Richards 490-A Wind Monitor / Alarm

Model # 490-A-B

Technical Specifications

General Information

The 490-A Wind Monitor/Alarm is used to monitor current wind conditions and trigger a visual and audible alarm when user set points are reached. The monitor also has a single relay which can be used to shut down heavy equipment or to turn on a remote signal beacon during dangerous wind conditions. The Wind Monitor has the ability to display current wind speed, maximum gust registered during the previous 60 seconds, and the current wind direction if a wind direction sensor is used. The instrument also can display the temperature if used with an optional resistance type temperature probe (not included). The 490-A Wind Monitor has an intuitive menu-driven interface controlled by three front panel selection buttons. User setup options include unit of measurement, sensor type and alarm settings. The user can configure the LED lighted alarm and relay settings for gust speed, wind speed, minimum and maximum temperature. All monitor settings are kept secure with a physical key lockout. Although wind and temperature sensors are hardwired directly to the monitor, the unit can wirelessly transmit data to other monitors or to a wireless internet gateway for uploading to the internet to be used with our complimentary online wind monitoring interface.

Wireless Options

The 490-A Wind Monitor displays data from a hard wired anemometer, wind vane, and temperature sensor. Wireless options include the capability of each unit to act as either a transmitter or a receiver of wind and temperature data. The unit which is wired to the sensors is set up as a transmitter. A second unit can be set up as a receiver to act as a wireless remote display. There is no limit to the number of receivers which can receive data from a single shared transmitter. This allows a number of remote displays to read data from one set of shared wind sensors. Wind data is transmitted over a 2.4 GHz wireless link using the 802.15.4 protocol. Wireless range is approximately 300 ft (90m) line-of-sight with the stock antennas and no obstructions. Range can be extended with an optional directional, high-gain antenna. Additional capability includes remote live internet-based monitoring via Richards Remote Monitoring Services. This option requires the Richards Wireless Gateway (PN: C-24154), as well as an onsite, always on, Ethernet based internet connection.

Enclosure Materials of Construction and Finish

Enclosure machined from solid 6061-T6 aluminum stock
Overall IP Rating of IP64
Durable, high visibility bright red powder coated finish
Polycarbonate LCD protector

Sensor Inputs (Wind Speed, Direction, and Temperature)

Single C5, C5C, and C7X Anemometer input (switch pulse)
Supports single FT Ultrasonic wind sensor input
Programmable transfer function and units
Single D5 or D5C Series Wind Vane input
Supports D5, and D5C Wind Vane (10K Potentiometer) with 5 volt DC excitation voltage
Wind Direction Display in 0° to 359° and cardinal directions
Programmable North offset
Single temperature input
Supports PT100 RTD, 10k NTC thermistor, 0-5 volt analog

Operator Interface and Display

Graphics 128 x 64 Pixels LCD
Green LED Backlight
Active display area 2.6 x 1.3 inches (67 x 33 mm)
Power Switch and Silence Switch
Physical key lockout for configuration screen
Three momentary buttons: Down, Select, and Up
Easy text based setup menus

Audible / LED Lighted Alarm and Relay Output

Flashing LED Color – Yellow indicator
Alarm Sound - Whoop
Loudness (Whoop) @ 2 feet (0.6 meters), 85 to 103 Db(A)
Programmable silence switch for warnings and alarms
Relay: 5 amps @ 30 volts DC / 120 volt AC, Dry Contact
SPDT – Connections: normally open, normally closed, common

Power and Sensor Protection

9 to 76 volts DC, < 5 watts typical
Includes AC Powder Adapter 24VDC, 2.7A
Sensor inputs: Transient voltage suppression (TVS) protected

Physical Dimensions, Weight, and Mounting Methods

Height (5.0 inches or 127.0 mm)
Width (8.0 inches or 203.2 mm)
Thickness (2.4 inches or 60.96 mm)
Weight (4.24 pounds or 1923.3 grams)
Rear mounting plate 6.5 x 7.75 x .06 in (165.1 x 196.8 x 1.53 mm)
4-Bolt Mounting H= 5.75 x W= 6.0 in (146.05 x 152.4 mm)
Mount with wall plate or adjustable desk stand (both included)

Environmental and Regulatory Compliance

Operating temperature -4°F to 158°F (-20°C to 70°C)
Operation below -4° is possible, but display may be slow to refresh
RoHS Compliant and Made in the USA