ENCARDIO RITE

ISO 9001

DATALOGGER FOR SDI-12 INTERFACE SENSORS
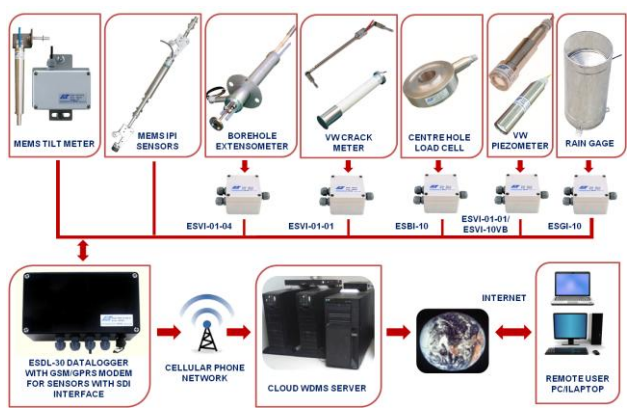
MODEL ESDL-30

INTRODUCTION

Encardio-rite model ESDL-30 datalogger is designed to log data from sensors with SDI-12 interface. Any sensor with a SDI-12 signal interface can be connected to the datalogger e.g. based on vibrating wire, resistance strain gage or MEMS technology etc. ESDL-30 is a rugged datalogger that can be used in a variety of application to provide accurate and reliable data. It features a wide operating temperature range, dependable stand alone operation, low power consumption, compatibility with many telecommunication options and flexibility to support a variety of measurement and control applications. It is of durable construction and very suitable for unattended applications.

DATALOGGER

ESDL-30 datalogger can connect a large number of sensors with SDI-12 interface. Datalogger is fully compatible for all measurement commands signal as per SDI-12 standard. It can be programmed to take a measurement from 5 seconds to 168 hours in linear mode. The number of measurements taken per day should however be kept to a minimum as higher frequency of measurement drains the power supply battery at a faster rate.

The SDI-12 serial digital interface requires a three conductor cable to connect the sensors to the datalogger. The beauty of the system is that only a single 3 conductor cable is required to interconnect all the sensors and the datalogger in a serial bus. SDI-12 is a multi-drop interface that can communicate with multi-parameter sensors. Multi-parameter means that a single sensor may return more than one measurement, like displacement and temperature from vibrating wire displacement sensors. All the measured data is stored, together with the current date, time and battery voltage, as a data record in the internal

FEATURES

✦ Easy to install, simple to use and user friendly.
✦ Large data storage memory allows data to be stored for longer time between retrievals.
✦ Fully compliant with latest SDI-12 interface standard
✦ Weather resistant housing.
✦ Dataloggers with telemetry options allow data to be collected remotely from hundreds of kilometers away.
✦ Measures virtually any sensor with SDI-12 signal interface. Commonly used sensors include:
  • Vibrating wire sensors
  • Resistive strain gage
  • MEMS tilt meters and in-place inclinometer sensors
• Thermistors

APPLICATIONS

✦ Metros, tunnels, under-ground cavities, Dams
✦ High rise buildings, historical monuments, bridges and other such structures
✦ Landslide monitoring
✦ Foundations, retaining structures, piles etc.

non-volatile memory of the datalogger.

DATA RETRIEVAL AND TRANSMISSION

Following options are available:
✦ Telemetry through GSM/GPRS modem
✦ Readout/data retrieval using laptop

Telemetry through GSM/GPRS modem

In a location covered by any GSM/GPRS service provider, the data from the automatic datalogger can be transmitted remotely to a PC at a central location. The user will need to arrange a data SIM card for each datalogger.

Readout/data retrieval using laptop PC

The logged data from the datalogger in the field can be directly downloaded to a laptop/PC. Data can be transferred to the central PC or server from the laptop using either a USB pen drive or through Internet.

DATA PRESENTATION, ARCHIVING AND WORLD WIDE ACCESS THROUGH ENCARDIO-RITE PUBLIC CLOUD SERVICE

Encardio-rite offers public cloud based web monitoring service to its customers for retrieving data from ESDL-30 dataloggers, archiving the retrieved data in a SQL database, processing the data and presenting the processed data in tabular and most suitable graphical forms for easy interpretation of logged data. The tables and graphs related to any site or sites can be accessed by authorized personnel who can login to their site using the supplied login ID and access password from anywhere in the world over the internet. Users can have two types of access – any user with lower level access can only view or access the data whereas a higher level user has the authority to set or modify some of the settings.

No special software is needed for accessing the user sites as the information can be viewed using most standard and popular web browsers like Microsoft Internet Explorer, Mozilla Firefox, Google Chrome etc.
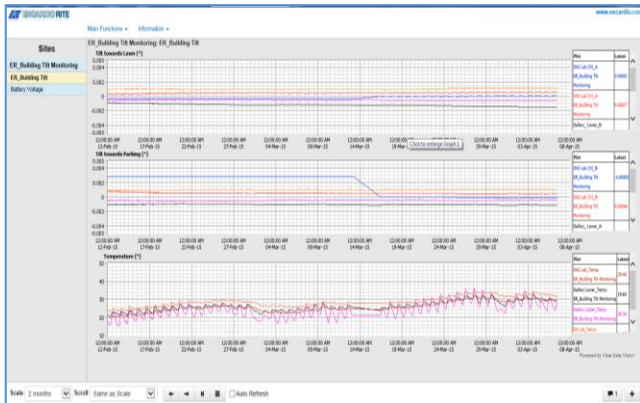
Encardio-rite cloud services work on a rental model. User has to pay a small setup fee for first time and then a monthly rental has to be paid for accessing the data over the cloud as long as required.

SPECIFICATIONS

Input	Sensor with SDI-12 signal interface
No. of channels	3
No. of sensors per channel	61
Scan/upload interval	5 seconds to 168 hours
Memory capacity	Flash Memory (64-Mbit); 2 Million data points
Data output format	CSV text file. Can be easily imported in many third party applications like Microsoft® Excel
SDI-12 version	Version 1.3
Communication port	RS-232 (Standard) 115 kbps
Temp. measurement range	-20 to +70°C with 0.1°C resolution
Operating temperature range	- 30 to 70ºC
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
Dimensions LxWxH	220 x 140 x 90 mm

ORDERING INFORMATION

Model code	No. of sensors to be connected
ESDL-30-1	1-5 sensors
ESDL-30-2	6-10 sensors
ESDL-30-3	11-24 sensors
ESDL-30-4	25-60 sensors
Contact factory if more sensors to be connected.	