurance

ICT International products are manufactured under a third party accredited ISO9002 System.

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