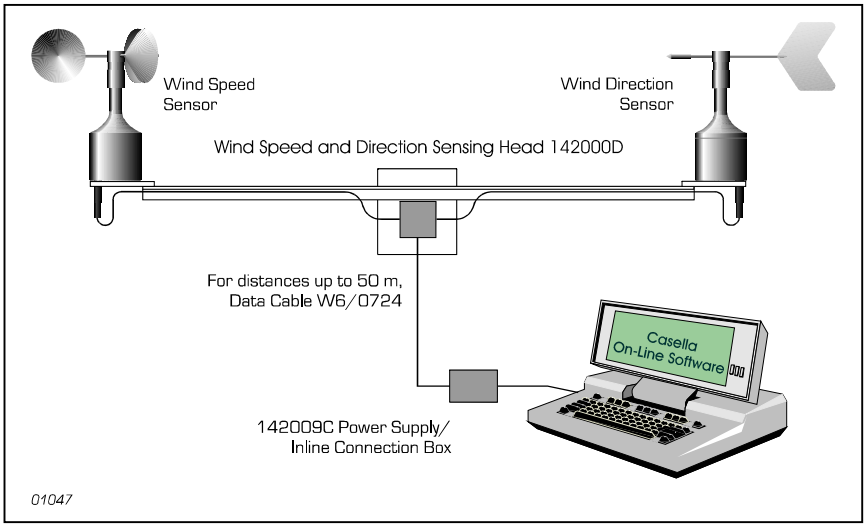
Wind Speed And Direction Systems

CASELLA CEL

SYSTEM 1
Transmits data directly into a PC over distances up to 50 m.

The wind speed and direction sensors are mounted on a cross arm. No sensor interface module is required, merely a junction box. The outputs from the sensors are linked via an Inline Connection Box to the RS 232 port on the PC.

A Universal 12 V Power Supply is also included to provide power for the sensors.

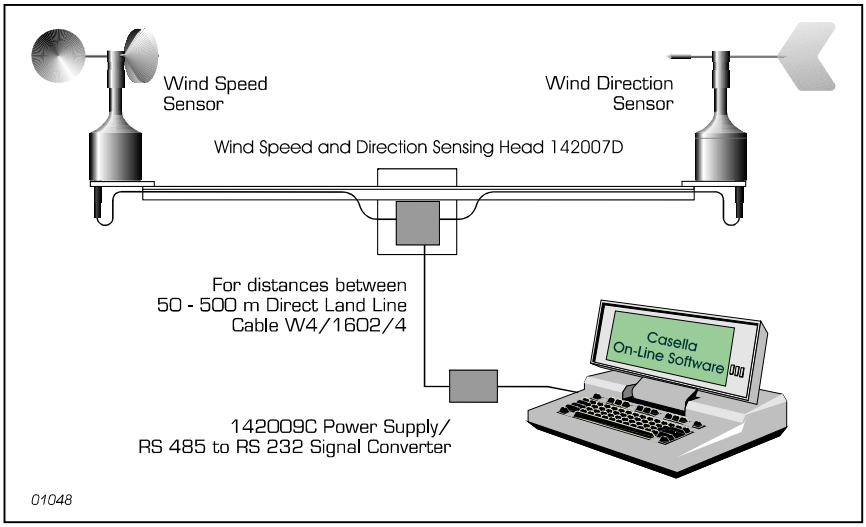


SYSTEM 2
Transmits data to a PC over distances between 50 and 500 m*.

The wind speed and direction sensors are mounted on a cross arm which includes a signal-conditioning interface that generates an RS 485 output. This output passes via an RS 485 to RS 232 Signal Converter to the PC.

A Universal 12 V Power Supply is also included to provide power for the sensors.

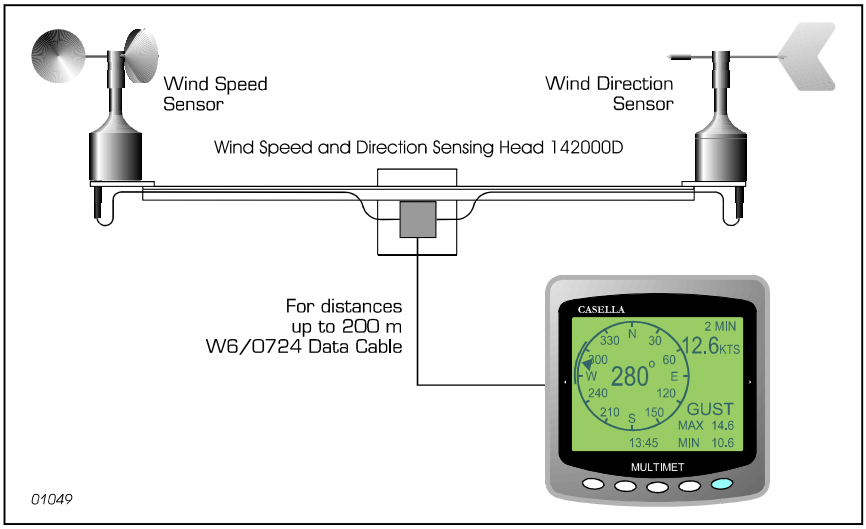
*For distances greater than 500 m, please contact the Casella CEL Sales Department.



SYSTEM 3
Transmits data directly into a Multimet display over distances up to 200 m. Multimet systems can be networked.

The wind speed and direction sensors are mounted on a cross arm. No interface module is required, merely a junction box.

Power for the sensors is provided by the Multimet.



The wind sensing heads for all three systems utilise OEM sensors manufactured by Casella CEL.

The anemometer uses a non-contacting optical encoder transducer providing a pulsed 0 – 5 V output (frequency directly proportional to wind speed).

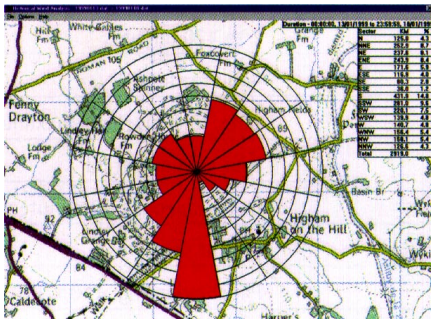
The windvane employs the very latest Giant Magneto Resistive (GMR) magnetic sensing technology to offer accurate, frictionless sensing with zero dead-band at north.

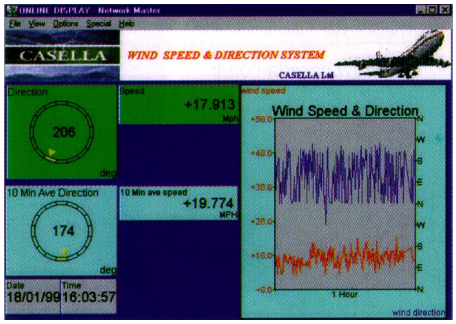
Both sensors are manufactured from high quality anodised aluminium, which guarantees functional reliability even under the harshest of environmental conditions. The sensors are mounted on a zinc galvanised, steel cross arm using corrosion resistant fittings. U-bolts can be provided for fitting to masts from 50 – 115 mm in diameter. Heated versions of both sensors are available if required.

For Systems 1 and 3, NMEA signals are sent directly to the PC, while for System 2, RS 485 is used as this allows noise free signals to be transmitted over longer distances.

ON LINE SOFTWARE

The screen illustrations show the type of information available on line.





SPECIFICATIONS

ANEMOMETER:

Transducer type:	Optical interrupter
Max wind speed:	75 m/s
Starting velocity:	Typically 0.3 m/s
Resolution:	7.84 cm
Output signal:	0 - 5 V pulses
Pulses/revolution:	20
Non-linearity:	<±0.6%
Accuracy:	±0.3 m/s below 3 m/s ±1% over 3 m/s
Supply voltage:	6 to 28 V DC
Power consumption:	3 mA
Stabilisation time:	<1 s from power up
Operating temp:	-20 to +70ºC
Heater option:	24 V DC/AC, 47 Ω 12 W
Swept diameter:	134 mm
Height:	135 mm.

WINDVANE:

Transducer type:	GMR solid state system
Max wind speed:	75 m/s
Resolution:	1º
Accuracy:	<±2º
Aligning threshold:	<0.8 m/s for a 10º offset
Damping ratio:	0.25
Distance constant:	Typically 3.0 m
Undamped natural wavelength:	2.2 m
Repeatability;	0.5% FSD
Electrical angle:	0 to 359º with no dead band at North
Output signal:	0 to 1.8 V DC for 0 to 359º
Supply voltage:	6 to 28 V DC
Power consumption:	3 mA (9 mA during first 60 s of power up)
Stabilisation time:	<1 s from power
Operating temp:	-20 to +70oC
Heater option:	24 V DC / AC, 47 Ω 12 W
Swept diameter:	220 mm
Height:	148 mm.

SENSING HEADS:

Distance between sensor centres:

142000D-03:	1581 mm
142007D-02:	1581 mm

Casella instrumentation and software is designed, manufactured and serviced by:

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