

# Automatic Weather Station

## Compact Series

**Compact Series AWS** having the industrial grade micro controller ensure the reliability, accuracy and continuous performance in the toughest weather condition. **Compact series** AWS is the best choice for the research works in the market. Design makes easy to installed by one person and reduce the transportation cost. AWS **Compact series** all model comes with the tripod stand, solar panel and battery an intelligent solar and AC power circuit make the system self-powered.

BHM **Compact Series** AWS is categorized the four models **Compact 3 in 1** | **Compact 5 in 1** | **Compact 6 in 1** | **Compact 7 in 1** which can be selected by the user according the measuring weather paramant.

Model **BHM-Compact-7 in1** data Logger having the facility of the measuring the Temperature, Wind Speed, Wind Direction, Relative Humidity, Dew Point, Solar Radiation and Rainfall. All the above model measuring the Data logger for the collection of real time data automatically. **16 X 2** alphanumeric display and **1 X 4** keypad is provided at front of data logger for programming data logger and monitoring sensor reading at site without the help of computer.



### DATA LOGGER -VIEW

PROFESSIONAL LINE	SPECIFICATION
<b>Model</b>	Compact-datalogger version v-21.7
<b>Display</b>	<b>16</b> Characters x <b>2</b> Lines alphanumeric display (Auto Light on when touch the keypad button)
<b>Measured Parameter</b>	Date, Time, Air Temp. (°C), Max Air Temp.(°C), Min Air Temp. (°C), RH (%), Max RH (%), Min RH (%), Wind Speed (m/s), Maximum wind speed (m/s), average wind speed (m/s), Wind Direction (Deg), Rainfall (mm), Air Pressure (hpa), Solar Radiation(w/m <sup>2</sup> ), Dew Point (°C), Battery (volts)
<b>Real Time Clock</b>	Stability long-term: ±1 ppm / year Stability (temperature): ±3.5 ppm or better form -40° to 85°C
<b>Logging Rate</b>	1 min to 1 hours
<b>Data Storage</b>	16 GB (sufficient for more than 5 years of logging in 1 min. logging rate)
<b>Logger Power supply</b>	5 volts
<b>RTC Battery Life</b>	< 5 years in continuous operation
<b>Clock accuracy</b>	±5 seconds per year
<b>Keypad</b>	1 x 4 on front of the datalogger programming and check the sensors Realtime reading
<b>Logger Programming</b>	Through given keypad in front of the logger
<b>IP rating</b>	IP 65
<b>Operating Temp.</b>	-40°C to 75 °C
<b>Operation Humidity</b>	0 to 95% no-condensing
<b>Data Retrieval</b>	SD Card and RS 485 (Optional) No need of any software direct copy and past
<b>Data Transmission</b>	GPRS telemetry OR WIFI in IOT (optional)
<b>Watchdog timer</b>	System Reset Upon Microprocessor Failure
<b>Weatherproof Encl.</b>	IP 67 weatherproof enclosure provides Optional

### BATTERY, SOLAR PANEL AND SOLAR CHARGE VIEW

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



## SENSORS-VIEW

## Temperature &amp; Humidity

## PROFESSIONAL LINE

## SPECIFICATION

## Air Pressure

Model: BHM-S-THA



Measuring range temperature	-40° C to 123 ° C
Measuring humidity	0 to 100 %
Accuracy temperature	± 0.3 ° C @ 5 to 40° C
Accuracy rel. humidity	± 2% @ 20 to 80 %
Resolution of temperature	0.01 ° C Typical
Resolution rel. humidity	0.05 % RH Typical
Operating condition	-40°C to +70 °C
	0...100 %
Supply voltage	0 to 5 volts
Weather shield	IP 65 provided
Dew point	Calculated Provided
Measuring range air pressure	300 hPa ~ 1100 hPa
Accuracy air pressure	±0.12hPa or better



## Wind Speed

## PROFESSIONAL LINE

## SPECIFICATION

## Wind Direction

Model: BHM-S-WS



Measuring range wind direction	0 ° to 360 °
Measuring range wind speed	0.8 ... 50 m/s
Accuracy wind direction	1°
Accuracy wind speed	0.5 m/s at 0.8 ... 5 m/s and 2 % FS at 5.02... 40 m/s
Resolution of the wind direction	1°
Resolution wind speed	0.06 m/s
Operating condition	0...+70 °C • 0...100 %
Supply Voltage	0 to 5 volts
Material	Polycarbonate

Model: BHM-S-WD



## RAIN GAUGE

## PROFESSIONAL LINE

## SPECIFICATION

Model: BHM-S-TBRG-5



Type	Tipping Bucket
Measuring intensity	500 mm/ hours
Accuracy of rain gauge	100 mm / hour, better than ±4%
Collection area	127 cm <sup>2</sup>
Design	Aerocon for remove the wind effect
Resolution	0.20 mm
Operating condition	0°C to +70 °C
	0...100 %
Output	Switch / pulse
Material	ABS
Capacity	Unlimited



## SOLAR RADIATION

## PROFESSIONAL LINE

## SPECIFICATION

Model: BHM-S-SR



Measuring range	0 to 1800 W/m <sup>2</sup>
Spectral Response Range	400 - 1100 nm
Cosine Response	±3% (0° to ±70° incident angle)
Cosine Response	±10% (±70° to ±85° incident angle)
Absolute accuracy	±5% of full scale
Resolution	1 W/m <sup>2</sup>
Drift	up to ±2% per year
Operating Environment	- 40 to 65 °C; 0 to 100% RH
Response	Less than 1 ms
Type	Silicon cell
ISO 9060:2018	Class C

## Ordering Information

BHM-compact-Datalogger  
 BHM-S-THA  
 BHM-S-WS  
 BHM-S-WD  
 BHM-S-TBRG-5  
 BHM-S-SR

DATALOGGER  
 Temperature, Humidity and Air Pressure Sensor  
 Wind Speed Sensor  
 Wind Direction Sensor  
 Rainfall Sensor  
 Solar Radiation Sensor

## Accessories

BHM-A-SSS  
 BHM-A-SP  
 BHM-compact-BAT

Stainless Steel Stand  
 Solar Panel  
 Battery with charging

## SELECT YOUR MODEL

Model Sensors	Compact 3 in 1	Compact 5 in 1	Compact 6 in 1	Compact 7 in 1	Compact 8 in 1
Temperature		✓	✓	✓	✓
Humidity		✓	✓	✓	✓
Rainfall		✓	✓	✓	✓
Wind speed	✓	✓	✓	✓	✓
Wind direction	✓	✓	✓	✓	✓
Solar radiation				✓	✓
Air Pressure	✓		✓	✓	✓
Open Pan Evaporation					✓
SS Tripod Stand	✓	✓	✓	✓	✓
Battery case	✓	✓	✓	✓	✓
Solar panel	✓	✓	✓	✓	✓
GPRS Telemetry	At Extra Cost	✓	✓	At Extra Cost	At Extra Cost
WIFI Telemetry	At Extra Cost	At Extra Cost	At Extra Cost	At Extra Cost	At Extra Cost
RS 485 data communication	At Extra Cost	At Extra Cost	At Extra Cost	At Extra Cost	At Extra Cost



## DATA Communication



## 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

## GPRS Modem

- 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

## BALAJI HYDROMET

**Sign In (Registered User Only)**

User Id

Password

Captcha Code



Input symbols

**SIGN IN**

Date (ddmmyyyy)	Time (hh:mm)	Temperature (°C)	Max Temp (°C)	Min Temp (°C)	RH (%)	Max RH (%)	Min RH (%)	Wind Speed (Meter/Sec)	Avg Wind Speed (Meter/Sec)	Max Wind Speed (Meter/Sec)	Wind Direction (° from N)	Solar Radiation (Watts/m <sup>2</sup> )	Rain (mm)	Dew Point (°C)	Battery Voltage (vDR)
3/18/2021	0:0	15.36	15.36	15.36	77.05	77.07	77.05	0.00	0.00	0.00	160.00	0.00	0.00	10.76	11.23
3/18/2021	0:15	15.11	15.29	15.08	78.69	79.70	78.68	0.00	0.00	0.00	160.00	0.00	0.00	10.85	11.06
3/18/2021	0:30	14.86	15.12	14.83	80.08	80.30	80.09	0.00	0.00	0.00	155.00	0.00	0.00	10.88	11.33

Representative

\*Drawing & Specification of the Product subjected to be change without any prior notice as per manufacturing suitability and future technology