



Blue Mountain Energy

Hybrid Solar Inverter user
manual

BME-30

Please note: The BME-30 is NRS compliant but NOT NRS certified therefore should be used off-grid (Feed-in to Grid mode is disabled and should remain disabled)

Installation

This document is a guide on installation of high voltage BME-30 hybrid inverter.

Hardware required:

- BME-30 inverter.
- BMS unit for Powercube H2 batteries available on the portal: PYL-PC-SC1000-100.
- Pylontech Power-cube H2 batteries available on the Segen Portal: PYL-PC-H2-BAT
The high voltage batteries recommend setup is 8 Power-cube batteries in series with a nominal voltage of 384V.
Capacity can be expandable to 307.2kWh by adding extra racks of the same number of batteries®, with an additional BMS unit along with an M-BMS unit to facilitate RS485 communication between both BMS units.
- 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

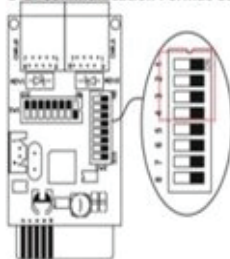
NB: 1 indicates on (or up) 0 indicates off (down).

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 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)
	ON ON	19200bps
Parity check	# 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 2: Switch 2 dip switch settings



Figure 3: BMS card dip switches

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 control module and the other to the inverter RS485.



Figure 4: RS485 ports

Commissioning

1. Battery

- Use battery to start up inverter in order to confirm battery communication first before switching on PV. Please use a thin object (like a small screwdriver) to press cold start button for 3 seconds to start up inverter.(see figure 5)
- Follow the sequence below for battery startup: 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 BMS 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.

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 LCD should be on by now (Inverter on standby).

4. To connect inverter to loads, the LCD interface can be used or solar Power software.

Battery charge current and discharge current are automatically adjusted upon successful BMS communication, however user can adjust settings on either solar power or the inverter interface settings.

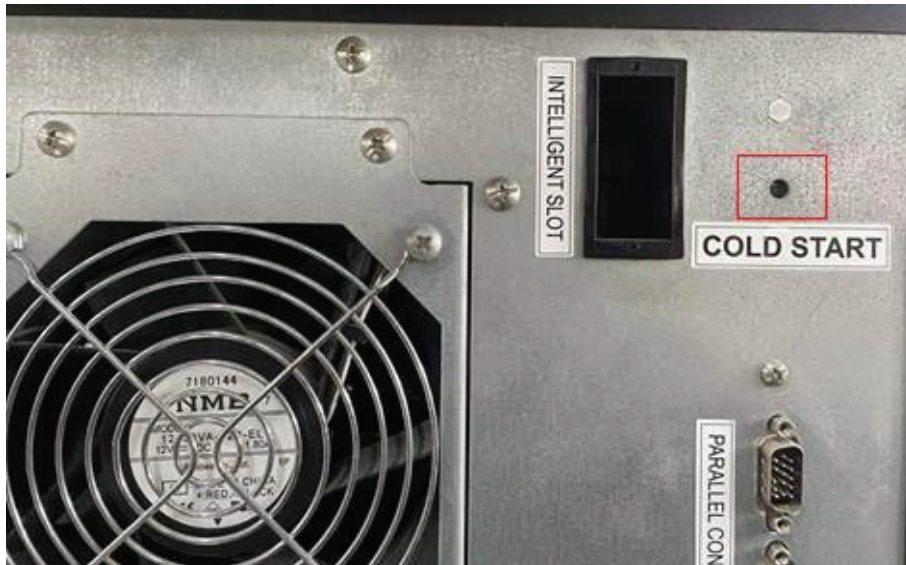


Figure 5: Cold start button

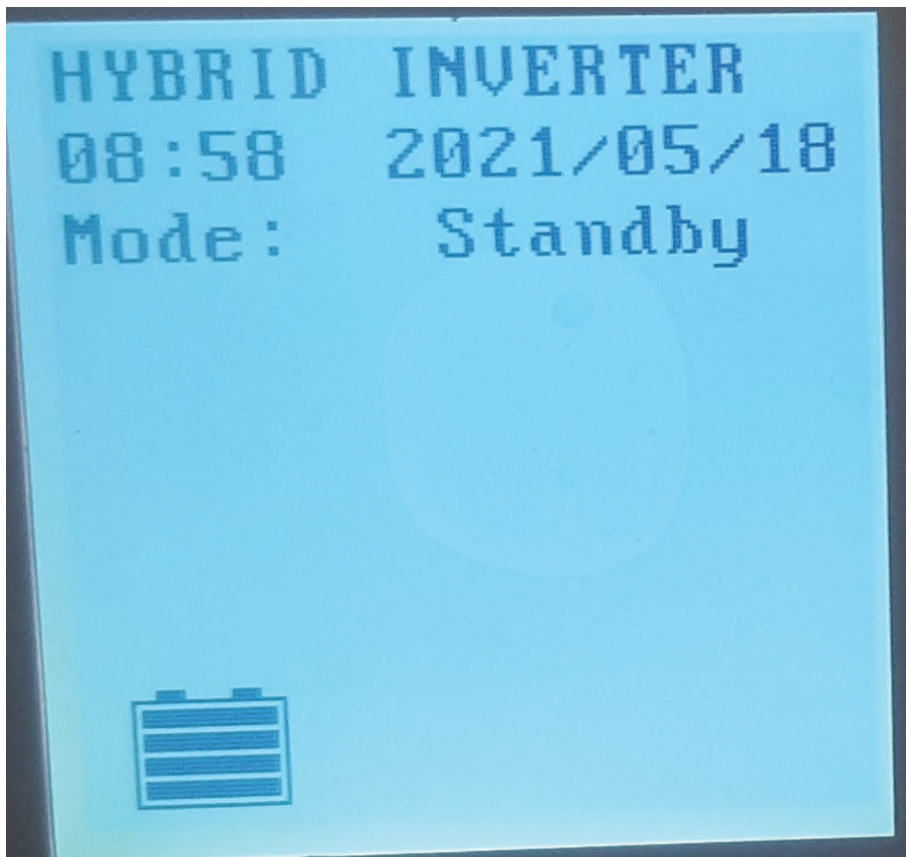


Figure 6: RS485 ports

Setup

The inverter can be setup on the inverter interface or Solar power monitoring software.

Interface setup

1. To connect to load, Press enter for less than 3 seconds, open control and select yes to connect to load.

If control is indicated as on, select no if prompted to switch off.

1. To access settings, press enter to open menu and move to advanced settings.
2. The password to enter advanced settings is 0000.
(press down to move on to the next digit and press enter twice on the last).
PV, Battery, AC, Power management settings are done here like OV voltage range, AC output time duration, maximum battery charge current and operation mode.
Includes the following modes:
OffgridI,II ,III.
Grid-tie with backup I, II, III.
The different modes vary in charge source priority, load supply source priority and battery charge disable/enable and so on.

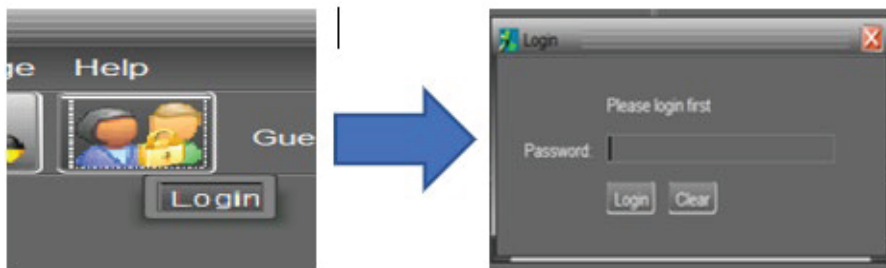
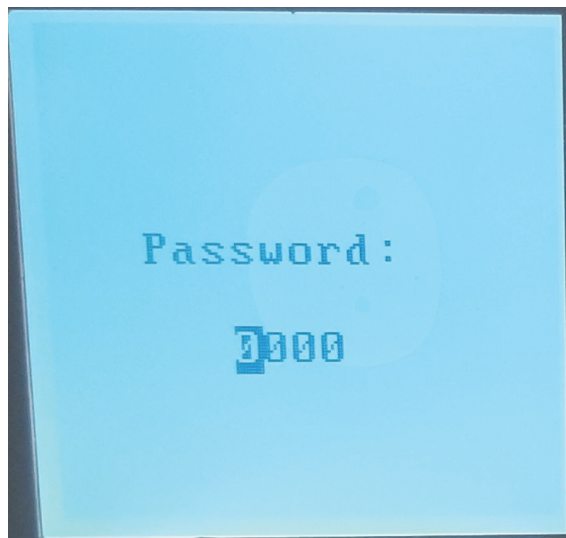
Solar Power

Includes all modes hybridoff-grid mode

1. Connect USB cable that comes with inverter to USB slot on inverter and computer that has solar power software.
2. Once inverter is powered on and still in standby mode click on login and enter the password: administrator on prompt.
3. Open device controlmypowermanagement, here you can set modes in which you want the inverter work .
4. Click apply to activate selected mode and connect to loads.

Solar Power includes the following modes:

- OffgridI,II ,III.
- Grid-tie with backup I, II, III.
- The different modes vary in charge source priority,load supply source priority, battery charge enable/disable and so on



MyPower Management

Mode: Grid-tie with backup Grid-Tie Off-Grid Standard: VDE0126 Nominal output voltage: 230 Nominal output frequency: 60

Setting

PV energy supply priority setting

Grid-Tie with Backup (I)

Priority: 1st: Load -> 2nd: Battery -> 3rd: Grid

Configuration details

Charging source: None Allow to charge battery

Not allow to charge battery Allow AC to charge battery

Load supply source (PV is available): PV-Grid-Battery Allow to feed-in to the Grid

Priority: 1st: PV -> 2nd: Grid -> 3rd: Battery Allow battery to discharge when PV is available

Load supply source (PV is unavailable): Grid-Battery Allow battery to discharge when PV is unavailable

Priority: 1st: Grid -> 2nd: Battery Allow battery to feed-in to the Grid when PV is available

When battery voltage < 0 V, the AC starts charging Allow battery to feed-in to the Grid when PV is unavailable

Allow AC-charging duration: 02:00 ~ 02:00 00:00 - 00:00 Means AC charger operates all-time

02:00 ~ 02:00 00:00 - 00:00 Means AC charger operates all-time

Apply Close