



WEATHER



STATIONS

.....



IM171-SDTH
SPEED & DIRECTION
HUMIDITY & TEMPERATURE

BUILD YOUR OWN SYSTEM

T +44 20 8551 7000
E INFO@MUNROINSTRUMENTS.COM
W WWW.MUNROINSTRUMENTS.COM





WEATHER STATIONS

IM171-SDTH SPEED & DIRECTION HUMIDITY & TEMPERATURE

PAPERLESS RECORDER

The Paperless Recorder (PR) is a data acquisition unit with a 5.6" TFT touch screen. It is designed for use with our range of meteorological sensors. The PR offers multiple real-time and historical views, as well as numerous archiving strategies to ensure data is never lost. Using the associated PC software, the user can view live data, generate reports, set alarms and configure the PR unit.

PC SOFTWARE

Powerful, versatile software allows the user to view and analyse data from the sensors. Configuration of the PR is also possible. Key features: Live data monitoring (includes trending, with scalable time axis between 1 minute and 1 month). Historical review of data. Customizable display screens: Configure the PR to display data in your chosen format. Choose from a variety of display styles. Configure alarms and relay outputs. Download data for offline analysis. Configuration wizards for easy set-up and troubleshooting.



Specification	Description
Power	90-250VAC or 11-36VDC
Display	5.6" TFT touch screen
Resolution	640 x 480 pixel resolution, 65K colour
Internal Memory	256 MB
RAM	256 MB
External Memory	SD card, USB x 2
Ethernet	Modbus TCP/IP
Sampling Rate	100 ms max
Maths Channels	Yes
Protection	IP65 front, IP20 rear
Operating Temperature	0°C to 50°C



150/IM147 IN-LINE CUP ANEMOMETER & WIND DIRECTION VANE



Product Description

The IM147 is a dual in-line unit comprising an IM124 Cup Anemometer and IM145 Wind Direction Vane. It transmits wind speed and wind direction measurements to remote dial indicators and displays. The IM147 can be used with the following display modules:

- Up to 6 x IM124A Wind Speed Dial Indicators
- Up to 6 x IM125A Wind Direction Dial Indicators
- 150/DAS Digital Graphical Recorder
- A suitable data logger (4-20 mA output)

The sensor itself is extremely robust and has an expected lifetime of several decades. It is particularly suited to coastal and cyclonic areas. The wind speed range is 0-180 knots. It is a near-identical model to our acclaimed IM146 and is used around the world by meteorological offices, airports, shipping terminals, offshore rigs, bridges etc.

Technical Specifications

Start Threshold	3±1 Knots
Speed Range	0-180 Knots
Speed Accuracy	Below 40 Knots ±1 Knot, Above 41 Knots ±2 Knots
Direction Range	0-360°
Direction Accuracy	±1°
Operating Temp	-40°C to + 100°C
Operating Humidity	98% non-condensing
Combined Height	840 mm
Fin Tip Axis	790 mm
Fixing	2 inches BSP internal
Weight	16.25kg



IM124 CUP GENERATOR ANEMOMETER



Product description

Requiring no external power source, the IM124 Cup Anemometer generates an output signal that is directly proportional to the wind speed. Each IM124 can drive up to six IM124A Wind Speed Dial Indicators. It can also be used as part of a complete IM147 system.

Constructed from non-ferrous materials resistant to corrosion in salt-laden and high humidity atmospheres

Technical Specifications

Start Threshold	3±1 Knots
Speed Range	0-180 Knots
Speed Accuracy	Below 40 Knots ±1 Knot, Above 41
Knots	±2 Knots
Weight	4.2Kg

IM145 WIND DIRECTION VANE ENCODER



Product description

The IM145 Wind Direction Vane is a sensitive, reliable unit of robust construction, which transmits wind direction measurements to a high degree of accuracy. It can drive up to six IM125A Wind Direction Dial Indicators using an external AC supply. It can also be used as part of a complete IM147 system. Constructed from non-ferrous materials resistant to corrosion in salt-laden and high humidity atmospheres able to withstand a near-miss lighting strike

Start Threshold	3±1 Knots
Direction Range	0- 360°
Direction Accuracy	±1°
Weight	12 kg



150/W20 2-AXIS ULTRASONIC ANEMOMETER (0-60 M/S)



Product Description

This durable 2-Axis Anemometer facilitates the measurement of wind speed & direction and the U-V Cartesian components of wind speed. Operating according to the ultrasonic principle, it is unaffected by inertia and can therefore detect extremely low wind speeds to a high degree of accuracy.

The sensor requires a 10-30 VDC power supply, making it particularly suitable for remote applications. As it contains no moving parts, this ultrasonic anemometer can be left for up to two years without the need for maintenance or re-calibration. Furthermore, the sensor has a very small power draw. It is therefore ideal for remote solar-powered or wind-powered systems.

This lightweight sensor can be fitted to any 40 mm diameter pole/mast. The inbuilt compass makes installation and alignment quick and easy.

The sensor has a temperature operating range of -40°C to +60°C. Optionally, it can be fitted with a heater to prevent the accumulation of ice and snow in low temperatures.

The sensor outputs can either be analogue 0-1 V, 0-5 V, 4-20 mA. Alternatively, the serial outputs are RS232 and RS 485 following communication protocols SDI-12, MODBUS or NMEA.

This instrument can also be supplied with integrated sensors to measure temperature, relative humidity, barometric pressure and solar radiation (please state if this functionality is required when requesting a quotation).

Technical Specifications

Specification	Description
Wind Speed Range	0-60 m/s
Wind Speed Resolution	0.01 m/s
Wind Speed Accuracy	±2% (<35 m/s), ±3% (>35 m/s)
Wind Direction Range	0-359.9°
Wind Direction Resolution	0.1°
Wind Direction Accuracy	±2°
Power Supply	10-30 VDC
Power Consumption	26 mA @ 12 VDC
Analogue Outputs	0-1 V, 0-5 V, 4-20 mA
Digital Outputs	RS232, RS485, SDI-12, MODBUS-RTU
Operating Temperature	-40°C to +60°C
Environmental Protection Rating	IP66



150/T10 PRECISION HYGROMETER



Product Description

This highly precise hygrometer is an excellent solution for those who need to monitor humidity and temperature.

Humidity is measured by a capacitive sensor made up of a hygroscopic polymer. The sensor works by detecting changes in the dielectric constant, which is directly proportional to the relative humidity of the surrounding environment. The advantages of this type of sensor

include insensitivity to temperature changes, quick response time and durability.

The temperature sensor is a platinum resistance thermometer (100Ω at 0°C). The Pt100 resistance variation is transformed into a current or voltage signal, linear to temperature.

Technical Specifications

Specification	Description
Humidity Sensor Type	Capacitive Hygroscopic Polymer
Humidity Measuring Range	0-100% RH
Humidity Accuracy	±0.15% (0-90% RH)
Humidity Sensor Working Temperature	-40°C to +60°C
Hysteresis and Repeatability	0.4% RH
Long Term Stability	1%/ year
Response Time at 63% of Final Variation	3 minutes with filter, 6 seconds no filter
Temperature Sensor Type	4 wire Pt 100 1/3 DIN
Temperature Measurement Range	-40°C to +60°C
Temperature Accuracy	±0.15°C, ±0.1% of measurement
Temperature Stability	0.2°C/ year
Outputs	Analogue: 4-20 mA; Digital: RS232 or RS485 MODBUS RTU
Power Supply	10-40 VDC
Consumption	2 mA
Environmental Protection Rating	IP65

T +44 20 8551 7000

E INFO@MUNROINSTRUMENTS.COM

W WWW.MUNROINSTRUMENTS.COM

©MUNRO INSTRUMENTS 2016

