

Ampd Enertainer

User Guide



Ampd Entertainer

User Guide

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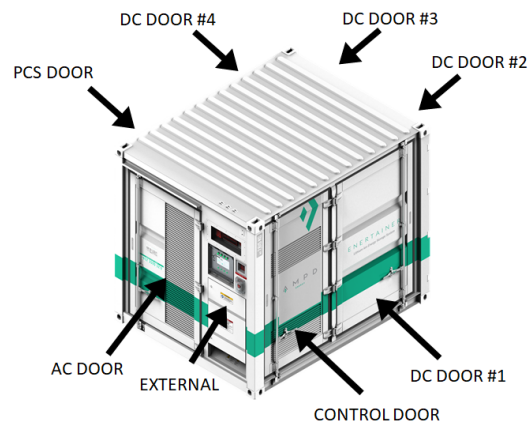
1. Overview

The Ampd Enertainer is an advanced energy storage system that provides diesel free power for the next generation of construction projects. It is using state-of-the-art lithium-ion technology to provide clean and efficient electrical energy to the heavy equipment, which would ordinarily be powered by a diesel generator. This document includes a general overview of the system as well as summarized instructions for startup, shutdown, general operation, and emergency response.



The Enertainer is a 10ft container that consists of seven accessible doors. Each door is marked with a label on the outside with accessibility to different parts of the system. The names of the doors are as follows:

- Control Door
- AC Door
- PCS Door
- DC Door #1-4



There are two main sections of the Enertainer, called the AC room (consisting of components that use AC electricity) and the DC room (consisting of components that use DC electricity). The AC room is accessed through the Control Door, AC Door, and PCS Door. The DC room is accessed through DC Door 1, 2, 3 and 4.

1.1 AC Room

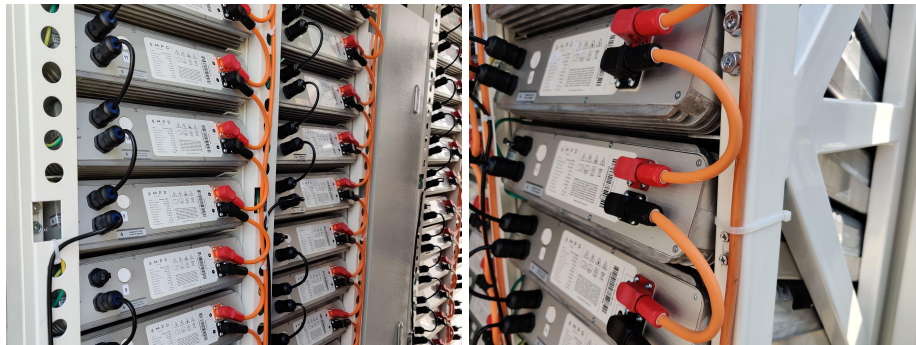
In the AC room, there are multiple electronic controllers and subsystems working together to optimize the overall operation of the Enertainer. The main unit which controls the entirety of the Enertainer function is called the Battery Management System (**BMS**). It sends and receives data across the rest of the subsystems to manage the charging and discharging functions. The other subsystems include:

- Energy Management System (**EMS**) - Performance Optimization
- Charger - Recharging
- Power Conversion System (**PCS**) - Discharging
- Fire Suppression System (**FSS**) - Fire detection and fire suppressing extinguishant



1.2 DC Room

The DC room consists of multiple columns and racks, each with battery modules installed and connected. There are 15 battery modules connected together in series to form one string. The strings are then connected in parallel, working together to provide an outflow of uninterrupted electrical energy.



To manage the recharging and discharging of each string, there is a BMS connected at the bottom of the column. The function is to measure, monitor, and control the stored energy within each battery pack.



2. Safety Guidelines

While the Enertainer is designed to include multiple safety systems and safety protection layers, it is important to follow the proper safe workplace practices around electrical systems.

2.1 Work Environment

Always maintain a safe environment for all construction site workers and field engineers. When using the Enertainer, ensure the environment is free from any hazards that could potentially cause an accident or injury. The following conditions are mandatory:

1. Arrange all external cables neatly to prevent tripping or electrocution
2. Remove any debris that prevents the opening and closing of doors
3. Have a level and secure working area/platform for standing
4. Ensure adequate lighting for visibility



2.2 General Electrical Safety

The following practices will reduce risk of electrocution when working on or near the Enertainer:

- Guard/lock/isolate all sources of electricity and exposed circuits
- Protect/repair/replace all frayed or damaged cables
- Disconnect the device's power source during any service or maintenance
- Cut off all sources of power (main switch or circuit breaker) if there is any contact with water



2.3 General Fire Safety

The Enertainer has a built-in fire suppression system that will trigger when fire is detected within. In addition, the rules regarding fire safety in the workplace are applicable to the Enertainer. Please note the following:

- Remove all flammable materials away from the work area
- Smoking around or nearby is prohibited

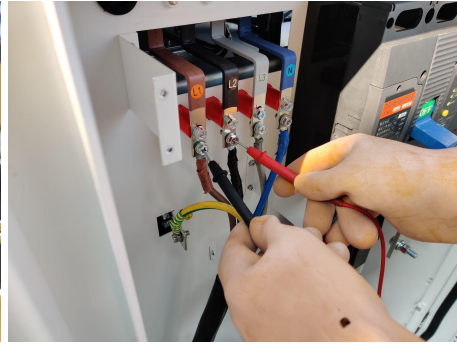
- Keep external type ABC or BC fire extinguishers nearby the area (optional)



2.4 Personal Protective Equipment (PPE)

The following must be worn when working with the Enertainer:

- Safety shoes - prevent dropping heavy loads onto the foot
- Safety hat - prevent any object collisions with the head
- Non-conductive gloves and insulated-sole shoes - prevent electrocution

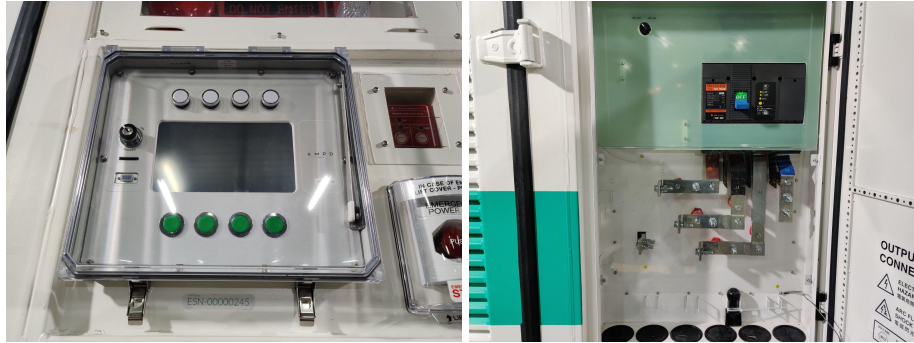


3. Transportation, Moving, and Lifting

The Enertainer is designed to be mobile, with the intention that it will regularly be transported from one location to another. Care must be taken before and during any form of movement of the Enertainer to prevent damage to it.

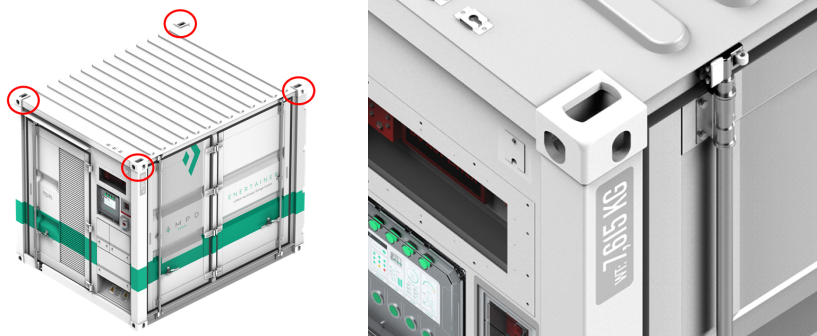
3.1 Preliminary Checks

Confirm that the entire system is offline, including all of the electronic parts, by performing a normal shutdown procedure (see section 7.4.2). This process will ensure that the Enertainer is safe for transportation. Then proceed to disconnect all of the electrical cables and connections. No exterior cable should be left connected to the Enertainer.

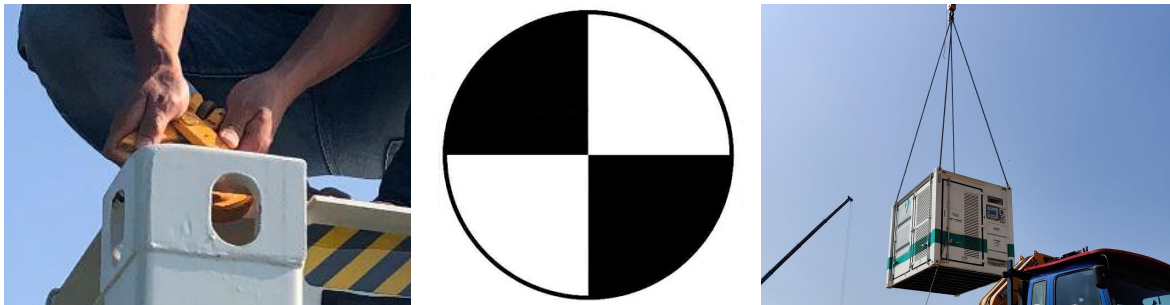


3.2 Lifting Chains and Hooks

At the top of the Enertainer, there are four hoisting points located at each corner. These are designated corners for the hoisting to latch on to when lifting and transporting.



Secure all the hooks and chains to each corner of the container. All chains must be of equal length. Ensure that the centre of gravity marker is directly under the main hook in order to keep the Enertainer level during lifting.



3.3 Safe Lifting Procedures

Please follow safe lifting procedures when transporting:

- Ensure the Enertainer is raised and lowered slowly
- Horizontal movement and rotation should be as slow as possible to minimize any lateral swing
- Do not stand near the lorry crane, truck or below the container when it is being lifted
- Keep a safe distance of 2m away
- Ensure a clear pathway before lifting to prevent collision with other objects or structures
- For more information, refer to the Safe Lifting guidelines by the Occupational Safety & Health Council



Upon landing, the Enertainer must sit on a flat and level ground that is rated to support the size and weight.



4. Environmental Conditions

The location and the environmental conditions, which the Enertainer is operating around, must be up to standard such that the main operation is not affected. The requirements in maintaining a safe and ideal operating environment include:

- Away from sources of heat such as open flames or engine exhausts
- Away from extreme dusty areas to prevent false smoke alarms
- Flat and level ground to support the weight
- At least 1m door clearance from all other structures and objects
- Cover protection to prevent direct sunlight and or heavy rainfall (optional)
- Above ground level in case of flooding (optional)
- Barriers around the perimeter to prevent trespassing and unauthorized access (optional)



5. Fire Suppression System

The Fire Suppression System (FSS) uses condensed aerosol fire extinguishing technology to suppress fire. The main component consists of packaging filled with a dry solid extinguishing agent, which following activation, is discharged as a dry aerosol. It is effective in extinguishing gas and liquid fires in electrical equipment.

The FSS is divided into three main parts:

1. Aerosol Generator
2. Fire Alarm Control Panel
3. Manual Release Trigger

5.1 Aerosol Generator

The Enertainer has built-in aerosol generators in both the AC and DC room. When triggered, the aerosol is propagated and evenly distributed in the enclosure. It suppresses fire by interrupting the chemical chain reactions occurring in the flame. There are no toxic substances nor any risk of increased air pressure within the enclosure.



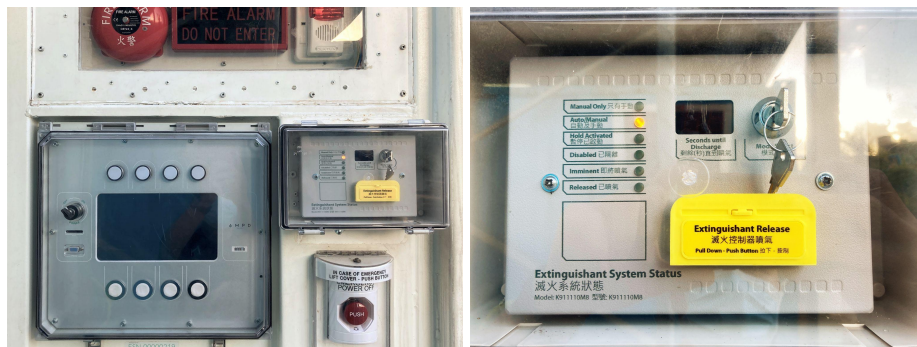
5.2 Fire Alarm Control Panel

The fire alarm control panel (FACP) is located inside of the container. Its main operation is to control the series of smoke and heat detectors, fire alarm, and the aerosol generator triggers. The FACP is designed to control the smoke and heat detectors across the whole system. When any of the detectors are activated, the fire alarm will trigger, giving indication of smoke or heat detection. When both detectors are activated together, it will initiate a countdown timer of 30 seconds until the release of the aerosol extinguisher.




5.3 Manual Release Trigger

At the front of the Entertainer, there is an extension of the FACP called the manual release trigger. That is, the manual release of the extinguishant can be triggered by pulling the yellow handle downwards and pushing the red button underneath. This function is given to operators in case there are any emergencies that require immediate fire suppression. This is only to be done if there is a serious risk of fire or smoke inside the Entertainer.



6. Installation

This section provides general guidance on installation on the Ampd Enertainer for the customer's qualified electrician(s). The installation procedures may vary depending on the conditions of each installation case.

	<p>WARNING! Professional Installation Only</p>
<p>The Enertainer should be installed by a qualified electrician in accordance with the information contained in this manual. If any issues arise during installation, contact your Ampd Energy representative for assistance.</p>	
<p>The Enertainer shall not be powered on without approval of an Ampd Energy field engineer and a qualified electrician.</p>	

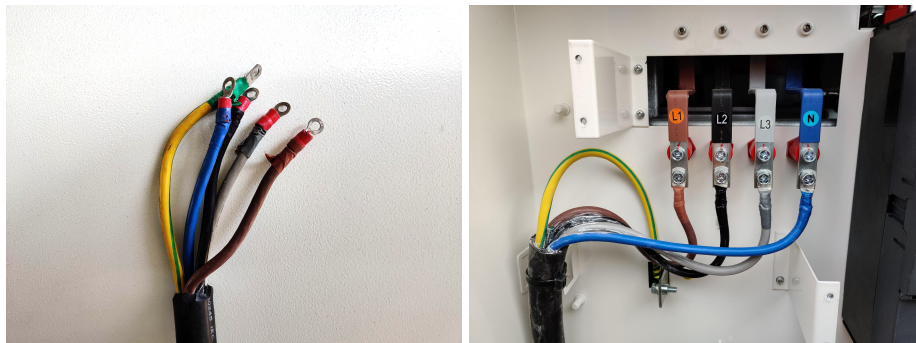


6.1 Connection Requirements

Prior to the use of the Enertainer, it must have all the input and output connections secured and ready for energizing. The sections below summarize the specifications of the cables that the Enertainer uses for supplying power to construction site equipment. Ensure that the Enertainer is turned off completely first before connecting any cables to the input and output.

6.1.1 Input Connection Busbars

The input cable, which supplies electricity to the Enertainer for recharging, must be a 63A 3PH 5 Core 16mm² power cable to maximize the recharging capabilities. Any cable with specifications that is less than the aforementioned should not be used. The input busbars on the Enertainer requires an M6 terminal lug and an M6 bolt and nut for a secure connection. Ensure that the input cable is compliant with the local electrical regulation requirements. For more details, refer to the table below.



	Color	Bolt Size
L1	Brown	M6
L2	Black	M6
L3	Grey	M6
N	Blue	M6
PE	Yellow/Green	M6

6.1.2 Output Connection

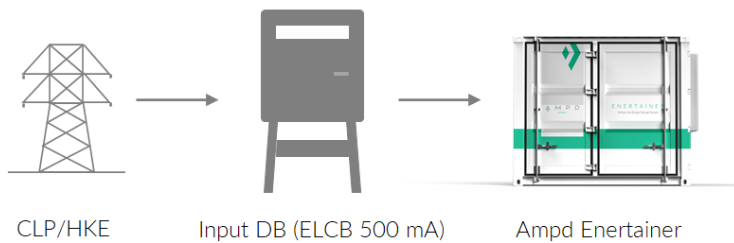
The output connection joins the Enertainer to the heavy duty construction equipment. A busbar type connection is required between the equipment (also referred to as an electrical load) and the Enertainer. The Enertainer offers power in three phases and neutral to satisfy all electrical load phase requirements. Use an M12 bolt and nut to secure the connection. For more details, refer to the table below.



	Color	Bolt Size
L1	Brown	M12
L2	Black	M12
L3	Grey	M12
N	Blue	M12
PE	Yellow/Green	M12

6.1.3 Leakage Current

During the electrical operation, the internal electronic components may produce some current leakage of up to 400 mA. During its charging, the maximum leakage current could potentially trip the upstream Earth Leakage Circuit Breakers (ELCB) on site, thus disrupting the charging. In order to sustain the electricity supply to the construction site and not be disrupted by the ELCB trip, ensure that all ELCBs are set 500mA to accommodate.



6.1.4 Grounding Requirements

For safety purposes, the earthing terminal of the Enertainer must be connected to a grounding electrode system. The connections must be in accordance with the electricity supplier grounding standard. It can follow any nearby pre-installed grounding system. Alternatively, a separate grounding system can be installed solely for the Enertainer.



7. Operator Control

The Enertainer is designed to be a plug-and-play system where it will manage its own charging and discharging functions automatically. The front of the Enertainer includes a display screen called the external human machine interface (xHMI) and a few switches, which is left for the operator to monitor and control.

7.1 xHMI

The xHMI is an interactive monitoring screen that can be used to view the performance of the Enertainer in real time. The following sections will describe how to view it and what each of the data points mean:

7.1.1 xHMI LCD Screen and Push Buttons

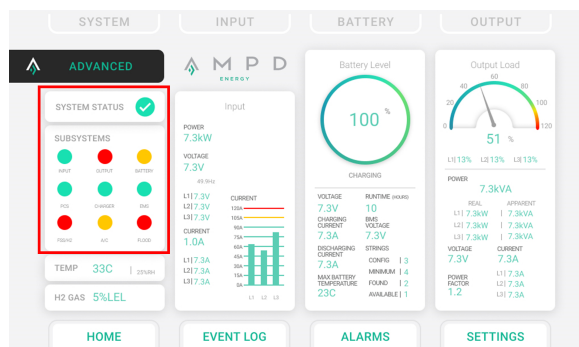
The LCD screen can be divided into four columns with the heading shown at the top of the screen. Each square underneath the header will display the data according to the label. The columns are labeled as:

- System - data regarding the entire system including subsystems and controllers
- Input - data regarding the input AC electricity for recharging
- Battery - data regarding the DC electricity for the batteries
- Output - data regarding the output AC electricity for discharging

At the bottom of the screen is a navigation pane where there are four pages (Advanced, Event Log, Alarms, Settings) that the user can change to. Navigation can be done either through the Push Buttons or on the touch screen itself.



7.1.2 Subsystem Status



On the Advanced Page, the left hand side of the screen will display the status of every subsystem in the Enertainer. The status can change color depending on how it is functioning. The color change logic is as follows:

	Red (error)	Yellow (warning)
		Green (normal)

Input		AC input under voltage	AC input is normal
Output		AC output under voltage	AC output is normal
Battery	Battery strings are offline	Battery strings are disconnected SOC is less than 20%	Battery strings are normal
PCS	PCS is in alarm state PCS is offline		PCS is normal
Charger	Charger is in alarm state Charger is offline		Charger is normal
EMS	EMS is offline		EMS is normal
FSS	Smoke detector is activated Heat detector is activated FACP is offline		FSS is normal
A/C		Air conditioners are offline	Air conditioners are normal
Flood	Flooding alarm activated	Flood detectors triggered	Flood detectors are normal

7.1.3 Data Monitoring



The xHMI screen displays data relating to the operation of the Enertainer. They are as follows:

Input

- Active power (kW)
- Input voltage (VAC)
- Input current (A)
- Input frequency (Hz)

Battery

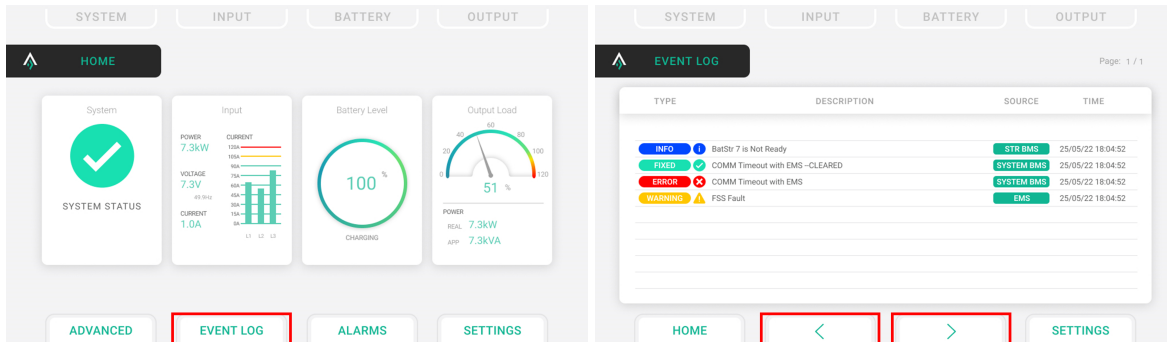
- Battery voltage (VDC)
- Battery charging/discharging current (A DC)
- Battery temperature (°C)
- Operational runtime (hours)
- BMS voltage (VDC)

Output

- Active power (kW)
- Apparent power (kVA)
- Output voltage (VAC)
- Output frequency (Hz)
- Output current (A)
- Power factor

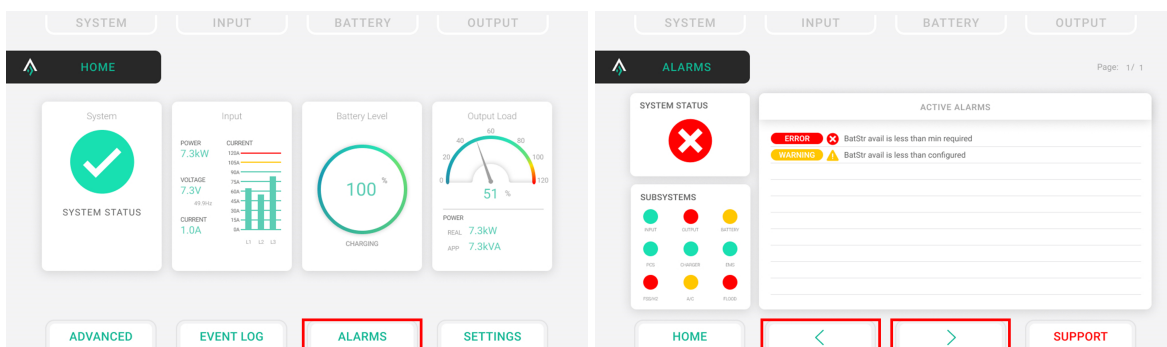
7.1.4 Event Log

The history of events can be accessed through the Event Log section from the LCD screen display:



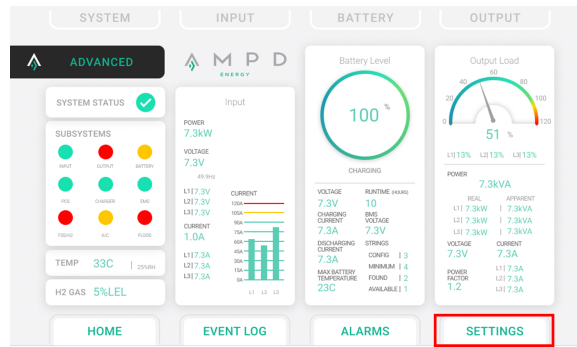
7.1.5 Alarms

The details regarding warnings and alarms can be accessed through the Alarms section from the LCD screen:



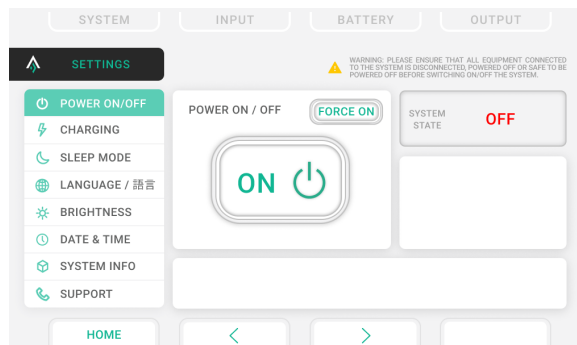
7.1.6 Settings

The settings of the Enertainer can be accessed through the Settings button:

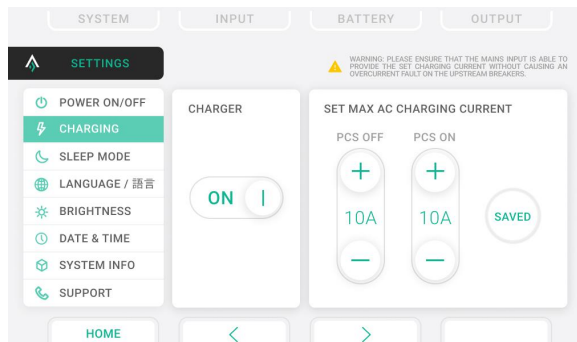


From this menu, several settings can be customized.

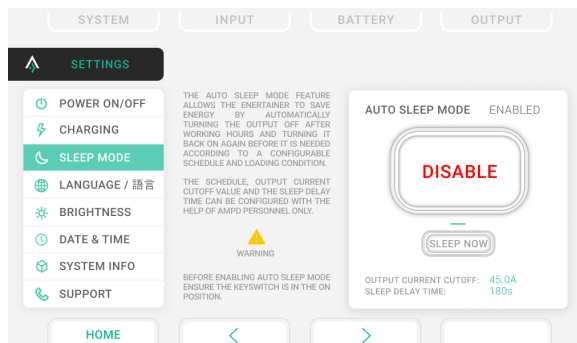
Power On/Off:



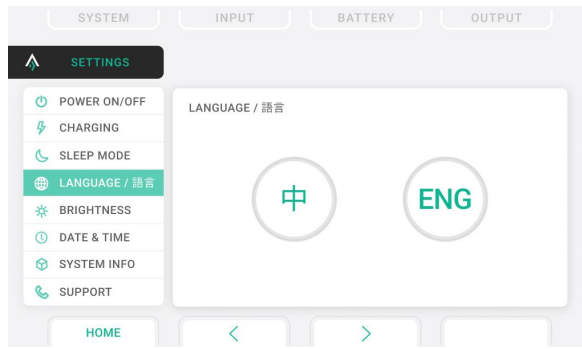
Charging (Warning: please ensure that the mains input is able to provide the set charging current without causing an overcurrent fault or trip on the circuit breakers):



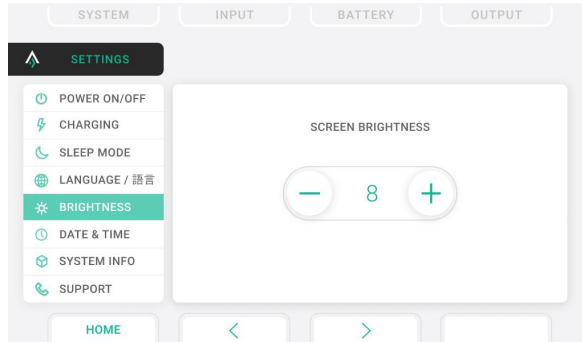
Sleep Mode:



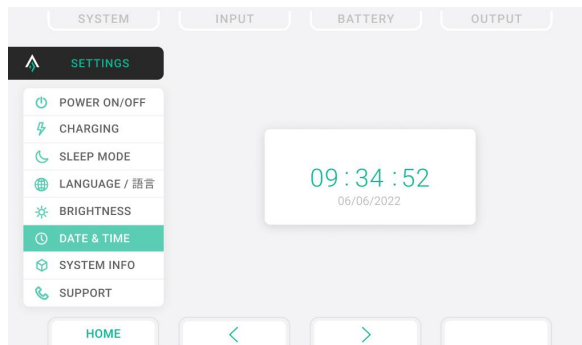
Language:



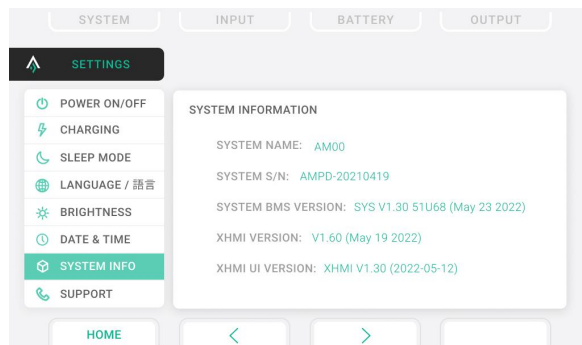
Screen Brightness:



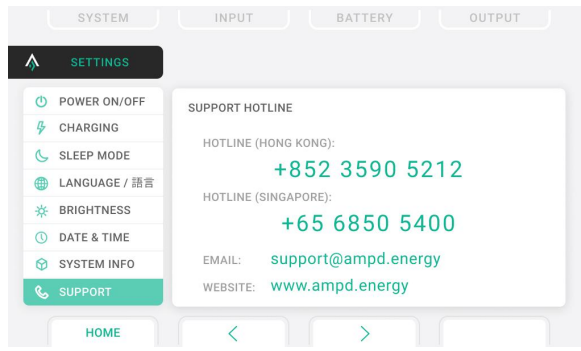
Date and Time:



System Info:

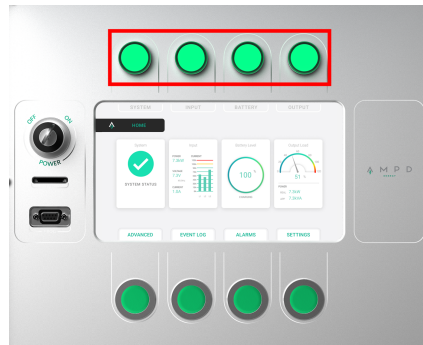


Support:



7.2 Dual-color LED Indicators

Dual-color LED indicators provide a status of the Ertainer in one look. Each LED light follows the subsystem that is labeled directly under (System, Input, Battery, Output). There are two colors it would show, red and green, and the lights will either hold or flash slowly, giving indication on the operational status.



Color code chart of the LED indicators:

	Red	Red flashing (slow)	Green flashing (slow)	Green
System		Subsystem is in alarm state		All subsystems are normal
Input	Input is under voltage			Input is normal
Battery	All battery strings are offline	Battery strings initializing	SOC is less than 20%	All battery strings are normal
Output	Output is under voltage	Sleep Mode is enabled		Output is normal

7.3 Key Switch

The Key Switch to the left of the xHMI screen is used to toggle the PCS on and off. By changing the key to the 'On' position, it will enable the PCS function, which will energize the output busbars. By changing the key to the 'Off' position, it will only disable the PCS function while the rest of the operation is unaffected. It may take up to 30 seconds for the system to change status.



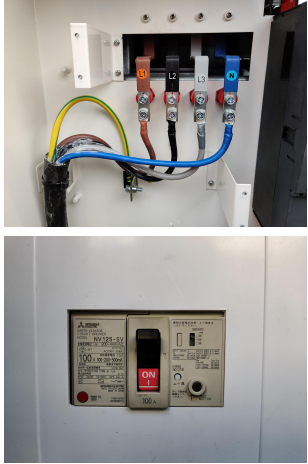

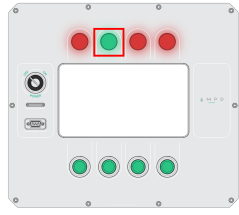
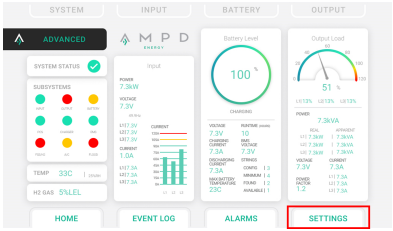
7.4 Operating Procedure

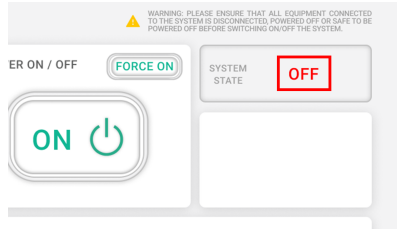
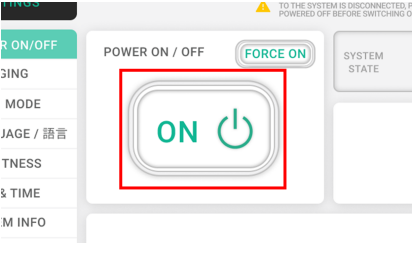
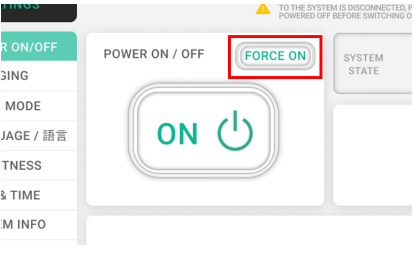
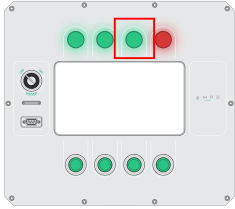

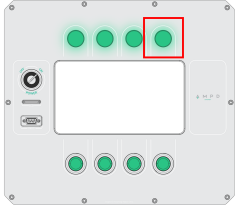
All of the control switches for the Enertainer are built inside, which only authorized Ampd Energy field engineers can access. However, the basic functions, such as turning on and off, are available to the operator and can be controlled using the xHMI. **Warning:** only qualified electricians and operators should perform these functions.

Follow these guidelines carefully in order to safely protect your Enertainer from harm:

7.4.1 Normal Startup

The following outline will describe the procedure to safely start up the Enertainer.


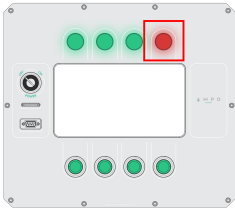
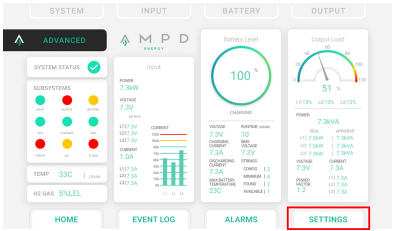
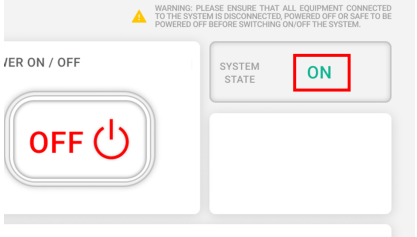
Step	Action	
1	Connect the input power cable or turn on the input power MCCB.	 <p>The top photograph shows a close-up of the internal power distribution panel with various colored cables (yellow, blue, red) connected to terminals labeled L1, L2, and N. The bottom photograph shows a metal MCCB (Molded Case Circuit Breaker) with a red 'ON' indicator and a black handle.</p>
2	Turn the UPS switch to the 'ON' position.	 <p>A close-up of a circular rotary switch on a green metal panel. The switch is currently in the 'ON' position, with the label 'UPS ON' visible above it and 'UPS OFF' to the left.</p>
3	Wait until the xHMI panel is powered on and the LED indicator light regarding "INPUT" is changed to green.	 <p>A close-up of the xHMI (eXtended Human-Machine Interface) panel. It features a central LCD screen and several indicator lights. The 'INPUT' indicator light, located at the top center, is illuminated in green, while other lights are red.</p>
4	On the xHMI panel, click "SETTINGS" > "POWER ON/OFF".	 <p>A screenshot of the xHMI software interface. The interface displays various system metrics such as SYSTEM STATUS, INPUT, BATTERY, and OUTPUT. At the bottom of the screen, there are navigation buttons: HOME, EVENT LOG, ALARMS, and SETTINGS. The SETTINGS button is highlighted with a red box.</p>

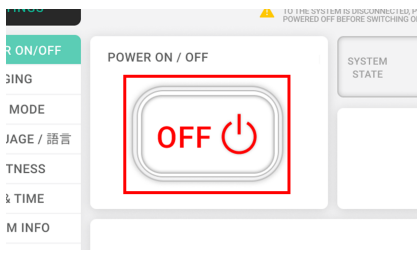
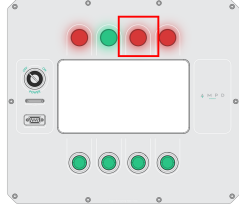
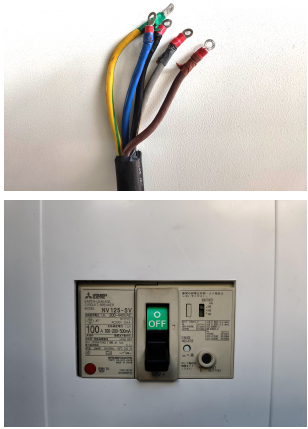
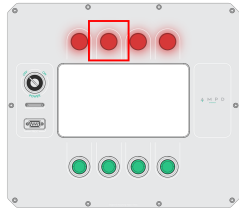
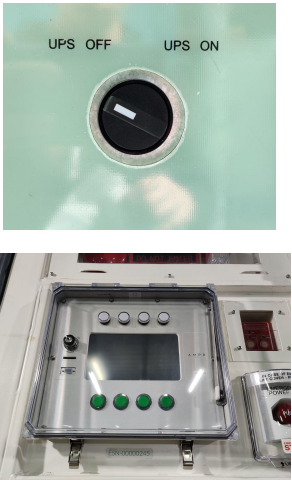
5	Ensure that the "SYSTEM STATE" says Off.	 <p>WARNING: PLEASE ENSURE THAT ALL EQUIPMENT CONNECTED TO THE SYSTEM IS DISCONNECTED, POWERED OFF OR SAFE TO BE POWERED OFF BEFORE SWITCHING ON/OFF THE SYSTEM.</p> <p>POWER ON / OFF: FORCE ON</p> <p>SYSTEM STATE: OFF</p> <p>ON [power icon]</p>
6	Click the "ON" button.	 <p>WARNING: PLEASE ENSURE THAT ALL EQUIPMENT CONNECTED TO THE SYSTEM IS DISCONNECTED, POWERED OFF OR SAFE TO BE POWERED OFF BEFORE SWITCHING ON/OFF THE SYSTEM.</p> <p>POWER ON / OFF: FORCE ON</p> <p>SYSTEM STATE</p> <p>ON [power icon]</p>
7	If the "ON" button is not available after 3 minutes, press the "FORCE ON" button.	 <p>WARNING: PLEASE ENSURE THAT ALL EQUIPMENT CONNECTED TO THE SYSTEM IS DISCONNECTED, POWERED OFF OR SAFE TO BE POWERED OFF BEFORE SWITCHING ON/OFF THE SYSTEM.</p> <p>POWER ON / OFF: FORCE ON</p> <p>SYSTEM STATE</p> <p>ON [power icon]</p>
8	Wait for 1 minute until the LED indicator light regarding "BATTERY" is changed to green.	
9	Turn the key switch to the "ON" position.	
10	Wait until the LED indicator light regarding "OUTPUT" is changed to green.	

	<p>If you experience any further errors or issues, please contact your Ampd Energy representative to assist you.</p>	<p>SUPPORT HOTLINE</p> <p>HOTLINE (HONG KONG): +852 3590 5212</p> <p>HOTLINE (SINGAPORE): +65 6850 5400</p> <p>EMAIL: support@ampd.energy</p> <p>WEBSITE: www.ampd.energy</p>
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7.4.2 Normal Shutdown

The following outline will describe the procedure to safely shut down the Enertainer.

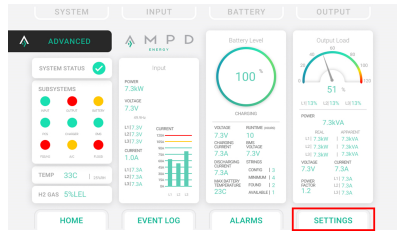
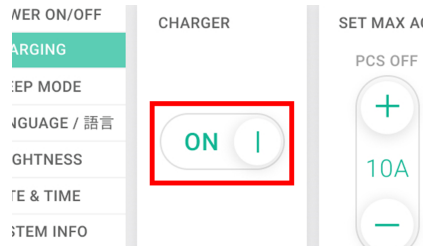
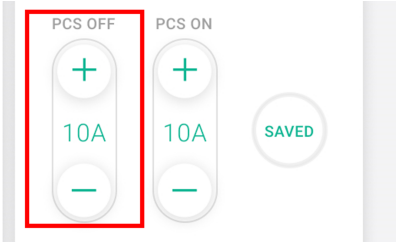
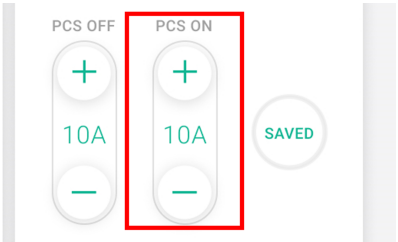
Step	Action	
1	Turn the key switch to the “OFF” position.	
2	Wait until the LED indicator light regarding “OUTPUT” is changed to red.	
3	On the xHMI panel, click “SETTINGS” > “POWER ON/OFF”.	
4	Ensure that the “SYSTEM STATE” says On.	

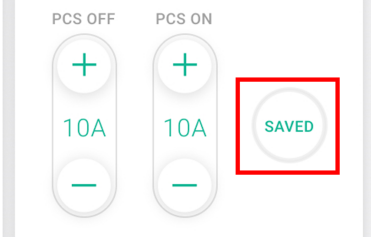

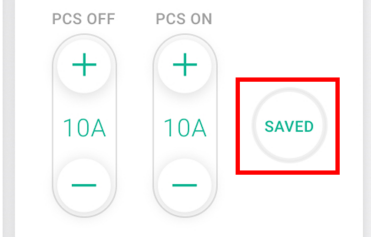

5	Click the "OFF" button.	
6	Wait for 1 minute until the LED indicator light regarding "BATTERY" is changed to red.	
7	Disconnect the input power cable or turn off the input power MCCB.	
8	Wait until the LED indicator light regarding "INPUT" is changed to red.	
9	Turn the UPS switch to the 'OFF' position. Afterwards, the xHMI will shutdown.	

	<p>If you experience any further errors or issues, please contact your Ampd Energy representative to assist you.</p>	<p>SUPPORT HOTLINE</p> <p>HOTLINE (HONG KONG): +852 3590 5212</p> <p>HOTLINE (SINGAPORE): +65 6850 5400</p> <p>EMAIL: support@ampd.energy</p> <p>WEBSITE: www.ampd.energy</p>
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7.4.3 Change Charger Settings

The following outline will describe the procedure to configure the charging current.

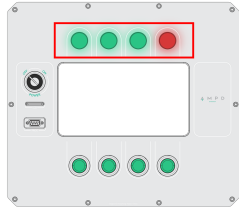

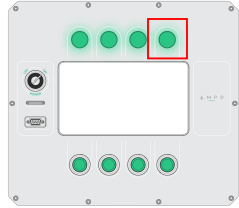
Step	Action	
1	On the xHMI panel, click "SETTINGS" > "CHARGING".	
2	If the "CHARGER" is off, press the button to turn it on.	
3	For adjusting charging current when the key switch is off, change the current value by pressing the +/- buttons under "PCS OFF".	
4	For adjusting charging current when the key switch is on, change the current value by pressing the +/- buttons under "PCS ON".	

5	After selecting the correct charging current, press “SAVE”.	
6	If it causes the upstream MCCB to trip (due to overload), you may need to reduce the charging current value until it is equal to or less than its maximum rating.	
7	After selecting the correct charging current, press “SAVE” again.	
8	Press the “HOME” button to return to the main screen.	
	If you experience any further errors or issues, please contact your Ampd Energy representative to assist you.	<p>SUPPORT HOTLINE</p> <p>HOTLINE (HONG KONG): +852 3590 5212</p> <p>HOTLINE (SINGAPORE): +65 6850 5400</p> <p>EMAIL: support@ampd.energy</p> <p>WEBSITE: www.ampd.energy</p>

7.4.4 Enabling the PCS



The following outline will describe the procedure to enable the PCS and energize the output.

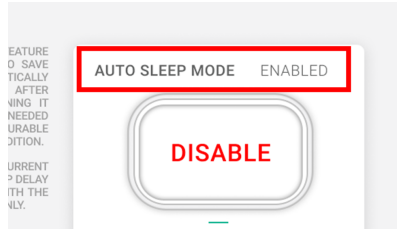
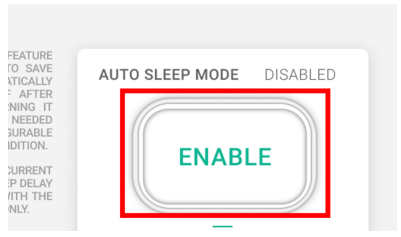
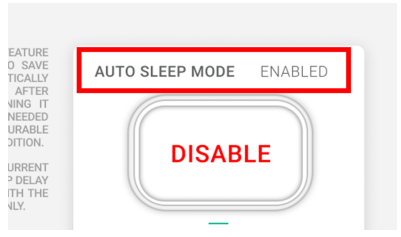
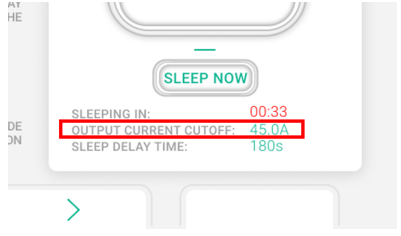
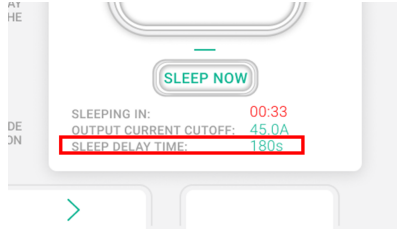
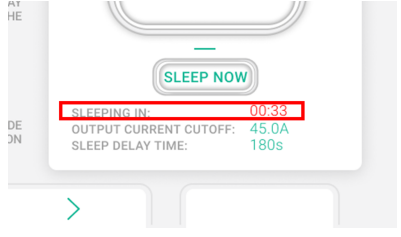
Step	Action	

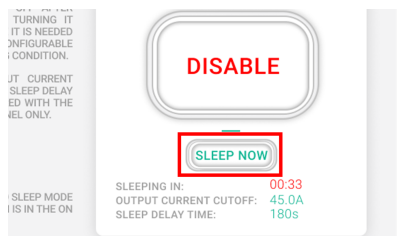
1	On the xHMI panel, check to make sure the LED indicator lights regarding “SYSTEM”, “INPUT” (optional), “BATTERY” are displaying green.	
2	Turn the key switch from the “OFF” position to the “ON” position.	
3	Wait until the LED indicator light regarding “OUTPUT” is changed to green.	
	If you experience any further errors or issues, please contact your Ampd Energy representative to assist you.	<p>SUPPORT HOTLINE</p> <p>HOTLINE (HONG KONG): +852 3590 5212</p> <p>HOTLINE (SINGAPORE): +65 6850 5400</p> <p>EMAIL: support@ampd.energy</p> <p>WEBSITE: www.ampd.energy</p>

7.4.5 Enable Sleep Mode

The following outline will describe the procedure to enable sleep mode.



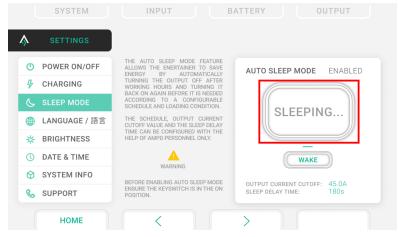
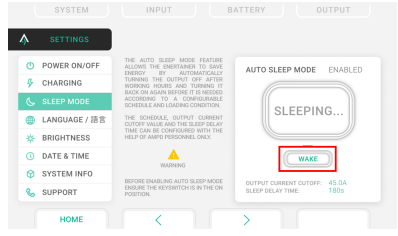
Step	Action	
1	Ensure that the key switch is in the “ON” position” and the LED indicator light regarding “OUTPUT” is green.	
2	On the xHMI panel, click “SETTINGS” > “SLEEP MODE”.	

3	Ensure that the "AUTO SLEEP MODE" says Enabled.	
4	If the mode says "DISABLED", then click on the "ENABLE" button to enable auto sleep mode.	
5	The mode should change to "ENABLED". This means that Auto Sleep Mode is now activated and will de-energize the PCS when there is no usage for a period of time.	
6	The Auto Sleep Mode function will need to fulfill two requirements before it proceeds to de-energize the PCS. First, the output current must be below the "OUTPUT CURRENT CUTOFF".	
7	Second, it must be below that value for as long as the time specified beside "SLEEP DELAY TIME".	
8	When the output current is below the limit, it will begin counting down until the PCS de-energizes.	

9	To go to sleep earlier than the countdown, press the “SLEEP NOW” button to immediately de-energize the PCS and change into sleep mode.	
	Auto Sleep Mode is designed to sleep and to wake at specific times of the day/night depending on usage and output current. If you would like to change when the system would automatically sleep and wake up, please contact your Ampd Energy representative to assist you.	<p>SUPPORT HOTLINE</p> <p>HOTLINE (HONG KONG): +852 3590 5212</p> <p>HOTLINE (SINGAPORE): +65 6850 5400</p> <p>EMAIL: support@ampd.energy</p> <p>WEBSITE: www.ampd.energy</p>

7.4.6 Disable Sleep Mode

The following outline will describe the procedure to disable sleep mode.

Step	Action	
1	Ensure that the key switch is in the “ON” position” and the LED indicator light regarding “OUTPUT” is blinking red.	
2	On the xHMI panel, click “SETTINGS” > “SLEEP MODE”.	
3	Ensure that the state is “SLEEPING...”.	
4	Click on the “WAKE” button to wake up the system and re-energize the PCS again.	

Auto Sleep Mode is designed to sleep and to wake at specific times of the day/night depending on usage and output current. If you would like to change when the system would automatically sleep and wake up, please contact your Ampd Energy representative to assist you.

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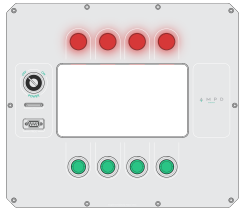
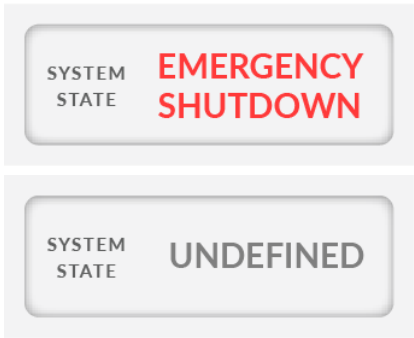


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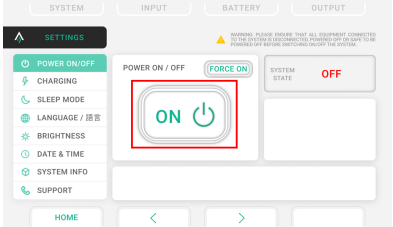
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8. Emergency Response Procedures

8.1 Emergency Power Off (EPO)

If there are any unusual reactions on the Enertainer that are causing it to malfunction and pose a safety hazard for the people around, an immediate shutdown is necessary to stop, isolate, and safeguard the system. Follow these steps to lock the whole system in a shutdown state.

Step	Action	
1	Press the EPO button.	
2	All four LED indicators will display red lights, indicating that all subsystems including the charger, battery, and PCS are in the shutdown state.	
3	The Enertainer will then enter into a shutdown state. All subsystems will be locked and disabled until the entire system resets again.	
4	In order to reset the system back to normal, pull the EPO button back out again.	
5	Turn the UPS switch to the 'OFF' position. Afterwards, the xHMI will shutdown.	

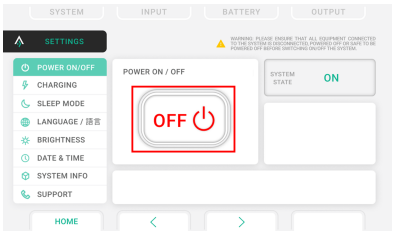

		
6	Turn off the input power MCCB.	
7	After 1 minute, turn on the input power MCCB.	
8	Perform a normal startup procedure (see section 7.4.1).	
	If you experience any further errors or issues, please contact your Ampd Energy representative to assist you.	<p>SUPPORT HOTLINE</p> <p>HOTLINE (HONG KONG): +852 3590 5212</p> <p>HOTLINE (SINGAPORE): +65 6850 5400</p> <p>EMAIL: support@ampd.energy</p> <p>WEBSITE: www.ampd.energy</p>

8.2 Typhoon/Black Rain Response Procedure


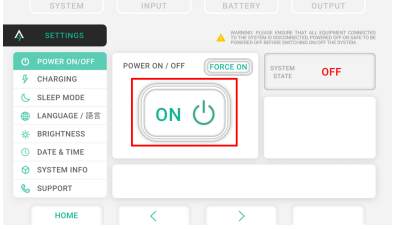
If the weather and environmental conditions of the construction site become unsuitable for any normal construction work to continue, then the Enertainer may be stopped to further prevent any risk of water damage or short circuit. In situations such as typhoon storms or heavy rainfall, and there is no cover protection on the system, it is important to shut down the Enertainer completely.



If the construction site is expected to stop their operation, follow these steps.

Step	Action	
1	Perform a normal shutdown procedure (see section 7.4.2).	
2	When the system is confirmed to be off, check all areas of the Enertainer to ensure that doors are closed and locked, as well as there are no cracks, holes, or areas where water may be able to enter.	
	If you experience any further errors or issues, please contact your Ampd Energy representative to assist you.	<p>SUPPORT HOTLINE</p> <p>HOTLINE (HONG KONG): +852 3590 5212</p> <p>HOTLINE (SINGAPORE): +65 6850 5400</p> <p>EMAIL: support@ampd.energy</p> <p>WEBSITE: www.ampd.energy</p>

After the weather and environmental conditions of the construction site improve and it becomes safe to operate the Enertainer again, follow these steps.

Step	Action	
1	Check all areas of the Enertainer to ensure that there are no cracks, holes, or areas where water may be able to enter.	
2	Perform a normal startup procedure (see section 7.4.1).	
	If you experience any further errors or issues, please contact your Ampd Energy representative to assist you.	<p>SUPPORT HOTLINE</p> <p>HOTLINE (HONG KONG): +852 3590 5212</p> <p>HOTLINE (SINGAPORE): +65 6850 5400</p> <p>EMAIL: support@ampd.energy</p> <p>WEBSITE: www.ampd.energy</p>





8.3 Fire Response Procedure

If there is any situation where fire, smoke, or extreme heat is present, or there is a suspicion of fire, smoke or extreme heat, the FSS will normally detect it and trigger the fire alarm to sound. When the alarm and the strobe light are activated, the system will automatically disable and lock all input, battery, and output functions within 30 seconds. Afterwards, please contact your Ampd Energy representative to assist you.



If there are visible indications of fire or smoke in the Enertainer, you may follow these steps in suppressing the fire within.

Step	Action	

1	On the right hand side of the xHMI panel, press the EPO button.	
2	Above the EPO button, open the box to access the FSS manual release trigger.	
3	Pull the manual release trigger downward and press the red button underneath to release the aerosol extinguisher.	
4	The FSS will trigger the fire extinguisher to release and the Enertainer will shut down.	
	If you experience any further errors or issues, please contact your Ampd Energy representative to assist you and follow your site's evacuation procedure.	<p>SUPPORT HOTLINE</p> <p>HOTLINE (HONG KONG): +852 3590 5212</p> <p>HOTLINE (SINGAPORE): +65 6850 5400</p> <p>EMAIL: support@ampd.energy</p> <p>WEBSITE: www.ampd.energy</p>