

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

BMS Protocol Converter

BMS-LINK

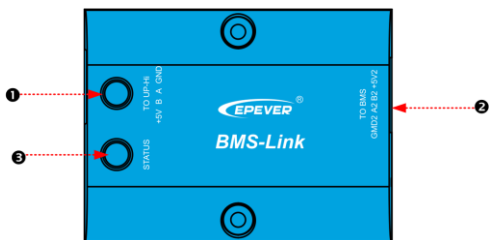
1 Overview

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 all-in-one products and other products to communicate with the lithium battery BMS.

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 all-in-one products is a non-isolated RS485 communication port.

2 Characteristics



No.	Port	Instruction	Note
❶	TO UP-Hi	Connect to the BMS interface of the UP-Hi device (Non-isolated RJ45 port★)	Cable(Included): CC-RS485-RS485-350mm
❷	TO BMS	Connect to the BMS interface of the lithium battery(Isolated RJ45 port★)	Cable(Optional): Adjust the connection cable according to the lithium battery's BMS line sequence.
❸	Status	Communication status indicator	Green: Normal Red: Abnormal communication

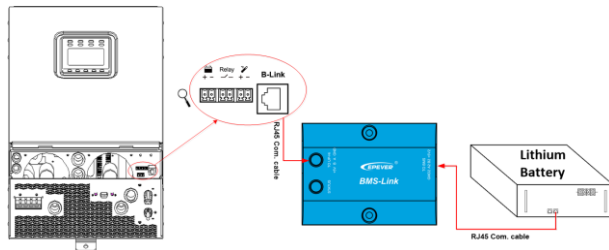
★RJ45 Pin Definition:



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

3 Connection diagram

Step1: Connect the BMS-LINK converter to the RS485 port of the all-in-one product and the lithium battery through an RJ45 communication cable.



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



Lithium battery's DIP switch

Please see the "BMS Lithium Battery Protocols & Fixed ID Table" or contact our technical support department for different manufacturer's fixed ID.

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

Fixed ID	DIP switch Sequence					
	1	2	3	4	5	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 "PRO" parameter into the BMS protocol number through the remote meter or PC software(Take the remote meter as an example):

- ① In the real-time interface, press the UP+DOWN button and hold on for 2s to enter the engineer's operation interface.
- ② Press the UP/DOWN button to select the "PRO" parameter(item 40).
- ③ Press the SET/ENTER button and hold on 2s to enter the parameter modifying interface.
- ④ Press the UP/DOWN button to modify the "PRO" parameter.
- ⑤ Press the SET/ENTER button to confirm the modification.
- ⑥ Press the ESC button to exit.
- ⑦ Restart the all-in-one product to make sure the BMS protocol number is modified successfully.

- 1) Please refer to the "BMS Lithium Battery Protocols & Fixed ID Table" or contact our technical support department for the supported BMS manufacturers and protocols.
- 2) Please make sure the lithium battery's default ID has been modified into the fixed ID before setting.

4 Specifications

Parameters	BMS Protocol Converter
Input voltage	5VDC (Powered by the UP-Hi connection port)
Serial port baud rate	9600
Communication method	RS485
Connection port	RJ45
Working environment temperature	-20~ 55 °C
Storage temperature	-35-70 °C
Altitude	<5000m
Enclosure	IP30
Humidity range	< 95%(N.C.)
Dimension (Length x Width x Height)	67* 51* 24.5mm
Mounting dimension	67x41.2mm
Mounting Holes	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: V1.0