

# DLight

## Flexible and Versatile Data Logger

The Stevens DLight is a flexible and versatile data logger, ideally designed for simpler applications that require a small number of inputs and outputs. Four single-ended analog input channels are available and feature voltage surge and lightning protection to help protect sensitive instruments in areas with storm activity.

Supported measurement and sensor types include temperature, 0-5 VDC, 4-20 mA, and pulse inputs for tipping buckets—with programmable logging and reporting intervals. The DLight provides a 24 VDC loop power supply with sufficient current to drive sensors.

The DLight provides several popular data bus I/O's including; SDI-12, one RS-232 port (Tx only), and USB 2.0. It also features an SD card slot for storing up to two gigabytes of sampled data.

The DLight supports connection to telemetry over the RS-232 port for reporting data over cellular, UHF/VHF, or satellite systems such as GOES.

- Inputs: Analog, Pulse, SDI-12 (up to 12 SDI-12 sensors)
- Outputs: V-out, Alarm, RS-232
- Simple telemetry configuration
- High-speed USB 2.0 port
- SD memory card slot
- Multi-lingual Windows software for easy configuration and diagnostics, tabular analysis and data export
- User-controllable channel and parameter names



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## TECHNICAL SPECIFICATIONS

### KEY FEATURES

<b>Processor</b>	16-bit TI MSP430, and two 16-bit dsPIC microprocessors
<b>On-board data storage</b>	2 GB internal FLASH storage, plus removable 2 GB on SD memory card
<b>Non-volatile memory</b>	All setup parameters and clock, lithium battery backup
<b>Real-time clock</b>	Accurate to $\pm 1$ minute/month, leap year correction
<b>Watchdog timer</b>	System resets upon microprocessor failure
<b>Digital to analog (0-5 VDC) output</b>	12-bit resolution
<b>Serial ports</b>	One (1) RS-232 (Tx only), minimum $\pm 5$ VDC levels, 1200 to 115K baud One (1) USB 2.0 (fully compatible with USB 1.0 devices)
<b>Power requirements</b>	9.6 to 16 VDC, 7 mA standby current (telemetry system will require additional power)
<b>Logging interval</b>	1 minute to 24 hours
<b>Message size</b>	6 - 340 bytes typical

### SENSOR INPUT

<b>Sensor input selections</b>	4 analog channels, single-ended <b>Input type:</b> 2 wire, 4 - 20 mA current loop, or 0 - 5 V with accessible DIP switch <b>Sensor power:</b> 24 VDC (under firmware control), 12 VDC and 5 VDC (fixed)
<b>Accuracy &amp; resolution</b>	0.01% accuracy, 0.002% resolution
<b>Analog to digital (0-5 VDC)</b>	21-bit resolution <b>Input impedance:</b> 10 K ohm (min)
<b>Pulse counter</b>	<b>Input type:</b> pulse <b>Sensor power:</b> 5 or 12 VDC continuous <b>Maximum rate:</b> 60 pulses per minute
<b>Serial</b>	<b>Input type:</b> SDI-12 (up to 12 sensors) <b>Sensor power:</b> 12 VDC continuous
<b>Switched excitation voltage</b>	+24V/sw for 4-20mA sensor power

### ENVIRONMENTAL

<b>Temperature and humidity</b>	<b>Operating:</b> -40°F to 158°F (-40°C to 70°C) <b>Optional NEMA 4 enclosure:</b> 100% condensing <b>Aluminum enclosure:</b> 95% non-condensing
<b>Dimensions</b>	5.53" x 3.06" x 1.95" (14.05 cm x 7.77 cm x 4.96 cm)



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