

WX PRO

Integrated Single Station Weather Reporting System



WX PRO Integrated Weather Sensor

Automatic Power's WX PRO Integrated Single Station Weather Reporting system offers a rugged, low-cost, low power, easy to install weather reporting solution for buoys and platforms.

The unit features rugged, multi-parameter weather sensors with state-of-the-art technology:

- Ultrasonic, folded-path anemometer
- Internal, automatic self-alignment flux-gate compass
- Fast-response capacitive relative humidity sensor
- Multi-element temperature sensor
- Advanced barometric pressure sensor
- No mechanical components

Technical Data

Temperature

Range: -50 to +50°C (-58 to +122 °F)
Accuracy: ± 0.2 °C
Resolution: 0.1 °C

Relative Humidity

Range: 0 to 100%
Accuracy: $\pm 3\%$ Resolution: 1%

Wind Speed

Range: 0 to 50m/sec (0 to 112 mph)
Accuracy: ± 0.5 m/s or 5% of reading

Wind Direction

Range: 0 to 360°
Accuracy: $\pm 5^\circ$ @ wind speed > 2.2 m/s
Resolution: 1.0°

Compass

Accuracy: $\pm 2^\circ$
Resolution: 1°

Barometric Pressure

Range 600 to 1100 hPa
Accuracy: ± 0.35 hPa
Resolution: 0.1 hPa

Physical

Materials: Anodized aluminum and stainless steel
W/tg: 0.91 kg (2.0 lbs)
Size: 292.1 mm H x 101.6mm dia (11.5 in x4 in)

Environmental

Temperature: -50 to +70 °C (-58 to +158 °F)
Humidity: 0 to 100%

Power

Active mode: 50 mA @ 12V
Sleep mode: 0 watt

Mounting:

1" to 3" diameter pole

WX Pro MicroServer

WX Pro sensor data is processed through the WX Pro microserver which offers internet-ready output and industrial automation protocols including **FTP, XML, CSV, SNMP, and Modbus/OPC.**

The microserver has datalogging capability and is able to report:

- 3 second rolling average wind speed and direction
- 2 minute rolling average wind speed and direction
- 10 minute rolling average wind speed and direction
- 10 minute Gust wind direction, speed and time
- 60 minute gust wind direction, speed and time

ATONIS and WX Pro

The WX Pro MicroServer can be connected directly to the ATONIS AIS Aton Transponder to report weather data via Message 8 in IMO format. The user can configure the reporting intervals for Message 8 and ATONIS controls the on/off times of the microserver to keep power consumption at the lowest possible level.

Typical examples:

Less than 0.15Ah/day for 3 second rolling average reporting every 15 minutes

Less than 0.5 Ah/day for 2 minute rolling average reporting every 15 minutes

In other applications, the microserver can be connected directly to a network via its Ethernet port.

The WX Pro MicroServer can be housed in a NEMA-4X or other suitable enclosure depending on the application.

Power consumption

Active mode: 1 watt @ 12V
Sleep mode: 0 watt

Memory

512 MB Flash
32 MB datalogger

Board Dimensions

1.8" x 4.75"



WX Pro MicroServer Board

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