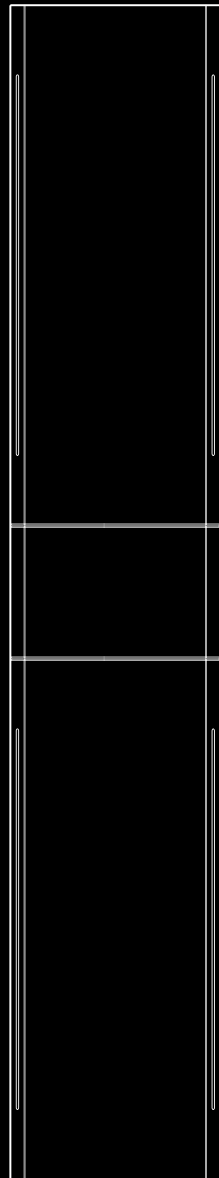
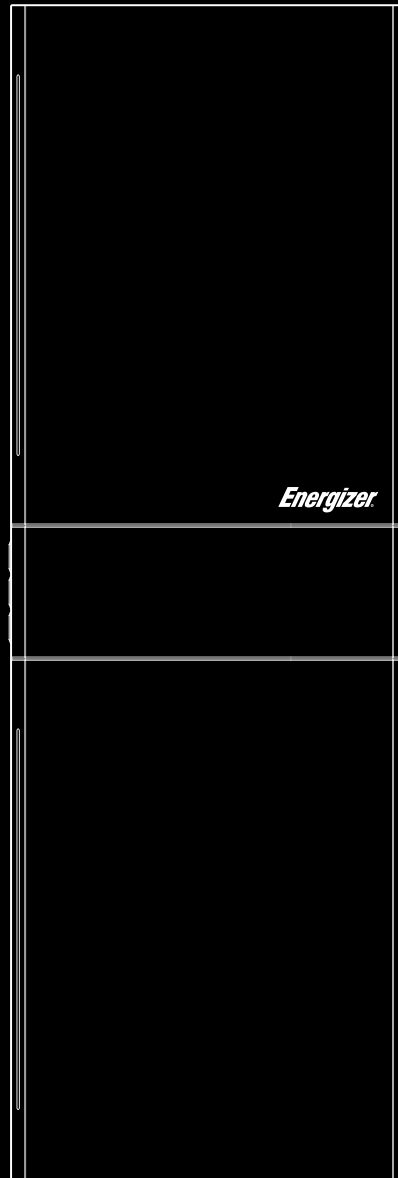


Energizer[®]

HOMEPOWER



HP-6S



HP-6M

INSTALLATION MANUAL

Australia & New Zealand

Disclaimer

For the latest *Energizer* Homepower documents, visit energizerhomepower.com

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To secure the full 10-year Product Warranty, *Energizer* Homepower HP-6 Series must be commissioned using the *Energizer* Homepower Installer App and system must stay connected to the *Energizer* Homepower Cloud.

Warning: Read this entire document before installing or using *Energizer* Homepower HP-6 Series units. Failure to do so or to follow any of the instructions or warnings in this document can result in electrical shock, serious injury, or death, or can damage the product, potentially rendering it inoperable.

Environmental Protection

Electronic device: Do not throw away. Electrical products should not be disposed of with household waste. Proper disposal of batteries is required. Refer to your local codes for disposal requirements.



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Contact Information

Energizer Homepower
Suite 255, 17 Coleman Parade,
Glen Waverley, VIC 3150
Australia
+61 (03) 9110 1000
energizerhomepower.com
support@energizerhomepower.com













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1. Important Safety Instructions












This Installation Manual contains essential instructions that must be followed during installation and maintenance of the *Energizer* Homepower HP-6 Series BESS (Battery Energy Storage System). To ensure safe installation and operation, the HP-6 Series BESS should only be installed by certified *Energizer* Homepower Installers. Please note the following safety symbols that appear throughout this document that indicate dangerous conditions, relevant warnings, and notes to facilitate best results.

Symbol Used

-  **DANGER:** This indicates a hazardous situation, which if not avoided, could result in death or serious injury.
-  **WARNING:** This indicates a situation where failure to follow instructions may be a safety hazard or cause equipment malfunction. Use extreme caution and follow instructions carefully.
-  **NOTE:** This indicates an important step that leads to best results but is not safety or damage related.
-  **REFER TO OPERATING INSTRUCTIONS:** This indicates an important step that leads to best results but is not safety or damage related.
-  **HOT SURFACE:** This indicates that the surface may be hot, please beware.
-  **CAUTION, RISK OF ELECTRIC SHOCK, ENERGY STORAGE TIMED DISCHARGE:** Discharge time is 5 minutes from de-energization.
-  **EARTH:** This indicates location of grounding point on the equipment.
-  **LOCKING POINT:** This indicates location of locking point on the equipment.
-  **EUROPEAN CONFORMITY:** This indicates that the product conforms to standards within the European Union.
-  **RCM:** This indicates that the product is marked with the Regulatory Compliance Mark in accordance with the requirements listed within the independent schemes.
-  **SAA:** This indicates that the product is certified by SAA Approvals and conforms to standards in regard to compliance with legal requirements for manufacturing and selling electrical products within Australasia.
-  **TUV SUD:** This indicates that the product has been tested and certified by TUV SUD.

This Installation Manual contains important safety instructions that are key to the proper installation of the *Energizer* Homepower (HP-6M/HP-6S) but are not meant to be a complete explanation of designing an energy storage system. All installations must comply with local and national electrical standards. Read the entire document before installing or using the *Energizer* Homepower (HP-6M/HP-6S). Failure to follow any instructions or warnings in this document may result in electrical shock, serious injury, and death or may damage the battery, potentially rendering it inoperable. Failure to follow any instructions or warnings may void the Warranty.

Dangers

-  *Energizer* Homepower HP-6 Series system installations must be carried out only by *Energizer* Homepower Certified Installers, who have been trained to work with Low Voltage electricity, while using Personal Protective Equipment (PPE) to handle the battery.
-  The *Energizer* Homepower HP-6 Series units are heavy objects, use of PPE and lift equipment is recommended.
-  Do not use the *Energizer* Homepower HP-6 Series units if they are defective, appear cracked, broken, or damaged in any sense.
-  Before beginning installation, ensure that the *Energizer* Homepower HP-6 Series units are switched off and open any associated circuit breakers and disconnect switches.
-  Do not allow or place flammable or explosive items near the *Energizer* Homepower HP-6 Series units and do not dispose in a fire as they may explode.
-  Do not attempt to open, disassemble, repair or tamper with the *Energizer* Homepower HP-6 Series units, as doing so may result in damage to equipment and/or cause injury or death. Contact the *Energizer* Homepower installer who installed the system for any repairs.
-  Risk of electric shock. Be aware that installation of this equipment includes risk of electric shock. Do not install the *Energizer* Homepower HP-6 Series units without first removing AC power from the photovoltaic system. Disconnect the power coming from the photovoltaics before servicing or installing.
-  Always de-energise the AC branch circuit during an emergency and/or before servicing the *Energizer* Homepower HP-6 Series system. Never disconnect the DC connectors under load.
-  *Energizer* Homepower HP-6 Series units can present risk of high short-circuit current. Observe the following precautions when working on the system:
 - Remove watches, rings, or other metal objects.
 - Use tools with insulated handles.
 - Wear rubber gloves and boots.
 - Do not lay tools or metal parts on top of the *Energizer* Homepower HP-6 Series units.
-  Do not work alone. Ensure that someone is always in range of your voice or close enough to come to your aid, when working with or near electrical equipment.
-  When placing the *Energizer* Homepower HP-6 Series units in storage, ensure that the battery isolator is switched off.

Warnings



During installation and usage, always keep the *Energizer* Homepower HP-6 Series units in an upright position. Do not impact, pull, drag, step or apply strong force on the *Energizer* Homepower HP-6 Series units.



To help prevent damage, leave the *Energizer* Homepower HP-6 Series units in their original shipping packaging, until they are ready to be installed.



Install the *Energizer* Homepower HP-6 Series system only on a suitable wall, using the wall-mount bracket supplied with the product.



Before installing or using the *Energizer* Homepower HP-6 Series system, read all instructions and cautionary markings included in the technical description and on the equipment.



Do not install more than three (3) *Energizer* Homepower HP-6S (Sub Units) in a 25A AC branch circuit.



Do not sit on, step on, place objects on or insert objects into the *Energizer* Homepower HP-6M Series units. Please refrain from placing liquids or containers (with liquids) on top of *Energizer* Homepower HP-6 Series units.



Damage to the *Energizer* Homepower HP-6 Series units can occur from over-discharge. While in storage, it is expected to discharge gradually. Ensure that the *Energizer* Homepower HP-6 Series units are installed by the "Must Energize by Date" located on the packaging.



If an *Energizer* Homepower HP-6 Series unit needs to be replaced or removed, it must be turned off as per the recommended shutdown procedure prior to removal.



Ensure the absence of any water sources above or near *Energizer* Homepower HP-6 Series units, including sprinklers, water jets, garden hoses or faucets.

2. *Energizer* Homepower HP-6 Series (HP-6M/HP-6S)

The *Energizer* Homepower HP-6 Series is an AC coupled, lithium iron phosphate based Battery Energy Storage system (BESS), designed to operate seamlessly with existing solar (PV) installations. It is easy to install and allows a high degree of customisation to suit a variety of energy considerations. The *Energizer* Homepower HP-6 Series is modular and consists of the Main Unit (HP-6M) and optional Sub Units (HP-6S).

The *Energizer* Homepower HP-6 Series system measures solar generation & energy consumption using its production & consumption CTs, and then utilises its intelligent algorithms to either charge or discharge its batteries to reduce consumption from the grid and increase local energy usage. This improves overall energy efficiency by aiding local consumption of solar energy and reducing export to the utility grid.

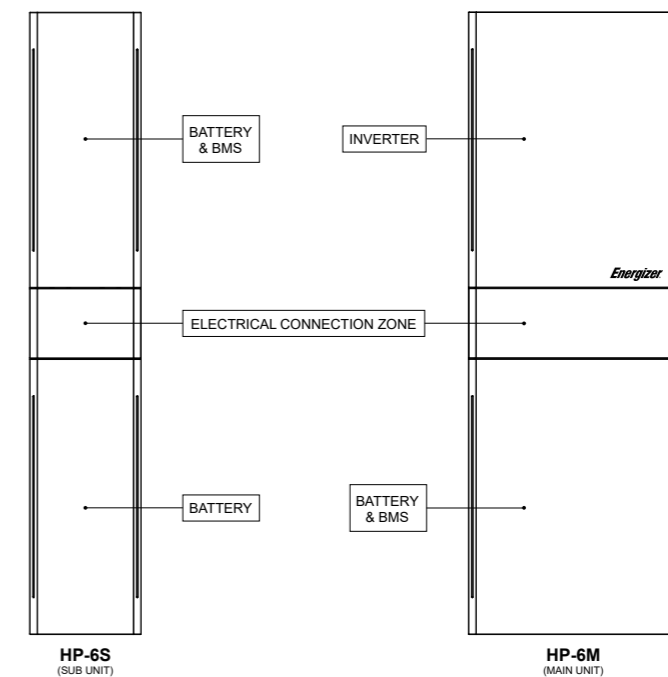


Fig. 1. *Energizer* Homepower HP-6M & HP-6S Units

The *Energizer* Homepower Installer App & web-based monitoring platform allow for comprehensive monitoring & analysis of data captured by the *Energizer* Homepower HP-6 system. It constantly monitors important data from the utility grid, inverter, and the battery to ensure that optimal system performance is maintained.

The *Energizer* Homepower HP-6 Series system can operate in 3 unique application modes: **Automatic**, **Semi-Automatic** and **Manual**. Each mode follows a unique priority and can be customised to operate as per site requirements.

- 1. Automatic Mode** – is the default mode of operation. The system determines the energy supply requirement with the priority: **Site Loads > Battery Charge > Grid Export > Battery Discharge > Grid Import**.

The operating sequence is as follows:

- Solar generation supplies the connected loads.
- When site loads are lower than solar generation, excess solar energy is diverted towards charging the battery.

- c. When site loads are lower than solar generation and battery is full (SoC 100%), the excess solar generation is exported to the utility grid.
- d. When site loads are greater than solar generation (or at night time), energy is primarily discharged from the battery to supply the loads.
- e. When site loads are greater than the sum of solar generation and battery output, the balance is drawn from the utility grid.

2. Semi-Automatic Mode – is an optional mode. The system allows for a certain percentage of the solar generation to be reserved towards battery charging and/or export to grid. The system determines the energy supply requirement with the priority: **Site Loads > Battery Charge (& Grid Export) > Grid Export > Battery Discharge > Grid Import**. The operating sequence is as follows:

- a. Solar generation is mainly utilised to supply the connected loads.
- b. When site loads are lower than solar generation, excess solar energy is divided between battery charging and export to utility grid. E.g., if PV Charge % is set to 70%, then 70% of solar generation is used to charge the battery, and the remaining (30%) is exported to the utility grid.
- c. When site loads are lower than solar generation and battery is full (SoC 100%), the excess solar generation is exported to the utility grid.
- d. When site loads are greater than solar generation (or at night time), energy is primarily discharged from the battery to supply these loads.
- e. When the site loads are greater than both solar generation and/or battery discharge combined, the balance is drawn from the utility grid.

3. Manual Mode - is also an optional mode. The system allows for electricity tariff arbitrage by customising battery charge and discharge functions. The battery can be charged on-demand using either solar or utility grid energy and can be discharged on-demand towards site loads. The entire schedule can be configured on *Energizer Homepower Cloud*.

3.1. Maximum State of Charge - This setting is found on the Application Mode window within customer app/portal. It limits the maximum SOC capacity that the grid can charge the battery to. E.g. If set to 80%, then the grid can be used to charge until SOC hits 80%. Above this SOC level, the grid will not be used to charge the battery.

3.2. Blank windows of time - When there are no instructions for the Scheduler entered for a window of time then the unit will revert to Automatic Mode until it reaches a window of time with instructions.

a. Automatic mode logic:

Site Loads > Battery Charge > Grid Export > Battery Discharge > Grid Import.

3.3. Percentages - Within the Scheduler, you will need to input a percentage for the instruction you want the Plant to follow.

- a. **This value is the percentage of the maximum inverter capacity (3600W).** E.g. For grid charge, if you input 60% then only 2160W (~60% of 3600W) will be used to charge the battery from the grid.

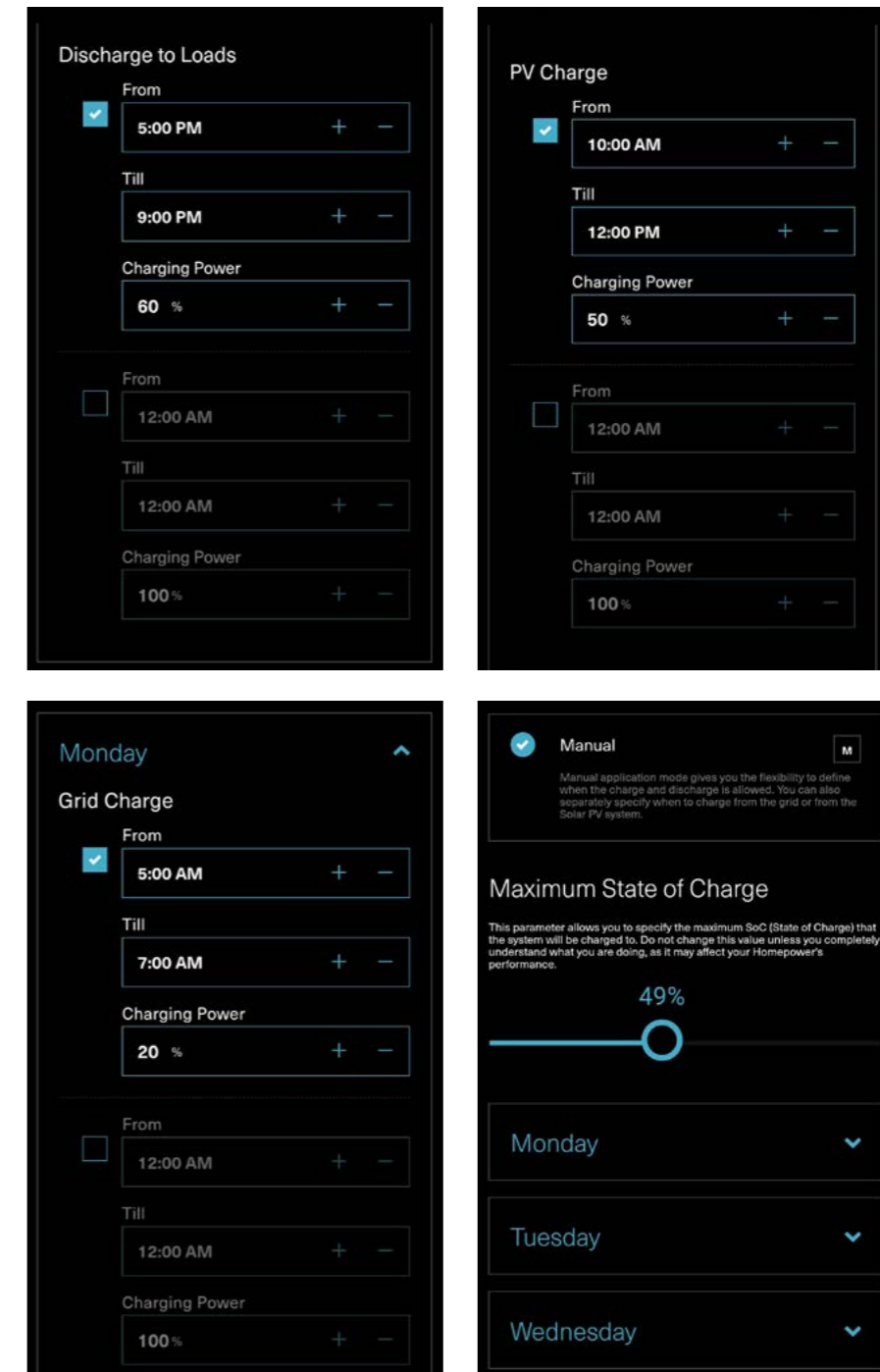


Fig. 2. Homepower Scheduler

3.4. Grid Charge - Specifies when to use the grid to charge the battery. If left unticked, *Energizer* Homepower will not charge from the grid.

- a. **E.g. 50% @ 5 am - 7 am** - Following this instruction, the battery will charge from the grid at 1800W between the times of 5 am and 7 am.

When used: Designate when to charge the battery, normally during off peak periods. This allows customers to reduce the need to consume grid power during peak periods.

3.5. PV Charge - Limits the amount of solar generation used to charge the battery. If left unticked, *Energizer* Homepower will not limit the PV charge power.

- a. **E.g. 50% @ 10 am - 12 pm** - With these instructions, during 5 pm - 9 pm, system will limit the PV charge to 1800W.

When used: Generally used to exempt scheduled periods of time from using the battery or ensure availability of battery power by minimising consumption throughout the day.

E.g. When heat pumps are scheduled to be on during off peak periods.

3.6. Discharge to loads - Restricts how much energy is drawn from the battery during times when site loads are greater than solar generation. Usually, early mornings and in the evenings. If left unticked, *Energizer* Homepower will not limit the discharge power.

- a. **E.g. 50% @ 5 pm - 9 pm** - With these instructions, during 5 pm - 9p m, only 1800W will be available for use from the battery. If any additional power is required, it will be drawn from the grid.

When used: Generally used to exempt scheduled periods of time from using the battery or ensure availability of battery power by minimising consumption throughout the day.

E.g. When heat pumps are scheduled to be on during off peak periods.

Specifications

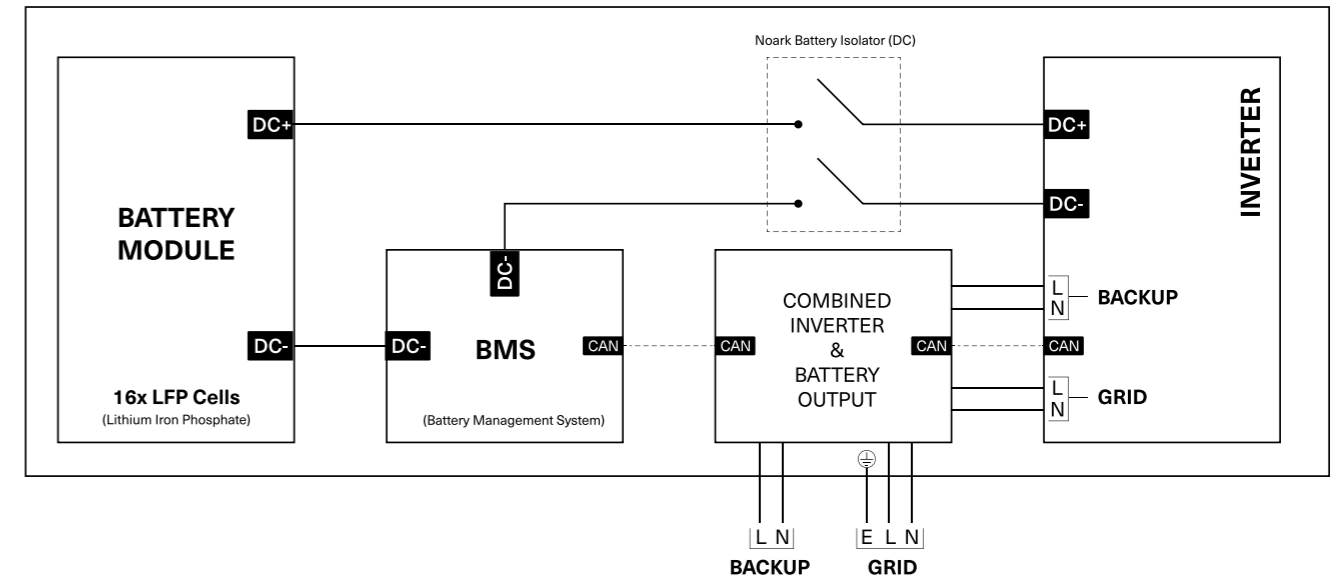


Fig. 3. Block Diagram – *Energizer* Homepower HP-6M (Main Unit)

Electrical Specifications

Homepower Series	HP-6M	HP-6M/1S	HP-6M/2S	HP-6M/3S	HP-6S ³
Rated Energy ¹ (kWh)	6.14	12.28	18.42	24.56	6.14
Usable Capacity ² (kWh)	5.8	11.6	17.4	23.2	5.8
Rated Capacity (Ah)	120	240	360	480	120
Dimensions (H/W/D; mm)	1244/420/183	1244/646/183	1244/872/183	1244/1098/183	1244/222/183
Weight (kg)	98.5	168.5	238.5	308.5	70.0
Ingress Protection	IP65				
OTR ⁴ (Operating Temperature Range)	Charge: 0 to 45 °C, Discharge: -20 to 50 °C				
Recommended Temperature	0 to 30 °C				
Protection Class	Class I				
Operating Altitude Range	<2000 m				
Operating Humidity (RH)	0 - 95%				
Mains Connection	Single-phase, L/N/PE				
Cooling	Natural Convection				N/A
Certification & Standards	AS 62040.1:2019, AS/NZS 4777.2:2020, IEC 62619:2017, UN 38.3, IEC 62109-1:2010, IEC 62109-2:2011, IEC 62477-1:2012, IEC 62477-1:2012/AMD1:2016, IEC 61000-2/-3				IEC 62619:2017, UN 38.3, AS 62040.1:2019, IEC61000-2/-3
Types of Protection	Anti-Islanding, Over Current, Short Circuit, Over Voltage & High/Low Temperature				Over Current, Short Circuit, Over Voltage & High/Low Temperature
Country of Manufacture	China				

¹ Rated Energy is determined as per battery standard IEC 62619:2017. ² Usable Capacity is calculated as 95% of Rated Energy. ³ HP-6S unit is considered a sub-system of the Main Unit (HP-6M) and is never installed in a stand-alone manner. ⁴ Performance de-rating expected in extreme ambient temperature.			
Inverter			
Nominal Output Voltage	230 V a.c.		N/A
Nominal AC Frequency	50 Hz (Self-Adapting)		N/A
PF Range	1 (adj 0.8 leading – 0.8 lagging)		N/A
	Grid (AC Input)	Grid (AC Output)	Backup/UPS (AC Output)
Rated Power	3600 W	3600 W	3600 W
Max. Active Power	6000 W	3600 W	3600 W
Max. Apparent Power	6000 VA	3600 VA	3600 VA
Rated Apparent Power	6000 VA	3600 VA	3600 VA
Rated AC Current	26 A a.c.	16 A a.c.	16 A a.c.
Over Current Protection	26 A	18 A	16.45 A
THD Index	< 3%		N/A
Max Efficiency	94%		N/A
Standby Self Consumption	<10 W		N/A
Inrush Current	<10 A		N/A
Topology	High Frequency Isolation		N/A
Fault Current	Grid Terminal: 48.08Apeak (25.42ms) Backup Load Terminal: 76.39Apeak (10s)		N/A
Anti-islanding Method	Method (a) - frequency shift as per Clause 4.3 in AS/NZS 4777.2:2020 is in use		N/A
DRM Support Method	DRMs (0-8)		N/A
Battery			
	HP-6M	HP-6S	
Battery Type	LFP (Lithium Iron Phosphate)		
Battery Energy	6.14kWh		
Nominal Voltage	51.2 V d.c.		
Rated Charge Current	71 A d.c.		
Rated Discharge Current	71 A d.c.		
Rated Current (AC Input)	16 A a.c.		
Rated Apparent Power (AC Output)	3600 VA		
Rated Current (AC Output)	16 A a.c.		
Voltage Range	41 V – 57.6 V d.c.		
Number of Cells	16		
Standby Self Consumption	< 3W (Standby)		
Battery Short Circuit Current	500±50A ⁵ / 8500A ⁶		
Additional Features			
Supported Communication Interfaces	2.4G Wi-Fi, RS 485, Ethernet, CTs, CAN (to battery), Cellular/4G (to Cloud)		RS 485, CAN 2.0 (To Inverter)
Communication Module	Integrated Communications Module (supporting LTE-TDD/ FDD, UMTS/ HSPA+, GSM/GPRS/EDGE) with external Antenna		N/A
Monitoring	Energizer Homepower Monitoring (App & Web platform)		N/A
⁵ 500A±50A: primary short-circuit protection performed by BMS (Electronic). ⁶ 8500A: prospective short-circuit current with no protection.			

Table 1. Electrical Specifications

Single Line Diagram

The *Energizer* Homepower HP-6 Series is designed to operate as an AC coupled BESS in conjunction with an existing solar PV inverter. It has a single phase 3.6 kW integrated inverter that charges and/or discharges the battery using a proprietary algorithm. The *Energizer* Homepower HP-6 Series system can be installed on sites with either single, dual or three phase service connections. For simplicity, the diagram below captures the electrical connections required for an installation at a site with a single-phase service connection.

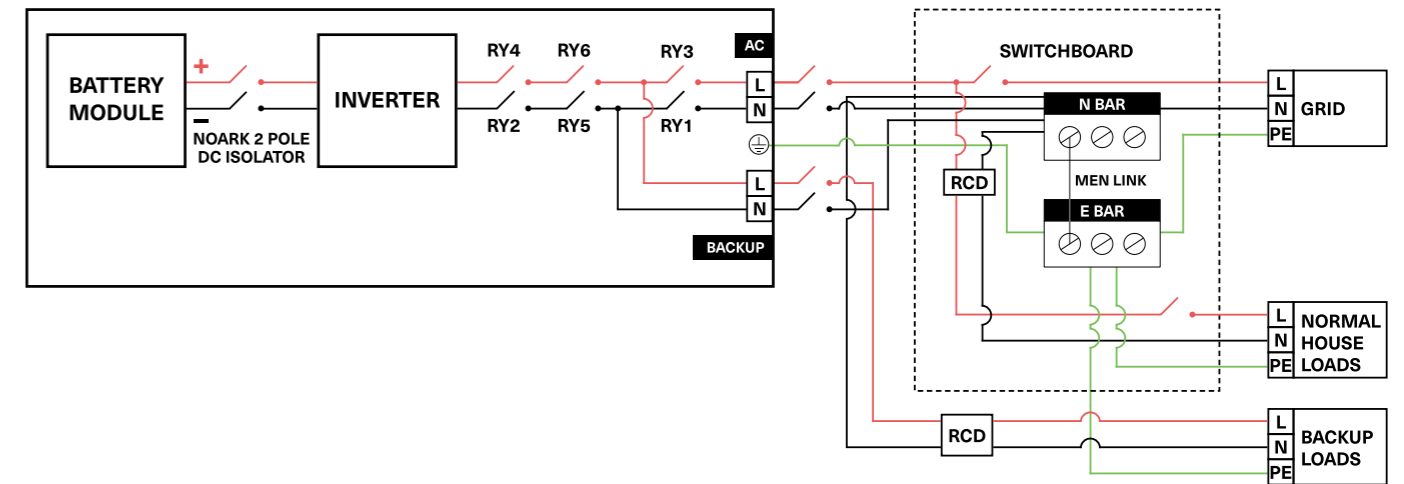


Fig. 4. Energizer Homepower HP-6 System Schematics



Within Australia & New Zealand, the neutral cables emerging from the Grid/Backup terminals on the HP-6M must be connected externally on the neutral bar (MEN link) within the switchboard. Please refer to your local and national codes for relevant regulations. Refer to Page 35 for more information regarding RCD requirement.

3. Getting Started

The *Energizer* Homepower HP-6 Series system is designed for both indoor & outdoor installations and relies on Current Transformers (CTs) to monitor solar production & utility grid-based consumption. The location of the installation must be chosen as per the site conditions, but it is recommended to install the HP-6 system within the vicinity of the Main Service Panel/Switchboard (MSB).

The *Energizer* Homepower HP-6M is equipped with an integrated communications module that supports WiFi, 4G/LTE or Ethernet to enable an internet connection. The communication module can support only one type of connection at a time, and it is recommended to select the applicable wireless standard based on the site conditions and available wireless connectivity. It is essential to connect the HP-6 system to the *Energizer* Homepower Cloud to enable real-time monitoring and remote device troubleshooting. In areas or regions with weak 4G/LTE signal, CAT-5E cables can be used to connect the HP-6 system to a Wi-Fi router at the property.

The AC isolation and interconnection requirements between the HP-6 system and the Main Switchboard are subject to the local codes & standards. Ensure that the installation meets the local isolation and interconnection requirements & also conform to the laws, regulations, codes & applicable standards.



WARNING! The *Energizer* Homepower HP-6 Series system is designed to operate mainly on a single-phase service connection and does not support **Multiple Inverter Combinations** as described in AS/NZS 4777.2:2020 (Section 5). When installing on a multi-phase service connection, ensure you do not install more than one Main Unit (HP-6M).

Required Tools & Supplies

The following tools are required to carry out the installation for the *Energizer* Homepower (HP-6M/HP-6S):

- Personal Protective Equipment - Level 1 (safety glasses, gloves, protective footwear).
- M6, M8 or M10 hammer drill & drill bits for wall-mount brackets.
- Philips 2 screwdriver, Allen keys, cable stripping tool & box cutter.
- Spanner or socket wrench (if using dyna bolts).
- Crimping tool – CAT-5 cable/for RJ 45 connectors.
- Installation tools (spirit level, tape measure etc).
- Dyna bolts/heavy gauge wood screws - 6mm x 60mm.
- Lift equipment (capable of lifting 75 – 120 kg).
- Mobile phone running latest version of Apple (iOS) or Android operating system, enabled with internet (mobile data).

Cable Gauge and Length Information

The HP-6M unit requires cable connections for AC power, communication/ethernet (optional), Current Transformers (CTs) and/or energy meters. For an HP-6S installation, additional DC Power cables & Battery Communication (CAN) may also be required. Install the HP-6 system and other electrical components with minimal cable lengths in-line with local codes and regulations.

Terminal	Connections	Recommended Cable Gauge
Main Unit Installations (HP-6M)		
AC Power ¹ (Grid - L/N)	Grid terminals to electrical panel	4 - 6 mm ²
AC Power ¹ (Backup - L/N)	Backup terminals to electrical panel (UPS/Backup)	4 - 6 mm ²
Earth ²	Earth terminal to electrical panel	2.5 - 6 mm ²
PV & Grid CTs (optional)	Grid & PV CT Lead Extensions	0.2 - 1.5 mm ² or CAT-5E/6 Shielded
Ethernet port (optional)	HP-6M Ethernet port to Internet Router	CAT-5E/6 Shielded
DVC Voltage Class		
DVC-A	Battery terminal, DRM terminal, 3-Phase communication terminal, CT (Grid/PV) terminal, CAN terminal	
DVC-C	Backup terminal, Grid terminal	
Combined Installations (HP-6M/1S, HP-6M/2S and HP-6M/3S)		
AC Power ¹ (Grid - L/N)	Grid terminals to electrical panel	4 - 6 mm ²
AC Power ¹ (Backup - L/N)	Backup terminals to electrical panel (UPS/Backup)	4 - 6 mm ²
DC Power	HP-6M (+ve) to HP-6S (+ve) HP-6M (-ve) to HP-6S (-ve)	25 mm ²
Earth ¹	Earth terminal to electrical panel	2.5 - 4 mm ²
CT Lead extension (optional)	Grid & PV CT Lead Extensions	0.2 - 1.5 mm ² or CAT-5E/6 Shielded
Ethernet port (optional)	HP-6M Ethernet port to Internet Router	CAT-5E/6 Shielded
Battery Communication (CAN)	HP-6M to HP-6S	CAT-5E/6

¹ Cables must be selected as per local and national codes or regulations.

² Earthing considerations as per local electrical codes. For HP-6S installations, 6 mm² cable supplied with package.

Table 2. Connections (Cable Information)

4. Site Requirements

The *Energizer* Homepower HP-6 Series system can be installed in both indoor and outdoor conditions and has an Ingress Protection rating of IP65. However, it is recommended to select an appropriate installation location to increase the safety, performance, and the lifespan of the system. Please ensure the below requirements are met prior to installation.

The battery must be installed on a wall capable of supporting the size, mandatory clearances, and weight of the *Energizer* Homepower HP-6 Series system. The clearances ensure sufficient space availability for electrical cabling and necessary airflow.

- If being installed indoors, it is recommended to install the *Energizer* Homepower HP-6 Series system in a garage, ventilated storage area or a dedicated battery room.
- It is recommended to install the *Energizer* Homepower HP-6 Series on a switchboard that has both the Normal Supply main switch and the Solar Supply main switch.
- The *Energizer* Homepower HP-6 Series units have unique enclosures to ensure even heat dissipation, so please refrain from installing any additional external enclosures around the unit.
- Ensure that the *Energizer* Homepower HP-6 Series units are not installed on a wall that may have flammable or corrosive equipment (including natural gas supply valves, gas meters or external air conditioning units).
- Energizer Homepower HP-6 Series units must be installed in a location with an ambient temperature range between -20 to 50 °C.
- Do not install the Energizer Homepower HP-6 Series units in a location exposed to direct sunlight, extreme rainfall, or snow.
- The site must have access to an internet connection via Wi-Fi, 4G/LTE and/or ethernet to ensure the *Energizer* Homepower (HP-6M/HP-6S) is connected to the internet. The absence of such a connection or interruptions over extended periods may affect the Warranty of the product.
- Furthermore, please refrain from installing the *Energizer* Homepower HP-6 Series in the following locations:
 - Areas prone to flooding.
 - Locations exposed to flammable or hazardous materials and gases.
 - Cavity walls unable to support the weight of the battery.
 - Areas of access, egress, and walkways.
 - Closed spaces with minimal ventilation (such as under stairways).
 - Areas exposed to high humidity, salty conditions & condensation values (over 85%).
 - Location altitude > 2000 m.



In order to prevent any Electrical Shock or other related injuries, please ensure that Personal Protective Equipment is used during the installation & ensure there are no electricity, plumbing or gas pipelines on the wall selected for Battery Installation.

The *Energizer* Homepower HP-6 Series system can intelligently control the charge and discharge based on several parameters including connected loads, solar generation, and external environmental conditions. It is sensitive to the temperature variations & may limit charge or discharge based on internal cell temperature. Therefore, it is recommended to avoid installations in locations that may be directly exposed to sunlight for prolonged periods of time, and/or locations with sustained high or low temperatures. The *Energizer* Homepower HP-6 Series is designed to operate optimally in an average ambient temperature range between 0°C to 30 °C.

5. Installation

The installer shall identify a suitable location for the *Energizer* Homepower HP-6 Series system, maintain recommended clearances, install the wall-mount bracket(s), carry out the electrical wiring, energize the system and commission it using the *Energizer* Homepower Installer App. The installation procedure is best described as per the flowchart below:

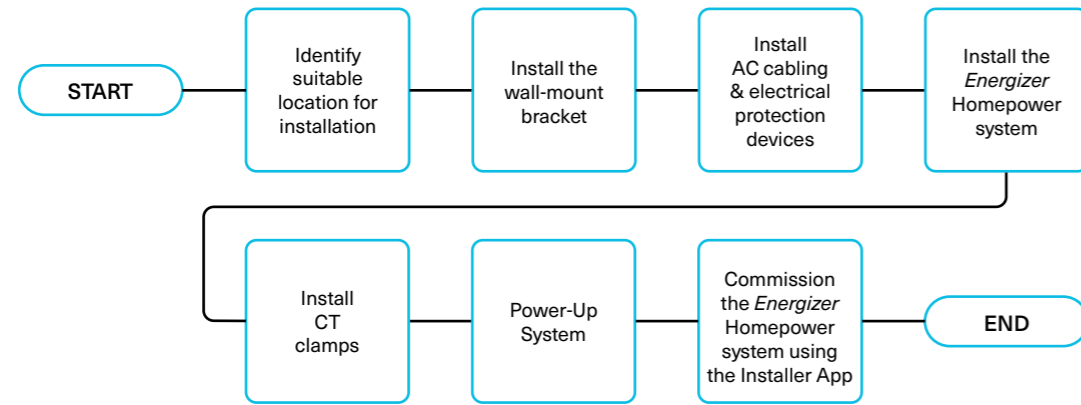


Fig. 4. Installation Flowchart

Step 1 – Planning the Installation

Always refer to local electrical standards while planning the *Energizer* Homepower HP-6 Series system installation. Select a suitable wall that is accessible, ventilated, not facing direct sunlight and within close proximity to the Main Switchboard (MSB), and ensure the area is isolated from hazards that may damage the unit(s) or may be prone to flooding.

Removing the Units from the Package

With a minimum of 1 person either side of the box, reach down the sides of the unit to locate the cut outs in the unit carrier device. Using the carrier device lift the unit from the box and place flat on the ground. The HP-6S follows the same packaging design and can be unpacked similarly to the HP-6M unit.

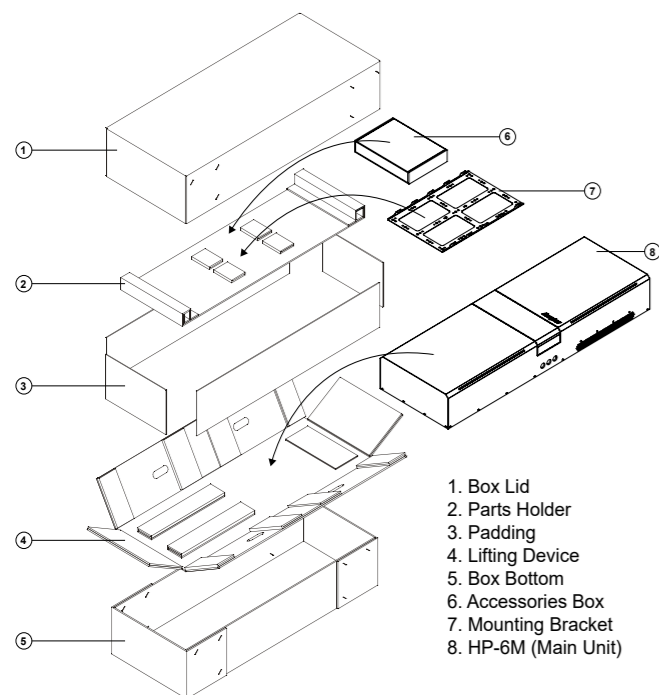


Fig. 5. Unpacking the HP-6M Unit

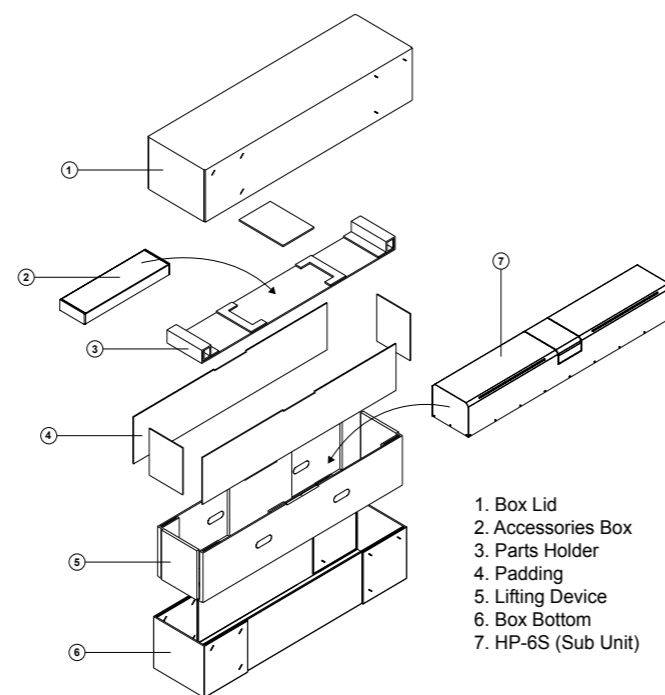


Fig. 6. Unpacking the HP-6S Unit

Step 2 – Transporting & Unpacking *Energizer* Homepower HP-6 Series Unit(s)

Keep the *Energizer* HP-6M unit(s) in their original package(s) until they are ready to be installed. Ensure that the box is stored flat on its back during transport.

Open the box by removing the packing straps that hold the package together. Following this, open the lid, remove the wall mounting bracket and the accessories box. Ensure that you have the items listed within Table 3. and check for any damages that may have occurred during transit.

No.	HP-6M (Main Unit)		HP-6S (Sub Unit)	
	Item	Qty	Item	Qty
1	HP-6M (Main Unit)	1 pc	HP-6S (Sub Unit)	1 pc
2	Owner's Manual	1 pc	Owner's Manual	1 pc
3	Wall-Mount Bracket (Main Unit)	1 pc	Wall-Mount Bracket (Sub Unit)	1 pc
4	Accessories Box		Accessories Box	
	• Pre-terminated CT Sensors	2 pcs	• DC Cables – 225 mm	2 pcs
	• M25 Conduit Connector	3 pcs	• DC Cables – 435 mm	2 pcs
	• Antenna Module	1 pc	• CAT 5E Cable – 300mm	1 pc
	• SMA Extension Cable	1 pc	• RJ 45 Connectors	2 pcs
	• Side Cover	1 pc	• Earthing Cable 6mm ² – 500mm	1 pc
	• M25 AI Hole Blockers	4 pcs	• M25 Glands	4 pcs
	• M5 Earthing Lugs	2 pcs	• M20 Slotted 2-Hole Gland	2 pcs
	• M8 Locking Bolt – 30 mm	1 pc	• M6 Spring & Washer Set	4 pcs
			• M5 Earthing Lugs	2 pcs

Table 3. Package Contents

Step 3 – Installing the Units

Ensure the mounting location can accommodate the entire system including the clearances required and allows access for electrical cabling through identified ports and provides a flat surface for the *Energizer* Homepower HP-6 Series system to be mounted on. The *Energizer* Homepower HP-6 Series system can support one HP-6M plus up to a maximum of three HP-6S units. Depending on the size of the system you plan to install, refer to the dimensions below to plan the location of the units.

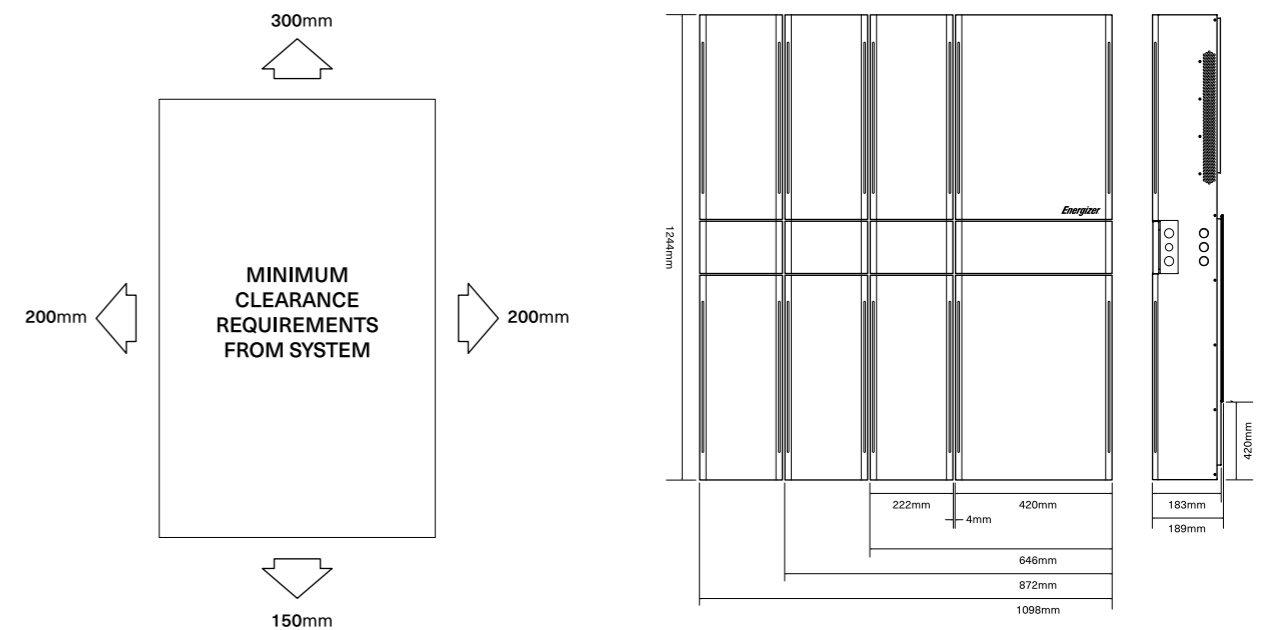


Fig. 7. System Dimensions & Minimum Clearance

When adding Sub Unit(s), it is strongly recommended to install the HP-6M & 6S modules adjacent to one another using the spacing guide provided. All cables provided with the Sub Unit (HP-6S) cater to this spacing exactly. However, there is no mandatory sequence for HP-6M/6S placement and for site-specific obstructions (such as stationary objects, pipes, window ledges etc.), ensure the Sub Unit is installed within a maximum distance of 5m from the Main Unit.

The bracket has provision for accommodating M6, M8 or M10 fasteners using appropriately sized holes. Select the appropriate fastener based on the wall material and local building codes. The *Energizer* Homepower HP-6 Series units can be mounted on a variety of surfaces including wood, metal or concrete walls. Please follow the recommendations for each surface below:

- Wood & metal stud walls - use a minimum of six (6) fasteners, one for every corner, and a further two in the next most suitable positions (as shown in Fig. 8).
- Concrete or masonry walls - use a minimum of four fasteners, one for every corner (as shown in Fig. 8).
- Follow the arrows on the bracket to ensure correct orientation.

To ensure the correct position of the HP-6M wall bracket, refer to Fig. 9 that illustrates the position of the wall bracket in relation to the unit itself.

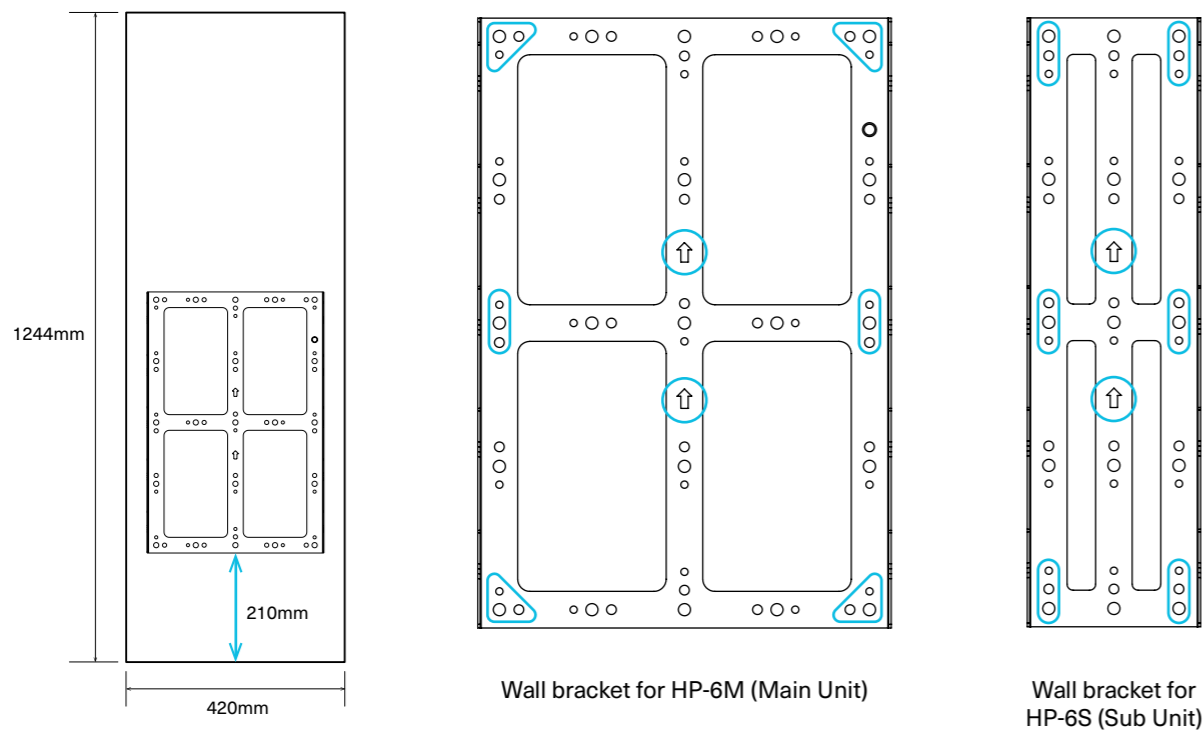


Fig. 8. Wall bracket for HP-6M (Main Unit) & HP-6S (Sub Unit)

Use a spirit level to ensure the bracket is level and carefully mark the holes to be used. Drill the holes and install the wall-mount bracket and ensure the fasteners hold the bracket firmly in place.

When installing the first Sub Unit (HP-6S) use the Sub to Main Spacer Mate to mark the location of the Sub Unit bracket in relation to the Main Unit as shown in Fig. 9.

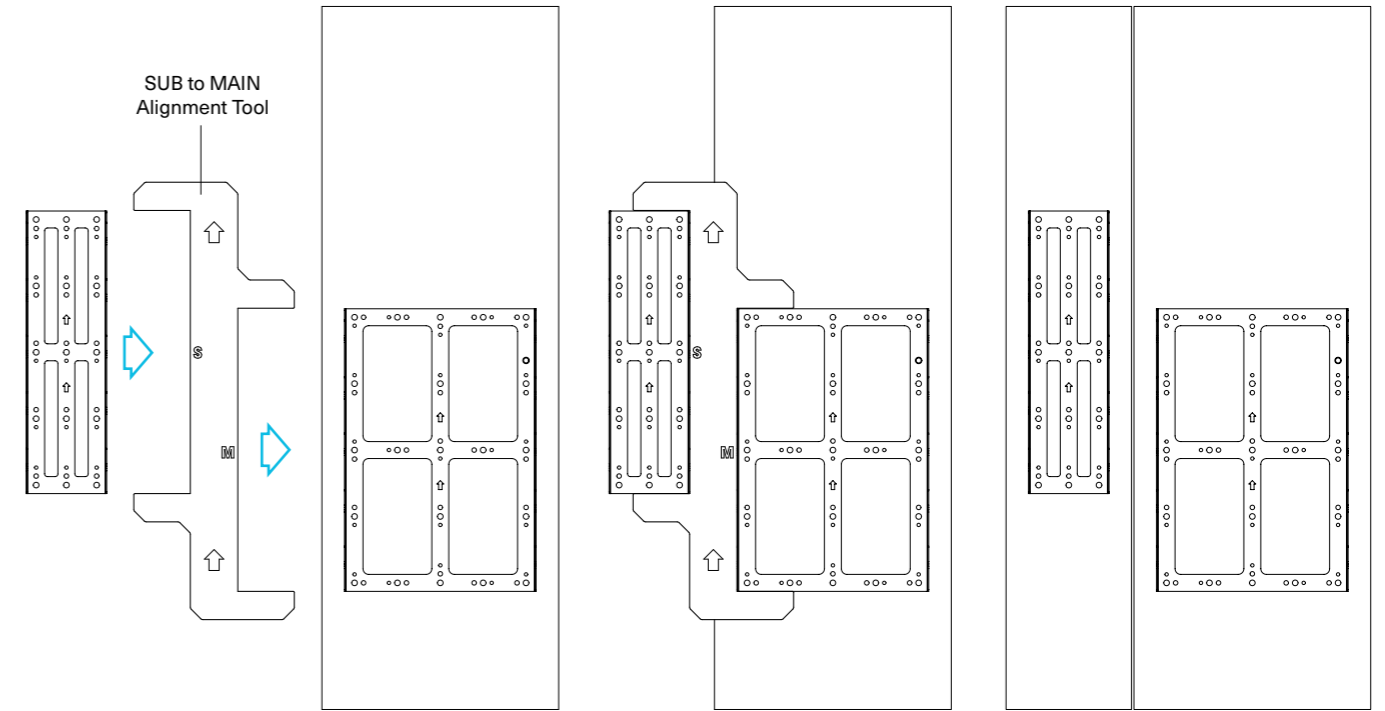


Fig. 9. Sub to Main Spacer Mate

When installing consecutive Sub Units (HP-6S) use the Sub to Sub Spacer Mate to mark the location of the Sub Unit bracket in relation to the adjacent Sub Unit as shown in Fig. 10.

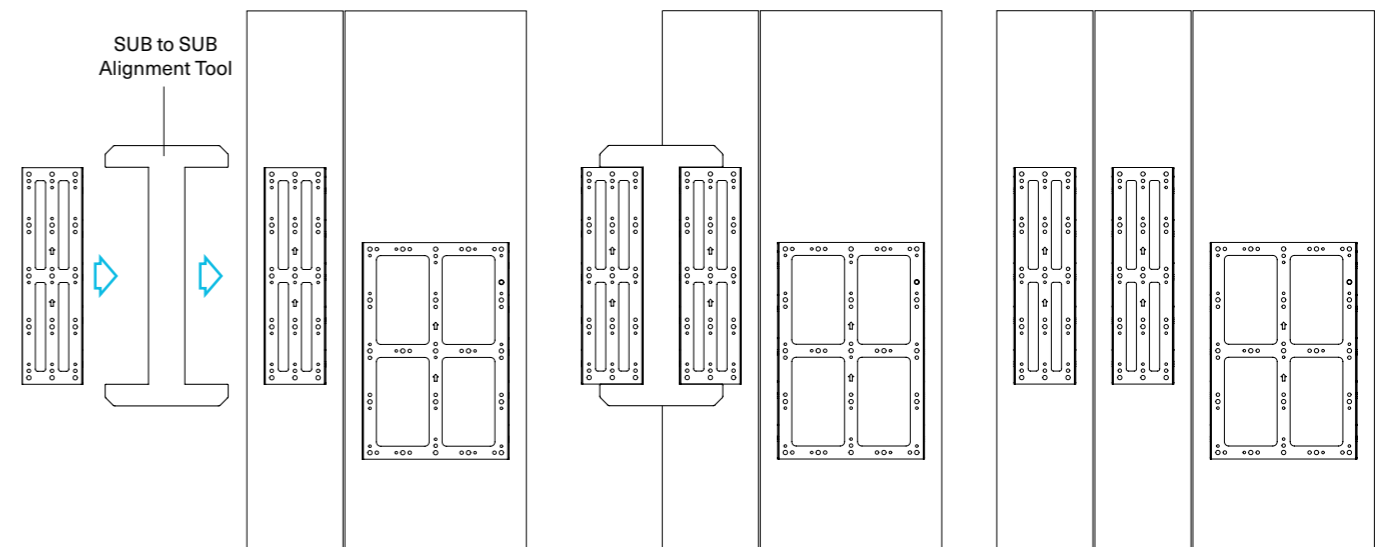
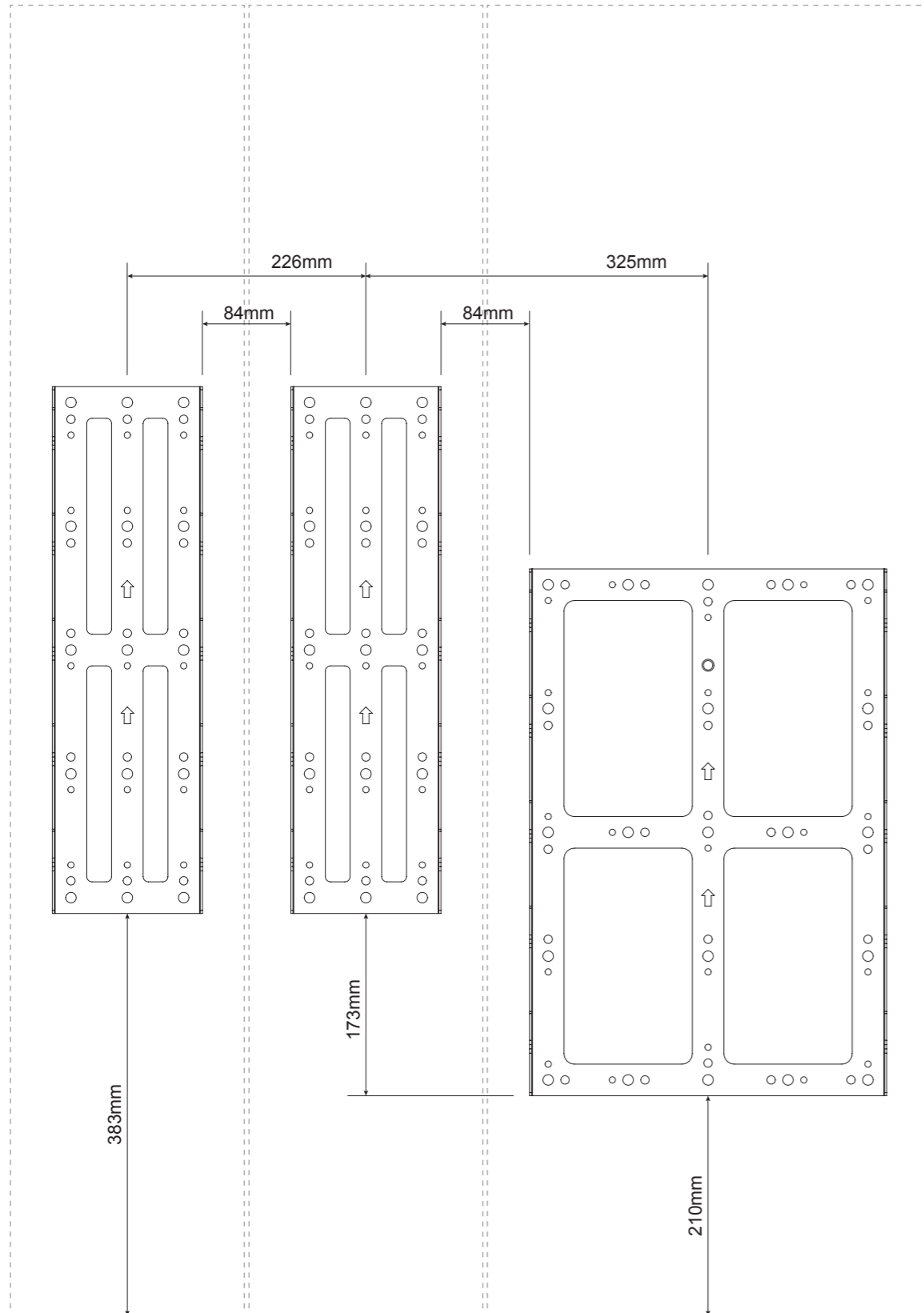


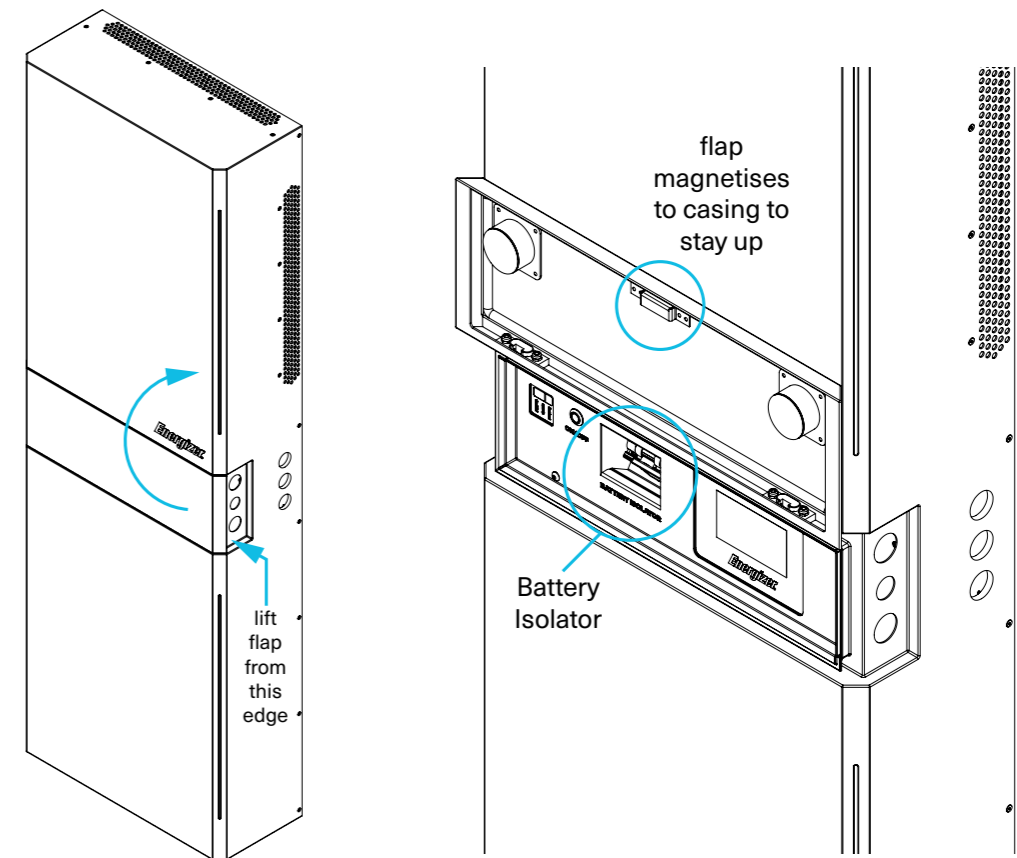
Fig. 10. Sub to Sub Spacer Mate

Stud Wall Mounting Instructions

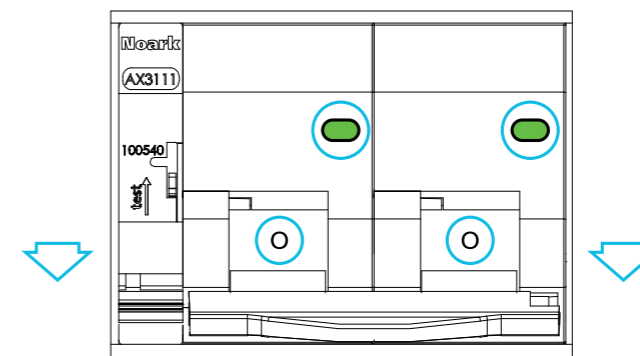


Step 4 – Mounting the Main Unit (HP-6M)

Firstly, ensure that the *Energizer* Homepower (HP-6M) battery isolator under the Magna-Flap is turned to the OFF position (refer to Fig. 11).



Green dot indicates OFF
Circle symbol indicates OFF



BATTERY ISOLATOR

Fig. 11. Main Unit Battery Isolator

Installing the battery onto the wall-mount bracket using lifting equipment is recommended. Adjust the height of the battery using the lift equipment until they are slightly above the marked areas, then utilising the “Slot” position guide stickers (refer to Fig. 12) located on the side of the mounting rails, align the top tooth of the bracket with the slot position as indicated. Then ensuring the teeth are aligned with the slots, both horizontally and vertically, push the unit onto the bracket and gradually lower it into place until it fully engages. Sticker may be peeled off after mounting.

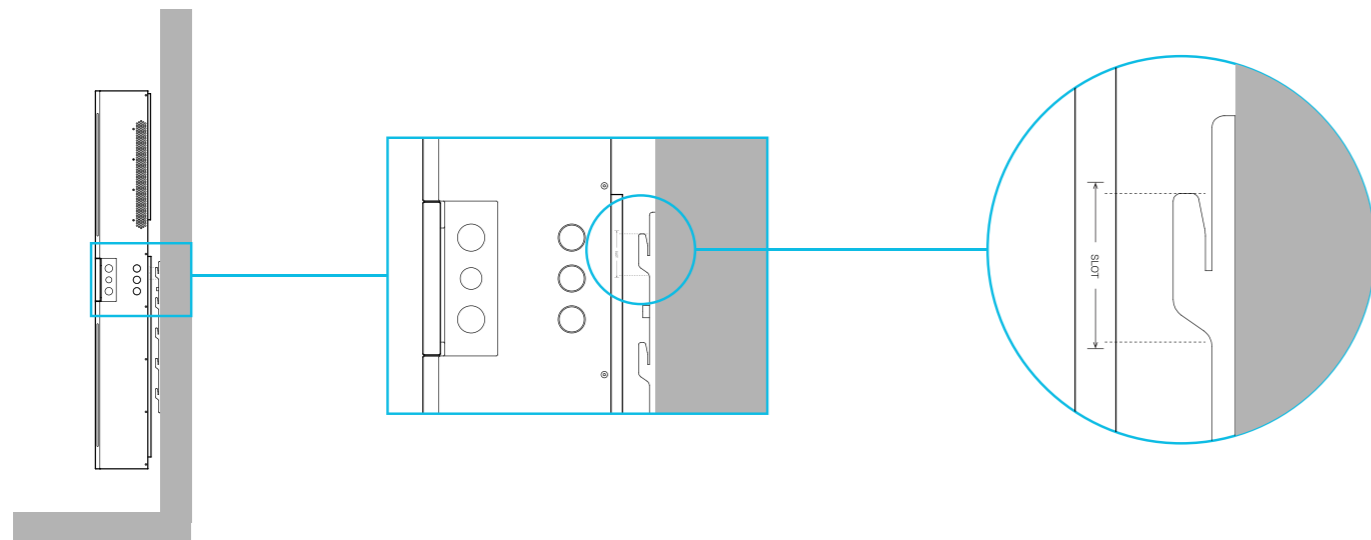


Fig. 12. Slot Position Guide

Step 5 – Accessing the Main Unit “Connection Zone”

Lift up the Magna-Flap on the HP-6M as shown in Fig. 13. and remove the Installer Access Panel (IAP) by removing the 4x M4 socket head screws using a 2.5mm Allen wrench, gently prize it out by gripping it from the left and right edges.

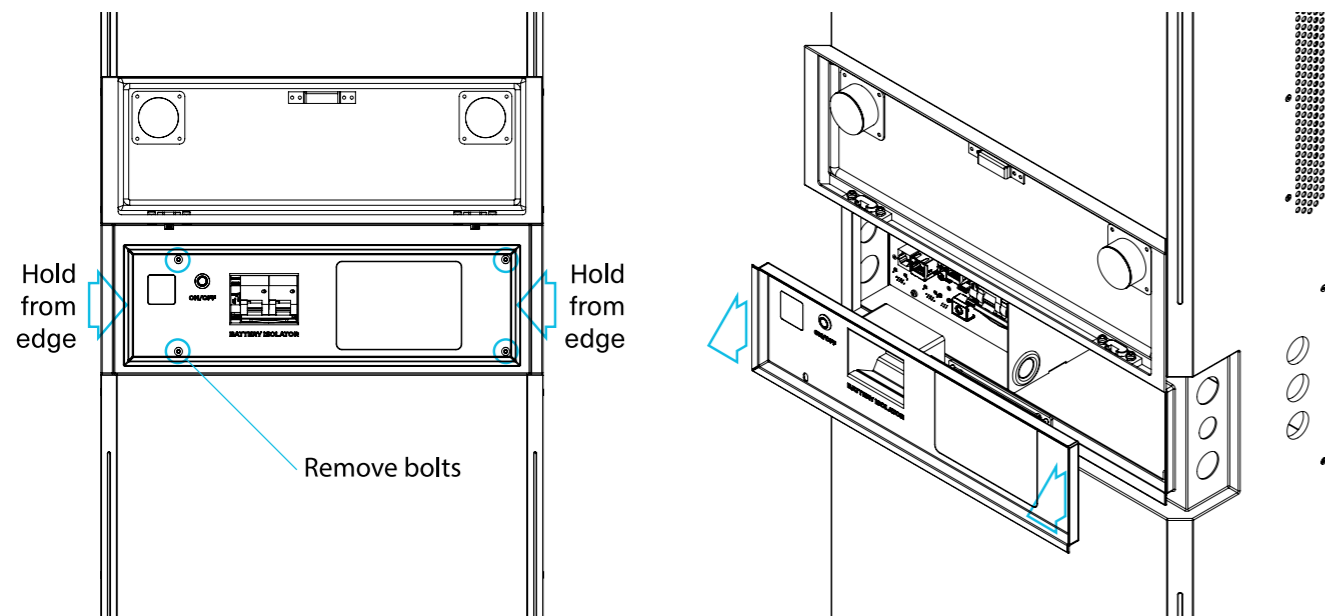
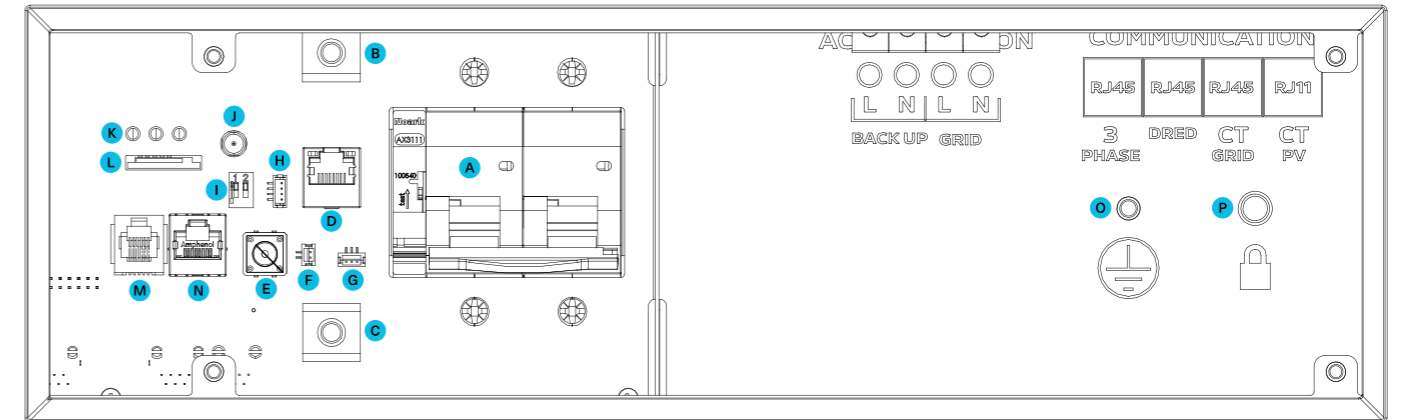


Fig. 13. Removing Main Unit IAP

Getting to Know Your Main Unit (HP-6M) Connection Zone

Once you have removed the IAP, you will gain access to all of the parts required for the installation. Please refer to the guide below to get familiar with the various parts. Please note that ports G, H & M are strictly for use by a qualified *Energizer* Homepower Technician.



- | | | |
|---|--|--------------------------------------|
| A: Battery Isolator | G: Comms Module Debugging Port | M: Diagnostic Port |
| B: Negative (-) Parallel Battery Terminal (DC) | H: Inverter Module Debugging Port | N: Parallel Comms Port (RJ45) |
| C: Positive (+) Parallel Battery Terminal (DC) | I: DIP Switch | O: Earthing Point (M5 Thread) |
| D: Ethernet Connection (RJ45) | J: Antenna Connection | P: Locking Point (M8 Thread) |
| E: BMS Reset | K: LED Indicators | Q: AC Terminals |
| F: BMS Reset Ext (ON/OFF Switch) | L: SIM Card Slot | R: Communication Ports |

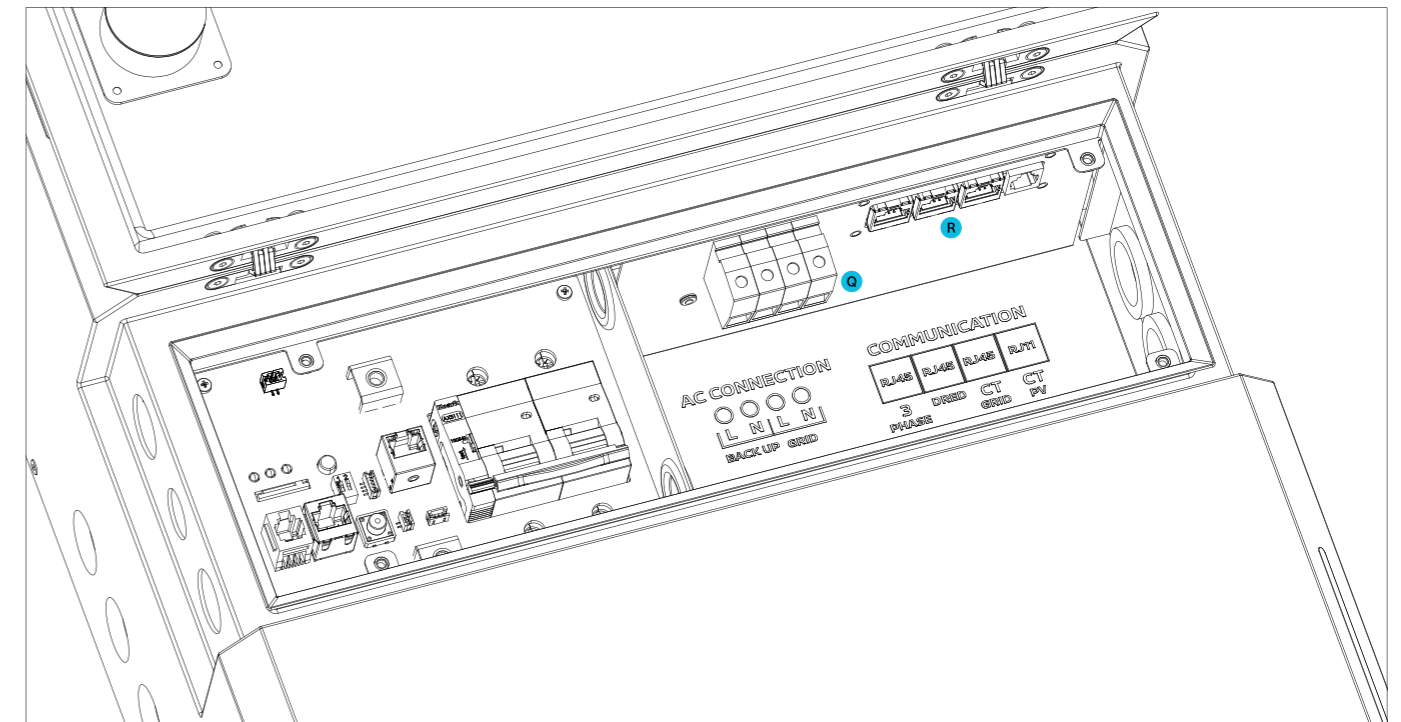


Fig. 14. Main Unit Connection Zone

Before making the connections, start by securing the unit to the bracket by installing the locking bolt as shown below.

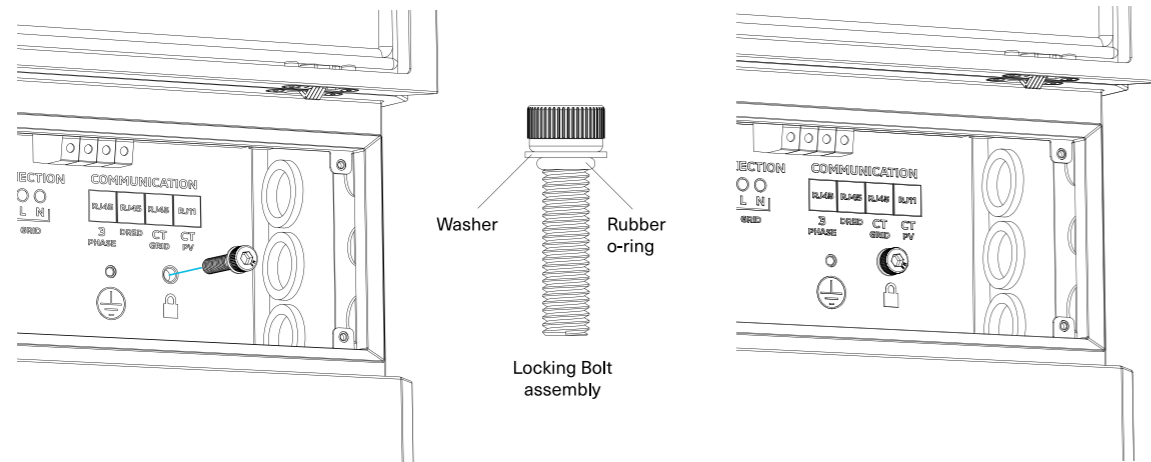


Fig. 15. Installing Locking Bolt

Step 6 – Electrical Connections (AC side)

✓ Electrical connections, including AC Isolator requirements for the *Energizer* Homepower HP-6 Series system must be carried out as per the recommended local & national electrical regulations.

Choosing the Side of Entry

Cables may enter the Main Unit from either the left or the right via the 3x M25 threaded openings. Carefully consider which side is going to provide a shorter and neater cable path back to the main switchboard and run cables accordingly.

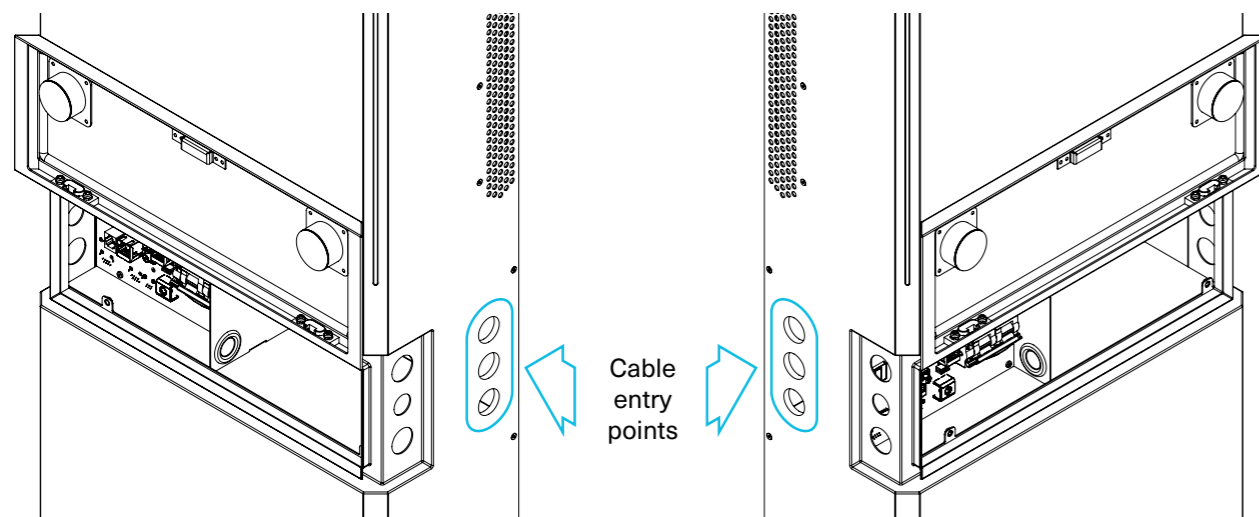


Fig. 16. Cable Entry Points

Connecting the Grid AC

Install a circuit breaker rated to handle the inverter max current, within the switchboard (or load centre). Screw in the M25 conduit adaptor supplied, then run the AC power cables (Line, Neutral & Earth) from the switchboard through medium duty or heavy duty corrugated conduit into the HP-6M Grid Terminals and common earthing point located within the connection zone.

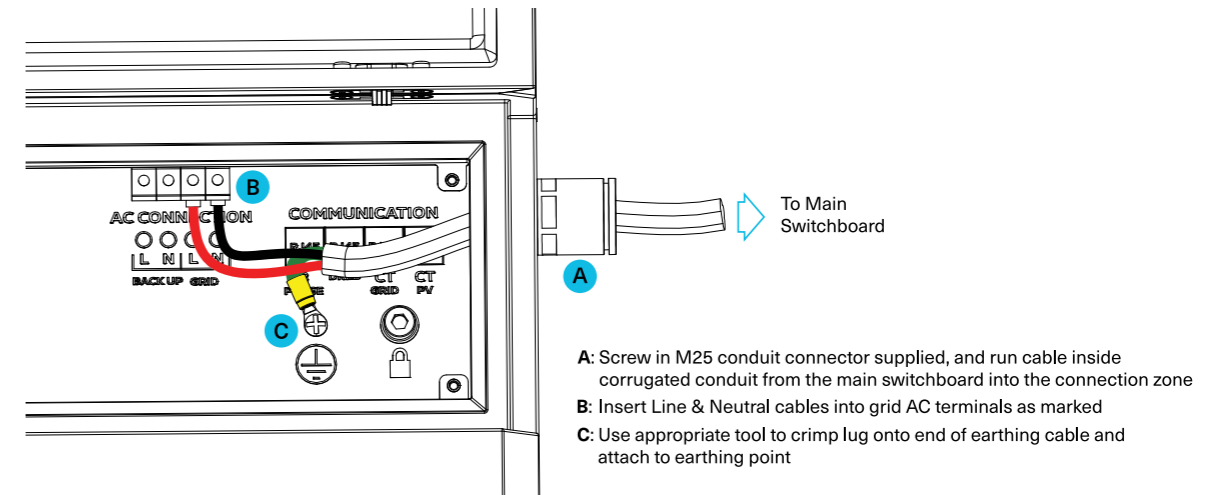


Fig. 17. AC Connection (Grid)

Connecting the Backup AC (if applicable)

In the absence of grid power or grid-failure, the Main Unit (HP-6M) has the ability to supply power to essential loads (not exceeding 3.6 kW/16 A) using a dedicated UPS function. Install a circuit breaker rated to handle the inverter Backup rated current within the switchboard (load centre). Screw in the M25 conduit adaptor supplied, then run the AC power cables (Line, Neutral & Earth) from the switchboard through medium duty or heavy duty corrugated conduit into the HP-6M Grid Terminals and common earthing point located within the connection zone.

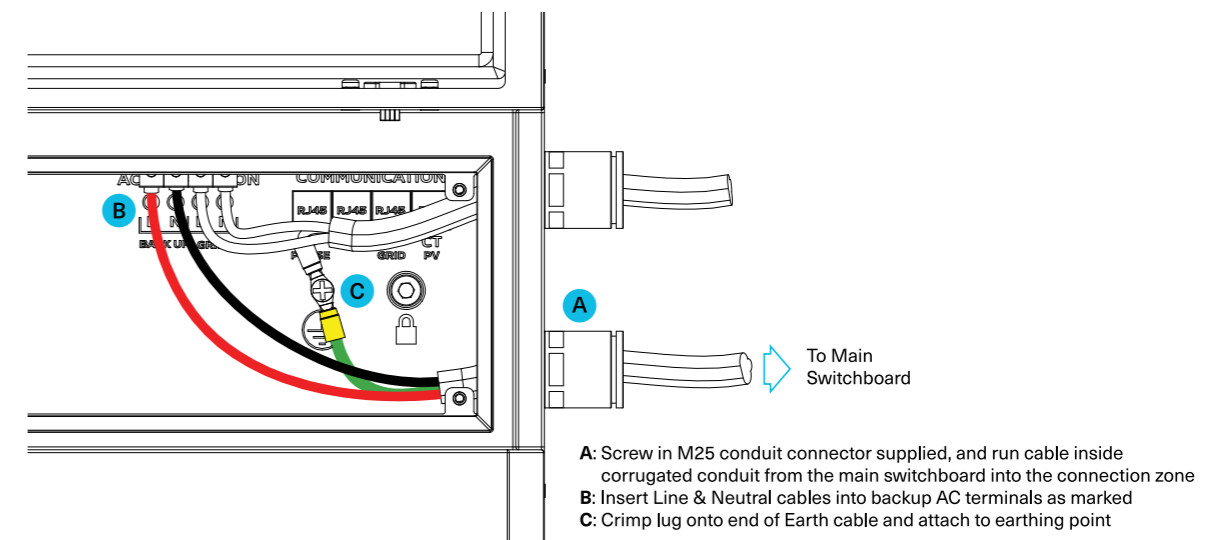


Fig. 18. AC Connection (Backup)

Step 7 – Connecting the Current Transformers (CTs)

The HP-6M is supplied with two Current Transformers, one to measure Solar PV generation and one to measure Utility Grid Consumption.

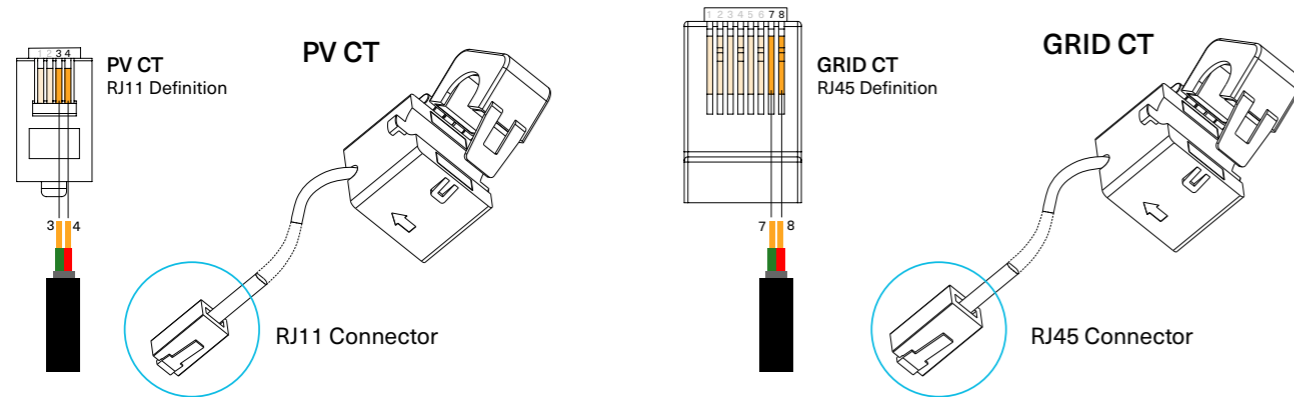


Fig19. CT Clamps & Connector Definition

Install the PV CT sensor on the Solar PV AC breaker with the arrow-mark on the CT pointing in the direction of the current flow (Solar -> Load). Screw in the M25 conduit adaptor supplied and run the CT cables through corrugated conduit into the connection zone and insert the connector (RJ11) into port labelled CT PV.

Install the Grid CT sensor on the Utility Grid Mains AC breaker with the arrow-mark on the CT away from the utility grid (or Grid -> Load). Screw in the M25 conduit adaptor supplied and run the CT cables through corrugated conduit into the connection zone and insert the connector (RJ45) into port labelled CT GRID.

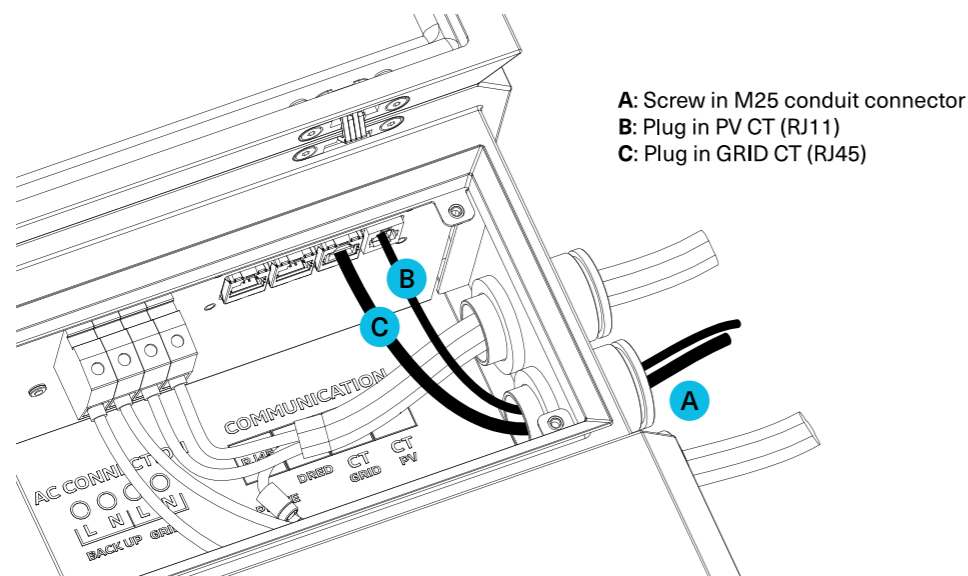


Fig. 20. Connecting CT Cables

Cable length on supplied CT clamps is 10m, however, if you need to run a longer cable the maximum allowable length is 100m.

WARNING! Any exposed CT Cables must be protected within an M25 Electrical Medium Duty Conduit, to protect it from exposure to the environment.

DRM Functions

For installations in Australia & NZ, The *Energizer* Homepower (HP-6M/HP-6S) supports a full suite of Demand Response Management functions (DRMs 0 – 8) that control the inverter power output to comply with utility regulations. The Main Unit (HP-6M) allows for the connection of a Demand Response Enabling Device (DRED) from an external source (e.g. energy retailer or distributor) to the Inverter's dedicated DRM port (RJ45). The inverter receives the MODBUS command & adjusts the power output as per the requirement. The system is compliant with DRM functions described as per the AS4777 & AS4755 standards (including DRMs 0 – 8) and can be enabled by *Energizer* Homepower upon request.

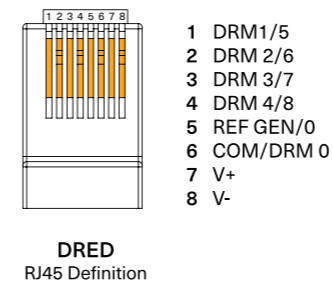
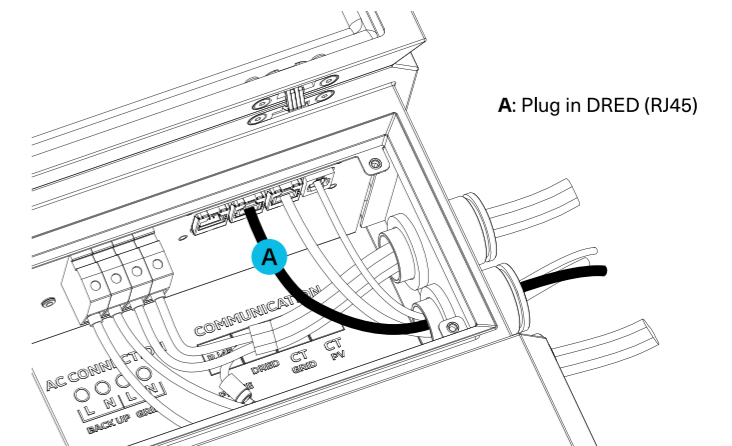


Fig. 21. DRM Port Specification



Step 8 – Communication Setup

The *Energizer* Homepower HP-6 Series uses an integrated communications module that supports 2.4G Wi-Fi, 4G/LTE and/or Ethernet for internet connectivity and communication with the *Energizer* Homepower Cloud. When selecting the method of communication, it is recommended to follow the order of preference where available.



The HP-6M supports only one method of communication at any one time, ensure that an appropriate method is selected (either 4G/LTE, Wi-Fi, or Ethernet) depending on the site conditions.

4G/LTE

Activate the 4G/LTE using the *Energizer* Homepower Installer App.

With the gold contacts of the SIM card facing down, and the notch facing out, insert until a click is felt to ensure it is locked into place. To remove the SIM, press further into the slot until a click is felt and eject it.

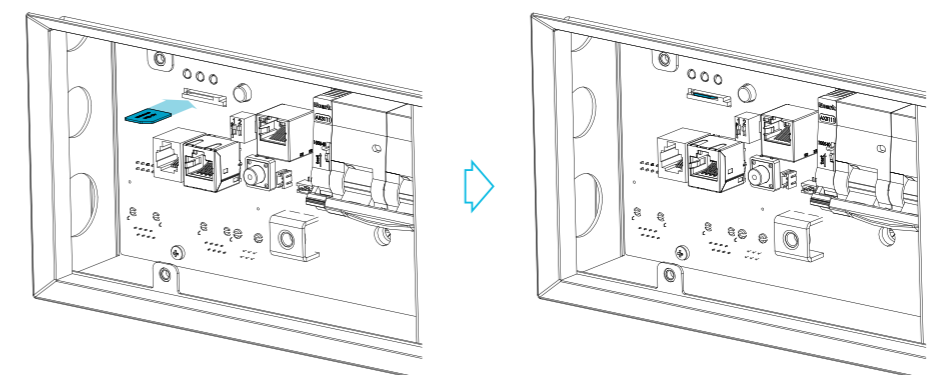


Fig. 22. 4G/LTE Inserting 4G/LTE SIM Card

2.4G Wi-Fi

The *Energizer Homepower HP-6M* also supports 2.4 GHz Wi-Fi connectivity. If this method is being used, the Wi-Fi configuration shall be carried out using the *Energizer Homepower Installer App*.

Antenna (Wi-Fi & 4G)

The *Energizer Homepower HP-6M* is supplied with a dual-purpose external antenna that supports both Wi-Fi and 4G/LTE band. The antenna module also serves as a hole blocker, therefore it must be installed regardless of the chosen connection method.

It must be installed on the same side as the entry points of the AC connection. Follow instructions below for right side installation.

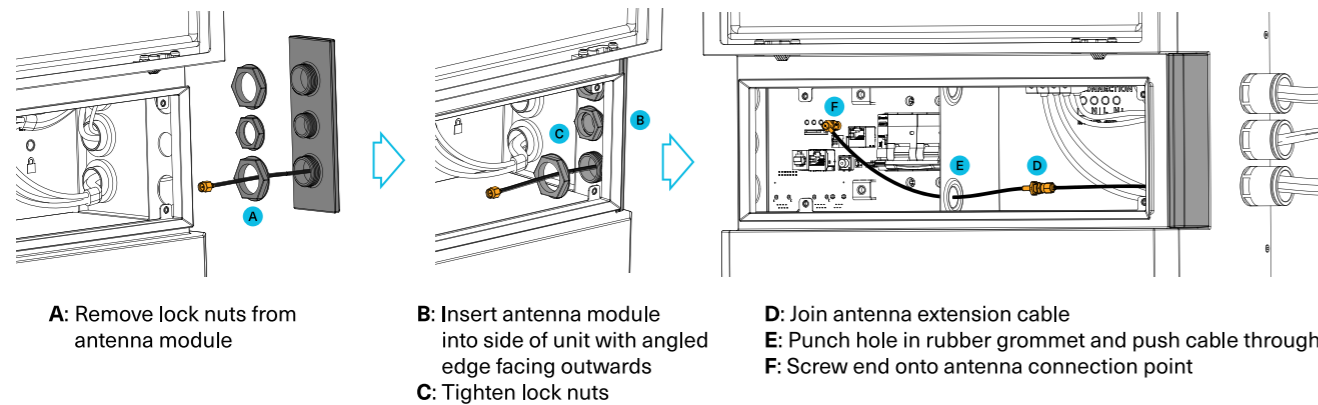


Fig. 23. Installing Antenna Module

For left side installation follow the same steps as the right-side installation with the exception of adding the antenna extension cable, as the cable path to the antenna port is much shorter when installed on the left.

Ethernet

To connect via Ethernet a communication cable must be run from the Ethernet port directly to a router within the home that is connected to the internet.

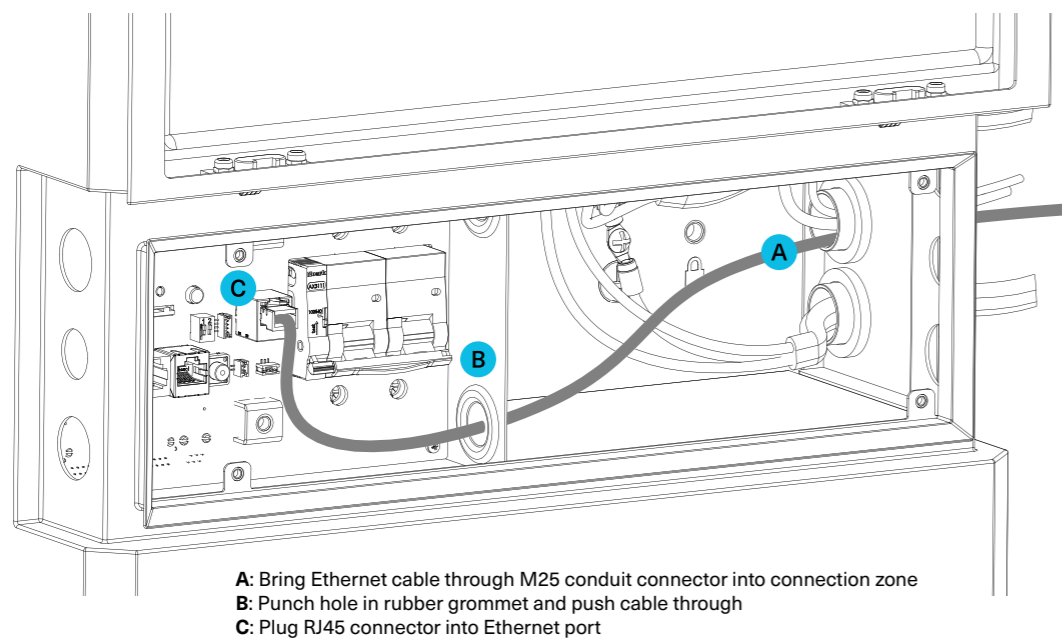


Fig. 24. Connecting Ethernet Cable

Blocking Openings

Block all unused threaded openings on either side using the aluminium hole blockers provided to ensure a water-tight seal.

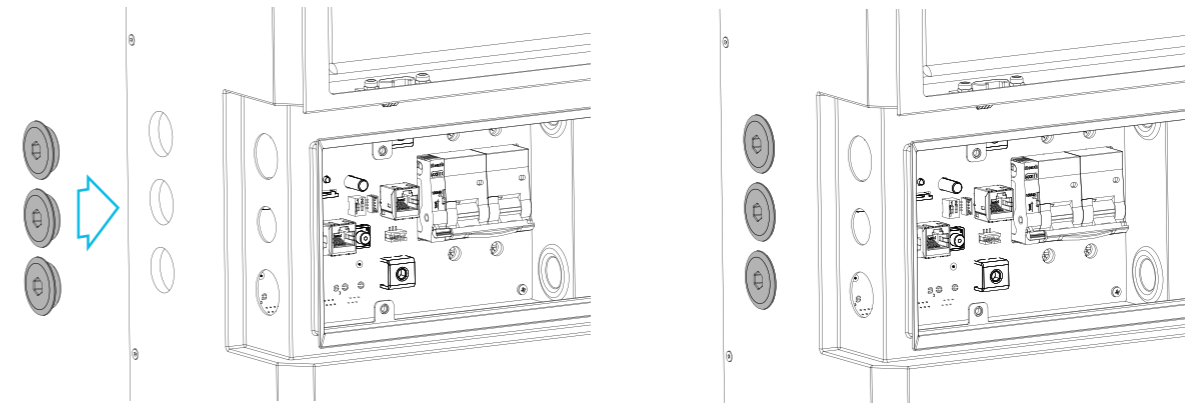


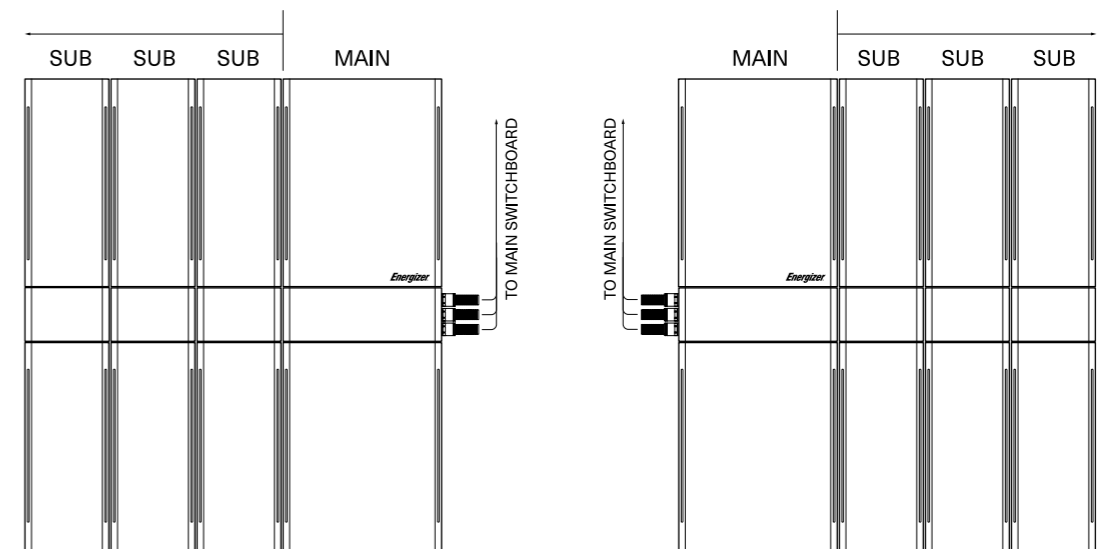
Fig. 25. Installing Hole Blockers

Step 9 – Multiple Battery Installations



NOTE: Steps 9 & 10 apply only to the installation of the Sub Units (HP-6S). If the *Energizer Homepower (HP-6M/HP-6S)* is limited to just the Main Unit (HP-6M), please skip to Section 6 (pg. 31) to finish & demonstrate the installation.

Sub Units (HP-6S) are always installed on the opposite side to the AC connections of the Main Unit (HP-6M), e.g. if the AC cables are fed in through the right side of the Main Unit, the Sub Units must be installed on the left side of the Main Unit, and vice versa as shown below. Please refer to Step 3 on pg. 15 for placement and mounting instructions.



Connections on the **right side** of Main Unit. Sub Units positioned on the **left side**.

Connections on the **left side** of Main Unit. Sub Units positioned on the **right side**.

Fig. 26. System Configurations

Step 10 – Mounting the Sub Unit(s)(HP-6S)

Firstly, ensure that the Sub Unit (HP-6S) battery isolator under the Magna-Flap is turned to the OFF position (refer to Fig. 27) below.

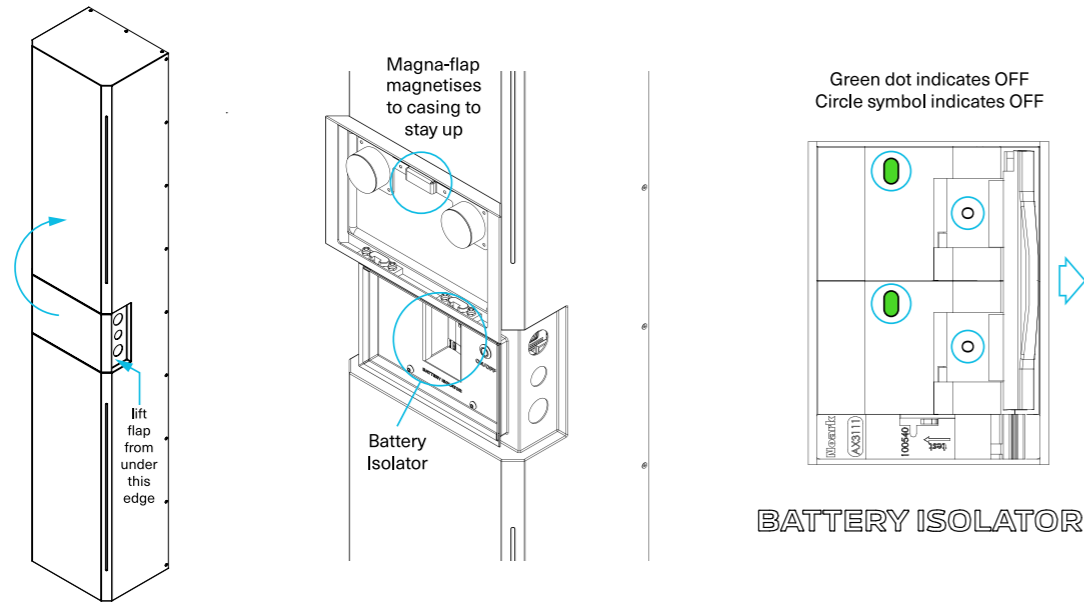


Fig. 27. Sub Unit Battery Isolator



NOTE: Follow the same mounting procedure as outlined in Step 4 (Fig.12) on pg. 18.

Step 11 – Accessing the Sub Unit “Connection Zone”

Lift up the Magna-Flap on the HP-6S as shown in Fig. 28. and remove the Installer Access Panel (IAP) by removing the 4x M4 socket head screws using a 2.5mm Allen wrench and gently prizing it out by gripping it from the left and right edges.

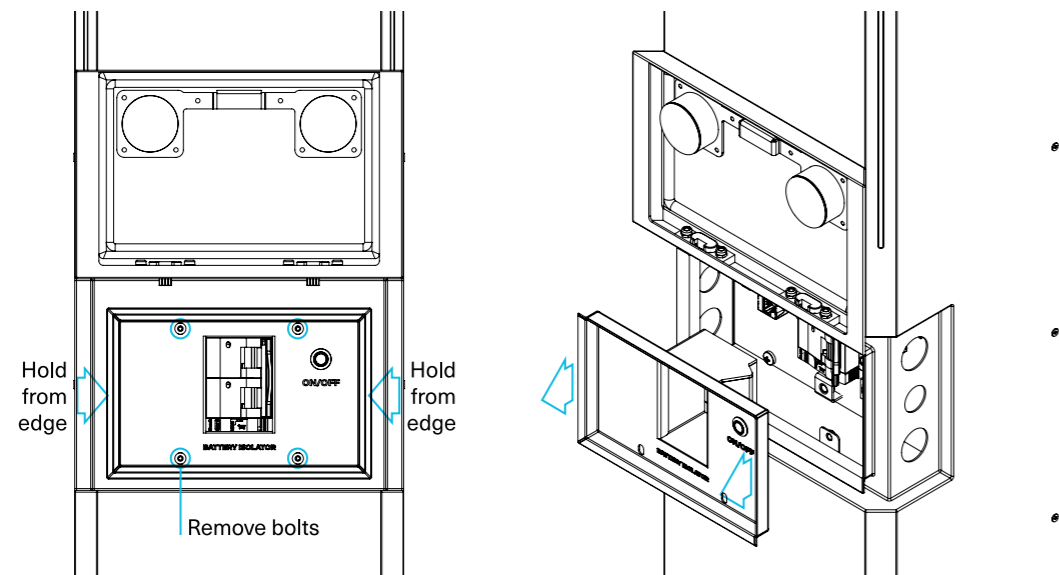


Fig. 28. Removing Sub Unit Installer Access Panel (IAP)

Getting to Know Your Sub Unit Connection Zone

Once you have removed the IAP, you will gain access to all parts required for the installation. Please refer to the guide below to get familiar with the various parts. Please note that port F is strictly for use by a qualified *Energizer* Homepower Technician.

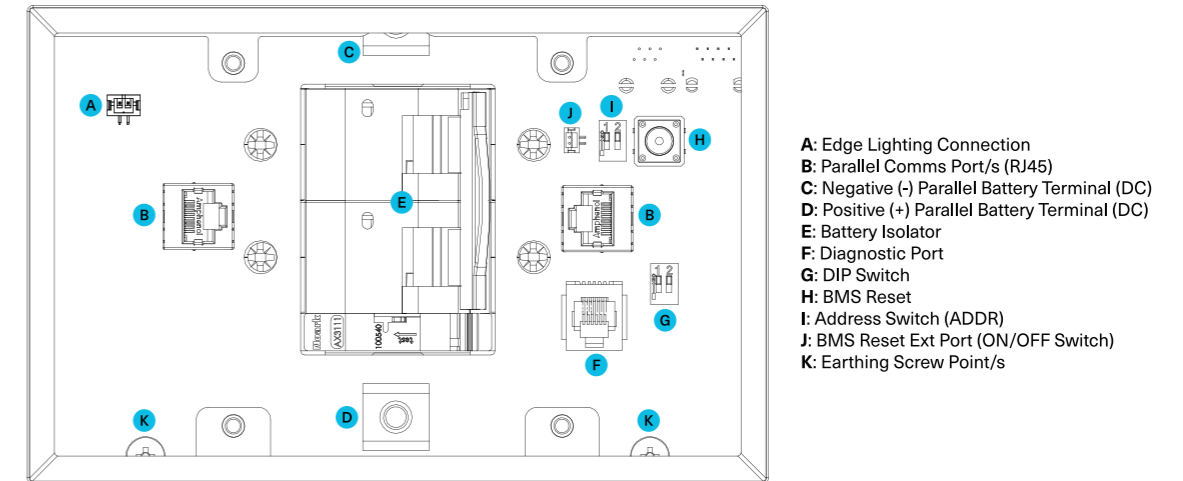


Fig. 29. Sub Unit Connection Zone

Connections

When installing one or more Sub Units, carefully follow the steps below:

1. In the Sub Unit accessories box you are provided with 4x M25 glands & 2x M20 cable glands.

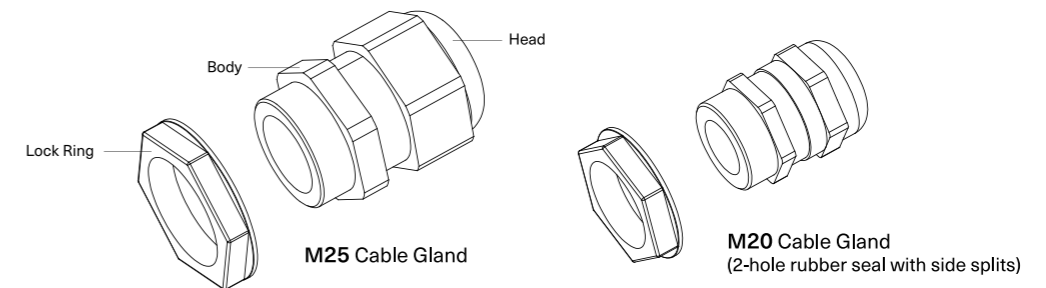


Fig. 30. Cable Glands

The smaller M20 cable glands are used for the parallel comms and earth cables, and the larger M25 cable glands are used for the DC cables. Remove the lock rings and install the cable glands into the units from the inside, pushing the thread through the openings, then screw on the lock rings from the outside, tight enough to ensure a water-tight seal.

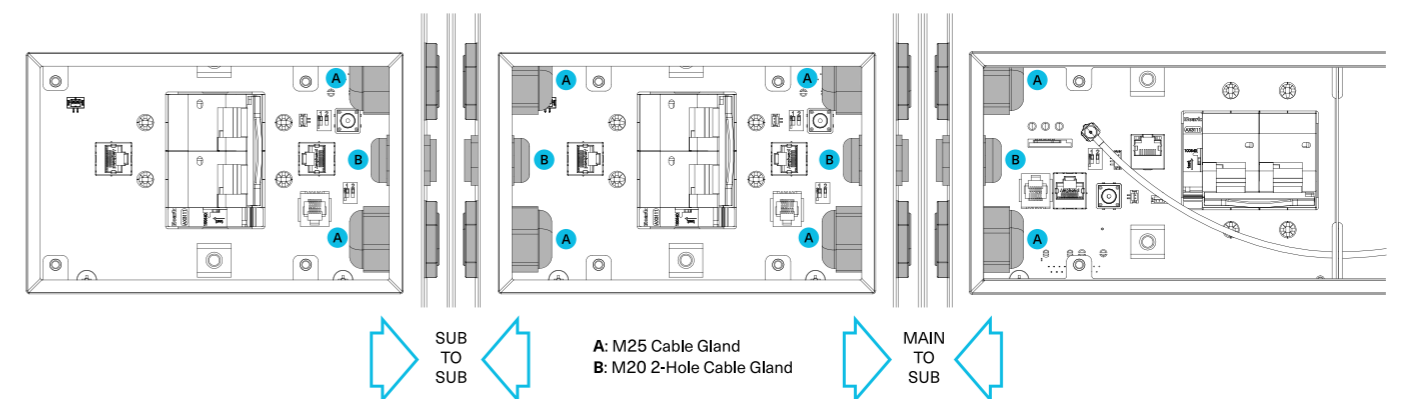
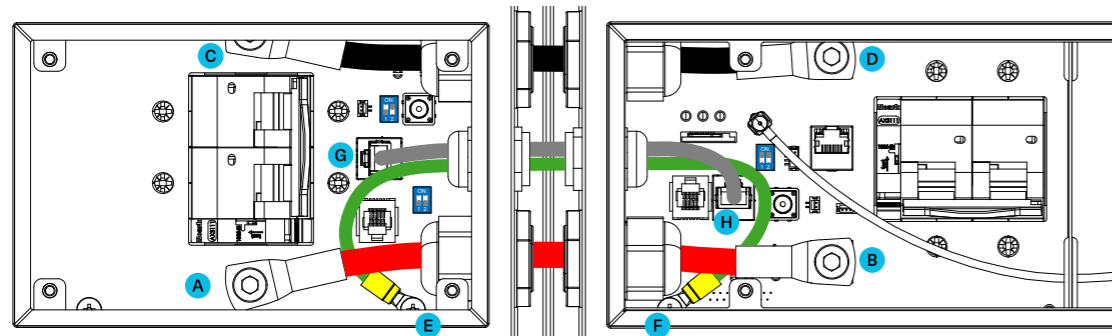


Fig. 31. Installing Cable Glands

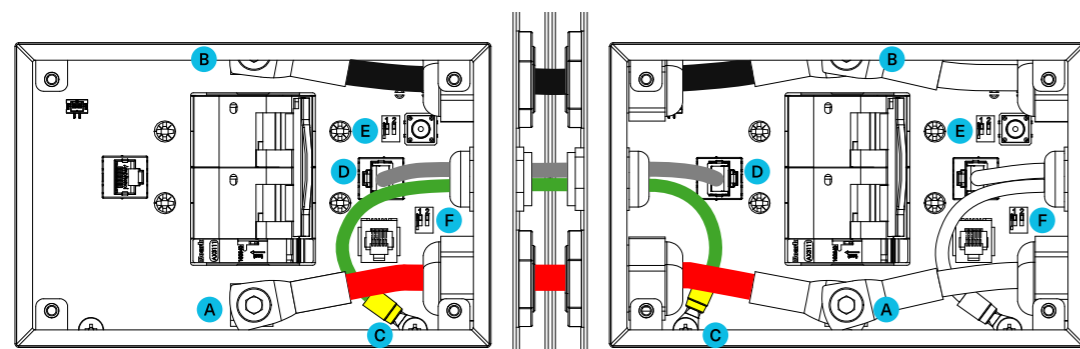
2. Remove the head and rubber seal (2-hole with side splits) off the M20 cable glands.
3. Feed parallel comms and earth cables through cable glands from one connection zone to the other.
4. Insert the cables into the rubber seal through the splits on the edges of the holes in the rubber and ensure the rubber seal is orientated the correctly and push it back into gland body with the cables running through it.
5. Slide cable gland heads over the cables and screw back onto gland body.
6. Plug in RJ45's shown as "G" and "H" in Fig. 32.
7. Affix earth cable lugs onto earth points as shown as "E" and "F" in Fig. 32.
8. Feed DC cables through the corresponding cable glands. **Use short DC cables for Sub Unit on left side of Main Unit/long DC cables for Sub Unit on right side of Main Unit.**
9. Using a 5mm Allen wrench affix lugs onto terminals (A-B/C-D in Fig. 32.) with the M6 bolts supplied.
10. Follow "Address configurations table" (Table 4. in page 29) to set the DIP switch and ADDR switch correctly before booting up.



- A: SUB Positive (+) Parallel Battery Terminal (DC)
- E: SUB Earthing Screw Point
- B: MAIN Positive (+) Parallel Battery Terminal (DC)
- F: MAIN Earthing Screw Point
- C: SUB Negative (-) Parallel Battery Terminal (DC)
- G: SUB Parallel Comms Port (RJ45)
- D: SUB Negative (-) Parallel Battery Terminal (DC)
- H: MAIN Parallel Comms Port (RJ45)

Fig. 32. Main (HP-6M) to Sub (HP-6S) Connection

When installing Sub to Sub, refer to Fig. 33. below and follow the general procedure as outlined for main to sub. Once again pay careful attention to the address configurations table to ensure the DIP & ADDR switches are correct.



- A: Positive (+) Parallel Battery Terminal (DC)
- D: Parallel Comms Port (RJ45)
- B: Negative (-) Parallel Battery Terminal (DC)
- E: DIP Switches
- C: Earthing Screw Points
- F: ADDR Switches

Fig. 33. Sub (HP-6S) to Sub (HP-6S) Connection



NOTE: In the event the supplied EXT Comms data cable needs to be remade, please follow the definition as shown below. **BOTH CABLE AND RJ45 CONNECTOR MUST BE SHIELDED.**

Straight Through (8-wire) Patch Cable

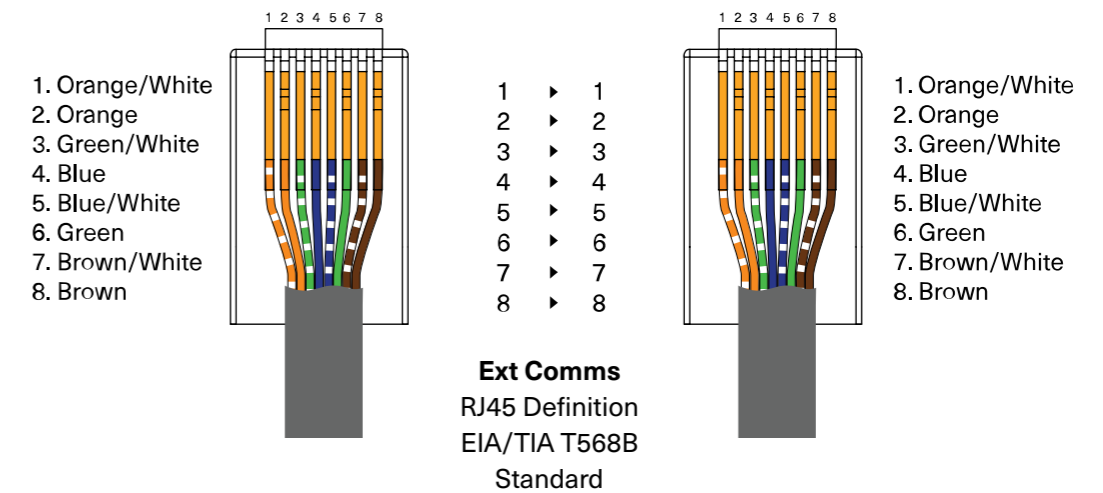


Fig. 34. Parallel Communication Cable

Addressing

Each Main Unit (HP-6M) & Sub Unit is assigned a unique address using on-board two-digit binary Address DIP switches, one (1) on the Main Unit labelled **DIP** and two (2) on the Sub Units one labelled **DIP** and another labelled **ADDR** which allow the BMS to identify & control the battery modules individually.

Please refer to table below for the correct Address Configuration depending on the system installed.

		SYSTEM ADDRESS CONFIGURATIONS					
No. of Sub Units	Main Unit	Sub Unit 1		Sub Unit 2		Sub Unit 3	
		DIP	ADDR	DIP	ADDR	DIP	ADDR
0		-	-	-	-	-	-
1				-	-	-	-
2						-	-
3							

Table 4. System Address Configurations

Sealing the System

Once addressing has been completed, seal the remaining side openings by installing the side cover on the opposite side of the antenna module on the last unit in the series. E.g. if the system consists of only a Main Unit with the antenna module installed on the right side, then it should be installed on the left side as shown below.



Fig. 35. Sealing the System

Replacing the IAP's

Before switching on the system, the IAP (Installer Access Panels) need to be replaced.

Main Unit (HP-6M)

1. Connect the ON/OFF cable - orientate the two ends correctly before pushing them together
2. Connect the ribbon cable - ensure correct alignment, then press the connector in firmly so the jaws close over.

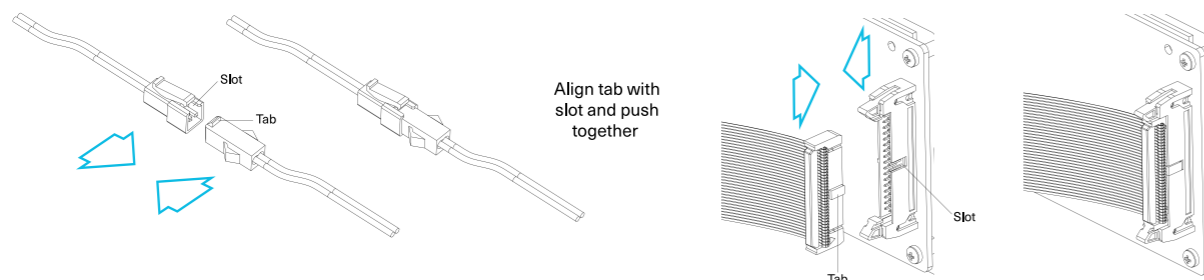


Fig. 36. Replacing the IAP's

3. Carefully arrange the cables to ensure that they are not jammed as you place the IAP back in position.
4. Screw the 4x M4 socket head screws back into place.

Sub Unit(s) (HP-6S) - if applicable

1. Connect the ON/OFF cable - orientate the two ends correctly before pushing them together
2. Carefully arrange the cables to ensure that they are not jammed as you place the IAP back in position.
3. Screw the 4x M4 socket head screws back into place.

6. Installation Cross-Check

Before energizing the system, please ensure that the entire *Energizer* Homepower HP-6 Series system has been installed following correct procedure. The installer is advised to take sufficient photos of the battery, electrical wiring and associated switchboards & must complete the start-up procedure described below;

1. Check if the *Energizer* Homepower (HP-6M/HP-6S) is firmly installed on the wall-mount bracket.
2. Ensure that the electrical conduits & cable entry points are secure & properly sealed.
3. Verify all electrical wiring including the AC, DC, CT sensors & communication cables are correct and neatly arrange the wires within the Connection Zone.
4. Verify that the addressing switches for all units (HP-6M & HP-6S) are positioned accurately as per Table 4.



WARNING! The system detects the address of the HP-6M & each HP-6S module only during start-up, and not during operation. Please ensure that correct addresses are configured prior to turning the system on via the ON/OFF switch. If incorrect addresses have been set, please turn off the system via the ON/OFF switch change the DIP switch positions, and then turn the system back on via the ON/OFF switch.

5. Switch on the Main Unit and the Sub Unit(s), if applicable, by pressing the ON/OFF switch(es) located on the IAP(s) for 2 seconds. You should notice a short flash on the edge lighting.
6. Switch on Battery Isolator on the Main Unit (HP-6M) then on all Sub Units (HP-6S) if applicable.
7. Turn on the Main Circuit breaker (Grid side) and proceed to turn on any AC Isolators if applicable.

If Backup circuits are connected, then turn on the AC breakers on the Backup side, along with any AC Isolators and/or connected RCD/RCBOs if applicable.

Residual Current Device & Fault Protection

If the local standard or regulation mandates the use of an external RCD (residual current device) or RCBO (residual current circuit breaker with overcurrent protection) for protection against electrocution or fire risk by an earth fault, it is recommended to use a Type A or Type B RCD/RCBO upstream of the *Energizer* Homepower HP-6M system. For example, in Australia it is recommended to use a 30mA/25A, Type A or B, RCD/RCBO to be connected to the backup circuit, and follow the local electrical requirements for AC supply, e.g. AS/NZS 3000:2018.

7. Commissioning

The *Energizer* Homepower Installer App requires a mobile device with access to Internet and Bluetooth. The HP-6M must be used to commission the *Energizer* Homepower (HP-6M/HP-6S) as shown within the *Energizer* Homepower Commissioning Video. energizerhomepower.com/app/installation.

1. Use the *Energizer* Homepower Installer App to connect your mobile device (either Android/iOS) to the *Energizer* Homepower (HP-6M/HP-6S).
2. Verify Address Configuration of all connected units.
3. Follow the prompts within the *Energizer* Homepower Installer App to connect the *Energizer* HP-6M to the internet (using either Wi-Fi, 4G/LTE or Ethernet) and commission the system with the correct settings.
4. Once communication is established, check the real-time information (infographics) to verify that the *Energizer* Homepower (HP-6M/HP-6S) is working correctly.
5. Return the Magna-Flap(s) to its/their original position on Main Unit and Sub Unit(s) if applicable.

Firmware Version, Grid Profile Setting and Power Quality Response

This information is available inside of the Fleet Management System, navigate to a desired plant and view the values as per below screenshots:



Fig. 37. Firmware Versions

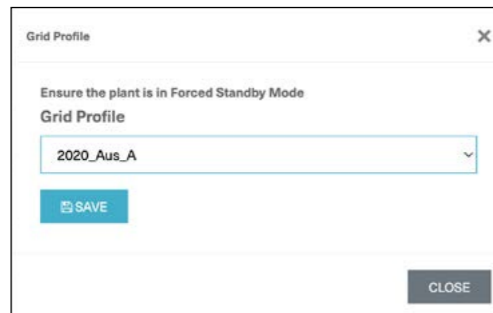


Fig. 38. Grid Profile Settings

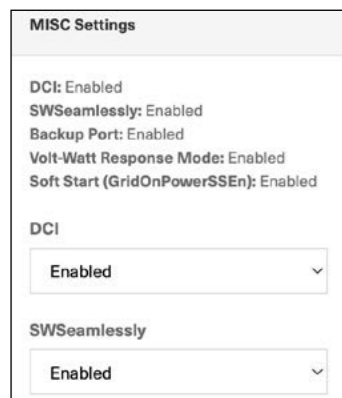
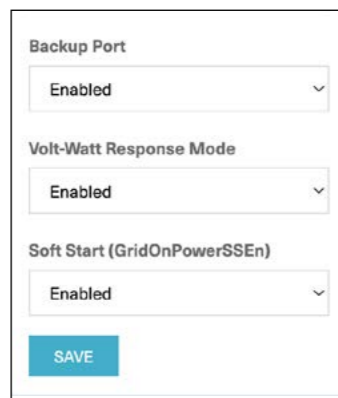


Fig. 39. Power Quality Response Mode



NOTE: For compliance with AS/NZS 4777.2:2020 please select from Australia Region A, B,C or New Zealand. Please contact your local grid operator on which region to select.

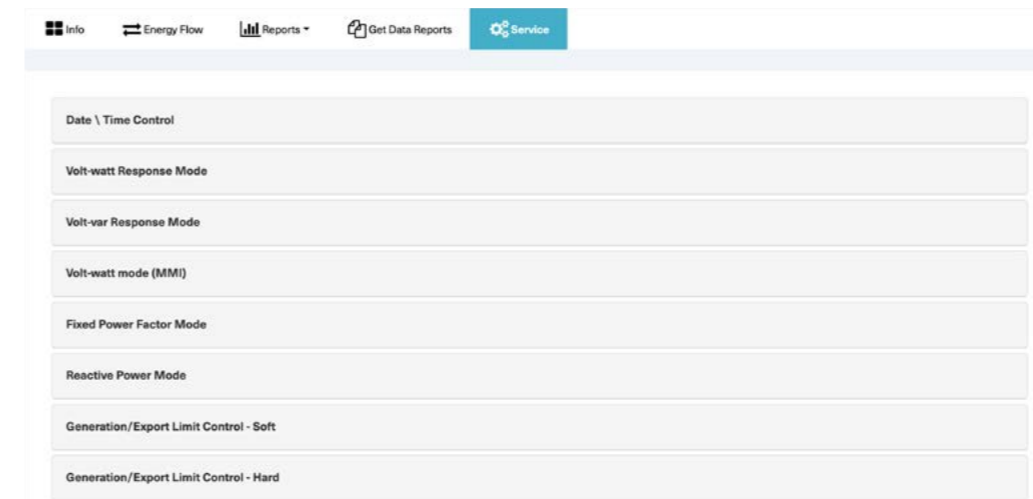


Fig. 40. Power Response Modes

Power Off Sequence

1. If Backup/UPS loads are connected, turn off respective AC Isolators.
 - a. If applicable, turn off any AC Isolators connected on the Backup side.
2. Turn off the Main AC Isolator, connected to the *Energizer* Homepower HP-6 Series system.
 - a. If applicable, turn off any AC Isolators connected on the grid side.
3. Turn off the Battery Isolators on all connected units as described below:
 - a. Lift the Magna-Flap on the HP-6M to uncover the Installer Access Panel, housing the Battery Isolator and the LCD.
 - b. If HP-6S unit(s) are installed, lift the Magna-Flap to uncover the Installer Access Panel, housing the Battery Isolator.
 - c. The Magna-Flaps on the HP-6M (and HP-6S) units will magnetically attach to the metal casing/body of the unit directly above.
4. Press and hold the ON/OFF Switch on the HP-6M, until a long buzzer noise is heard. Repeat the same for all connected HP-6S unit(s). At this stage, you have powered off the *Energizer* Homepower HP-6 Series systems.
5. Return the Magna-Flaps to their original position on the HP-6M and all connected HP-6S units.



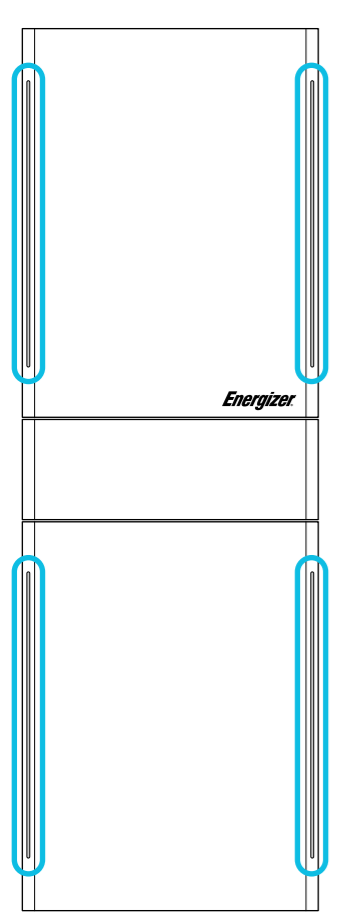
DANGER! Although the system is OFF, a certain amount of reserve charge may remain on the AC/DC terminals. It is recommended to wait 5 mins to ensure full energy discharge.



DANGER! Please do not attempt to disassemble the HP-6M or HP-6S any further, as it may cause damage to the product or serious human injury. Any further disassembly must be conducted only by a qualified *Energizer* service technician to ensure product safety. Unsolicited disassembly shall void any applicable manufacturer (or performance) Warranty.

8. Using the System

The *Energizer Homepower HP-6 Series* system can be monitored using a variety of interfaces including Edge Lighting, an LCD panel, and the *Energizer Homepower App*. The Edge Lighting is designed to convey at-a-glance information about system operating states such as Normal, Stand-by and Fault.



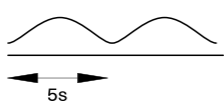
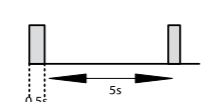
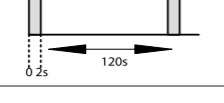
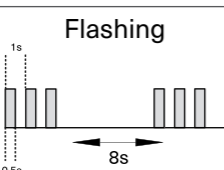
Usage State	Sequence	Description
Charging or Discharging	<p>Breathing</p> 	The battery indicator LED mimics a breathing function when the <i>Energizer Homepower HP-6 Series</i> units are either charging or discharging. The LED brightness varies between 20% - 80%.
Standby	<p>SoC 100% - 10%</p> 	When the battery is in Standby mode & the State of Charge is greater than 10%, the LEDs flash once (duration 0.5s) over every 5s.
	<p>SoC 10% - 5%</p> 	When the battery is in Standby mode & the State of Charge is between 10% - 5%, the LEDs flash once (duration 0.2s) over every 120s.
	<p>SoC 5% - 0%</p> <p>OFF</p>	When the battery is in Standby mode & the State of Charge is lower than 5%, the LEDs cease flashing to save energy.
Fault	<p>Flashing</p> 	These are indicated by a sequence of 3 flashes (duration 0.5s). This sequence shall repeat every 8s until the fault is resolved.

Table 5. *Energizer Homepower HP-6 Series* – Edge Lighting

To activate the LCD panel, swipe from left to right on the *Energizer Logo*. The LCD panel displays real-time information of solar generation, energy consumption from house and Backup (UPS) loads, Feed-in (Export) and battery State-of-Charge (SoC).



Fig. 41. Activate LCD Panel

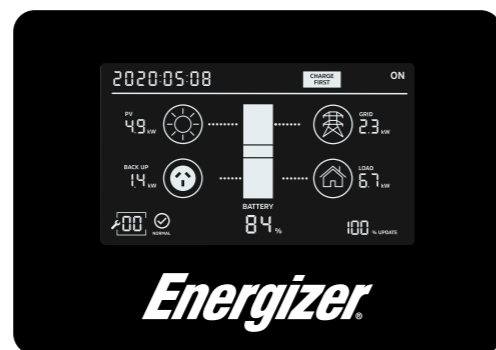


Fig. 42. System Status Panel

9. Maintenance & Support

The *Energizer Homepower HP-6 Series* uses the *Energizer Homepower Installer App* for detection, troubleshooting and resolution of faults. During the commissioning, the Installer App is designed to run diagnostics aimed at verifying system parameters, identifying installation errors, and providing appropriate resolutions. In case an error/fault is detected, the App shall provide a relevant fault code and a brief description of the fault. It must be used to identify, diagnose, and troubleshoot the error/fault.

Maintenance

The *Energizer Homepower HP-6 Series* does not require any routine maintenance. For accumulation of dirt, dust, or debris, please ensure the product frame is cleaned using a soft dry cloth. The *Energizer HP-6M* has vents located on the top, left and right-hand side of the unit for natural convection, and these must be kept free of objects and/or obstructions.



WARNING! Do not use solvents and/or cleaning fluids to clean the *Energizer Homepower HP-6 Series* units or expose them to harsh chemicals or vapours.



WARNING! Do not use any third-party accessories, fluids, or paint to alter the internal or external components including the exterior casing.

Troubleshooting (For Installers)

If the system is not functioning correctly, use the *Energizer Homepower Installer App* to run diagnostics on the system and carry out suggested resolutions. You may also check the system errors that appear on the LCD panel located under the Magna-Flap.



NOTE: The LCD panel located under the Magna-Flap can be activated to perform advanced troubleshooting using the *Energizer Homepower Installer App*. This feature will have to be enabled by contacting *Energizer Homepower*.

Emergency Procedures

The *Energizer Homepower HP-6 Series* has a lithium ion battery that contains several chemicals and organic electrolytes, which are hermetically sealed within a metal enclosure. There is no risk of chemical exposure under routine use of the unit's specific application. In case of an emergency, where there is a genuine threat to health or safety, contact emergency personnel or fire response teams immediately and present the Safety Datasheet (SDS).



DANGER! Do not perform the suggested actions listed below unless it is safe to do so.

In case of a fire:

- Inform all affected people e.g., family, neighbours etc of the issue and evacuate the area.
- Turn off the AC breakers connected to the HP-6M unit within the switchboard.
- Use dry chemical (ABC), carbon dioxide or alcohol resistant foam extinguishers.
- Do not use water jets or streams, as it may scatter or spread chemicals.

In case of water leakage and/or flooding:

- Inspect from a safe distance to ensure that the *Energizer* Homepower HP-6 Series system and/or associated electrical equipment are not submerged. Ensure to stay out of water surrounding the system.
- If safe to approach, turn off the AC breakers connected to the Main Unit (HP-6M) within the switchboard.
- Stop the source of water leakage, by redirecting flow and/or contacting plumbing services.
- In case the unit is submerged, do not approach until water level has receded and capture images of damage.
- Contact your *Energizer* Homepower reseller for further troubleshooting and/or safe product recovery procedures.

In case of smoke or related smells:

- Turn off Battery Isolators on the Main Unit (HP-6M) and Sub Units (HP-6S) if applicable.
- Turn off the AC breakers connected to the Main Units (HP-6M) within the switchboard.
- Ventilate the location of the *Energizer* Homepower HP-6 Series unit(s).
- If smell persists, contact your *Energizer* Homepower authorised reseller.



DANGER! Do not turn on the system prior to receiving technical advice and/or without the written consent of your *Energizer* Homepower authorised reseller

First Aid Measures

If the battery is physically damaged & results in battery leakage, the following measures must be taken to reduce the impact of the exposure. Any accidental exposure to the electrolytes or chemicals must be treated immediately with first aid.

- Present the Safety Data Sheet (SDS) to the medical professional in attendance
- Eyes - flush eyes with water for at least 15 minutes, occasionally lifting the upper & lower eyelids. Seek medical attention if eye irritation persists.
- Skin - remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes. Seek medical attention if skin irritation persists.
- Ingestion - do not induce vomiting or place anything into the mouth of an unconscious person. For advice, contact a Poison Information Centre on 13 11 26 (Australia wide) or a doctor at once.
- Inhalation - evacuate the affected from the hazardous area and allow them to rest in a position comfortable for breathing with access to fresh air.
- Adverse effects not expected to occur from this product. Long term exposure may cause substance accumulation and/or irritation.
- Medical attention - treat symptomatically. If symptoms persist, get medical aid by calling a physician for appropriate medical advice.

Notes:

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