110-WS-25DL Data Logger with Display

The **110-WS-25DL Data Logger** is designed to provide an affordable and easy-to-use solution for environmental monitoring purposes. It supports up to three anemometers, recording wind speed, gust, pulse count and direction. Analog channels for temperature, humidity, pressure, solar radiation, and many other types of sensors can be set up using the front-panel programming buttons. Digital channels monitor tipping bucket rain gauges or other pulse-type sensors.

Sensor readings are recorded directly on a 512MB Secure Digital (SD^{TM}) card along with the time and date. A new file is created each day in a convenient comma-separated values (CSV) format. The logger is compatible with SD cards up to 2GB, but does not support SDHC cards. We recommend purchasing tested spare cards directly from us for best results.

Real-time data can be viewed in a terminal program or displayed with the optional Graphical Display Software on a Windows PC. An add-on device server board (110-WS-25DS) is available for a hosted internet connection.

The logger is available in a desktop enclosure, weatherproof outdoor enclosure, or carrying case with room for additional equipment. Consult NovaLynx for a list of compatible sensors, mounting equipment and solar panels for remote applications.

Features

- No computer is required for sensor configuration.

- Removable 512MB Secure Digital (SD^{TM}) card stores months of data.

- Card reader with USB connector included to transfer data to your computer.

- Daily CSV files can be opened in Excel and other programs.

- RS-232 serial port for real-time output.

Desktop, Carrying Case, & NEMA Enclosures

Analog Inputs	4 high resolution(12-bit) channels, 0 to 5 Volt
	3 low resolution (10-bit) channels, 0 to 5 Volt
	1 power supply voltage channel
Digital Inputs	3 pulse counters for wind speed and rain gauge measurements
Clock	Real-time clock accurate to within 10 minutes per year
	Battery life 9 to 17 years. CR1225 / BR1225, 3 volt lithium, 48mAh
Operator Interface	16 character x 2 line backlit LCD screen
	3 momentary buttons for programming and viewing readings
Communications	RS232 cable included
Memory	512MB SD^{TM} industrial grade memory card included
	USB 2.0 card reader
Compliance	RoHS

Ordering Information

110-WS-25DL-D	WS-25 Data Logger with desktop enclosure and AC Adapter (Exterior: 8.5"w x 4"h x 6"d)
110-WS-25DL-N	WS-25 Data Logger with NEMA-4X enclosure, 7Ah battery and AC Charger (Interior: 10"w x 12"h x 5.27"d)
110-WS-25DL-CC	WS-25 Data Logger with carrying case for sensors, 7Ah battery and AC Charger (Interior: 18.6"w × 14.2"h × 7.7"d)

Options

110-WS-STR	Graphical Display Software CD
110-WS-25MC	SD Memory card 512MB (Rated for -40°C to 85°C)
110-WS-25DS	Device Server/Client (RS232 to 10/100 Ethernet) (Pre-configured to connect to a hosted internet service)

OPERATOR INTERFACE

- 16 character by 2 line LCD display
- Backlight with automatic or manual shutoff
- Adjustable contrast
- Three momentary buttons

LOGGING AND STORAGE

- Logs at 10 to 16,000 second intervals
- Secure Digital™ or Multi Media Card™
- Supports 2 gigabyte or smaller cards
- Data files in Comma Separated Vertical (CSV). Can be used with spreadsheet software, databases, or custom software
- One data file per calendar day

RS232 INTERFACE

- EIA/TIA-232 voltage levels
- Four position screw terminals connector. Accepts 0.08 to 1.5 mm2 (28-16 AWG) wire. Strip length, 5.5 mm (0.21 in)
- 1200, 2400, 4800, 9600, 19200, 57600, and disabled baud rates, 8 bits, no stop bit, 1 parity bit (8N1)
- No hardware handshaking
- Accessible through connector marked "RS-232"
- Outputs raw data logger record in same format as written to memory card

ANALOG INPUTS

- 0 to 5 volt range
- 12 bit analog to digital converter, 1.22 mV precision
- Internal 5 volt 1% band gap voltage reference
- RC low pass on all inputs (fc=159 Hz)
- User configurable linear functions for displaying real units as well as voltage

DIGITAL INPUTS

- Supports dry contact switch, hall effect switch, or TTL level signal
- RC low pass filter on each input (fc=159 Hz)
- Inputs pulled to 5 volts with internal 4.7k resistor

POWER

- 8 to 32 volts DC
- 2.1 x 5.5 mm power jack

- 50mA peak power while writing to SD card
- 35mA with backlight on
- 15mA with backlight off
- All sensors inputs have Transient Voltage Suppression (TVS) protection