



Blue Mountain Energy

Hybrid Solar Inverter user
manual

BME-20

Please note: The BME-20 is NRS compliant but not NRS certified
therefore should be used in off-grid mode
(Feed-in to Grid mode is disabled and should remain disabled)

Hardware requirements

This document is a guide on installation of high voltage BME-20 hybrid inverter.

Hardware required:

- BME-20 inverter.
- BMS unit for PowercubeH2 batteries available on the portal: PYL-PC-SC1000-100.
- PylontechPower-cube H2 batteries available on the Segen Portal:

PYL-PC-H2-BATTherecommendhigh voltage battery setup is8 Power-cube batteries in series with a nominal voltage of 384V. Capacity can be expanded to192kWh by adding extra stacks of the same number of batteries ®, with additional BMS units along with an M-BMS unit to facilitate RS485 communication between both BMS units and the inverter.

- The M-BMS unit is available on the Segen Portal: PYL-PC-MBMS1000.
- The BMS card with the included BMS cable available on the Segen portal: BME-BMS-C-HV.
- Solar Power CD.

Setup:

- Dip switch settings
NB: 1 indicates on (or up), 0 indicates off (down).

1. BMS unit should be set as 100001.(As seen in Figure 1)

2.BMS card:

switch 1 : default: 10000000 / 00000000.

switch 2 :0110 for dip switches 1 to 4.

The rest are termination resistors that can be left at default values.Full dip switch setting:
01100111/01100000

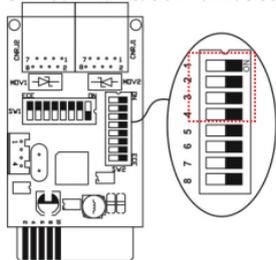


Figure 1: BMS module dip switches



Figure 2: BMS card dip switches

3-1. Communication Format Configuration



Function	Bit Setting	Meaning
Baud rate	# 2 # 1	
	OFF OFF	2400bps
	OFF ON	4800bps
	ON OFF	9600bps*(Default)
Parity check	ON ON	19200bps
	# 4 # 3	
	OFF OFF	Even parity
	ON OFF	Odd parity
	OFF ON	No parity check 1 stop bit (Default)
	ON ON	No parity check 2 stop bits

***It's request to use 9600bps baud rate and no parity check 1 stop bit if communicating with BMS. The Bit setting for # 1 is OFF, # 2 is ON, # 3 is ON, # 4 is OFF.**

Figure 3: BMS card dip switch settings

- Insert BMS card into inverter intelligent slot.
- Please note that the BMS cable that comes with the Modbus card is labelled (BAT) on one side, please connect this part to the RS485 slot on the battery BMS and the other to the inverter RS485. (Please see figure 4).



Figure 4: RS485 ports

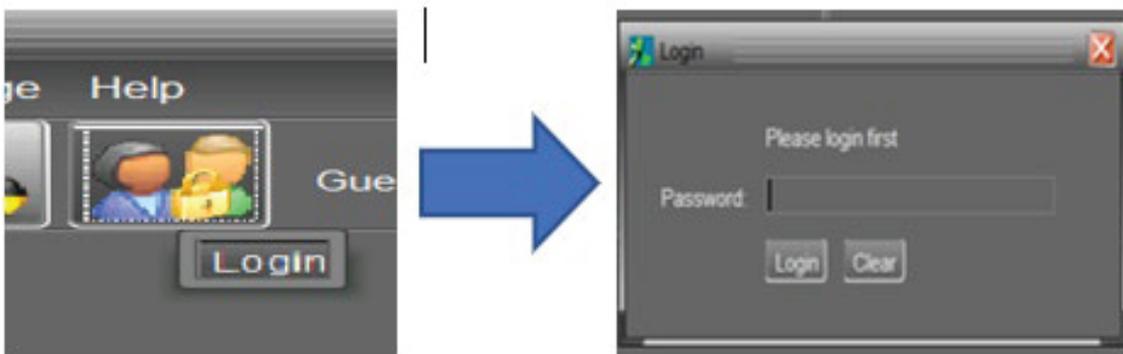
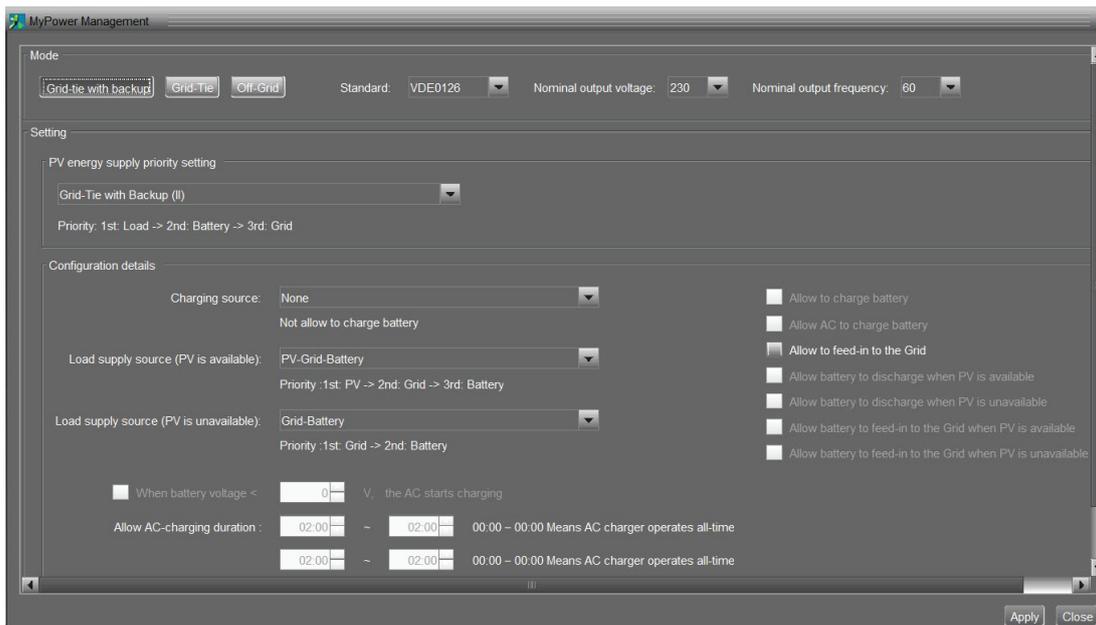
Commissioning

1. Battery
 - Switch the battery breaker on, then press and hold start button until status indicator turns green, the rest of the status indicators should sequentially turn green. The status indicator on the controller should then go into standby mode by turning solid red. Press and hold the start button again until the status indicator turns green indicating batteries are on.
 - Once this is done the inverter LCD is switched on by pressing the on button for 3 seconds.
 - BMS connection is confirmed by a flashing message on LCD "Li-Bat"
2. PV and Grid

It is highly recommended to start up the inverter with battery power, however the Grid/PV can also start up the inverter.
3. The inverter should be on standby mode.
4. Solar Power software included with the inverter on a CD is used to set inverter modes.

Solar Power

- Connect USB cable that comes with inverter to usbslot on inverter and computer that has solar power software.
- Once inverter is powered on and still in standby mode click on login and enter the password: **administratoron** prompt.
- Open device control.
- Click on Parameters to set inverter parameters.
- Click mypowermanagement to set modes in which you want the inverter work .
- Click apply to activate selected mode and connect to loads.
- Solar Power includes the following modes:
 - Offgrid I, II ,III.
 - Hybrid with backup I, II, III.
 - The different modes vary in charge source priority, load supply source priority.



Inverter Screen Messages

- The inverter LCD indicates BMS communication through the message "Li-Bat".
- Warning messages flash a warning number
- Fault messages show a solid fault number
- Please note that upon loss of communication the BMS internal contactor trips for safety.