

Automatic Rain Gauge Station

Automatic Rain Gauge Station having the industrial grade micro controller datalogger ensure the reliability, accuracy and continuous performance in the toughest weather condition. **BHM** make Automatic Rain Gauge is the best choice for the research works in the market. Design makes easy to installed by one person and reduce the transportation cost. **Automatic Rain Gauge Model BHM-Compact-ARG-5** comes with the tripod stand, solar panel and battery case having the an intelligent solar and AC power circuit which make the system self-powered. **16 X 2** alphanumeric display and **1 X 4** keypad is provided at front of data logger for programming data logger and Rain Gauge sensor reading at site without the help of computer. The lithium on battery having the more than 2 years of life and < 10 days of the backup at no sunlight and extremely hardest weather condition.

DATA LOGGER -VIEW

PROFESSIONAL LINE SPECIFICATION

Model	Compact-datalogger version v-21.7
Display	16 Characters x 2 Lines alphanumeric display (Auto Light on when touch the keypad button)
Measured Parameter	Date, Time, Rainfall (mm), Logger Temperature (°C), Battery(volts)
Real Time Clock	Stability long-term: ±1 ppm / year Stability (temperature): ±3.5 ppm or better form -40° to 85°C
Logging Rate	1 min to 1 hours
Data Storage	16 GB (sufficient for more than 5 years of logging in 1 min. (logging rate)
Logger Power supply	5 volts
RTC Battery Life	< 5 years in continuous operation
Clock accuracy	±5 seconds per year
Keypad	1 x 4 on front of the datalogger programming and check the sensors Realtime reading
Logger Programming	Through given keypad in front of the logger
IP rating	IP 65
Operating Temp.	-40°C to 75 °C
Operation Humidity	0 to 95% no-condensing
Data Retrieval	SD Card and RS 485 (Optional) No need of any software direct copy and past
Data Transmission	GPRS telemetry OR WIFI in IOT (optional)
Watchdog timer	System Reset Upon Microprocessor Failure



BATTERY CASE - VIEW

PROFESSIONAL LINE SPECIFICATION

Model	BHM-compact-BAT Reverse Polarity
Protection	Battery over Charge Protection Battery over Discharged Protection
Battery Charging	Provided Inbuild solar charging Circuit through Battery management System OR 220 volts AC supply (optional)
Battery Life	More than 2 years
Battery Voltage & Amp	5 volts and 20 AMP Soft Start Charging or good health of battery
Advance Feature	Battery Temperature measurement inside Disconnect charging when temperature of batter goes high than normal
Solar Pannel	6 volts 2 Amp
Output Voltage	5 Volts DC



Above Datalogger, Battery Case comes with by high precision measurement Tipping Bucket Rain Gauge Model BHM-S-TBRG-5" collection area 127 cm² is to meet the WMO and IMD requirement and Symon's rain gauge for the precipitation measurement. TBRG model BHM-S-TBRG-200 collection area 200 cm² and Rain Guage Sensor model BHM-S-TBRG-8 collection area 314 cm² at extra cost by default above system comes with 127 cm² collector rainfall sensor. Station comes with SS tripod Stand, solar panel and IP67 grade enclosure. Easy to deploy, it is provided the high precision with minimum maintenance.

If the user wants to connect its TRBG sensor with the above logger, it will be sold separately. User can connect the any pulse output Tipping Bucket Rain Gauge manufacturers in the world.

SENSOR - VIEW

PROFESSIONAL LINE

SPECIFICATION

Model: BHM-S-TBRG-5"

Type	Tipping Bucket (Self Empty)
Diameter	5"
Accuracy of rain gauge	100 mm / hour, better than $\pm 3 \%$
Collection area	127 cm ²
Design	Aerocon for remove the wind effect
Resolution	0.20 mm
Operating condition	0°C to +70 °C 0...100 %
Output	Switch Encloser
Material	Polycarbonate
Capacity	Unlimited
Mounting	width SS strip at the bottom of the Rain Gauge



APPLICATION AREA

- Hydrology
- General rainfall monitoring
- Rainfall distribution and intensity
- Remote monitoring
- Leachate/run-off monitoring
- Ecological studies
- Agriculture
- Climate change studies
- Classical meteorology and hydrology
- Agriculture meteorology
- Measuring networks of water suppliers
- Lysimeter systems
- Sewage plants
- Weather services
- Airports



DATA TRANSFER

Through SD card direct in Excel File no need of the software
Jus Copy and paste to your computer

WIFI COMMUNICATION (optional)

A WIFI shield provided with the PC software user enter the its modem or WIFI dongle User ID and Password and transmit the data to our server for storage and analysing the data. A cost-effective solution if the system installed in the WIFI range, reduced user internet and no need to purchase an individual SIM for a station.
 Advantage of this feature for abroad user is that a WIFI dongle user connected to the logger given port. Either it is CDMA or GSM network dongle Logger push the data to the server.

GPRS Modem (optional)

- A GPRS enabled SIM is supposed to be installed in the modem. Based on the Sim Operator, the GPRS settings have to be configured in the modem.
- Once a proper SIM card is inserted and the terminal is switched ON, it will automatically connect.
- The terminal will continuously monitor serial port for messages received from the device connected.
- When modem receives a valid command in the serial port. it will take appropriate action based on the commands.
- Whenever the modem receives command from controller, it will be pushed through serial port.
- Stores Failed GPRS packets in non-volatile memory until system re-stores proper GPRS connection to server (zero data loss).

RS 485 Communication (Optional)

A RS 485 communication provide optional, logger transmitted the data every 1-minute interval with date and time stamp.
 A digital Running display also connected with this communication for the see the current data

Ordering Guide

BHM-compact-Datalogger	Datalogger
BHM-A-SSS	Stainless Steel Stand
BHM-A-SP	Solar Panel
BHM-compact-BAT	Battery with charging
BHM-S-TBRG-5"	Tipping Bucket Rain Gauge Sensor