❖ **Thanks for selecting the BMS protocol converter. Please read this manual carefully before using the product.**

❖ **Do not install this product in humid, salt spray, corrosion, greasy, flammable, explosive, dust accumulative, or other severe environments.**

BMS Protocol Converter

BMS-LINK

1 Overview

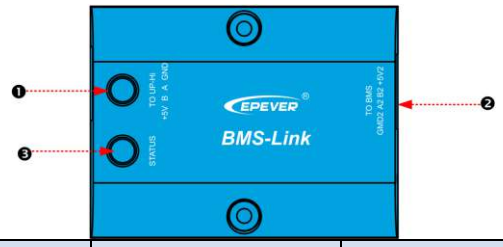
BMS-LINK is an external BMS protocol converter with an independent MCU. Setting the "PRO" parameter through the remote meter or PC software after connecting the BMS-LINK to UP-Hi and lithium battery. Different manufacturers' protocols can be converted into our standard protocol, which improves the actual application's flexibility. Compared with the traditional built-in BMS protocol conversion module, this converter has stronger application flexibility and expansibility. It is more suitable for our products to communicate with the lithium battery.

Features:

- Independent MCU
- Dual RS485 com. port★
- Support multi BMS protocols conversion
- Freely setting the protocol number
- Reliable protocol conversion and communication
- Optional remote meter or PC software to set the protocol number
- Simple installation and friendly operation

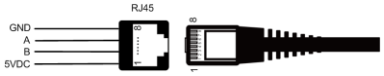
★ The port connected to the lithium battery is an isolated RS485 communication port, and the port connected to the inverter/charger is non-isolated.

2 Characteristics



No.	Port	Instruction	Note
❶	TO UP-Hi	Connect to the BMS port of the UP-Hi (Non-isolated RJ45 port★)	**Connection cable:** CC-RS485-RS485-350mm
❷	TO BMS	Connect to the BMS port of the lithium battery (Isolated RJ45 port★)	**Connection cable:** CC-RJ45-XXXX-150
❸	Status	Communication indicator♦	Green: Normal Red: Abnormal

★RJ45 Pin Definition：



Pin	Definition	Pin	Definition
1	5VDC	5	RS-485-A
2	5VDC	6	RS-485-A
3	RS-485-B	7	GND
4	RS-485-B	8	GND

♦ Red flashes slowly (0.5Hz): All communication is fault.

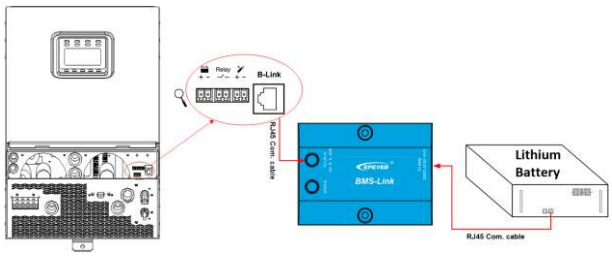
Green flash slowly (0.5Hz): Communication between the BMS-Link and UP-Hi is normal.

Green flash fast (1Hz): Communication between the BMS-Link and battery is normal.

Green flash faster (2Hz): All communication is normal.

3 Connection diagram

Step1： Connect the BMS-LINK converter to the inverter/charger and the lithium battery through an RJ45 communication cable.



Step2: Modify the lithium battery's default ID to the fixed ID through the DIP switch.

The battery DIP switch is shown on the left, different lithium battery manufacturers may display differently, please refer to the actual product. "ON" is upper position and "OFF" is bottom position.

The DIP switch's state of different fixed ID is shown below the table.

DIP switch / Fixed ID	DIP 1	DIP 2	DIP 3	DIP 4	DIP 5	DIP 6
0	OFF	OFF	OFF	OFF	OFF	OFF
1	**ON**	OFF	OFF	OFF	OFF	OFF
2	OFF	**ON**	OFF	OFF	OFF	OFF
3	**ON**	**ON**	OFF	OFF	OFF	OFF
4	OFF	OFF	**ON**	OFF	OFF	OFF

Step3: Modify the item "PRO" to the actual BMS protocol number through the remote meter or PC software (Take the remote meter as an example):

① In the real-time interface, press and hold the UP+DOWN button to enter the engineer's operation interface.

② Press the UP/DOWN button to select the "PRO" (item 40).

③ Press and hold the SET/ENTER button to enter the parameter modifying interface.

④ Press the UP/DOWN button to modify the "PRO".

⑤ Press the SET/ENTER button to confirm.

⑥ Press the ESC button to exit.

⑦ Restart the inverter/charger to ensure the BMS protocol number is modified successfully.

1) **Please refer to the "BMS Communication Protocols & Fixed ID" or contact our technical supporters for the BMS manufacturers and protocols.**
2) **Ensure the lithium battery's default ID has been modified into the fixed ID before setting the "PRO".**

Step4: Switch on the lithium battery, and then power on the inverter/charger after the power output is ready.

4 Specifications

Parameters	BMS Protocol Converter
Input voltage	5VDC (Powered by the UP-Hi connection port)
Serial port baud rate	9600bps
Communication method	RS485
Connection port	RJ45
Work temperature	-20℃~55℃
Storage temperature	-35℃~70℃
Altitude	＜5000m
Enclosure	IP30
Humidity range	＜ 95%(N.C.)
Dimension (Length x Width x Height)	67mm x 51mm x 24.5mm
Mounting size (Length x Width)	67mm x 41.2mm
Mounting Hole size	Φ3.2mm
Net Weight	37.9g

5 Disclaimers

The warranty does not apply to the following conditions:

- Damage caused by improper use or inappropriate environment.
- Damage caused by working temperature exceeds the rated range.
- Unauthorized dismantling or attempted repair.
- Damage caused by force majeure.
- Damage occurred during transportation or handling.

Any changes without prior notice! Version number: V1.2