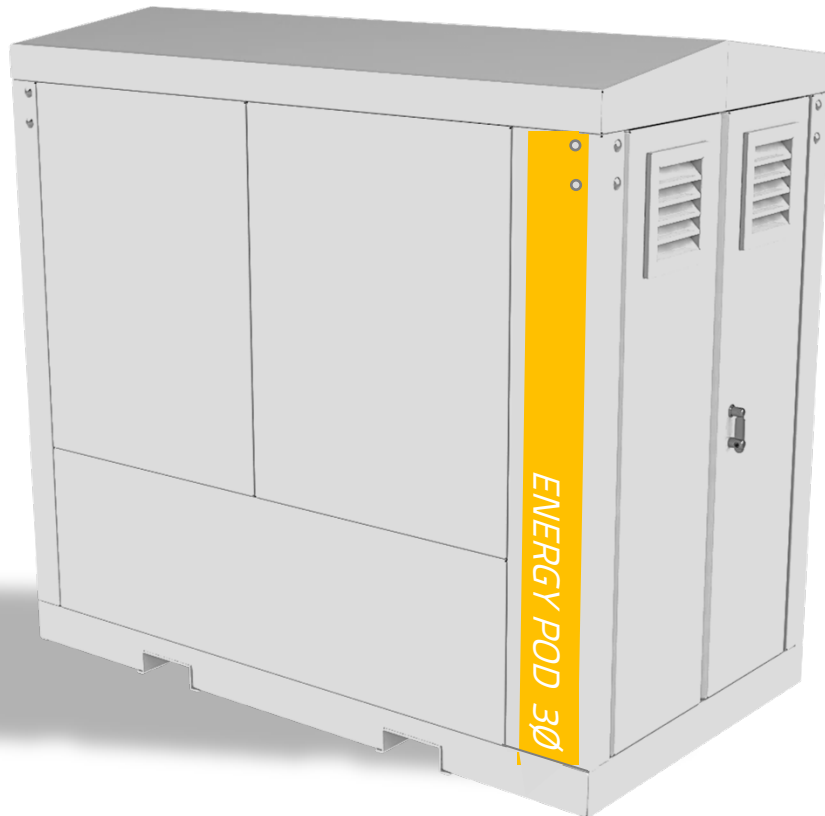


ENERGYDOCK

THREE PHASE ENERGY POD RANGE



ENERGY POD 3Ø 15kVA 15kWh / 30kWh / 45kWh

TECHNICAL DATA SHEET WITH INSTALLATION INSTRUCTIONS

ENERGYDOCK ENERGY POD 3Ø 15kVA - 15kWh / 30kWh / 45kWh	
Product Code	EP3-15/15/M. EP3-15/30/M and EP3-15/45/M
Dimensions	1600mm (l) x 900mm (w) x 1500mm (h)



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To be completed by Distributor:

<u>IMPORTANT INFORMATION</u>	
• PROJECT No.	
• CLIENT NAME	
• CLIENT CONTACT DETAILS	
• DATE PURCHASED/INSTALLED	
• SERIAL NUMBER of UNIT	
• SSS REPRESENTATIVE	

Please retain this booklet as proof of your warranty.

If this section has not been completed by a registered SSS Distributor, please submit a copy of the above to the following email address to ensure that your warranty will be valid:

info@specializedsolarsystems.co.za

The complete Energydock Energy Pod Range consists of the following products:

SINGLE PHASE	THREE PHASE
1Ø 15 kVA – 15 kWh / 30 kWh / 45 kWh	3Ø 15 kVA – 15 kWh / 30 kWh / 45 kWh
1Ø 20 kVA – 30 kWh / 45 kWh	3Ø 24 kVA – 30 kWh / 45 kWh
1Ø 30 kVA – 30 kWh / 45 kWh	3Ø 30 kVA – 30 kWh / 45 kWh
	3Ø 45 kVA – 45 kWh / 60 kWh



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ENERGYDOCK

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3Ø ENERGY POD

INTRODUCTION

In times of increasing pressure on the reduction of carbon emissions and increasing energy prices with penalties due to coal fired energy plants, the sales price of conventional energy has significantly exceeded the price of supplying renewable energy. The Energydock Energy Pod is a modular decentralized method of energy generation using the very latest technology in energy generation, energy storage methods and energy management control.

The Energy Pod is quick to deploy and does not need large areas for establishment. It is a versatile but complex product that will allow various functions of implementation; be it to increase a mini-substation's capacity, perform as a simple UPS unit or as an integrated off-grid decentralized utility energy system. This modular configuration will allow you to develop your energy needs, as required.

The Energy Pod can be equipped with a main central meter together with up to ten additional sub-meters, supplying customers with energy through standard means of distribution and controlling this distribution according to the energy supply and service promised to the customer. The Energy Pod has the functionality to "understand" individual supply agreements with different customers and manage these customers' expectations in relation to the contracted energy requirements. It is able to adapt its performance relative to the potential energy supplied in real time to ensure uninterrupted power supply



This micro-grid method has been developed, designed and manufactured in South Africa, and is known as the Energy Pod method. This could consist of individual Energy Pods working separately or several units connected to each other. The Energy Pod receives its generation from various sources, be it from solar generation in close vicinity, higher voltage DC distribution line, generators or limited grid supply. It will utilize all forms of incoming energy and store it or distribute it accordingly to the priorities set in its programming.

Housed in a high-end steel enclosure, this unit has been designed with security of equipment in mind. Two levels of access into the unit are supplied, one for local technicians while the side covers can only be accessed by specialist engineers. The configuration of the equipment is pre-determined and has been formatted as a three phase supply.



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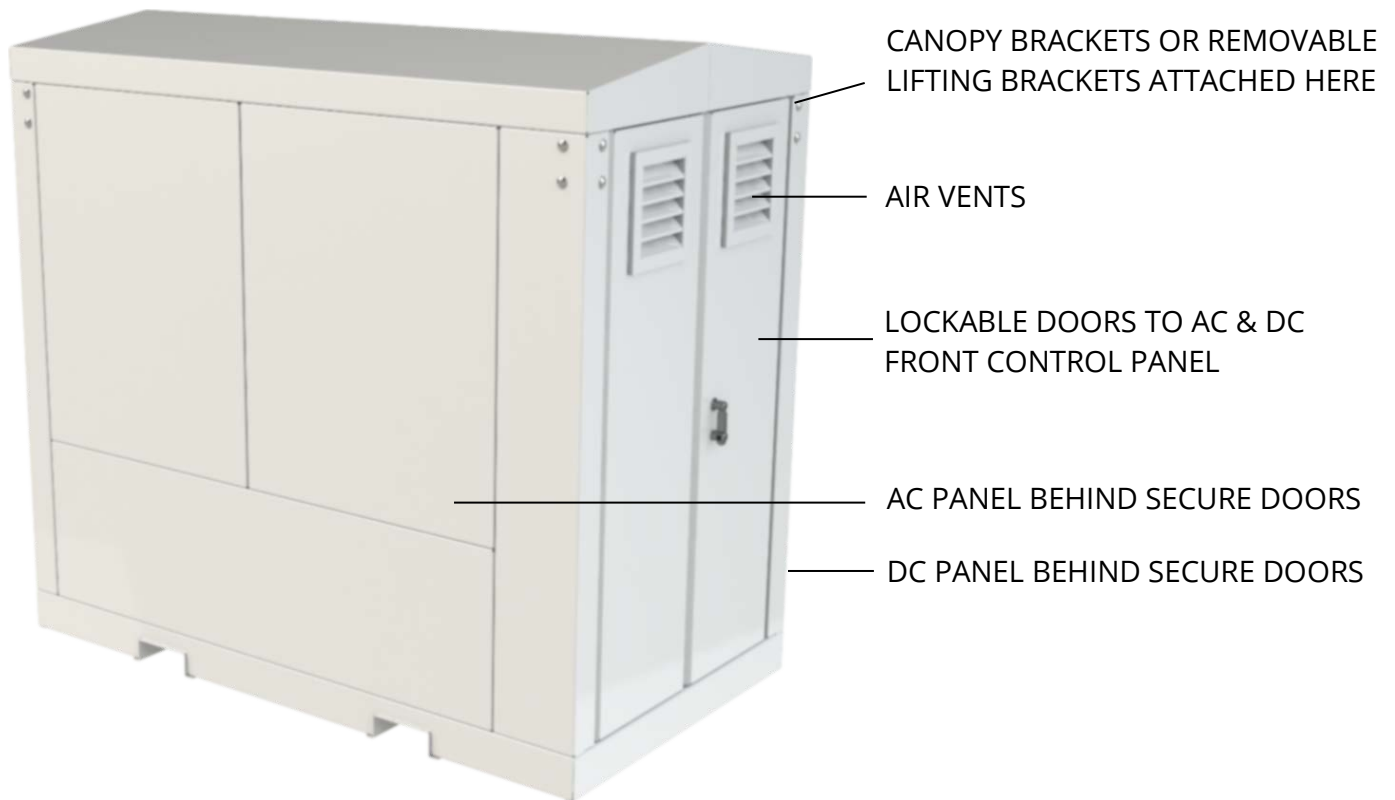
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THREE PHASE ENERGY POD

COMPONENTS



2. TECHNICAL SPECIFICATIONS

- *Delta configuration is not supported. Our products have been designed for a STAR (Y) type three phase system.*
- *No Residual Current Device (RCD) is installed in the unit. RCD should be installed at the load distribution box.*

2.1 General Specifications

3Ø ENERGY POD GENERAL SPECIFICATIONS	
Dimensions	1600mm (l) x 900mm (w) x 1500mm (h)
Enclosure	Ground mountable metal enclosure
Installation	Indoor or outdoor



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2.2 Inverter Specifications

VICTRON MULTIPLUS II 48/5000/70-50 INVERTER/CHARGER (x3)	
PowerControl / PowerAssist	Yes
Transfer switch	50 A per phase
Maximum AC input current	50 A per phase
INVERTER	
DC input voltage range	48 V – 38 – 66 V
Output	Output voltage: 230 VAC $\pm$ 2% / Frequency: 50 HZ $\pm$ 0.1%
Continuous output power at 25 °C	5 000 VA / 4 000 W per phase
Continuous output power at 40 °/60 °C	3 700 W / 3 000 W per phase
Max apparent feed-in power	5000 VA per phase
Peak power	9 000 W per phase
Maximum efficiency	96%
Zero load power	18 W
Zero load power in AES mode	12 W
Zero load power in search mode	2 W
CHARGER	
AC input	Input voltage range: 187 – 256 VAC / Input frequency: 45–65Hz
Charge voltage absorption	56.2 VDC
Charge voltage float	56.0 VDC
Storage mode	52.8 VDC
Max battery charge current	70 A per phase
Battery temperature sensor	Yes
GENERAL	
Auxillary output	32 A
Programmable relay	Yes
Protection	a) output short circuit b) overload c) battery voltage too high d) battery voltage too low e) temperature too high f) 230 VAC on inverter output g) input voltage ripple too high
VE.Bus communication Port	For parallel and three phase operation, remote monitoring & system integration
General purpose com. Port	2 x
Remote on-off	Yes
Operating temperature	-40 to +65°C <i>fan assisted cooling</i> / Humidity max 95%
STANDARDS	
Safety	EN-IEC 60335-1, EN-IEC 60335-2-29, EN-IEC 62109-1
Emission, Immunity	EN 55014-1, EN 55014-2, EN-IEC 61000-3-2, IEC 61000-6-1, IEC 61000-6-2, IEC 61000-6-3, EN-IEC61000-3-3



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2.3 Remote Management Specifications

REMOTE MANAGEMENT & PROGRAMMING - VICTRON CERBO GX DEVICE	
Supply voltage	8 - 70 VDC
VE.Direct ports (always isolated)	3
VE.Bus (always isolated)	2 paralleled RJ45 sockets
VE.Can	Yes - non isolated
Operating temperature range	-20 to +50°C
Cable length	2m
GX TOUCH 50 / GX TOUCH 70	
Display Resolution	GX Touch 50: 800 x 480, GX Touch 70: 1024 x 600



2.4 Battery Specifications

When selecting the 15kVA/15kWh Energy Pod, the following specifications will be applicable:

STORAGEDOCK LV-COM 15/300 LiFePO ₄ BATTERY	
Battery type	Grade A LiFePO ₄ Prismatic cells
Nominal voltage	51.2 VDC - 48V - 56 VDC
Nominal capacity	295 Ah
Total energy capacity	15 kWh
Energy capacity at 80% DoD	12 kWh
Maximum & constant current	300 A
Maximum charge current	305 A for 5 seconds
Maximum discharge current	355 A for 5 seconds / 305 A for 30 seconds
Max recommended inverter size	15 kVA
Cycle life	6000 cycles @ 0.5C and 80% depth of discharge



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When selecting the 15kVA/30kWh Energy Pod, the following specifications will be applicable:

STORAGEDOCK LV-COM 30/600 LiFePO₄ BATTERY	
Battery type	Grade A LiFePO ₄ Prismatic cells
Nominal voltage	51.2 VDC - 48V - 56 VDC
Nominal capacity	590 Ah
Total energy capacity	30 kWh
Energy capacity at 80% DoD	24 kWh
Maximum & constant current	600 A
Maximum charge current	610 A for 5 seconds
Maximum discharge current	710 A for 5 seconds / 610 A for 30 seconds
Max recommended inverter size	30 kVA
Cycle life	6000 cycles @ 0.5C and 80% depth of discharge

When selecting the 15kVA/45kWh Energy Pod, the following specifications will be applicable:

STORAGEDOCK LV-COM 45/900 LiFePO₄ BATTERY	
Battery type	Grade A LiFePO ₄ Prismatic cells
Nominal voltage	51.2 VDC - 48V - 56 VDC
Nominal capacity	885 Ah
Total energy capacity	45 kWh
Energy capacity at 80% DoD	36 kWh
Maximum & constant current	900 A
Maximum charge current	915 A for 5 seconds
Maximum discharge current	1065 A for 5 seconds / 915 A for 30 seconds
Max recommended inverter size	45 kVA
Cycle life	6000 cycles @ 0.5C and 80% depth of discharge

- A minimum of 1 x 15 kWh batteries can be connected
- A maximum of 3 x 15 kWh batteries can be connected



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3. ADDITIONAL COMPONENTS AND FEATURES

- Security alarm for unauthorized entry into Energy Pod.
- Temperature control with automatic cooling functions.
- Easy AC IN and AC OUT connections.
- All required DC cabling, fusing and surge protection.
- AC circuit breaker for incoming and outgoing AC.
- Emergency shutdown on AC and DC.
- Three phase bypass switch AC1/AC2.
- Full colour display touch screen.
- Internal modem for wifi communication (excluding SIM card).
- A Certificate of Compliance will be supplied for the internal installations within the Energy Pod.

4. APPROVED EQUIPMENT USED WITHIN ENERGY PODS

- Victron inverters.
- Storagedock LV lithium iron phosphate (LiFePO₄) batteries.
- Victron Cerbo GX device for remote monitoring and management.
- Victron MPPT's in the event a PV add-on kit is selected.

5. EQUIPMENT WARRANTIES

The following warranties are applicable to the major components within the Energy Pod:

- Victron inverters - 10 year warranty.
- Victron Cerbo device - 10 year warranty.
- Battery - 10 year warranty or 6000 cycles at 80% depth of discharge, whichever occurs first.

6. ADDING PV GENERATION TO THE ENERGY POD

In the event solar generation will be required, an optional PV add-on kit is available. The PV add-on kit ensures that the Energy Pod is prepared for the PV connection, and will consist of:

- The applicable amount of PV panels for each kit.
- The required Victron MPPT.
- VE.Direct communication cable.
- DC protection box.
- All internal power cables.
- Installation, programming and system commissioning will also be included.



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The solar panel mounting framework with external cable allocation are not included in the PV add-on kit. These must be purchased separately.

The additional equipment of the add-on kit will be pre-installed and (pre-programmed) inside the Energy Pod before it leaves the factory. PV add-on kits are available for the following PV array sizes *(please note that the kWp may vary slightly, depending on solar panel availability)*:

- 4.95 kWp
- 9.90 kWp
- 14.85 kWp
- 19.80 kWp

7. FUNCTIONALITY

The Energy Pod has the ability to function in several different formats:

- **Off-grid Energy Pod.**

When the Energy Pod is connected to a client's generator only (and not to the grid) it functions as an off-grid energy system. Extra energy generated by the solar panels during the daytime will be stored in lithium iron phosphate (LiFePO₄) batteries for use during the night-time. With a shortfall of contracted energy, the unit has the ability to automatically start the generator, supplement the shortfall and again switch off the generator.

- **Hybrid Energy Pod with Grid-Tie Functionality**

If the Energy Pod is connected to a main grid supply, the Energy Pod becomes a hybrid energy system. The hybrid system allows you to add renewable energy to your network, creating a priority for this supply. It could therefore function in a grid-tie format with the support of the grid. The NERSA approved inverters could supply the complete day-time load and, in the absence of this load, could be programmed to feed energy back to the grid, if so allowed. The power assist function will allow the Energy Pod to be connected to a limited grid capacity point and use this available power while adding its additional capacity to this limited point of supply. By selecting the schedule charging function of the Energy Pod, one could program the unit to accept the grid supply at a specific time, charging the batteries during off-peak periods and discharging these batteries during peak or standard periods. In the hybrid functionality, all these programs could be managed and controlled remotely.

- **Unlimited Power Supply (UPS) Functionality**

The Energy Pod can function to support loads (critical or non-critical) in times of grid failure. Each Energy Pod can be configured to be single or three phase. Selecting the correct Energy Pod for your load will deliver the required Amps proportional to the size of the Energy Pod. The Energy Pod comes standard with two load outputs, AC1 and AC2. AC1 will always stay on irrespective of the grid condition, and AC2 will stay on when the grid or generator is active. This function will allow you to have greater capacity when the grid is connected but when

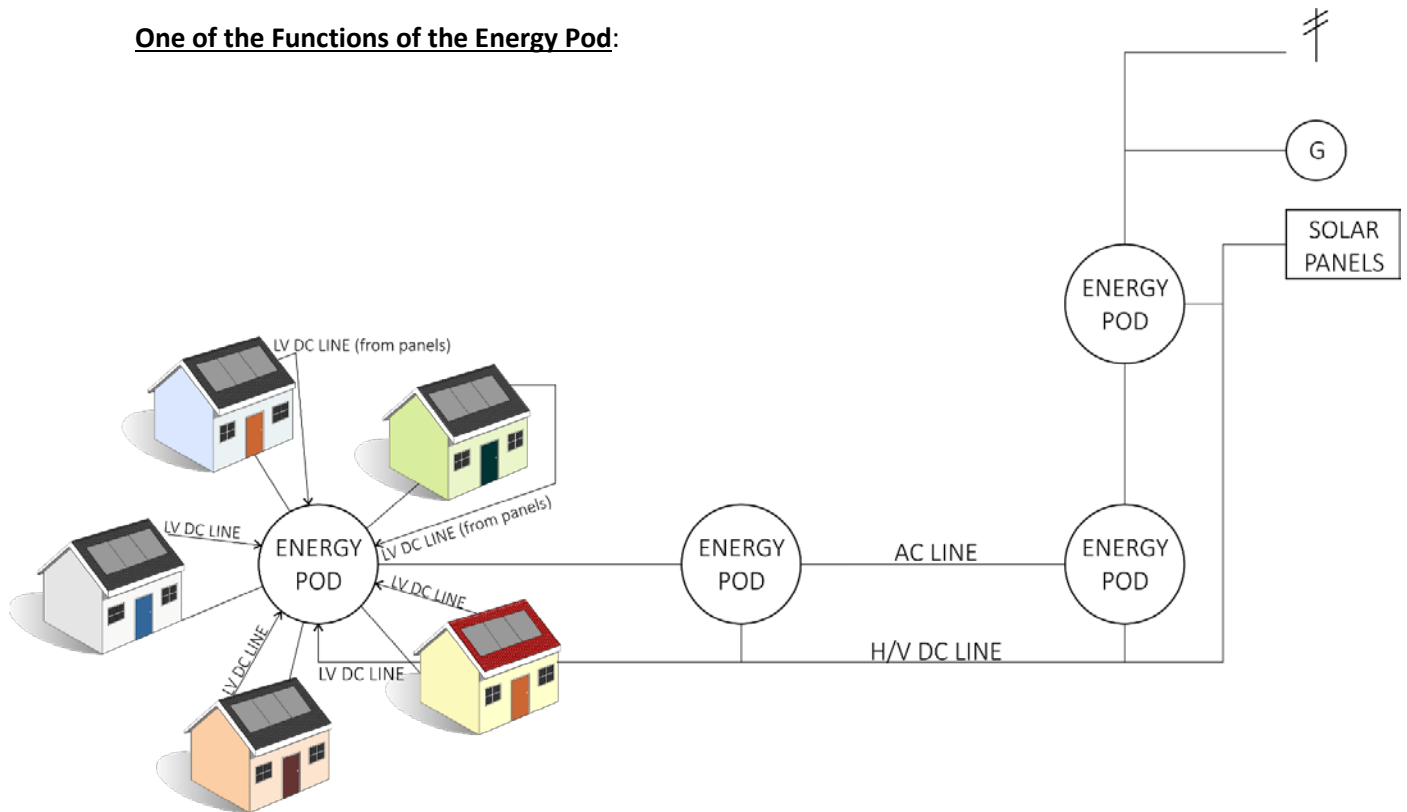


the grid fails, only the capacity of the Energy Pod will be available (AC1). AC1 should not exceed the capacity of the inverter size.

- **Decentralised Distribution of Energy**

Please see the schematic below indicating the basic principle on how the Energy Pod is the first step to a decentralised utility.

One of the Functions of the Energy Pod:



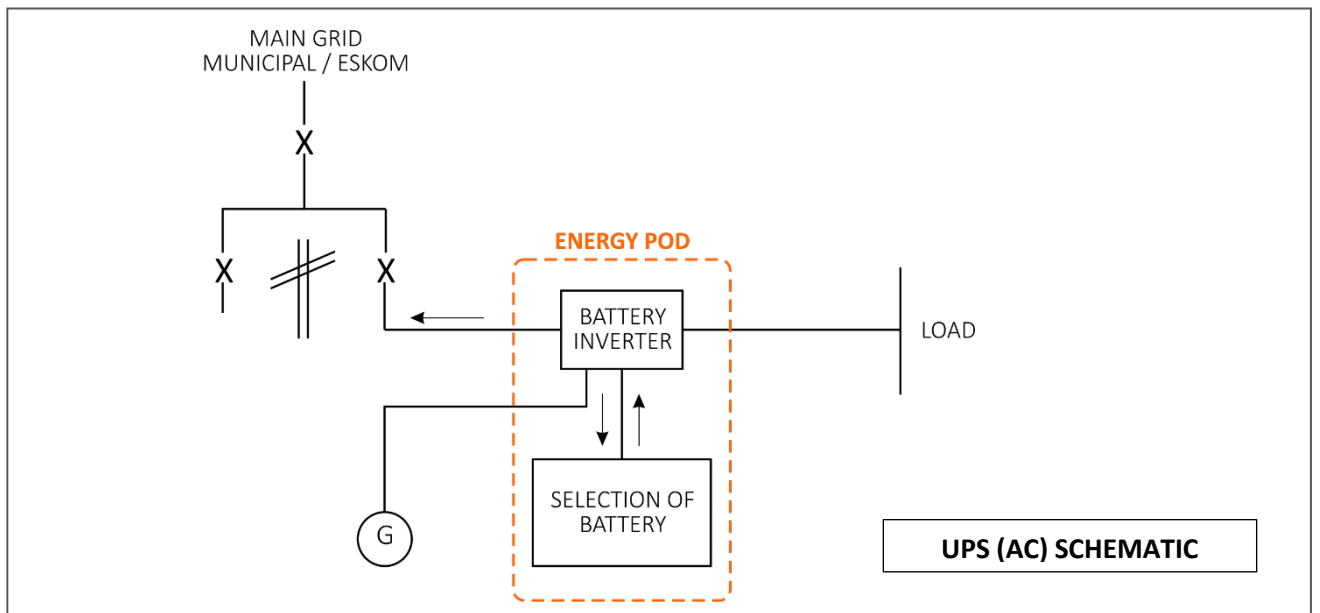
As each project and site have different criteria, detailed discussions would need to be held to achieve a customised design applicable to a specific site.

8. BASIC SCHEMATIC DIFFERENCES BETWEEN DIFFERENT CONFIGURATIONS

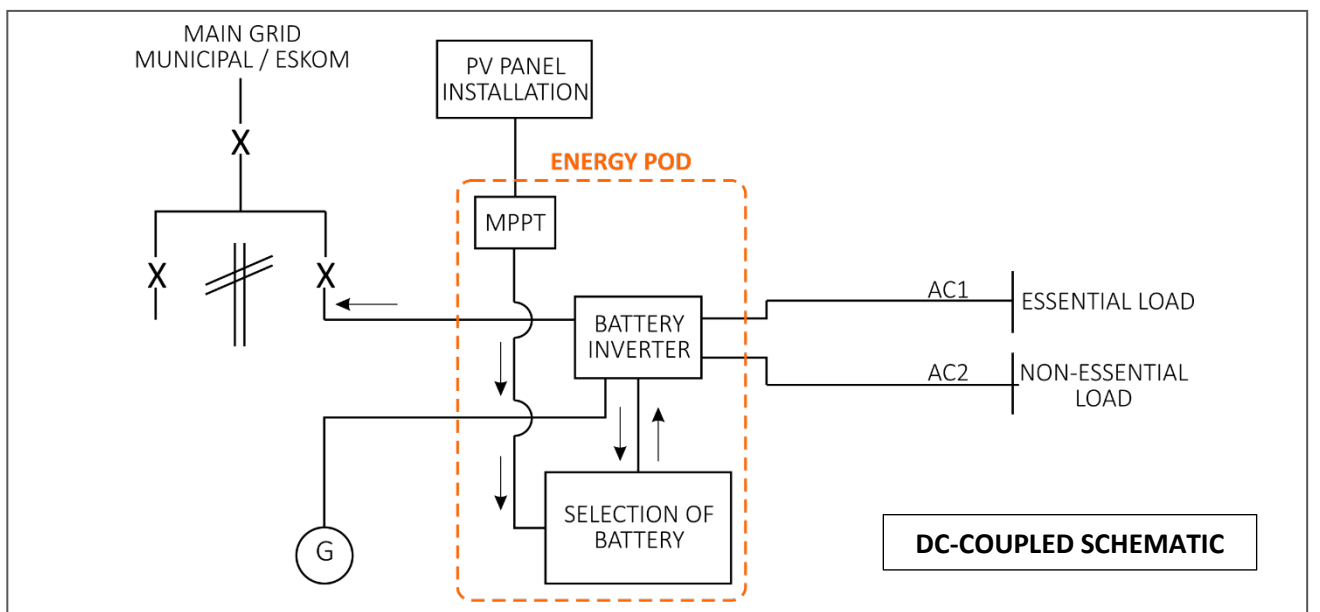
Please see the schematics of the differences between the UPS configuration, DC-coupled configuration and the AC/DC-coupled configuration:



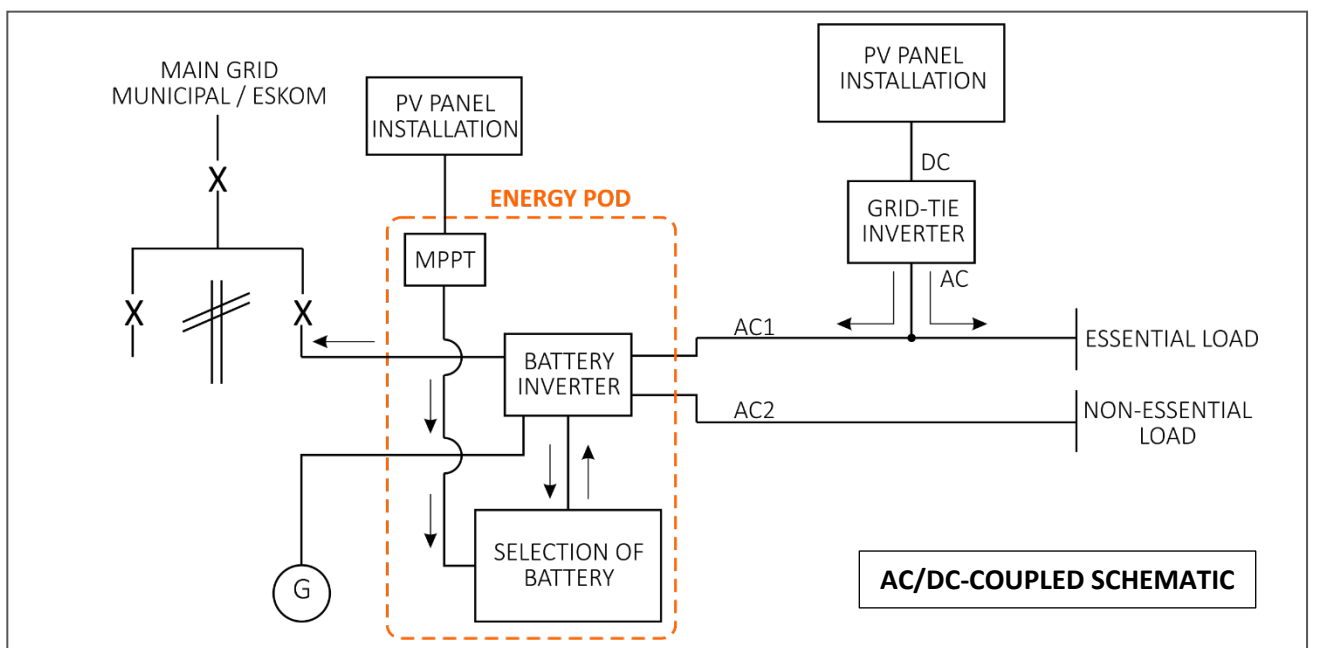
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2.



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9. SYSTEM INITIALISATION AND START-UP PROCEDURE

Ideally, the Energy Pod should be positioned on a cement plinth, extruding from ground level and under roof cover. Once the Energy Pod has been placed into position, the system initialisation and start-up procedure can begin.

When connecting the cable from the AC supply (grid or generator) and connecting the cable out of the Energy Pod, it would be advisable to have the correct cable glands secured into the cover plate, as indicated below the front cover of the front control panel.

Before the start-up procedure and after all cables have been connected, one will need to:

- Check that all cables are in the correct positions, ie input cable and AC1 and AC2 output cables. Please ensure that the cables are torqued correctly.
- Do not switch the AC input on yet as by default, all circuit breakers in the Energy Pod are in the “OFF” position and the emergency stop devices are activated.

9.1 Battery Activation Process

Once the AC supply cable and the output cables (AC1 – Essential Loads and AC2 – Non-Essential Loads) connections have been correctly completed, the activation of the Energy Pod can begin. First, the ***DC side of the Energy Pod*** must be activated. On the left-hand side (the DC side) of the front control panel the following steps must be implemented:

- The emergency stop device must be deactivated.
- The main 800 A motorised circuit breaker must be set in the “ON” position.
- The little black on/off switch below the BMS screen needs to be switched on by holding the switch in the “ON” position for two seconds.
- The BMS screen will now turn on (you will hear the contactor closing).
- On the main screen of the BMS check the following:
 - “STATUS” should be normal.
 - Check the main State of Charge (SOC) of the batteries
 - Check the voltage.
- If the above are indicating correctly, then on the bottom right-hand corner of the main screen of the BMS press the “SETTINGS” symbol. The second page of the BMS screen will now be active. On this screen check the following:
 - That the number of modules in the Energy Pod is indicated in green. This should indicate one, two or three modules (15 kWh unit, 30 kWh unit and 45 kWh unit respectively), depending on the battery size.
 - If the above is correct, press on the individual modules indicated on the screen and the details of each module will be displayed.
 - Verify that all the information for the individual modules is indicating no faults.



- At this stage you will notice on screen 2 of the BMS that the four disconnect circuits are all green. These are for: 1. Discharge / 2. Charge / 3. Resistive / 4. Main circuit breaker.
- The Cerbo GX device will now also be on and will indicate the status of the Energy Pod. Only the battery will be indicated accurately on the GX device at this stage.

The DC side of the Energy Pod is now activated.

9.2 AC Activation Process

Let's start with the AC activation. On the right-hand side (the AC side) of the front control panel the following steps must be followed:

- Ensure that all circuit breakers are in the "OFF" position.
- Near the middle of the top of the AC control panel is the "INVERTER ON/OFF KEY". Insert the Energy Pod key into the key slot. Check that the emergency stop is deactivated and turn the key into the "ON" position.
- The inverter will now switch on and supply power to the front control panel.
- Switch the "AC1 OUT" main circuit breaker "ON" and the indicator lights next to the circuit breaker will light up. The voltage and amperage indicator lights at the top right-hand corner of the AC control panel will also light up.
- To activate this AC1 output to the load, the main changeover switch (marked INVERTER, OFF and MAINS) should now be switched to "INVERTER". This changeover switch will only be used when AC IN needs to be bypassed to AC1 output, in the event of a failure or maintenance requirement.
- Once the changeover switch is switched to "INVERTER", the power will now be supplied to the load and can be tested via the connectors at the bottom of the front control panel.
- The Energy Pod will now supply power from the batteries and solar (if solar has been connected). The solar PV application process will be defined later in this booklet. The Energy Pod could now function in "off-grid" mode.

9.3 Before Connecting the Energy Pod to the Grid or Generator

Prior connecting the Energy Pod to the grid, certain criteria as stipulated by the NRS 097 regulations will have to be considered and adhered to. Therefore, consideration must be given to the points below:

- The inverters installed in the Energy Pod are NERSA approved. The default programming has, however, not taken NRS 097 into account and will need to have a grid code setting done prior to installation. Please ask your service provider to assist you with this.
- Once the grid code setting has been done, the incoming neutral and the AC1 and AC2 neutrals should be separated. This ensures that each circuit has a grid disconnect device for if and when the grid fails.
- If these neutrals are not separated, the inverter will go into an "ERROR" mode.



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When installing the Energy Pod to the grid, please note the following:

- Confirm that the incoming earthing is correct: TN-C, TN-C-S or T-T earthing.
- The Energy Pod contains an internal ground relay. This relay can automatically make or break the connection between earth and neutral. For more information, please contact your service provider.
- The Energy Pod has a common internal earth/grounding point. Ensure that a well-tested certified earth is connected to this point.
- For more detail on wiring and earthing, please see the Victron Energy “Wiring Unlimited” booklet.

9.4 Connecting AC Supply to the Energy Pod

Please keep in mind that AC2 will only come on when the grid is connected.

For more detail on this function, please ask your service provider.

If a generator is to be used, it would be advisable to have some of the programming of the system changed. The Energy Pod has the ability to start the generator automatically under various conditions. For this programming, please see paragraph 9.6 on page 15.

Now let's connect the AC input.

- Switch the “MAIN AC IN” circuit breaker to the “ON” position. The AC IN indicator light will turn on and the voltage and amperage indicator lights will also turn on.
- Now switch the “INVERTER AC1 IN” circuit breaker “ON” to allow the inverter to receive the AC IN power.
- Grid power is now being supplied to the inverter. The inverter will test this power and if it finds it to be correct, it will accept this power.
- Once the power has been accepted, AC2 will be ready to turn on.

AC2 Output

- Set the AC2 changeover switch to “INVERTER”.
- Switch on the “AC2 OUT” circuit breaker. The indicator light at the AC2 OUT will now light up.
- Please note that the voltage and Amperage indicator lights record AC1 only.
- AC 1 and AC2 will now be indicated on the touch screen of the Cerbo GX device in the load.
- AC2 output will now have power for the loads. If the grid fails, AC2 OUT will also automatically disconnect.



9.5 Quick Bypass Test

- Switch off AC1 OUT and AC2 OUT main circuit breakers. The loads will now be disconnected.
- Switch AC1 OUTPUT CHANGEOVER to “MAINS” and AC2 OUTPUT CHANGEOVER to “MAINS”.
- Switch the AC1 and AC2 OUTPUT circuit breakers back on and power will now be supplied from the grid to both AC1 and AC2.
- Once the test is complete, set AC1 and AC2 back to “INVERTER” mode.

9.6 Programming

The Energy Pod has full remote programming functionality. With the Energy Pod now switched on, wifi supplied by the Pod will be available. The password required to connect to the wifi is:

“The Product Code of the Unit Purchased”

To check if the wifi is connected to the Cerbo GX device, follow the following steps:

1. On the touch screen of the GX device go to “SETTINGS”.
2. In “SETTINGS” select “WIFI”.
3. Click on the wifi and see if it is connected.
4. If it is not connected push “CONNECT” and enter the password supplied.

Once the unit is connected there will be a team of programmers ready to assist you to program this Energy Pod to your specific needs.

Please arrange an appointment with your service provider at the time of your installation process.

Energy Pod should only be installed by a certified and registered installer.

10. SOLAR PV APPLICATION PROCEDURE

When purchasing the Energy Pod and selecting the required solar panel equipment, the Energy Pod will be supplied with a single line diagram indicating how the solar panels should be configured, what cables should be used and how the connection to the Energy Pod should be made.

For more detail on this, we would like to highlight the following procedures.

In the front control panel cover you will see empty trunking and the DC protection box.

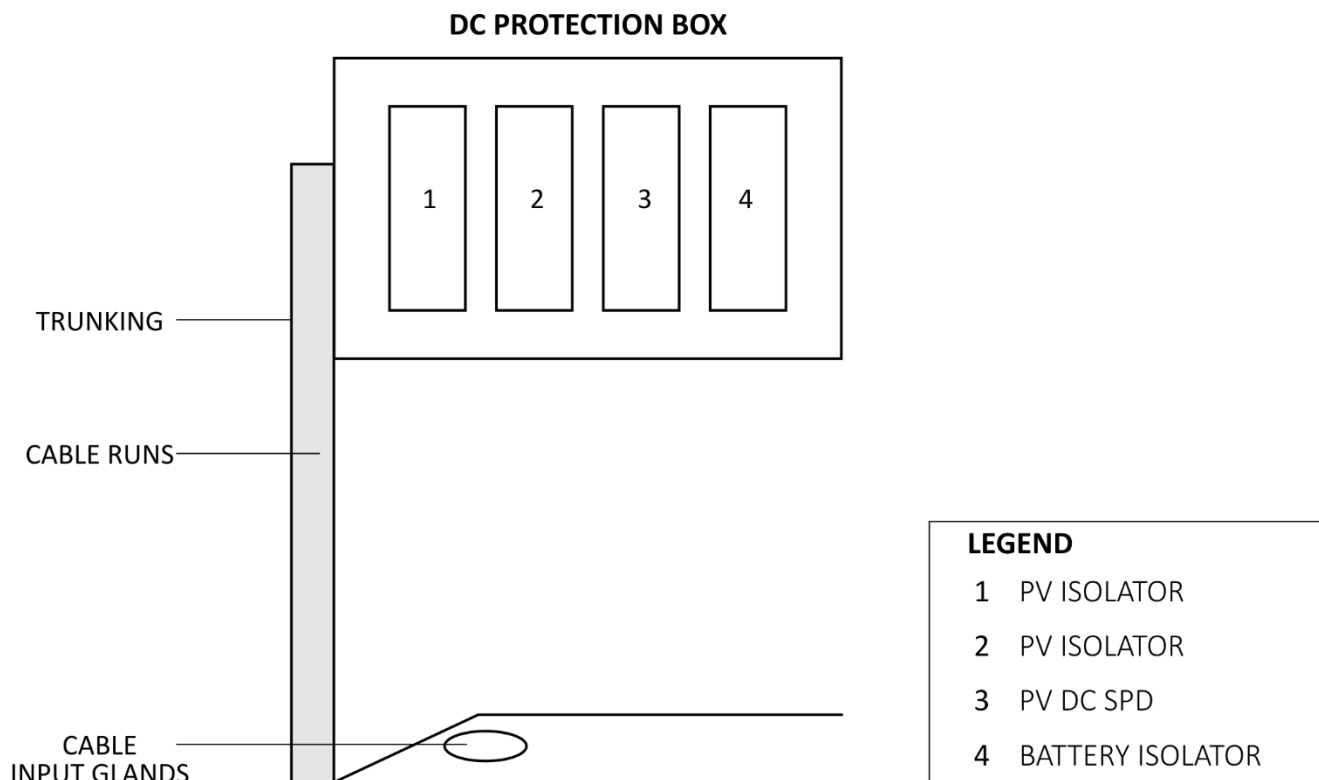


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The PV isolators (1 and 2) have been connected to the internal MPPT. The battery isolator has also been internally connected. The battery and PV isolators, as a default setting, should be in the “OFF” position. The Energy Pod activation process should be completed as defined earlier in this document.

- Now connect the PV cable to the top of the PV isolators. This is DC power so please ensure that the connections have been torqued correctly.
- Keeping the PV isolator in the “OFF” position, switch on the battery isolator.
- Check on the Cerbo GX device screen that the MPPT is present. The MPPT charge algorithm would have been programmed in the factory.
- Now put the PV isolator in the “ON” position and you will notice on the GX device screen that the panels’ voltage, Ampere and production either to the loads or to the battery.
- Again, for selected programming, ensure that your service provider is available to confirm that the functioning of the Energy Pod is as per your requirements.



11. SAFETY INSTRUCTIONS

11.1 General Safety Instructions

Please read all documentation supplied with this product first so that you are familiar with the safety indicators and instructions before using this product. This equipment should be used for the designated application only.

WARNING: *Danger and electrical shock*

- This product is used in combination with a permanent energy source (battery). Even if the equipment is switched off, a dangerous electrical voltage can occur at the input or output terminals. Always switch the AC power OFF and disconnect the battery before any maintenance is carried out.
- Never use the product at sites where a gas or a dust explosion could occur. The product is not intended for use by persons (including children) with reduced physical, sensory, or mental capabilities, or with a lack of experience or knowledge.
- An approved service agent must take responsibility of the installation of this product.

11.2 Transport and Storage Safety Instructions

- When transporting or storing the product, ensure that the main supply and the battery leads are disconnected.
- Transport the product in the original packaging only.
- Store all products in a dry environment and preferably at a temperature of 25°C.

WARNING: *Do not lift heavy objects without assistance.*

11.3 Installation Safety Instructions

- For electrical work, always follow the National Wiring Standards and Regulations of South Africa.
- Never replace a protective device with a component of a different kind.
- Before switching the energy system on, first check that the input voltage is correct.
- Ensure that the equipment is used in the correct operating conditions.
- Never operate in wet or dusty conditions
- Ensure that there is sufficient free space for ventilation around the installed equipment.
- Install the product in a heat proof environment.
- Ensure that there are no chemicals, plastic pots or curtains in the immediate vicinity of the installation.
- Always ensure that you follow the correct installation video/manual procedures when attempting to install this unit.



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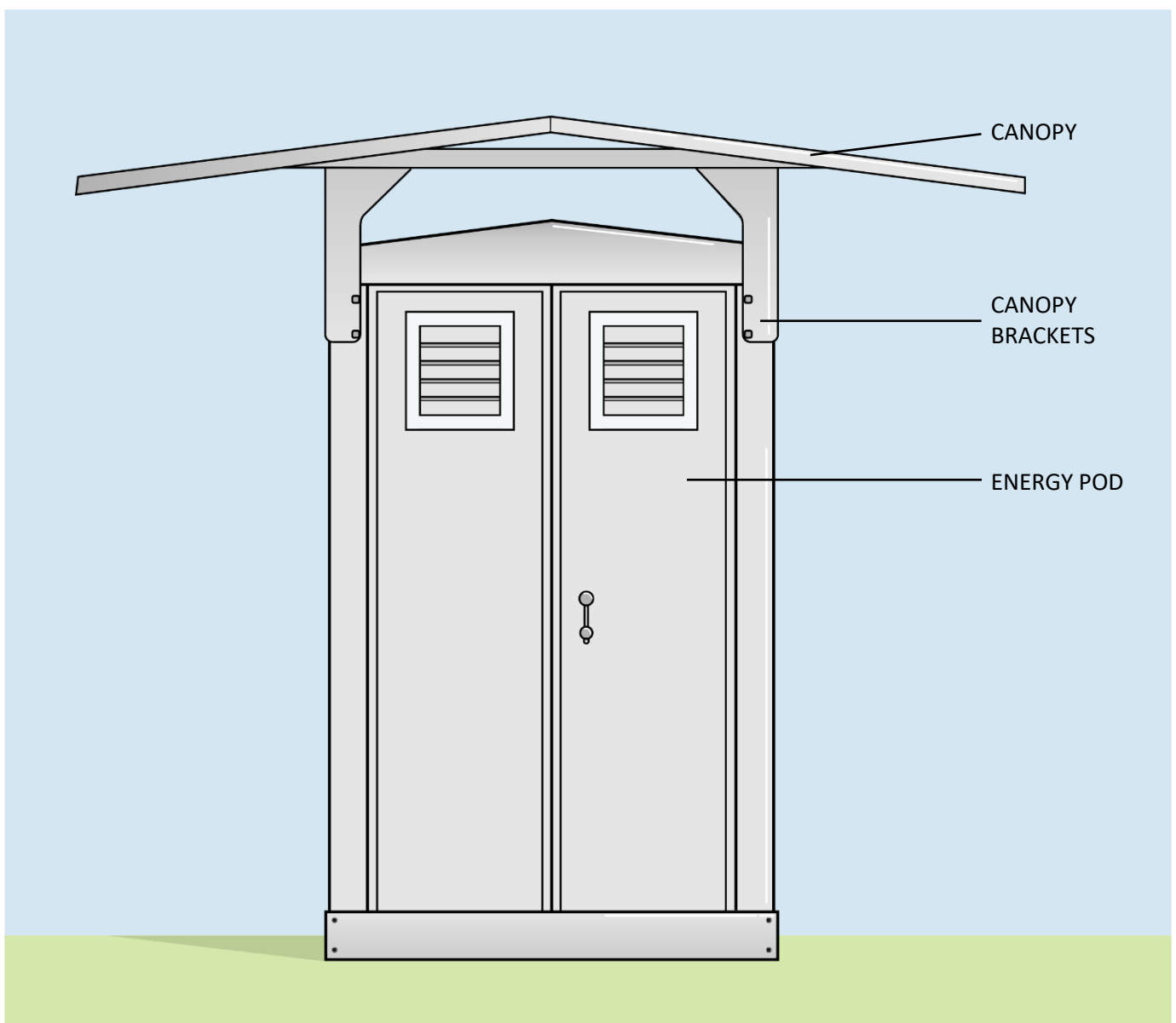
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12. OPTIONAL ENERGY POD CANOPY

If the Energy Pod is not to be installed in a sheltered location, such as adjacent to an existing building, under trees, inside a warehouse or under a covered parking area etc, then it is recommended that a canopy be purchased along with the Energy Pod to provide extra protection against the elements (especially rain).

The four lifting brackets on each of the top corners of the Energy Pod should be removed and then the canopy can be installed over the Energy Pod using the existing bolts and holes of the lifting brackets (please ensure that the lifting brackets are stored in a safe place once they have been removed, just in case the Energy Pod needs to be relocated in the future).

Below is an illustration of the optional Energy Pod canopy.



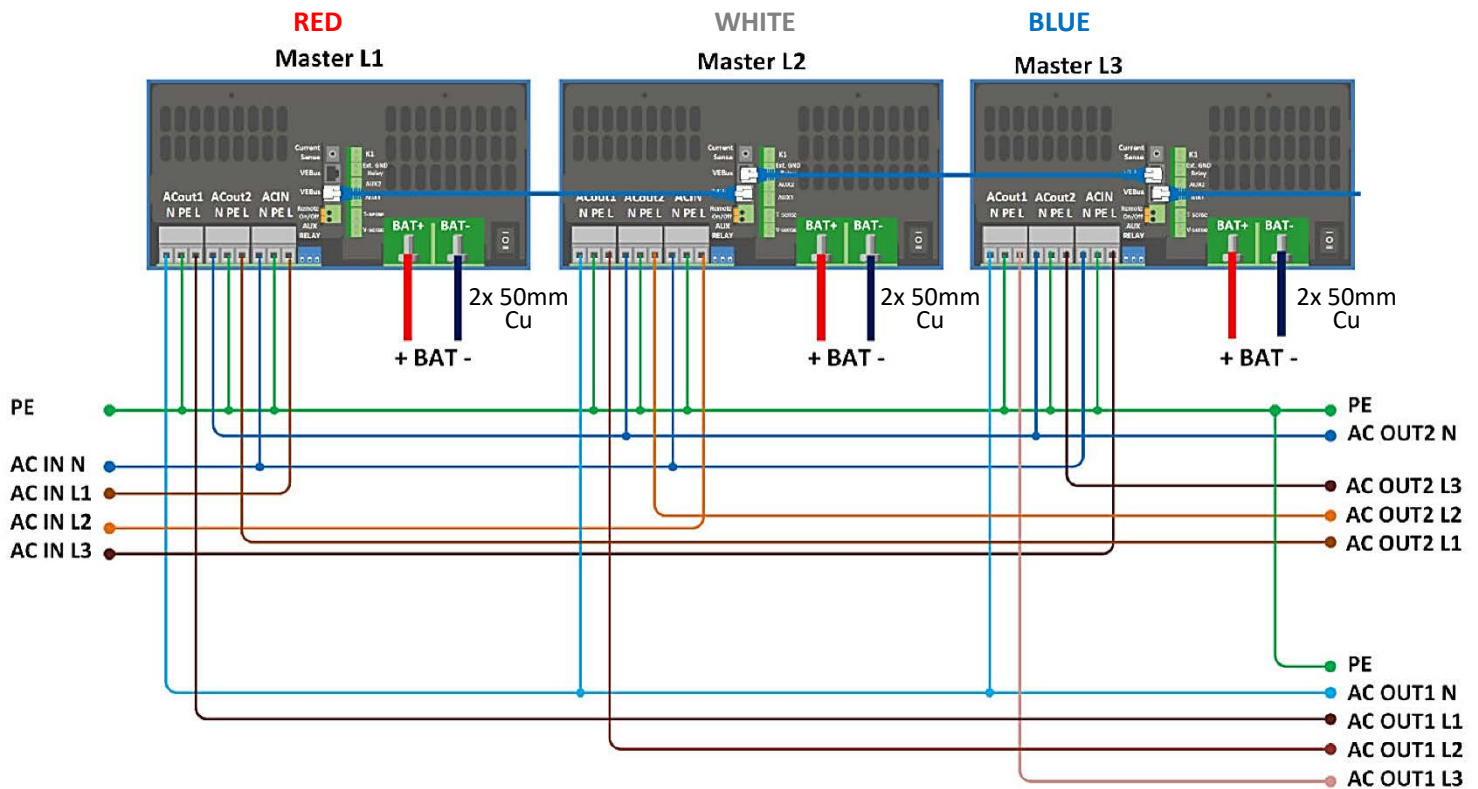
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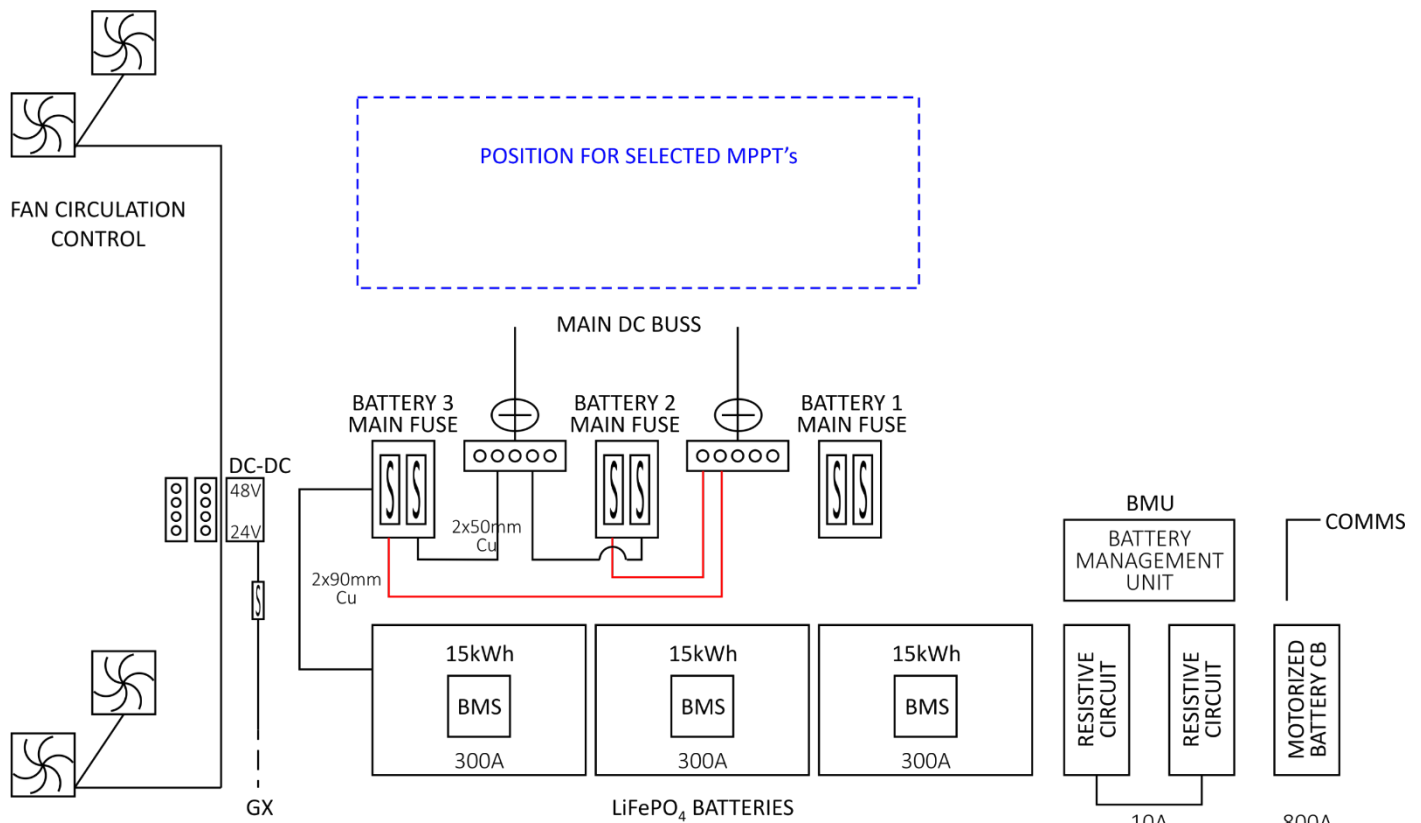
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13. SINGLE LINE DIAGRAMS

13.1 AC Panel Schematic (Three Phase)



13.2 DC Panel Schematic

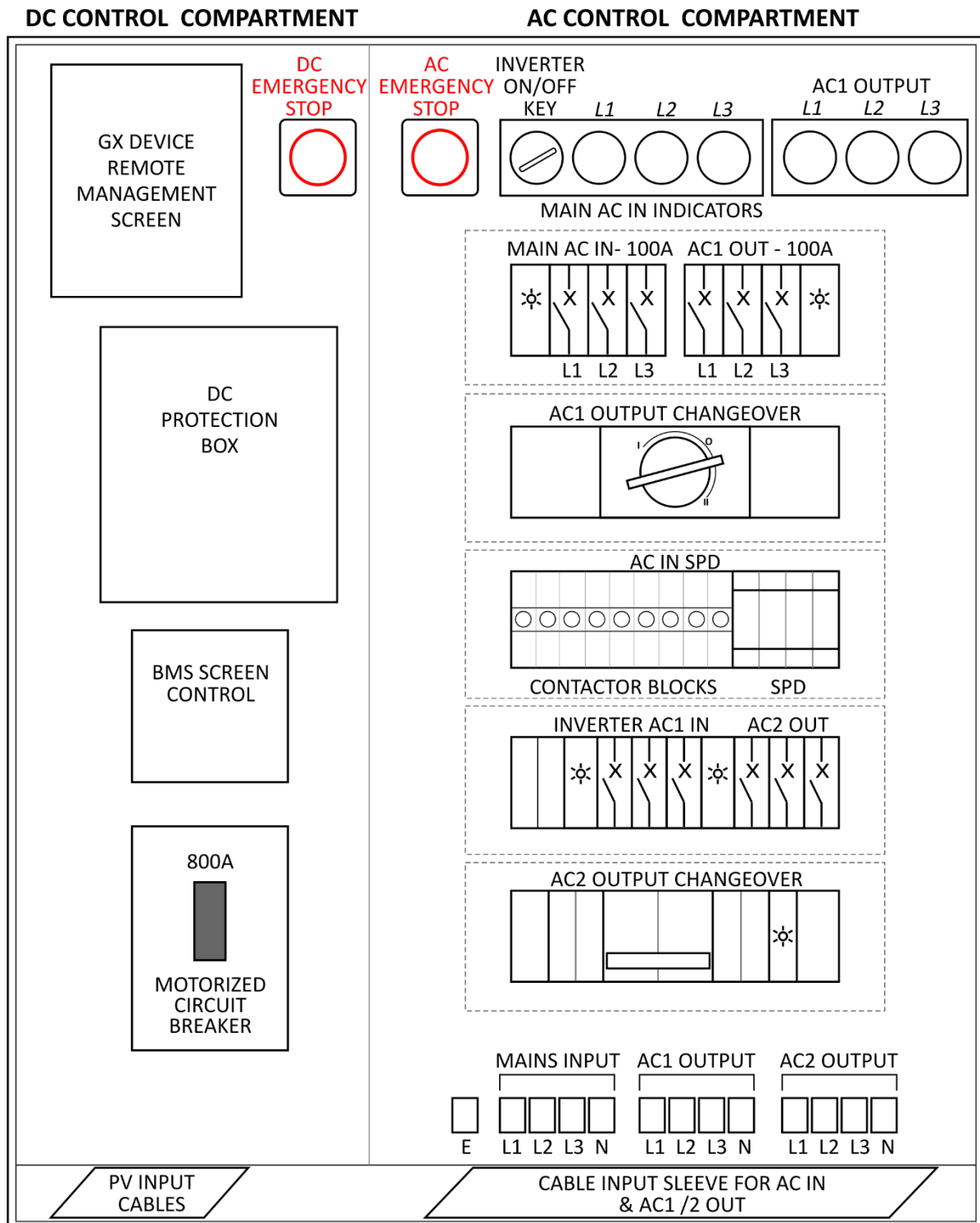


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13.3 Front Control Panel Schematic



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SPECIALIZED SOLAR SYSTEMS QUALITY CONTROL & SIGN-OFF

PRODUCT NAME:		ASSEMBLER NAME:	
SERIAL NUMBER:		QUALITY CONTROLLER NAME:	

CHECKLIST			
PASS	FIT & FINISH	QUALITY CONTROLLER INSPECTION	COMMENTS
	MAIN ASSEMBLY (Paint Finish, Structure, Rivets)		
	BATTERY COMPARTMENT LID		
	CIRCUIT BREAKER DIN RAIL & SSS COVER		
	LiFePO ₄ BATTERY MOUNT SECURE		
	ALIGNMENTS		
SIGN OFF:		DATE:	
PASS	FIT & FINISH	QUALITY CONTROLLER INSPECTION	COMMENTS
	LiFePO ₄ BREAKER, SIZE, TEST		
	LiFePO ₄ VOLTAGE SENSING CABLES		
	BMS MAIN ON/OFF		
	BATTERY MAINS ON/OFF		
	TORQUE VALUE:		
	RJ45 CABLE (CAN-bus Colour Coded)		
	FUSE HOLDER - ALIGNMENT LEVEL		
SIGN OFF:		DATE:	
PASS	PROGRAMMING & COMMISSIONING Memory Setup & Connectivity	QUALITY CONTROLLER INSPECTION	COMMENTS
	BREAKER ON/OFF, OC AMP TRIP		
	BMS ON/OFF		
	BMS CONFIG UPLOAD		
	BMS UPDATE WITH PRODUCT SERIAL NUMBER		
	CELL MONITOR- CELL VOLTAGES: HIGH:.....		
	LOW:.....		
	PACK:.....		
	CELL TEMPERATURE: A: B:		
SIGN OFF:		DATE:	



PASS	PERFORMANCE - DISCHARGE & CHARGE	QUALITY CONTROLLER INSPECTION	COMMENTS
	UPS MODE - AC DISCONNECT (NON ESS/VS)		
	RESISTIVE LOAD 1700W DISCHARGE TO LVD		
	DISCHARGE SOC 80%		
	RE-CHARGE TO 100% (AC Source 35A)		
SIGN OFF:		DATE:	
PASS	SAFETY & LEGAL	QUALITY CONTROLLER INSPECTION	COMMENTS
	BREAKER TEST		
	LABELS - AC, PV DC (if applicable & align)		
	QR CODE		
SIGN OFF:		DATE:	
PASS	PACKAGING	QUALITY CONTROLLER INSPECTION	COMMENTS
	PACKAGING MATERIAL AND MOUNT		
	SHIPPING LIST		
	PRODUCT SPECIFICATION BROCHURE		
	HANGER BRACKET KIT		
	QC LABEL		
	SERIAL NUMBER TAG		
SIGN OFF:		DATE:	
FINAL SIGN-OFF AND APPROVAL			
NAME OF COMMISSIONER:			
DATE:			
SIGN OFF:			

NOTE: PLEASE RETAIN THIS BOOKLET AS PROOF OF YOUR WARRANTY

For more information and videos, please scan the QR code below:



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