

110-WS-25HA High Accuracy Weather Station

The **110-WS-25HA High Accuracy Weather Station** includes the high performance RM Young Wind Monitor sensor, Vaisala temperature and humidity probe with excellent long-term stability, and the Setra barometric pressure sensor, which has a wide operating temperature range. A variety of optional sensors are available. The NovaLynx 260-2500 rain gauge completes the system, and is available in a variety of configurations including heated models for areas with ice and snow.

The logger is simple to operate, includes an LCD display, and is programmable without connecting a computer. Sensor readings are recorded on a 512MB Secure Digital (SDTM) card along with the time and date. The data is available real-time via RS232 connection to terminal software or on the internet via optional device server.

Applications

Forestry Research Industrial Agriculture Meteorology Climatology

Measurements

Wind Speed & Direction
Barometric Pressure
Relative Humidity
Air Temperature
Precipitation
Spare Inputs



Display	16 character by 2 line backlit LCD display
User Input	3 momentary buttons
Sensor Inputs	8 analog and 3 digital channels with surge protection
Resolution	12-bit A/D converter on 4 channels, 10-bit on other channels
Input Range	0-5 volts; Connect appropriate resistors for current inputs
Excitation	Internal 5 volt 1% band gap voltage reference
Logging Interval	Adjustable 10 to 16,000 seconds
Memory	512MB SD memory card and USB card reader included
Data Files	Comma Separated Values, daily, filename format: YYYYMMDD.csv
Serial Port	RS232 9-pin connector, selectable baud rate, real-time data output
Clock	Real-time clock, battery backup, accurate to within 10 minutes per year
Power	10 to 30 Volts DC at 20 mA (excluding sensors)
Operating Temperature	-40° to 140° F (-40° to 60° C)

110-WS-25HA High Accuracy Weather Station

0	110-WS-25DL-N	Data Logger in NEMA-4X Enclosure includes mounting hardware, surge protection, backup battery
0	200-05103	Wind Monitor (Requires 200-6511 Amplifier)
0	200-6511	AC Anemometer Amplifier (RMY to WS-25)
0	225-HMP155A	RH/Temp Sensor, 11' cable
0	380-41003	Solar Radiation Shield for humidity and temperature sensor
0	230-278	Barometric Pressure Transducer (mounts inside NEMA enclosure)
0	260-2500	8in Rain Gauge, 0.01in/tip
0	260-950	8in Rain Gauge Mounting Plate
0	110-WS-25TM	5' Tripod & 5' Sensor Mast
0	110-WS-25SP-20	Solar Panel, 1.2 Amp, 12 Vdc

Weather Stations

www.novalynx.com

Wind Speed (200-05103)

Range: 0-100 m/s (224 mph)

Speed Threshold: Propeller: 1.0 m/s (2.2 mph)*

Speed Constant 1800 rpm (90 Hz) = 8.8 m/s (19.7 mph)± 0.3 m/s (0.6 mph) or 1% of reading Accuracy:

Wind Direction (200-05103)

360° mechanical, 355° electrical Range:

Potentiometer Gap: 5° open

Vane Threshold: 1.1 m/s (2.4 mph)*

±3° Accuracy:

Temperature (225-HMP155A)

-40 ... +60 °C (-40 ... +140 °F) Range: $\pm (0.226 - 0.0028 \times \text{temperature}) ^{\circ}\text{C}$ Accuracy:

> At -40 ... +20 °C (-40 ... +68 °F) $\pm (0.055 + 0.0057 \times \text{temperature}) ^{\circ}\text{C}$ At +20 ... +60 °C (+68 ... +140 °F)



0-100% RH Range:

±0.6 %RH (0 ... 40 %RH) Factory Cal Uncertainty At +20 °C (+68 °F) ±1.0 %RH (40 ... 95 %RH)



Radiation Shield

Barometric Pressure (230-278)

500-1100 hPa, 600-1100 hPa, or 800-1100 hPa Range:

Accuracy: ±~0.1%

Long Term Stability 0.1 hPa (mb) per year

Operating Temperature -40°F to +140°F (-40°C to +60°C)

Rain Gauge (260-2500)

Resolution: 0.01"/tip

Orifice: 8" diameter (20.5 cm) Switch: Dry contact reed switch Output: < 0.1 sec switch closure

±1% at 5.1"/hr Accuracy:



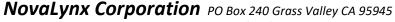


Optional Sensors

Wind Sensors: 200-05103-45, 200-05106, 200-05108, 200-05108-45, 200-05305

Solar Radiation: 110-WS-25SR, 110-WS-25SRD, 240-SP-215-SS Evaporation: 255-100, 255-200, 255-100P/F (Gauge, pan & fittings)





Phone (530) 823-7185

^{*} Nominal values, determined in accordance with ASTM standard procedures.