

Data-Chart

Document 1871A

Weather Monitoring Application Modules

Wind Speed
Wind Direction
Barometric Pressure
Solar Radiation
Air Temperature
Humidity

Additional Modules

Pressure
Absolute
Gage Differential

Hydrological
Waste Water pH



The Data-Chart is an electronic chart recorder that provides a high resolution LCD local display and stores one or two channels of information on a PCMCIA card. Recorded information can be viewed in real time, zoomed, compressed or searched. The user can select recording rates from 100 samples per second to 6 samples per hour. Averaging, Peak, Valley math functions can be applied to the data to be recorded. The Data-Chart can be linked to a personal computer via a RS232C serial port for remote operation. Information stored in the PCMCIA memory card can be loaded into a personal computer using the optional card reader. The accuracy of the recording process is $\pm 1/2\%$ of span (8 bits). The alarm option provides two SPDT relays that can be user programmed for high, low latching or not. The recorder fits a $1/4$ DIN mount. The unit can be ordered to operate from 120 VAC, 230 VAC or 12 – 28 VDC.

The Data-Chart Recorder in conjunction with one or more modules provides an economical, self contained system to monitor a wide variety of phenomena. The modules plug directly into the rear of the recorder. The modules are supplied with sensors, cable and instructions. The modules are normally calibrated in English Units. The Data-Chart display can be made to read any other system of units by using the Data-Chart input scaling feature.

External sensors such as the wind speed, wind direction, solar radiation and outdoor air temperature sensors are rated for operation from -40 to 60°C. The electronics module that plugs into the Data-Chart has a operating temperature range of -10 to 50°C. Connection to external sensors is made using a barrier strip on the module which will accept AWG# 12 or smaller wires.

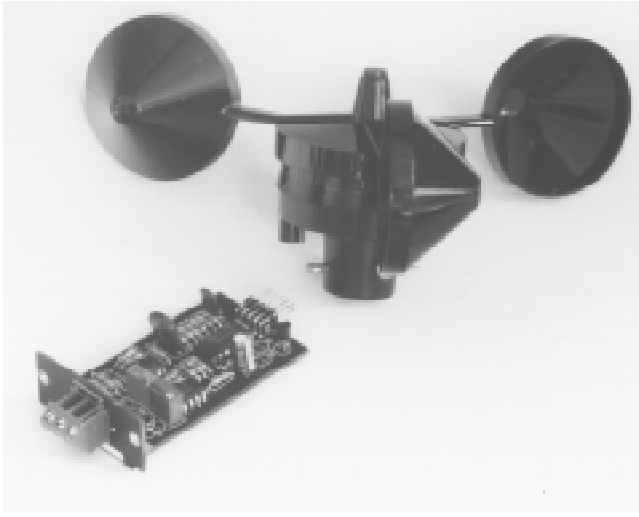
ISO 9001 Registered

Comptus Inc®

342 Lyndeboro Rd., New Boston, NH USA

Phone: 603 487-5512 Fax: 603 487-5513 E-mail: sales@comptus.com

Data-Chart



A75-104 Three Cup Anemometer

Wind Speed

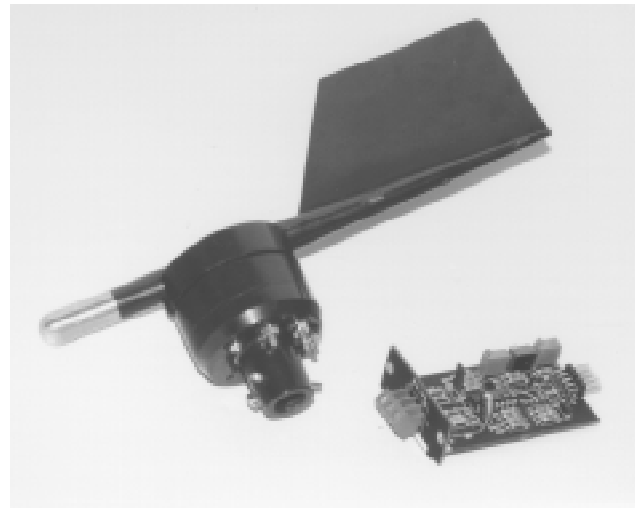
Wind speed is measured with the Model A75-104 Three Cup Anemometer which produces an AC signal whose frequency is proportional to wind speed. It has a distance constant of ten feet. The anemometer is injection molded using UV stabilized black Lexan to produce a very rugged and reliable sensor. Hundreds of thousands are in use throughout the world.

Extensive wind tunnel and field use has shown this unit to maintain its accuracy remarkably well in field use. Wind tunnel calibration reports for individual anemometers are available. See A75-104 data sheet for detailed anemometer specifications.

The system is supplied with 60 feet of cable and a 10 inch long stub mast for mounting the anemometer.

Model : MSE
Range : 0 - 100 MPH
Accuracy : 3 <Speed <10 MPH \pm 1MPH
Speed > 10 MPH \pm 5% of Reading
Threshold : 3 MPH

Higher performance anemometers are available.



A75-302 Precision Potentiometric Wind Vane

Wind Direction

Wind direction is measured with a Model A75-302 Precision Potentiometric Wind Vane. The A75-302 is balanced to reduce parking error, should the vane not be perfectly level. It is injection molded from black UV stabilized Lexan. It has proven rugged and reliable in field use. The vane produces a signal proportional to the azimuth of the wind. The vane has a 8 degree dead band either side of North. See the A75-302 data sheet for detailed sensor specifications.

The system is supplied with 60 feet of cable and an "S" mast for mounting the direction vane.

Model : MD360
Range : 0 - 360°
Linearity : \pm 1°
Threshold : 2.2 MPH

Higher performance wind vanes are available.

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