Weather Stations

FOR INDUSTRIAL APPLICATIONS

Columbia
Weather Systems

Professional Monitoring for Industrial Applications

Industrial weather stations offer professional-quality sensor options and communication protocols. Industrial-grade sensors improve efficiency and safety, and limit down-time.

Two configuration options cover most industrial weather monitoring requirements.

Weather MicroServer offers Internet-ready weather data, additional sensor options, and the following industrial protocols:

- SNMP
- Modbus TCP/IP and Modbus RTU (RS-485)
- DNP3 Ethernet and RS-485
- BACNet IP
- Profinet (via Modbus to Profinet Gateway)

4-20 mA Signal Interface. This configuration includes converter modules in a weatherproof enclosure to connect weather sensors to PLC, DCS, and SCADA systems. Click here for 4-20 mA.

Additional monitoring options on all systems include:

- Weather Master Software: PC display, graphing, archiving
- Weather Display Console: Touchscreen weather monitoring, trend graphs and max/mins.

GoDaddy's Orion Weather Station installation in Arizona

> *"In the Data Center industry, accurate monitoring of weather conditions is crucial to operate the facility within ASHRAE specifications, while maintaining low PUE (Power Usage Effectiveness)."*
> *~Justin Harp, Director of Operations Engineering for Vantage Data Centers*

Pulsar™

- All-in-one sensor head
- Internal compass for auto-alignment
- No moving parts
- Ultrasonic wind sensor
- Variety of sensor options

Capricorn FLX™

- Reliable, mechanical wind sensors
- Temperature, humidity, and pressure
- Modular system with sensor options

Magellan MX™

- Compass / GPS
- All-in-one sensor with multiple configurations
- Ultrasonic wind sensor
- Optical rain sensor
- Temperature, humidity, and pressure

Orion™

- All-in-one sensor head
- No moving parts
- Ultrasonic wind sensor
- Impact rain sensor
- Temperature, humidity, and pressure

Monitoring Options

Weather MicroServer™

Self-contained, proprietary weather data logger and powerful communication device. Compatible with all CWS weather stations and offers:

- Browser interface
- Data logging with 1-year capacity at 1-min interval
- "Internet-ready" weather monitoring with FTP output, XML, and Internet interfaces
- Industrial communication protocols (Modbus, DNP3, BACnet, and SNMP)

Four serial ports offer interface to the weather station and additional sensors such as visibility and ultrasonic wind sensors. Analog and digital channels available for additional sensor such as temperature, solar radiation, and rain gauge. The MicroServer provides real-time weather data to WeatherMaster software and the Display Console over the network. This allows users to simultaneously monitor the weather over the network.

Cloud Weather Server™

Free with the Weather MicroServer, this service offers real-time weather data monitoring on the Internet.

- View display screen remotely from any device using a web browser
- Data uploaded every five seconds
- Be alerted to critical weather conditions with alarm feature that generates email and push notifications
- For one or more weather stations

CWS Weather Monitor App™

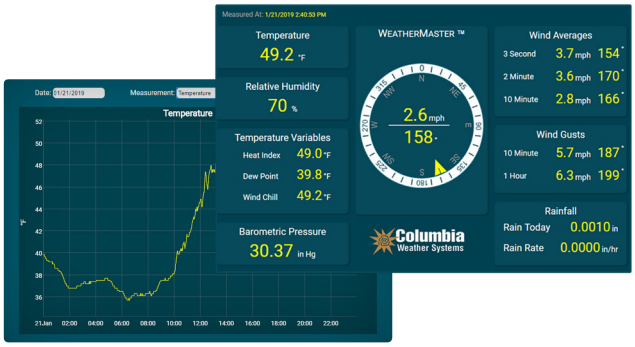
Check current conditions quickly from a hand-held mobile device for decision-making in the field. The CWS Weather Monitor App is compatible with all CWS weather stations that include the Weather MicroServer.

The app includes real-time weather monitoring screens, NWS forecasts, and custom alarm notifications. Access to a Cloud Weather Server account is required.

Weather Display Console™

This touchscreen weather monitoring device displays real-time meteorological data, plus computations for wind chill, heat index and other calculated parameters. Measurements are designed to be viewed clearly from a distance even in a darkened control room.

- Seven-inch, TFT color LCD panel with 800 x 480 pixels resolution
- Connect directly to the weather station with a serial port or to the Weather MicroServer utilizing existing Ethernet
- Three mounting options: Desktop/Wall-Mount, Panel Mount/Flush Mount, 19" Rack Mount



WeatherMaster™ Software

Professional-grade software providing real-time computer weather monitoring with display and automatic logging of all measured and calculated parameters.

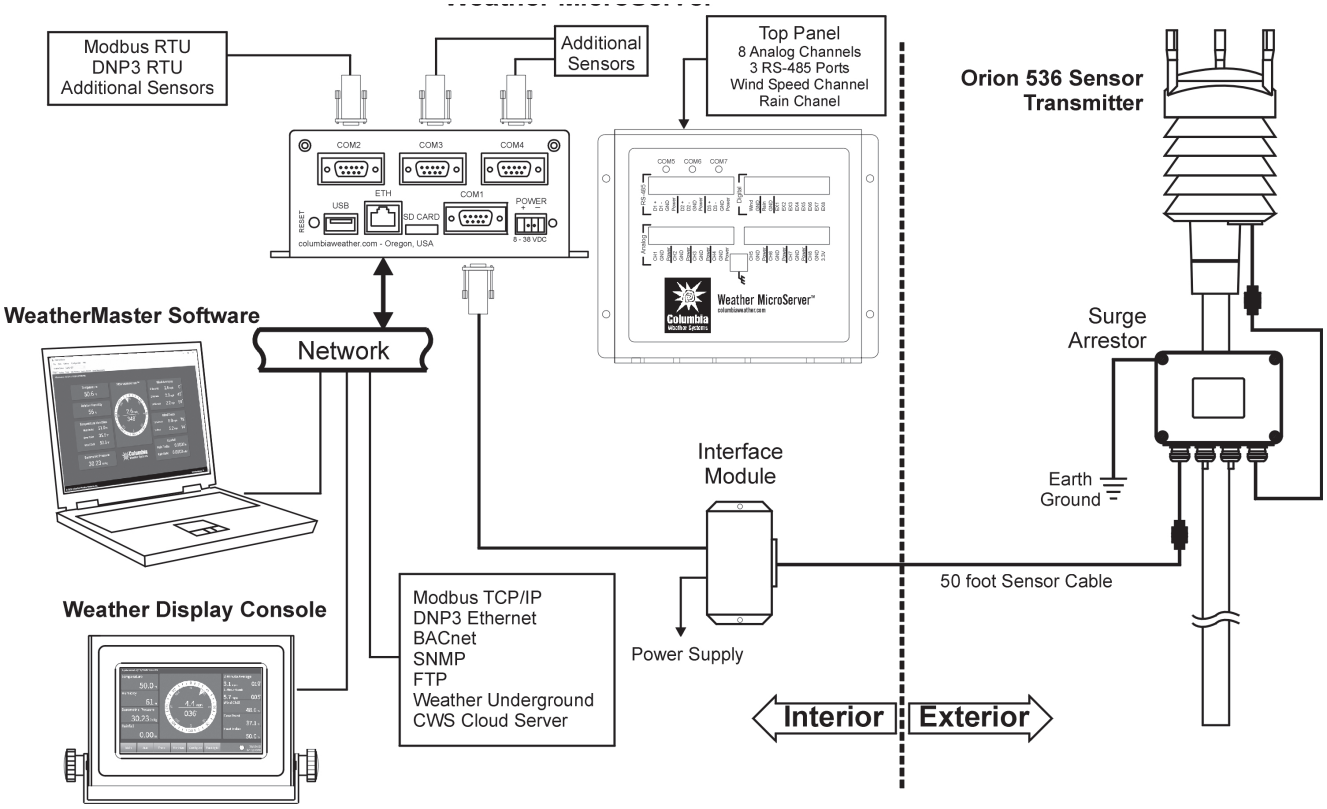
- Expandable SQL database to archive measured and calculated parameters
- Graphing and trend display of all parameters
- Alarm notification via computer, email, and/or text
- Multi-station monitoring and data acquisition
- Interface with CAMEO/ALOHA software for plume modeling and evacuation corridor predictions
- Interface with Weather Underground

4-20 mA Signal Output

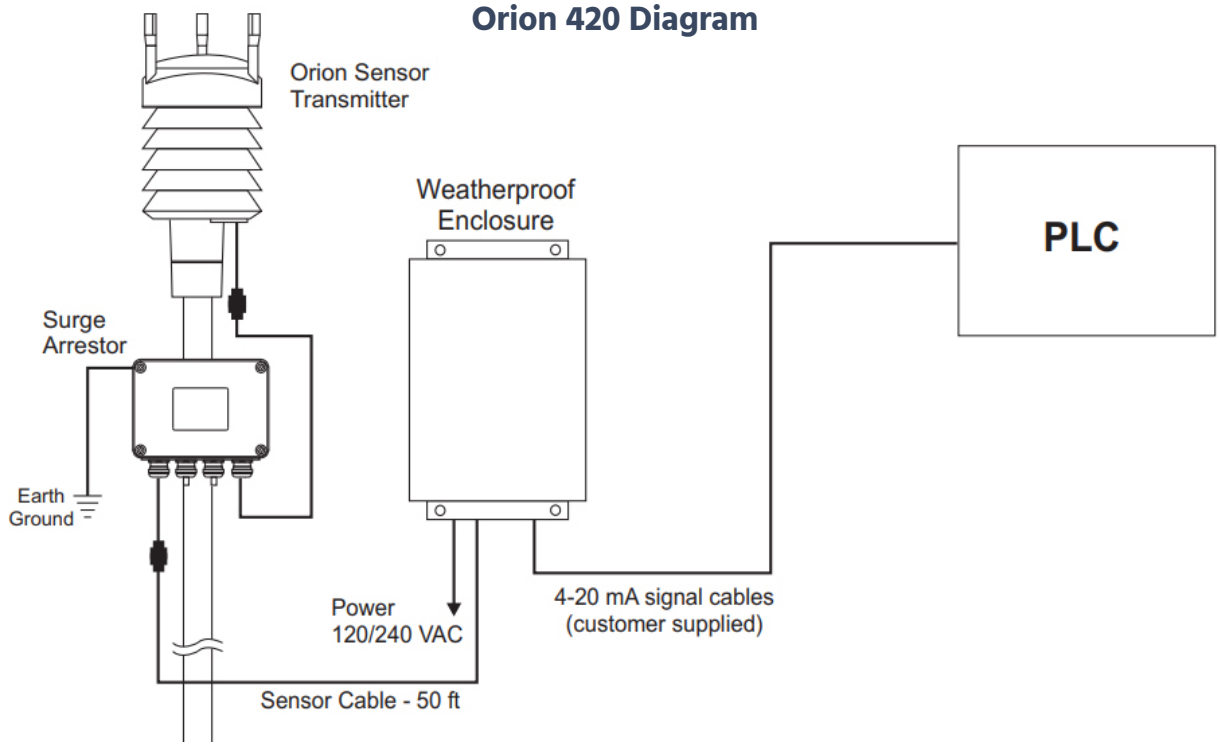
For industrial PLC interface, the Orion 420™ offers 4-20mA signal output to interface to PLC, DCS, and SCADA systems.

System Diagram

Orion with MicroServer Diagram



Orion 420 Diagram



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