DATA LOGGERS

SDI-12
Digital Sensor Networking System

The sensors, multiplexers and dataloggers of SDI-12 networking system are equipped with SDI-12 digital interface so that they can all be connected together using a three conductor cable in a bus arrangement. The SDI-12 system allows a huge reduction in cabling costs as only a single three conductor cable is required to interconnect the sensors, multiplexers and dataloggers in a network that can be spread over a wide area. Encardio-rite provides SDI-12 interface units for various types of sensors such as vibrating wire, resistive strain gage type, MEMS technologies tipping bucket rain gauge etc. to connect to Encardio-rite model ESDL-30, SDI-12 interface datalogger.

Model ESDL-30/ESCL-10VT
Automatic Datalogger for SDI-12 Interface Sensors

ESDL-30 datalogger is designed to log data from any sensor with SDI-12 digital interface. It can be programmed to take a measurement from 5 seconds to 168 hours in linear mode. All the measured data is stored together with the current date, time and battery voltage, as a data record in the internal non-volatile memory of the datalogger.

ESDL-30 is a rugged datalogger that features wide operating temperature range, dependable standalone operation, low power consumption, compatibility with many telecommunication options and flexibility to support a variety of measurement and control applications to provide accurate and reliable data.

Model ESCL-10VT single channel vibrating wire datalogger is designed to monitor a single vibrating wire sensor (including temperature) such as a piezometer, crack meter or displacement transducer. The datalogger can additionally monitor barometric pressure and rainfall, using a tipping bucket rain gage.
Following data transmission options are available in above dataloggers:

- Telemetry through GSM/GPRS modem
- Readout/data retrieval using laptop

SPECIFICATIONS

Input	Sensor with SDI-12 signal interface.
Scan/upload interval	5 seconds to 168 hours
Memory capacity	Flash Memory (64-MB); 2 Million data points.
Data output format	CSV text file. Can be easily imported in many third party applications like Microsoft® Excel.
Communication port	RS-232 (Standard) 115 kbps
Temp. measurement range	-20° to +70°C with 0.1°C resolution.
Operating temperature range	-30° to 70°C
Memory capacity	Flash Memory (64-MB); 2 Million data points.
Humidity	100 %
Power supply	· 2 x D size 3.6 V/19 Ah Lithium cells, or · 2 x D size 1.5 V Alkaline high power cells, or · 12V SMF battery chargeable from AC mains or solar panel
Housing	Corrosion resistant weather proof enclosure.
Antenna (in telemetry option)	Built-in or separately mounted antenna.

Model EDAS-10
Automatic Data Acquisition System

EDAS-10 delivers accurate and reliable measurement in a variety of applications. It is most suitable for unattended or network applications. We provide multiple options. The options for connecting the data acquisition system to PC, are like RS232C serial interface, short haul modems, GSM/GPRS modem, RF modem etc. Built around the Campbell Scientific middle level programmable measurement and control module, the Encardio-rite data acquisition system is available in multiple configurations depending upon the type, number of sensors used and their locations in a particular project.

Please contact Encardio-rite for any specific requirement giving details of the type, quantity and locations of sensors used in the particular project. The complete system includes datalogger, multiplexers, signal conditioners for vibrating wire sensors, interface cables, power supply, transfer software, etc. Units are available from 16 to 192 channels in different cabinet sizes.

SPECIFICATIONS

Resolution	0.66 micro Volt (analog)
Scan rate	Few times/sec to once/hour
Power consumption	50 mA during measurement
Power requirement	9.6 to 16 V DC
Storage capacity	2 MB data points, (expandable with peripherals)
Temperature limit	-25° to 50° C

Automated Total Station Systems (ATS)

Projects safety requires 24/7, high frequency & accurate measuring monitoring systems. Encardio Group uses an in-house developed system that consists of a series of networked robotic total stations. Every station is controlled by the Terramon software which is installed in the dedicated total station control box.

The system ensures valuable and timely monitoring of the displacements, providing high measurements density, simultaneous wireless transmission and automatic entry of the results in the Terramove monitoring data base. The system can be accessed and controlled remotely from anywhere by the users.