



# Met One Instruments, Inc.

## INDUSTRIAL WEATHER STATION

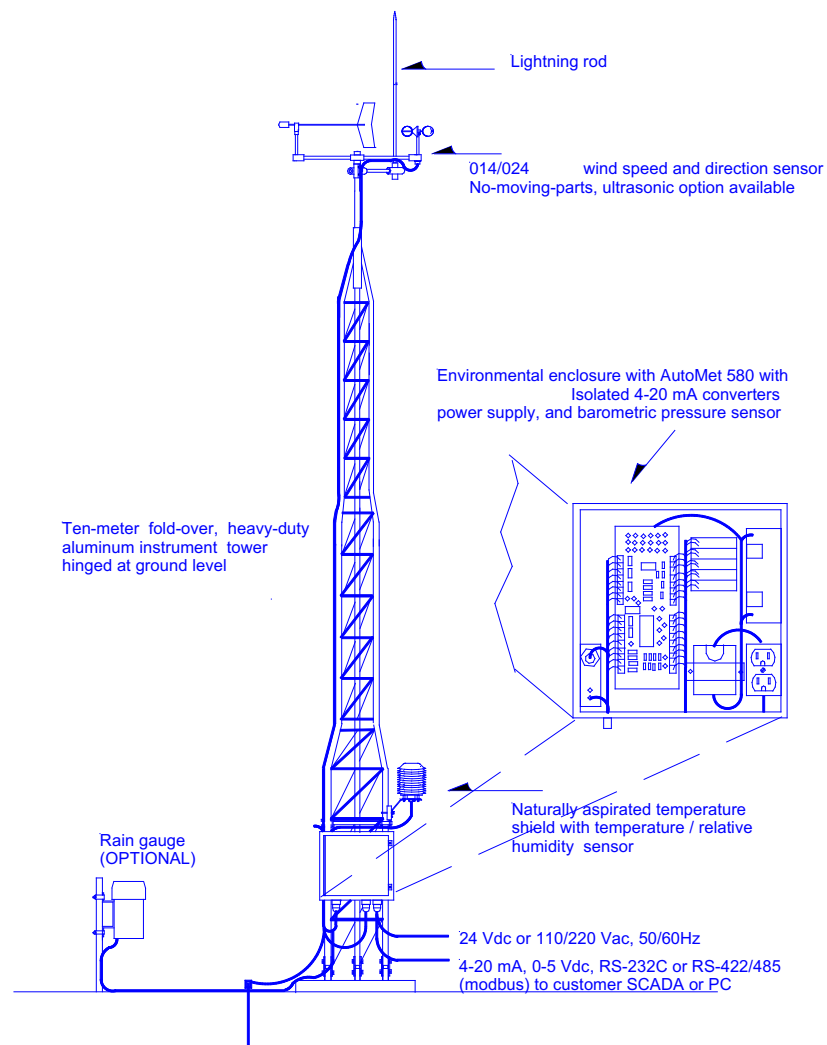
### FEATURES

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

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.

Met One Instruments' 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 our 455C data logger or our AutoMet 580 data logger, which are housed in a weatherproof enclosure. The data logger supplies excitation signals to the sensors and converts the sensor output signals to digital data, which are

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RS-232C or RS-422/485 compatible and available in printable or comma delimited ASCII or 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 and alarm functions.

When isolated 4-20 mA current loop signals are required voltage to current converters are connected to the analog output of the AutoMet 580.

A Sonic Anemometer 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 S2 sonic anemometer 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 sonic anemometer 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	014A/024A	WM-IIIA WIND SPEED/DIRECTION SENSOR
2	1	083E-1-35	TEMPERATURE/HUMIDITY SENSOR
3	1	5980	NATURALLY ASPIRATED TEMPERATURE/HUMIDITY SHIELD
4	1	360-1	PRECIPITATION GAUGE, 6-INCH
5	1	092	BAROMETRIC PRESSURE SENSOR ASSEMBLY
6	1	094-1	SENSOR, SOLAR RADIATION, W/ 10M CABLE, 1289 MOUNT (OPTIONAL)
7	1	580	AUTOMET 580 DATA LOGGER
8	3	510684	TWO-CHANNEL, TWO WIRE TRANSMITTERS
9	1	RS-25-24	POWER SUPPLY, CURRENT LOOP TRANSMITTERS
10	2	PB-8	SIGNAL LINE SURGE PROTECTOR
11	1	796002	AC SURGE PROTECTOR (115V)
12	1	LOT	SYSTEM MANUAL & CALIBRATION CERTIFICATES
13	1	970895	TEN METER TILT-OVER TOWER (OPTIONAL)
14	1	100924	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 Met One Instruments 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:	-55° to +125°F	(-50° 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)

