SDL500

submersible data logger

- Five digital & analog sensor ports
- Waterproof sensor connection
- Alkaline battery or solar powered
- Radio & cellular telemetry options
- Complete system is truly submersible

The **SDL500** Submersible Data Logger is a rugged, self-powered remote data logging system for deploying environmental sensors in streams, rivers, wetlands, coastal waters, sewers, and culverts without fear of accidental flooding. The system is configured with five sensor ports for connection to industry-standard digital and analog interfaces including RS-485, SDI-12, 1-wire temp string, 0-2.5 VDC, and more. Each sensor port offers a UW receptacle with double O-ring seal for a reliable waterproof connection. Unlike many data loggers, the **SDL500** is truly submersible. The housing and battery compartment are completely sealed and waterproof.

When it comes to field ruggedness, the NexSens **SDL500** is in a class of its own. The housing is constructed of impact-resistant PVC and includes two elastomer bumpers for long-term deployment in close-fitting pipes and buoy ports. Internal circuit boards and communication modules are shock mounted and all access ports incorporate redundant sealing. The **SDL500** withstands extreme wave action, drops, floods, periodic & long-term deployment underwater, and more. When fitted for wireless remote communication, the radio and cellular antennas are also waterproof.

The **SDL500** can operate autonomously via eight D-cell alkaline batteries. Optional solar power kits provide long-term continuous operation and solar charging. The data logger incorporates the same analog and digital interfaces as the popular NexSens **iSIC** data loggers. Common sensor connections include multi-parameter sondes, water quality sensors, temperature strings, Doppler velocity meters, water level sensors, and weather stations. User-supplied sensor cable assemblies can also be connectorized and tested at the factory for **SDL500** integration. With this sensor interface versatility, the measurement possibilities are endless.

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specifications

Analog Inputs	(2) differential or (4) single-ended, 0-2.5 V auto range, 12-bit resolution
Analog Outputs	(1) 12-bit channel, 0-5 V or 0-2.5 V programmable
Power Outputs	(1) 12V 100 mA switch; (1) 5V 100 mA switch; (1) 12V output, fused from battery
Pulse Counters	(1) tipping bucket counter, max rate: 12 Hz
Digital I/O Ports	(1) standard generic I/O port
1-Wire Interface	(1) 1-wire temperature sensor port
SDI-12 Interface	(1) SDI-12 port
RS-232 Interface	(2) RS-232 sensor ports
RS-485 Interface	(1) RS-485 port
Host Interface	(1) RS-232 host port, SDI-12 or RS-485 port can be configured as slave
Supported Serial Comm Protocol	NMEA 0183 or Modbus RTU
Internal Memory	2 MB Flash memory, over 500,000 data points minimum
Power Requirements	Voltage: 5 to 16 VDC
Typical Current Draw	5 mA sleep, 10 mA processing, 36 mA analog measurement
Battery	(8) D-cell alkaline batteries, internal; optional 12VDC power
Maximum Depth	200 ft.
Temperature Range	0 to +60°C
Dimensions	18.25" length x 5.5" diameter
Weight	11.0 lbs without batteries; 13.8 lbs with batteries
Compatible Sensors	4-20 mA sensors, 0-2.5 V sensors, SDI-12 sensors, RS-232 sensors, RS-485 sensors, Modbus RTU sensors, NMEA 0183 sensors, 1-Wire temperature sensors, Thermistor sensors, Tipping bucket rain gauges
Contents	(1) Submersible Data Logger (1) USB Interface Cable* (1) USB Driver CD* (8) D-Cell Alkaline Batteries (1) Maintenance Kit (1) Quick Start Guide *Only ships with SDL500 standalone data logger

parts list

Part #	Description
SDL500	Submersible data logger
SDL500R	Submersible data logger with spread spectrum radio telemetry
SDL500C	Submersible data logger with cellular modem telemetry
SDL500I	Submersible data logger with Iridium satellite telemetry
A44-SDL	High gain antenna with UW connector, radio frequency
A49-SDL	High gain antenna with UW connector, cellular frequency
A42-SDL	High gain antenna with UW connector, Iridium satellite frequency
UW-FL3	UW to flying lead cable for external power & communications, 3m
UW-CON	UW-connectorization of user-supplied sensor cable assembly
1001	iChart Software for Windows-based computers

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