



INDUSTRIAL WEATHER STATIONS

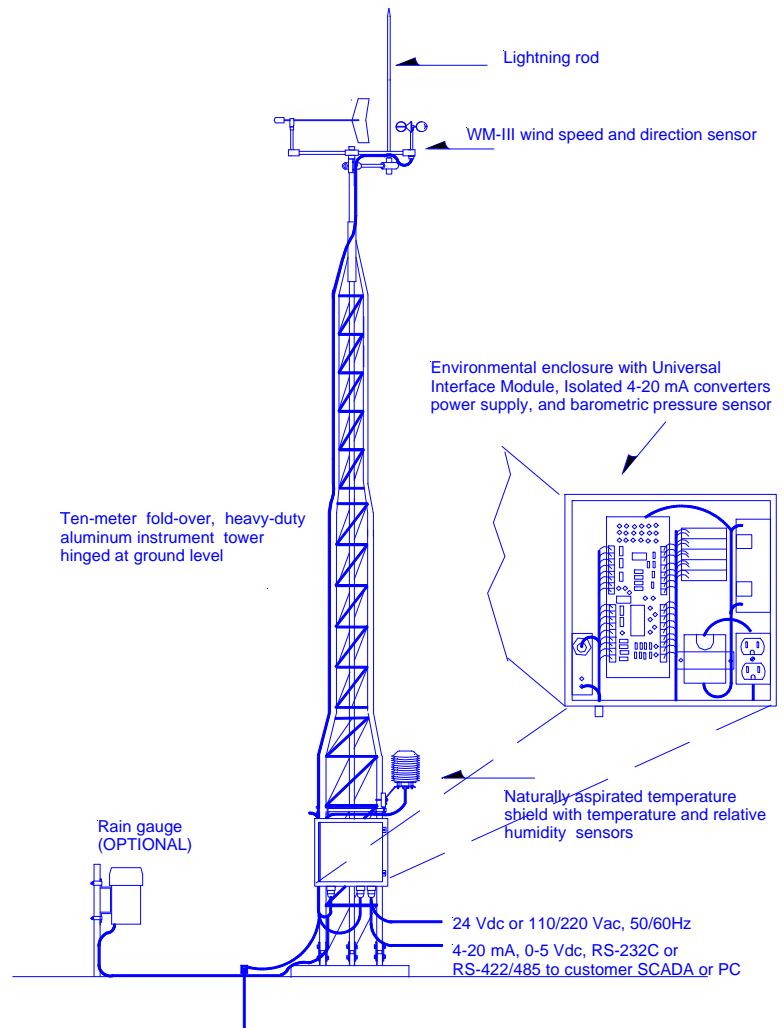
FEATURES

- Complete Integrated System
- Reliable, Proven Sensors
- ASCII, RS-232C or RS-422/485 Compatible
- Optional Current Loop Output to DCS
- Optional MODBUS protocol
- Low Power CMOS Design

The weather can have a major impact on many industrial processes and operations, both from an operational efficiency and/or safety standpoint. For example, real-time information about ambient atmospheric conditions provides the necessary input data required to make the proper decisions during an industrial emergency involving any type of hazardous material. Depending on the plant type, size and age, the federal Environmental Protection Agency (EPA), as well as municipal and state environmental regulatory organizations, also require that a number of basic meteorological variables are measured and recorded on site to ensure compliance with environmental regulations. Historical meteorological data collected from the actual plant site can also prove to be invaluable information in cases of complaints or litigation related to your plant operations. Knowing your operating ambient conditions accurately and reliably can help to increase overall plant operating efficiency and productivity, while minimizing downtime and overhead costs.

Climatronics' Industrial Weather Stations are designed to provide plant operators with all the data they need about the weather. The systems use reliable and accurate sensors to measure the weather variables of interest. Depending on output requirements, the sensors are connected to a data logger or our Universal Interface Module (UIM), which is housed in a weatherproof enclosure. The data logger or the UIM supplies excitation signals to the sensors and in the case of the data logger, converts the sensor output signals to digital data, which are

INDUSTRIAL WEATHER STATION W/ISOLATED 4-20 mA OUTPUT



RS-232C or RS-422/485 compatible and available in printable or comma delimited ASCII or optionally with MODBUS protocol. The data logger will also store the data and, if required, perform computational preprocessing such as averages, standard deviations, maximum/minimum, as well as certain control functions.

When isolated 4-20 mA current loop signals are required and/or when on-site data storage is not required, the UIM is used as a lower cost alternative to the data logger.

Climatronics has developed and is producing a sonic anemometer of novel design that can replace traditional wind sensors. We call this sensor the Sonimometer™. The Sonimometer™ is an option to our Industrial Weather Stations that provides several advantages over both mechanical and other solid-state sensors. With no moving parts, it requires no periodic maintenance, lowering the user's life-cycle costs. Our unique design means that it can tolerate a build-up of dirt, dust, snow, or other foreign matter in the sensing volume without measurement degradation. The design also improves accuracy and reliability since there are no 'arms' supporting the transducers to move, vibrate, or to provide roosts for birds. The digital output of the Sonimometer™ also means that there will be no conversion (A-D) or line-loss errors.

ORDERING INFORMATION

The basic Industrial Weather Station consists of the following items:

1	1	102083-G0-H0	WM-IIIA WIND SPEED/DIRECTION SENSOR
2	1	100093	TEMPERATURE SENSOR
3	1	102425	RELATIVE HUMIDITY SENSOR
4	1	102080	MULTI-PLATE RADIATION SHIELD
5	1	100508-G0	PRECIPITATION GAUGE, 6-INCH
6	1	102663-G1-10	BAROMETRIC PRESSURE SENSOR ASSEMBLY
7	1	100609-40	WM-III WIND CABLE
8	50	M3226	CABLE, DATA, PRECIPITATION
9	1	101779-G1	PREWIRED JUNCTION BOX
10	1	19017	TRIPLE NOTCH MOUNTING BRACKET
11	1	102489	UNIVERSAL INTERFACE MODULE (UIM)
12	1	102489G2	ANALOG OUTPUT OPTION FOR UIM (0-5 Vdc)
13	3	Q501-2B04	TWO CHANNEL, TWO WIRE TRANSMITTER
14	1	100519	POWER SUPPLY
15	1	RS-25-24	POWER SUPPLY, CURRENT LOOP TRANSMITTERS
16	2	101904	SIGNAL LINE SURGE PROTECTOR
17	1	415	AC SURGE PROTECTOR (115V)
18	1	ENGR.CHARGE	SYSTEM INTEGRATION, DOCUMENTATION, AND TESTING
19	1	MANUAL-N/C	SYSTEM MANUAL - NO CHARGE
20	1	C33HD-G0-H0	TEN METER TILT-OVER TOWER (OPTIONAL)
21	1	100924-G2-35	FULL-HEIGHT TOWER GROUNDING KIT (OPTIONAL)

The system can be provided with optional spare parts or maintenance tools, and the sensors can be provided with NIST-traceable calibration certificates. Contact Climatronics for additional details.

The standard data output from the Industrial Weather Stations will have the following English or metric engineering units:

Wind Speed:	0 - 125 mph	(0 – 50 m/s)
Wind Direction:	0° – 360°	
Air Temperature:	-25° to +125°F	(-30° to +50°C)
Relative Humidity:	0 – 100 percent	
Precipitation Accumulation:	0.01-in increments	(0.25 mm increments)
Barometric Pressure:	28 – 32 in Hg	(800 – 1100 hPa)



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