

SDL500 SDI-12 Controller Quick Start Guide

This guide will help you get started. Detailed instructions are available in the NexSens SDL500 manual.

Overview

The SDL500 data logger can be configured with an SDI-12 output for connection to other data loggers. This is beneficial when environmental sensors using communication methods not supported by the master device (data logger) must be integrated into a preexisting network.



What's Included

1. SDL500 sensor controller with SDI-12 output
2. USB interface cable
3. USB driver CD
4. (8) D-Cell alkaline batteries
5. Maintenance kit

Note: Use of the USB interface cable is not required for the initial system setup.

UW Flying Lead Cable

A UW-FL flying lead cable is required to provide external power to the SDL500 controller and connect it to an external data logger. Use the wires shown to connect power and communication signals to the controller.

Pin	Color	Signal	Direction	Connected
8	Green	Host RS-485A	Input/Output	No
7	Blue	Host RS-485B	Input/Output	No
6	Brown	SDI-12 Data	SDI-12 sensor	Yes
5	Red	Power Out	Fused Power output	No
4	White	Host RS-232 Tx	Output	No
3	Yellow	Power In	Connect to external power source.	Yes
2	Black	Ground	Signal and Power reference	Yes
1	Orange	Host RS-232 Rx	Input	No

Note: Observe caution when power is supplied to the data logger. All unused flying lead wires must

be protected to prevent damage to nearby electronics.

Connecting Sensors

The table below outlines the recommended ports for common sensor connections used with SDL500 controllers. Adhering to these recommendations simplifies setup to allow for quick and easy deployments.

Manufacturer	Sensor	Port
NexSens	Short T-Node string	T
NexSens	Long T-Node string	P0, P1
NexSens	AccuStage	P0, P1, T, or D
YSI	6-Series	P0, P1, T, or D
SonTek	Argonaut SW, SL, XR	P0, P1, T, or D
Turner Designs	Cyclops	A
Li-Cor	LI-193, LI-192, LI-191	A
Vaisala	WXT520	P0, P1, T, or D
OTT	RLS	P0, P1, T, or D

Note: For T-Node string connections, be sure to connect the sensors in order of serial number, where the lowest serial number is positioned closest to the data logger. Temperature data will then be output in an SDI-12 parameter list where the 1st list entry corresponds to the temperature element with the lowest serial number.

Field Installation

The versatility of the SDL500 allows the user to design application specific deployment. Several options include bottom-deployment, pipe deployment, structure mounting, or use with NexSens data buoys.

1. All physical sensor connections must be made prior to deployment. Sensors not manufactured by NexSens require custom cabling.
2. Check all ports for the double o-ring seal required for watertight integrity before submerging the SDL500. Also, avoid cross threading of port plugs or cables with the SDL bulkheads.

For more information see the online manual
www.nexsens.com/pdf/nexsens_sdl500_manual.pdf



Revision: 02
Revision Date: January 4, 2011

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