ENCARDIO RITE

ONE STOP MONITORING SOLUTIONS | HYDROLOGY | GEOTECHNICAL | STRUCTURAL | GEODETIC
Over 50 years of Excellence through ingenuity

DATASHEET

RAIN GAGE & BAROMETRIC PRESSURE MONITORING

MODEL ERG-200/201

OVERVIEW

Encardio-rite model ERG-200/201 rain gage with a proven tipping bucket mechanism provides a cost effective reliable method for measuring and recording rainfall. It is easy to use, durable and precision automated to provide long term, trouble free operation with a minimum of maintenance. It is corrosion resistant having a stainless steel outer housing. It is designed for many years of trouble free operation.

FEATURES

- Precision low cost, corrosion resistant system for monitoring both rainfall and barometric pressure simultaneously.
- Easy system maintenance.
- Easy to install and operate.
- Option to monitor data remotely from an internet connected computer.
- Suitable for unattended operation.

APPLICATION

- Automatic Weather Stations.
- Unattended and remote rainfall and barometric pressure recording.

DESCRIPTION

Inside each rain gage is a balanced tipping bucket mechanism with a magnet and switch assembly. Collection of rain is through a 200 mm diameter catchment through debris filtering screen. A funnel inside the rain gage feeds collected rain water into one of the two buckets. As soon as the preset amount of water has been collected in the bucket, it tips the other way, automatically emptying the water and positioning the other bucket for collecting rainfall. The measured water exits through drain tubes provided at the base of the rain gage. The tipping bucket mechanism activates a sealed magnet sensitive switch that produces a contact closure for each 0.2/0.5 mm of rainfall. Two adjustable screws provide calibration of buckets by changing position of the bucket stop point.

High vertical sidewalls of the model ERG-200/201prevent splash-out of rain from the catchment thus resulting in better accuracy. Each rain gage is individually calibrated for optimum accuracy. Three adjustable legs allow the rain gage to be fastened permanently onto a platform or deck using standard fasteners.

Datalogger

Model ERG-200/201 rain gage can be connected to following dataloggers:

- Model ESCL-10VT-BX data-logger used for monitoring water level/table. It has provision to attach rain gage to it.
- Model ESDL-30 datalogger for connecting to this datalogger, the rain gage is supplied with a SDI-12 interface.

In both the dataloggers, data is logged at pre-selected time intervals and is stored in an internal non-volatile memory of around 3 million data points. It can store data with the current date, time and battery voltage for many days. Data can be transmitted to a remote server at pre-defined time intervals. The datalogger has a number of power supply options and telemetry options.

Barometric pressure sensor

Both ESCL-10VT and ESDL-30 dataloggers measure and log output from a precision barometric pressure sensor fitted inside the datalogger. This feature is very useful for co-relating rainfall with barometric pressure variations.

DATA RETRIEVALAND TRANSMISSION

Following options are available:

- Telemetry through GSM/GPRS modem
- Readout/data retrieval using laptop or PC
- Readout/data retrieval using Android smart phone.

Telemetry through GSM/GPRS modem

In an area covered by any GSM/GPRS service provider network, the data from the datalogger can be transmitted to a remote server at a central location.

The user will need to arrange a data SIM card for each GSM/GPRS modem. In case telemetry is not required, the GSM/GPRS modem is not provided.

Readout/data retrieval using laptop, PC or Android smart phones

Logged data from ESCL-10VT and ESDL-30 dataloggers at site can be directly downloaded to a laptop. It can also be communicated with an Android smart phone running the supplied datalogger configuration/application software through a detachable Bluetooth dongle. Data can be transferred to the server or central PC from the laptop/smart phone using either a USB pen drive or through Internet.

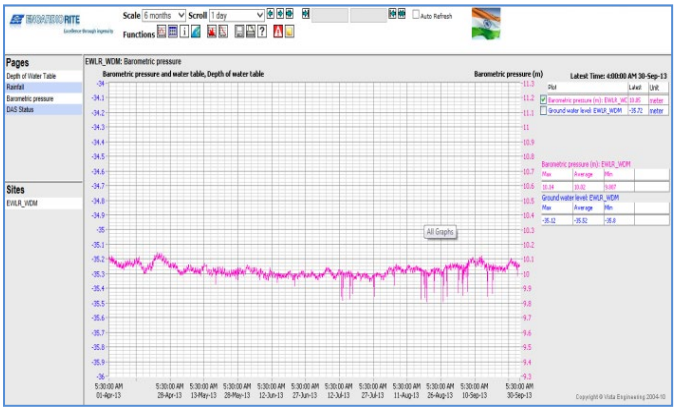
DATA PRESENTATION, ARCHIVING AND WORLD WIDE ACCESS THROUGH ENCARDIO-RITE PUBLIC CLOUD SERVICE

Encardio-rite offers public cloud based web data monitoring services to its customers for retrieving data from ESCL-10VT and 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.

Any internet connected computer and a standard web browser like Microsoft Explorer, Google Chrome or Firefox, etc. can be used for the purpose.

Data from the Encardio-rite cloud based web monitoring services can be accessed from just about any type of device that supports a standard web browser like a desktop or laptop PC, Tablet, smart phone or most other mobile computing devices.

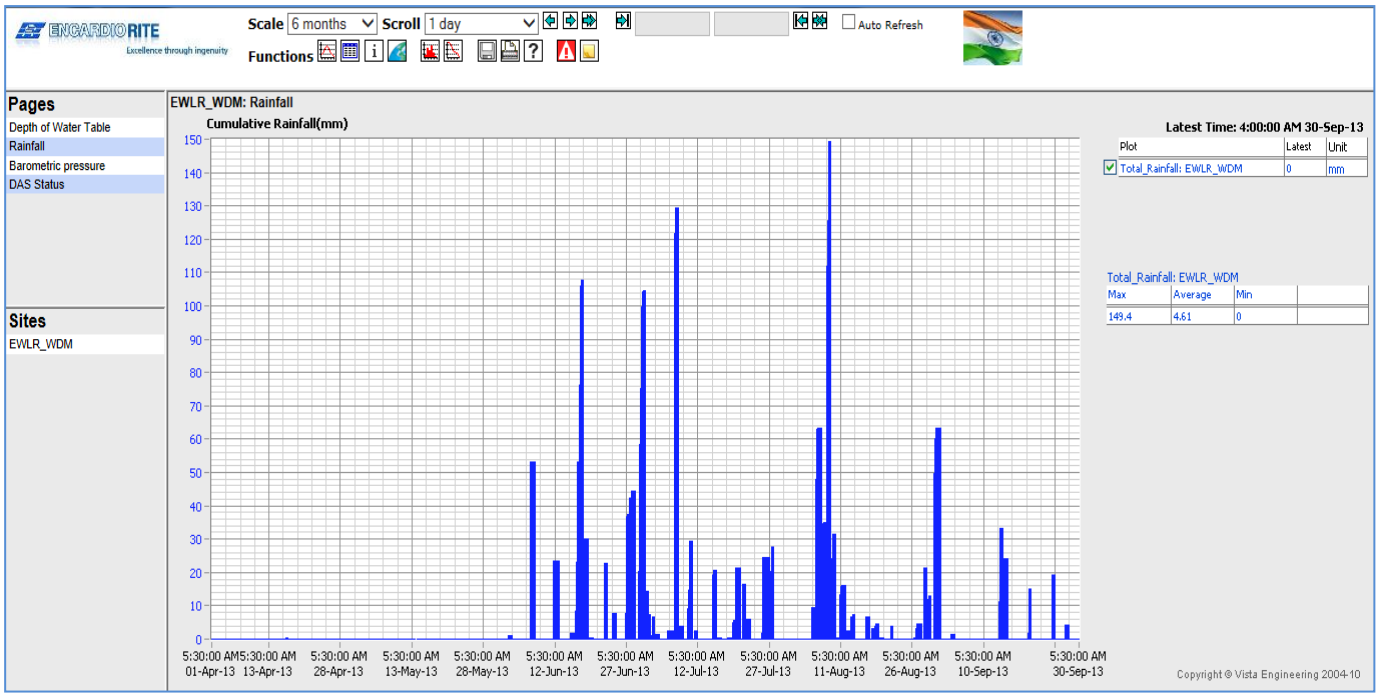
Encardio-rite cloud services work on a rental model. User has to pay a small setup fee for first time and then a monthly rental has to be paid for accessing the data over the cloud as long as required.



BAROMETRIC PRESSURE

SPECIFICATIONS

Sensor Type	Tipping bucket
Output	Potential free contact, one momentary switch closure per tip
Tip sensor	Sealed magnetic proximity switch
Resolution	0.2mm/tip for model ERG-200 0.5 mm/tip for model ERG-201
Accuracy	± 2 % at around 30 mm/hour ± 5 % at around 120mm/hour
Operating temp.	Up to 50°C
Humidity	0 to 100%
Catchment area	200 mm diameter
Construction	Corrosion resistant stainless steel outer housing
Data retrieval/ transmission	GSM/GPRS telemetry link, laptop/PC, Android smart phone
Barometric pressure	Range: 950 – 1050 hPa Accuracy: ± 2hPa



RAINFALL

**All specifications are subject to change without prior notice*

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