

AblereX Enerbatt 3G Wireless Battery Monitoring System Frequently Ask Questions

Question:

1) The Measurement Kits and Data Collector are using 2.4G radio frequency for transmission & receiving, thus will this cause any interference to other systems such as Telecommunication, Fire alarm, UPS, & etc, within or beyond the battery room?

Answer:

No, it will not cause interference to other equipments. The BMS is transmitting in a parcel of frequencies in the band width of 2.4G Hz. The transmitter is “jumping” from parcel to parcel of these frequencies automatically to avoid interference and for best result. The operating principle is similar to wireless moderns or wireless IT products available in the market. Since most wireless IT products do not interfere with each other, the Enerbatt 3G which is normally install inside a dedicated battery room, similarly does not interfere with other equipment.

Question:

2) Is it compulsory to have a dedicated computer in order to monitor the battery data?

Answer:

No, it is not necessary. The Data Collector itself is capable of displaying all battery parameters, graphs, curves and event logs. You can use a laptop to download all the data periodically from the Data collector via its RJ45 port using typical web browser application (eg. Internet Explorer). If a remote monitoring computer is a must in your requirement, you can use the standard RS485 port from the Data Collector to duplicate all the information & display onto the computer monitor using our proprietary software.

Question:

3) How many blocks of batteries and other auxiliary signals can the Data Collector receive? What are the limitations?

Answer:

Enerbatt 3G consist of 2 main measurement kits, i.e. (i) Individual battery block voltage cum impedance measurement kit known as the BMK and, (ii) String measurement kit known as SMK which can measure string current or string voltage or ambient temperature. These measurement kits will transmit the respective measured signal wirelessly to the Data Collector, which serves as a centralise receiver and display panel. The Data Collector can receive signals from a total of 256 numbers of BMK & SMK measurement kits. Thus if you need more than 256 numbers of measurement kits for your system, you simply add 1 or more Data Collector. Basically there is no limitation of the total numbers of Data Collector you can install.

Question:

4) Can Enerbatt 3G able to measure & monitor different battery voltages and different string sizes?

Answer:

Yes. Enerbatt 3G can handle battery mono-block of 2V or 6V or 12V DC nominal by using the respective BMK measurement kit. They can be configured for almost unlimited combinations of batteries of any size and voltage. All configuration settings can be easily done on the Data Collector coloured touch-screen display.

Question:

5) What is the maximum total string DC voltage and current Enerbatt 3G can handle?

Answer:

Enerbatt 3G is able to handle a maximum nominal string DC voltage of 620V (310 x 2V or 103 x 6V or 51 x 12V) and a maximum string current of 3000Amps. In situation where the system string DC voltage and current is higher than Enerbatt 3G limit, we can work around this issue by splitting the string measurement to multiple strings consisting of smaller numbers of battery. Incidentally, with all the field installation experience, this situation has never been reached.

Question:

6) What type of storage and capacity is use in the Data Collector?

Answer:

It uses a 2GB SD flash card. 2GB is the maximum memory it can operate with.

Question:

7) Isn't 2GB of storage capacity a tat too small for prolonged data storage?

Answer:

Not at all! The Data Collector uses Window CE OS, but the data storage & display application is computed using AblereX proprietary software. This unique software allows the Data Collector to capture the event logs & battery data utilising ultra low memory capacity. The 2GB SD card is sufficient to store many months or even many years worth of battery data. The below formula provide a glimpse how long the Data Collector can continue to store its data:

[60,000 x Recording intervals (in unit of "Minutes") ÷ Number of measuring kits].

The "Recording intervals" is user defined. It can be set from a shortest interval of every second up to every 60mins. Taking an example of a 40 blocks battery bank, with a recording interval set to every minute, the Data Collector can store up to (60,000 x 1min) ÷ 40 = 1,500 days (about 4 years) of event logs & data.

Question:**8) What happen if the Data Collector memory is full?****Answer:**

The Data Collector will provide a preventive alarm when its memory reached 90% full. In the worst case scenario if the data are not downloaded to free up the memory space, the Data Collector will continue to record and store the data in a first-in-first out (FIFO) logic to minimise data loss.

Question:**9) What is the maximum transmitting & receiving distance between the Data Collector and the measurement kits?****Answer:**

We have tested an effective range of 50meter in open environment (eg. Batteries on open racks), but we recommend a maximum range of 30 metres for optimum performance. However, just like any wireless devices such as modems and mobile phone, the transmitting signals will weaken or lost in a fully enclosed environment. Therefore if you would to house the battery blocks in an enclosed floor standing cabinets, we recommend that the cabinets should have ventilation louvers/openings in order for the transmitting signals to be able to reach out to the Data Collector.

Question:**10) Can Enerbatt 3G automatically initiate a discharge test on the battery?****Answer:**

No, Enerbatt 3G does not perform discharge test. A discharge test should be carry out by the equipment which uses the battery (eg. UPS, Charger). Enerbatt 3G reacts to a battery discharge if it occurs and automatically records all voltage, current, impedance and temperature data during the discharge period.

Question:**11) Does Enerbatt 3G perform data & history recording where there is no discharge?****Answer:**

Yes, Enerbatt 3G is recording data & history every day. The recording intervals are settable between every second to every hour.

Question:

12) Does ENERBATT 3G comes with 24x7 alarm notification including SMS & e-mail options?

Answer:

Yes, Enerbatt 3G comes with 24x7 (days) alarm notification including email options (use with optional Software together with a computer). For alarms via SMS, you can use the dry contact signal output from the Data Collector with a 3rd party SMS Auto Dialler (contact your Enerbatt 3G installers) which is readily available in the market.

Question:

13) Do we need to self-program battery capacity per block and number of blocks of battery per string?

Answer:

You have to set the number of string per system, number of block per string. You do not need to set battery capacity (Ah).

Question:

14) Does ENERBATT 3G comes with its own monitoring software for using with a remote computer?

Answer:

Yes, the optional monitoring software is Windows-based.

Question:

15) Any option for MODBUS communication to the existing building management system?

Answer:

Yes, the Data Collector has a standard RS485 port for communication with building management system using MODBUS/JBUS protocol.

Question:

16) When do we use Battery Block Measurement Kit (BMK) or/and Battery String Measurement Kit (SMK)?

Answer:

The BMK is use for battery block voltage measurement as well as battery block impedance measurement. If you wish to measure battery block terminal temperature you would need to purchase an additional temperature probe for each battery terminal temperature you wish to measure. The SMK comes with 1 x current measurement input, 1 x voltage measurement input and 1 x temperature input. You use the SMK for measurement of battery string/total current or/and string/total voltage or/and battery room/cabinet temperature. You would need optional current transformers and temperature probes for current and temperature measurement respectively. For string/total voltage measurement you would need to connect signal cable from the DC busbar to the voltage input terminal of the SMK.

Question:

17) Does this ENERBATT 3G allows us to read per block or/and per cell battery voltage/impedance reading?

Answer:

It measures per block voltage and per block impedance only.

Question:

18) Does Enerbatt 3G able to monitor humidity other than room/ambient temperature?

Answer:

It can only measure temperature. No Humidity sorry.