Issue date : Mar 16, 2026

Product Data Sheet : FORTELION 24V Battery Module

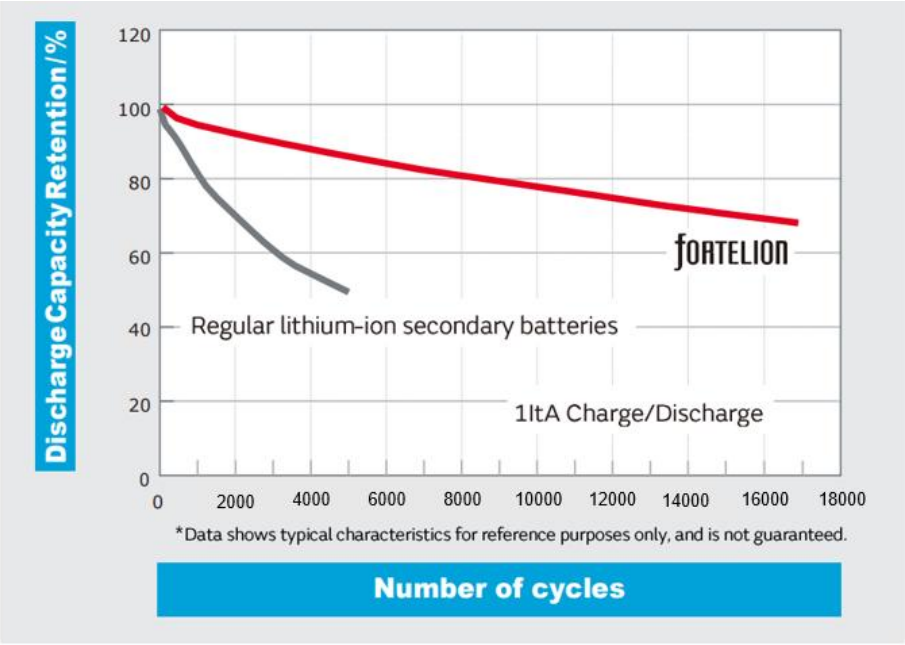
General System Information :

Battery Module (BM)	**BMU with safety related electronics, including integrated power switches and communication**
Max. Configuration	**up to 2S10P (max 20 Modules)**

Electrical Data :

Nominal Voltage	**25.6V**
Nominal Capacity	**21Ah**
Nominal Energy	**537Wh**
Current Consumption	**Active : max. 30mA (single BM configuration)** **max. 15mA (multi BM configuration)** **Sleep : max. 1mA** **Power Down : max. 20µA (shipping Mode)**
Standard Charge condition	**28.8V/10A/CC-CV, cut-off when charging current is 5A or less.**
Standard Discharge condition	**10A/CC, cut-off when Total cell voltage is 24V or less.**

Cycle Life



Discharge Data :

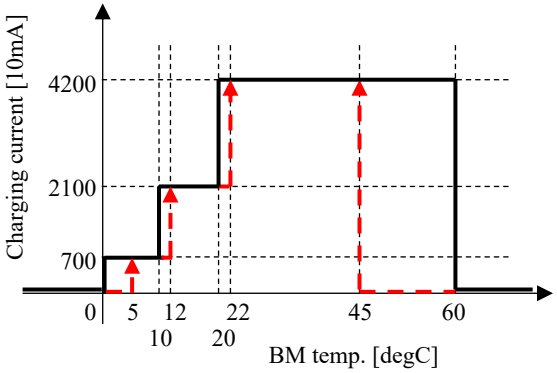
Discharge cut-off voltage	**18.4V**
Maximum continuous discharge current	**60A**
Maximum momentary discharge current / duration 1	**80A / 25s / 10% (duty cycle)**
Maximum momentary discharge current / duration 2	**100A / 5s / 10% (duty cycle)**
Short circuit protection	**>200A (300µs)**

Charge Data :

Charge cut-off voltage	**28.4V**
Maximum charging current	**7A 0 ≤ BM temp.* Min. < 10degC** **21A 10 ≤ BM temp.* Min. < 20degC** **42A 20 ≤ BM temp.* Min. & BM temp. Max. < 60degC**

***BM temp=measured temp inside Battery Module**

Condition	Charging current [10mA]
BM temp. Min. < 0degC	0
0degC ≤ BM temp. Min. < 10degC	700
10degC ≤ BM temp. Min. < 20degC	2100
20degC ≤ BM temp. Min. & BM Temp. Max. < 60degC	4200
60degC ≤ BM temp. Max.	0



Follow arrow line when the value of Charging current is increased.

Max charging current shows 'Recommended Maximum charging current' which means the recommended allowable maximum charging current value, and lower charging current is well acceptable.
So, for good cycle performance, it is also recommended to limit charging current to 21A even if this value shows more large value.

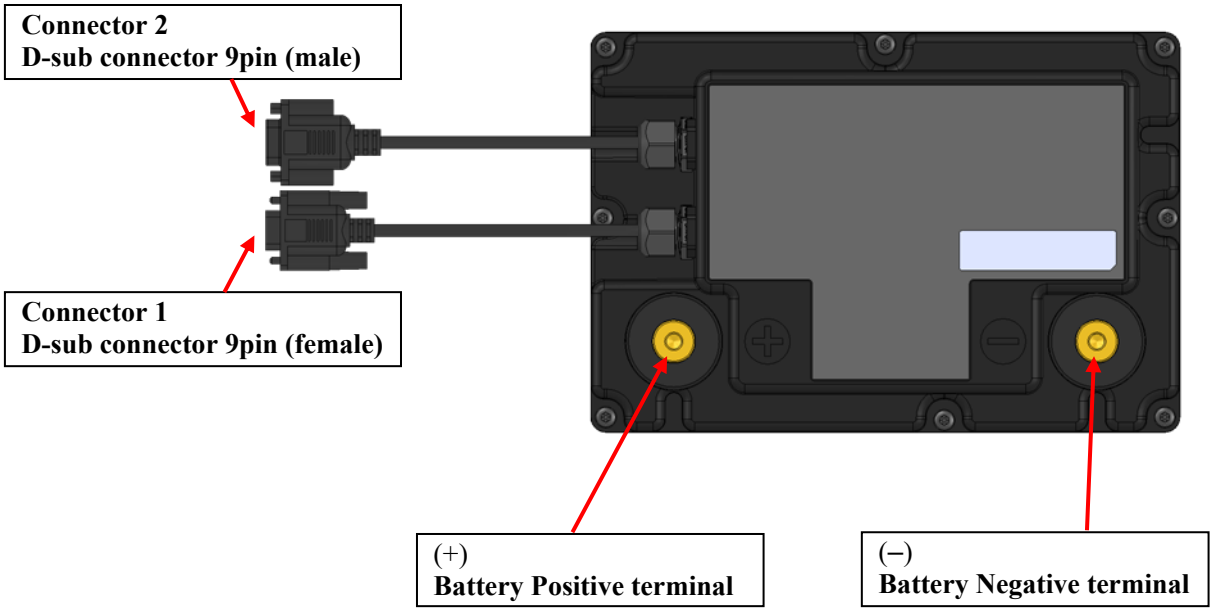
Temperature:

Discharge temperature	**-10degC to 60degC**
Charge temperature	**0degC to 50degC**
Storage / Transportation temperature	**-20degC to 60degC**

Interface:

CAN (proprietary protocol)	**Connector: Sub-D 9 pin**
CAN Adaptability	**10 configurable IDs for broadcast data (fixed ID 0x01, internal communication); configurable Bit Rate**
UART (proprietary protocol)	**Connector: Sub D 9 pin**
Battery Terminal connection	**Threaded M6, 10mm depth**

Location of Connectors (Top surface View)



BMS Functionality:

Undervoltage protection	**Implemented**
Overvoltage protection	**Implemented**
Overcurrent protection	**Implemented**
Short circuit protection	**Implemented** **(for reversibility, limits apply)**
Cell balancing	**Implemented**
Low energy standby	**Implemented**

Standards / Approval:

Transportation	**UN38.3**
EN/IEC	**IEC62133; IEC62619**
UL	**UL62133, UL2271**
RoHS	**compliant**

Mechanical data:

Dimension	**195mm(L) x 132mm(W) x 180mm(H)**
Weight	**Approx. 6.5kg**
Material	**Poly Carbonate (PC) UL94 V0 Flame Rating**
Dust and Water proof	**IP: 54** **The communication connector is not waterproof and dustproof.** **Take appropriate measures according to the usage conditions.** **BM* is not intended to be directly exposed to sunlight or rain.**

*BM : Battery Module

Caution for Handling of FORTELION® 24V Battery Module:

Storage	**Please store BM under the condition stated in Note-1.**
Mounting	**Please DO NOT install the output terminal surface with the bottom down.** **Please well fix BM into Equipment to prevent movement and stress on terminal and parts.**
Handling	**Please DO NOT disassemble / convert BM** **Please DO NOT put BM into the fire or extremely high temperature environment.** **Please DO NOT apply extreme shock or vibration to BM.** **Please DO NOT apply water to BM / put BM into water.** **Please DO NOT put BM into the corrosive gas / sea breeze / high humidity / extreme dusty environment.** **Please DO NOT put the BM under the direct sunlight for a long time.** **Please DO NOT pull BM with the cable.** **Please consider MOD is heavy parts.**
Cabling	**Please DO NOT make a short circuit of the battery.** **Please make a proper connection.** **Please use thick enough cable.** **Please make the power cable length as short as possible to reduce the surge voltage.** **Especially, the cable length between the battery system and User's Equipment should be shorter than 3 meters of each (+) and (–) cable (which means total 6 meters for + and – cable).** **When the cable length exceeds this, BM might be damaged.** **Please consider using a Free wheel diode (Fast recovery diode is recommended) between (+) and (–) terminals to limit the surge voltage.** **(In case of 2S configuration, use it between (+) terminal of High-side BM and (–) terminal of Low-side BM.)** **Please make the impedance of the power cable equal when connecting BM in parallel.**
Charging	**Please use suitable charger.** **Please DO NOT exceed the maximum charger voltage of 60 V and DO NOT apply high current.** **Please DO NOT apply the reverse voltage to BM.** **Please DO NOT connect BM to the outlet directly.** **Please use BM under the condition stated as above Charge Data.**
Discharging	**Please DO NOT short-circuit (+) and Batt (–) terminals.**
Warning	**Please stop using BM immediately if any abnormality (product's damage or deformation, discoloration, foreign odor, fever, etc.) is found.**

Note-1 :
For long-term storage (about more than 1 year), set to the Power-down mode by using the CAN command.
Note-2 :
Cycle performance may be degraded (lifetime may be shortened) if charging current exceeds 21A.

This datasheet is subject to change without notice.
This datasheet provides reference information for the product and does not guarantee product performance.