



Instructions for Use (IFU)

Geni-Tec Power System

*Geni-Tec Single Dock System
Geni-Tec Dual Dock System*

*Power Module (GEN-B201-Cxx-02)
External Power Adapter (PMP220SF-15HI)*

Issue 2.3

Versions	Date	Version	Data
Originated	1st June 2015	2.2	24th May 2016
1.0	10th August 2015	2.3	25th July 2016
2.0	18th May 2016		
2.1	20th May 2016		

Warning Notice

As with any power system that stores high levels of energy, the battery used in this device may present a risk of fire or chemical burn if mistreated. Do not disassemble, heat above 40°C or incinerate. Replace Power Module with genuine Bytec part only. Use of another battery may present a risk of fire or explosion. It is the user's responsibility to ensure that they are completely familiar with these instructions for use, and that they have received appropriate safety instructions on the safe handling of the Power Modules and the use of the system generally.

Regular maintenance is required to ensure that the Power Modules and electrical systems are free from wear and tear, or any damage whatsoever. If in any doubt seek advice, and remove any damaged Power Modules immediately from service. There are no user serviceable parts. All repairs or maintenance must be performed by an authorised maintenance center.

Manufacturer

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Important Information

Please read the Instructions for Use carefully before using the system

 **Caution**

- The Geni-Tec System must only be connected to the mains supply using the supplied external power adapter (PMP220SF-15HI 28V 220W Class II) when an external power option is fitted.
- Before use check that the Power Modules are fitted correctly and charged or the equipment is plugged into the mains using the supplied external power adapter.
- Do not use or store the Geni-Tec system, chargers or Power Modules where it is exposed to direct sunlight.
- Do not use or store the Geni-Tec system, chargers and Power Modules near sources of direct heat such as a fire or heater.
- Only Bytec approved Geni-Tec Power Modules and Chargers should be used.
- Only charge Power Module on approved Geni-tec Chargers.
- Do not immerse the Power Module in fluid.
- Do not strike, throw, drop or subject the Power Module to physical shock.
- Do not pierce the Power Module casing with a nail or other sharp object, attempt to open or breaking it open, or stepping onto it.
- GENI-TEC POWER SYSTEM AND POWER MODULE HAVE NO SERVICEABLE PARTS INSIDE.
- IF THE POWER MODULE OR ANY PART OF THE ELECTRICAL SYSTEM HAS BEEN DAMAGED OR COMPROMISED IN ANYWAY, DO NOT USE AND REMOVED FROM SERVICE IMMEDIATELY.

 **Operating Conditions**

- The operating temperature range for the Geni-Tec system should remain within 1°C to 40°C. **Do not use outside of this temperature range.**
- The operating relative humidity range for the Geni-Tec system should remain within 20% to 75% (non-condensing)
- The operating altitude range for the Geni-Tec system should not exceed 0m to 2000m (pressure range should not exceed 101kPa to 90kPa)
- Failure to observe these condition will invalid the warranty and reduce the life expectancy of the Power Module.
- In some conditions, the Power Modules may stop charging if the internal temperature is above a specific range. This is normal behaviour to protect the safety of the battery cells.

 **Storage Conditions**

- If Power Modules are to be stored for any length of time it is recommended to charge to 4-6 LEDs illuminated on bargraph or approx 50% capacity. This minimises age-related capacity loss while keeping the battery operational and allowing for some self-discharge
- It is recommended the Power Module charge levels should be checked every 30 days while in storage. If the charge level drops below 10% (single orange LED flashing on bargraph) then charge back to 4-6 LEDs illuminated on bargraph or approx 50% capacity. This is to prevent over discharge. It is normal for the battery to lose some or all of it's charge over time.
- If stored Power Modules are planned to be shipped by air, It is recommended to charge to 2-3 LEDs illuminated on bargraph or <30% capacity. It is recommended the Power Module charge levels should be checked every 30 days while in storage. If the charge level drops below 10% (single Orange LED flashing on bargraph) then charge back to 2-3 Orange LEDs illuminated on bargraph or <30% capacity. This is to prevent over discharge It is recommended to store the Power Module at room temperature.
- The storage temperature range for the Geni-Tec system should not exceed -10°C to 45°C
- The storage relative humidity range for the Geni-Tec system should not exceed 10% to 80% (non-condensing)
- Failure to observe these condition will invalid the warranty and reduce the life expectancy of the Power Module.

 **Shipping Conditions**

- Power Modules contain Lithium, and are classified as a Class 9 Dangerous goods for transportation, and therefore all regional regulations imposed by transportation companies must be observed. Check with you local transport representative for advice on shipping in your region.
- It is recommended to use the original box and packing materials when shipping.

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- Do not ship damaged or faulty Power Modules. Please contact the manufacturer to determine whether the product is safe for transport.
 - The Power Module should be charged 2-3 LEDs illuminated on bargraph or >10% and <30% prior to air shipment.
 - The shipping temperature range for the Geni-Tec system should not exceed -10°C to 35°C
 - The shipping relative humidity range for the Geni-Tec system should not exceed 10% to 80% (non-condensing)

General Specification

The Geni-Tec system is designed to provide power to an electrical load, and can be used continuously. Your system will comprises of one or more of the following:

Geni-Tec **Master Dock Module**, including built in output voltage regulation (programmable). IP40
Geni-Tec **Slave Dock Module** (Optional - used in a hot-swap two bay system configuration). IP40
Geni-Tec **Power Modules** (contains internal rechargeable batteries - 216Wh Lithium Ion 21.6V, other capacities are also available). IP67

Geni-Tec **Chargers**. (1, 2 and 4 bays) for remote charging. IP20

AC Power Supply

The Geni-Tec system can be connected to the mains using the supplied AC Power Adapter (some systems).

- Switching Power Adapter PMP220SF-15-HI
- AC Input 100–240VAC, 47-63Hz, 2.5-1.2A
- DC Output 220W Max 28VDC, 7.86A

Connection to External Equipment

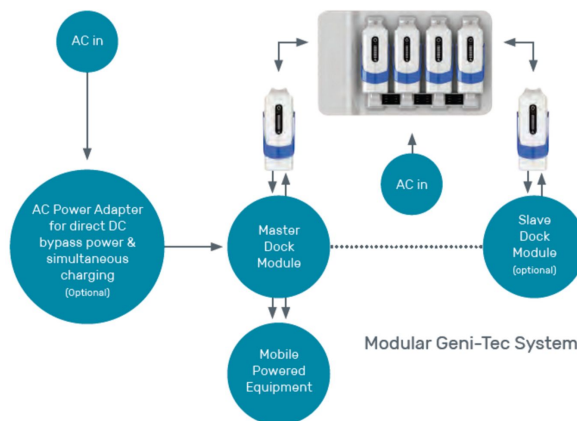
The Geni-Tec system is designed to be connected to peripheral equipment using the external connectors provided. The USB connection is used to connect the Geni-Tec system to a PC or other equipment for access and collection of performance information.

USB USB 2.0 compatible.
 Max cable length = 0.5m

DC Output Voltage = 12V to 17VDC - 100W max
 Voltage = 18V to 28VDC - 150W max

Warning: all SIP/SOP are for exclusive connection to IEC 60601-1 certified equipment when it is placed within the patient environment and to IEC 60XXX certified equipment when it is placed outside of the patient environment.

Warning: The output voltage may have already been set to the required voltage for your application by your reseller or partner. This function is NOT user programmable. If your application changes and you require a different voltage, then please contact your local representative who will be able to help.



Various Product Configurations

The Geni-tec system has been tested as a stand alone sub-assembly, which can be installed and used in a range of products, including Bytec’s standard range of carts and retro-fit systems.

The Following range of Bytec products incorporate the Geni-Tec Power System as part of their build. The Host Marketing Name (HMN) is shown below.

Part Number	HMN	Part Number	HMN
GEN-1xx-xxx-Cxx-xx	MIT Cart	GEN-6xx-xxx-Cxx-xx	GENI Cart (Long Wheel base)
GEN-2xx-xxx-Cxx-xx	MEDI Cart	GEN-7xx-xxx-Cxx-xx	GENI Cart (Short Wheel base)
GEN-3xx-xxx-Cxx-xx	ECO Cart	GEN-8xx-xxx-Cxx-xx	MEDI Stand (Long Wheel base)
GEN-4xx-xxx-Cxx-xx	Pole Mount Power System (POP)	GEN-9xx-xxx-Cxx-xx	MEDI Stand (Short Wheel base)
GEN-5xx-xxx-Cxx-xx	Rail Mount Power System (POR)		

“x” denotes part number elements that define the mechanical configurations of the product. Other configurations exist.

Electromagnetic Interference (EMI)

Although the product meets necessary EMI radiated, conducted and susceptibility standards to EN60601-1-2. Care should be taken around sensitive equipment, or other large EMI source. Such proximity could cause variation in equipment performance. If this happens, move the equipment further away.

Classifications

The system can optionally use a Class II mains power adapter for supplying power to the load and/or charging any Power Modules attached. The primary use of the system is as a mobile power source, therefore the mains power adapter is only intended for use in specific applications.

Not suitable for sterilization. Not suitable for use in an oxygen rich environment

Intended Use

The Geni-Tec system has been designed to provide a reliable source of battery power to equipment within a clinical environment. When integrating within equipment, individual components should be installed and/or configured by appropriately trained and certified engineers/technicians.

Integrations must be in accordance to the manufacturer's recommendations and terms of use.

The Geni-Tec system is intended for use by trained Healthcare professionals. **It is not intended for use by the patient, or member of the general public.**

All installers, configuration agents, and users should be completely familiar with all aspects of this IFU. No servicing or maintenance should be performed while the equipment is in use.



The Geni-Tec system is not intended for use with life support equipment in any way. Any use or integration within a medical device is strictly and exclusively the responsibility of the Medical Device manufacturer, agent, reseller or integrator. The Medical Device manufacturer is responsible for appropriate risk management, product testing, classification and certification for their own specific intended use.

Maintenance and Cleaning

ONLY USE GENUINE BYTEC SUPPLIED REPLACEMENT PARTS. FAILURE TO COMPLY WILL INVALIDATE YOUR WARRANTY AND MAY PRESENT SERIOUS DANGERS

Cleaning Exterior Surfaces

The Geni-Tec system should be kept clean and free of dust. The Dock, charger and Power Module should be cleaned using a damp cloth with water or alcohol solution. Please observe the follow precautions.

- Turn the system off and disconnect from the AC power supply before cleaning
- Do not pour fluid over any part of the Geni-Tec system.
- Do not allow fluids to penetrate the exterior surface of the dock module(s)
- Do not use abrasive cleaners or strong solvents such as acetone or acetone-based compounds

WARNING: *In case of fluid ingress, remove excess fluid with a cloth, and allow the system to dry out thoroughly. Seek advice from qualified or trained technician before attempting to use again.*

Power Module Calibration

To ensure that the Power Modules provide accurate capacity reporting, the Power Modules should be allowed to discharge fully and recharge fully at least once a month. This is typically accomplished in the process of normal usage.

WARNING: *In case the Power Module turns off before the display indicates that it is empty, the Power Module must be placed on charge until completely full.*

Battery Disposal

The Power Modules contain Lithium Ion batteries. Discard the Power Modules/batteries in an environmentally safe and friendly manner. Properly dispose of all Power Module/batteries according to local regulations



Do not disassemble, puncture or incinerate the Power Modules or batteries

Servicing

- The Geni-Tec system, Power Module and Chargers do not contain any user serviceable parts inside.
- Geni-Tec systems must only be installed by suitably qualified persons
- Instructions For Use are supplied in English. Other languages are available on request.
- For telephone assistance call Bytec +44 (0) 1737 378800

WARNING: Do not modify this equipment without authorization from the MANUFACTURER.

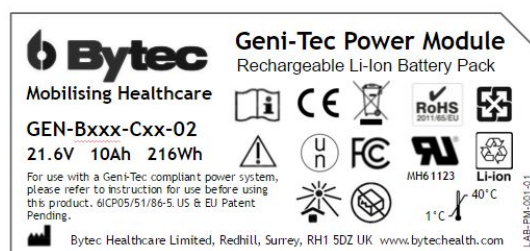
Emergency

In extremely rare case of smoke, fire or partial material decomposition, if safe to do so, submerge the Power Module fully into water. Call the fire department.









Symbols and Labelling

	<p>Press this symbol on the Power Module to turn On/Off the system. When external power is connected (optional), then system will go in and out of standby.</p> <p>When this symbol on the Power Module is lit blue, then that specific Power Module is sourcing power. If the symbol on all Power Modules fitted is flashing blue then the system is in standby (no output power, but Power Modules will charge when external power connected).</p>
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Example of typical label found of each of the Geni-tec components.



	Read the instructions for use (IFU) before using or installing the product.		Conformité Européenne
	Care should be taken when using the product. Handle with care.		Waste Electrical and Electronic Equipment Directive (EU)
	Recyclable (Taiwan)		Conforms to the transportation standards for hazardous materials. Class 9.
	Federal Communications Commission Conformance (US)		Underwriters Laboratory (UL) listed component.

	<p>Meets the requirements of the current EU RoHS Directive 2011/65/EU,</p>	 <p>Li-ion</p>	<p>Lithium Ion Recycling (Japan) Includes Universal Recycling symbol.</p>
	<p>Keep out of sunlight</p>		<p>Do not use if housing is cracked or broken.</p>
	<p>Operating temperature range</p>		<p>TUV Rheinland Listed component for US and Canada</p>
 <p>DC</p>	<p>Direct Current</p>	 <p>AC</p>	<p>Alternating Current</p>

Geni-Tec Quick Start Guide

Step 1 - Attaching a Power Module to the dock(s)

First check that the Power Module has sufficient charge by touching the Standby button momentarily. The display graph will illuminate showing the current state of charge. It is advised to fit only full charged Power Module for optimal performance.

Align the base of the Power Module to the lower locator, and rotate firmly to clip onto the dock. The Power Module will snap into position with a positive click.



Step 2 - Turning the Geni-Tec Power System On

To turn the system on touch the 'Standby' switch at the top of the display for approximately 2 secs. The unit will beep once to confirm instruction. DO NOT PRESS HARD. The blue LED around the switch will illuminate then extinguish before the bargraph cascades up from the bottom to the top of the display. 3 short beeps will confirm that the Power Module has been acknowledged by the system, and that it has been authenticated for use. (Alerts can be disabled)



Once the system has switched ON the bargraph will display the current state of charge. The output voltage will range from 12V to 28V depending on the system's configuration.

The blue LED (standby switch) will illuminate (solid) to indicate that power is being discharged from that specific Power Module. If the blue LED is OFF and the fuel gauge is illuminated, then the Power Module is ready for use, and the load is being supplied from either another Power Module or external power.

Step 3 - Fitting a Second Power Module

If the Geni-Tec power system is fitted with a second dock, then the system can be used in a hot-swap configuration. By fitting a second Power Module, it allows the first Power Module to be removed without loss of system power. This means that the system can effectively be used 24 hours, alternating and charging the Power Modules on a charger as they are being used.



The system automatically selects which Power Module supplies power to the output, it doesn't matter which Power Module you remove, or when, as long as a Power Module with available capacity remains on the system, the supply will continue uninterrupted.

If the Power Module being discharged becomes fully discharged, or removed, the system will automatically switch to the remaining Power Module.

Step 4 - Fitting an External Power Supply (Optional)

It is possible to connect an external power supply to the Geni-Tec system. When attached, the external power supply will become the primary source of power, and the Power Modules can be removed completely from the system without loss of supply. Various configuration exists for attaching an external Power Supply, but the principal use is the same.



If the Power Modules are left on the Geni-Tec Systems, or are added later, then they will automatically start charging. The bargraph display of a Power Module being charged will show a chasing LED. The charging of Power Modules on the Geni-Tec system is not as quick as on the dedicated chargers.



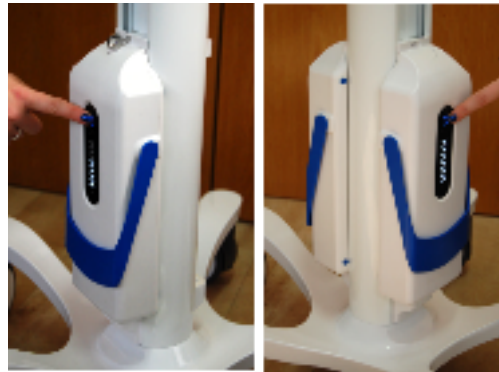
When an external power supply is connected to a system that is turned off, the system will automatically turn on and start charging.

The output voltage will be disabled (turned off) and the blue LED(s) will flash indicating that the system is in standby mode. It is possible to disable this function through the Geni-View APP (see Geni-View App technical manual).

Press the standby switch to turn the system output on see step 2 above. Once the output power has been enabled (turned on), if the external power is removed the output will automatically switch to the attached Power Module(s) and continue uninterrupted.

Step 5 - Turning the Geni-Tec Power System OFF

To turn the system OFF, touch the “Standby” switch for approximately 5 secs. The blue LED around the switch will extinguish and the bargraph cascades down from top to bottom.



Step 6 - Removing a Power Module from the dock

To avoid the Power Module from mechanically disconnecting from the dock, a latching mechanism retains the Power Module in position. A small push button (or a key on some systems), enables the release of the latching mechanism.

Simply depress the button fully to unlock (or insert and turn the key), and then remove the Power Module. DO NOT attempt to pull the Power Module before the button has been fully depressed. If the button feels hard to press, push the Power Module towards the dock while pressing the bottom, then remove the Power Module.

Geni-Tec Modes of Operation

NOTE: It is important that the Geni-Tec system is positioned in such a way that allows easy access to the mains power cable (if fitted) and battery modules (if fitted). If isolation from power is required, and normal powering down of the systems fails, then isolate supply by disconnecting the mains power cable (if fitted), and removing all connected Power modules.

Using the External Power Supply Only

The Geni-Tec system can be used without any Power Modules fitted by connecting the external power supply to the input socket found on the master dock. (Selected Models only)

When the external power supply is fitted, the system will automatically switch on and provides 12V-28V on the output depending on the configuration.

The output voltage will turn off when the power supply is removed, unless a Power Module is subsequently fitted.



Power Module State of Charge

When the Geni-Tec Power Module is removed from the system its state of charge can be viewed by 'touching' the "standby" switch on the front panel. The number of bars illuminated indicates the state of charge.



A safety feature disconnects the power voltage from the Power Module external contacts. It should be safe to clean the Power Module. If the "SERVICE" light is illuminated, do not use or clean with anything other than a damp cloth. Refer to 'Safety Features' for more information. The bargraph will stay illuminated for as long as the standby switch is touched, but will automatically extinguish 5 secs after removing the finger.

Power Module Fuel Gauge

The Power Module status or state of charge is indicated by the LED bargraph. A fully charged power module is indicated by all 10 WHITE LEDs illuminated solid. When the Power Module has reached a low level of charge the LEDs will turn AMBER YELLOW as a caution requiring prompt action to replace the Power Module with a charged one. A completely depleted battery is indicated by a single amber yellow pulsing LED, and requires charging.

Some configuration will use RED LEDs to indicate low level of charge, however in these cases immediate action is required to replace the Power Module with a charged one.

Generally, each bar represents 10% of remaining capacity. The Power Module will retain some charge to avoid going into deep discharge. It is recommended that the battery is placed on full charge within 5 days from being discharged below 20%. In some configurations when the RED LED is showing, immediate charging is required.

Power Module Charging

A Power Module that is being charged will indicate the current state of charge by displaying the relevant number of solid white LEDs on the bargraph display.

Note: The bargraph will display a single chasing LED (from LED 1 to LED 10) indicating that the Power Module is being charged

The Geni-Tec system will allocate up to 4.0 A for charging. When one Power Module is attached, it will charge at a constant current of 4.0 A until the voltage reaches a predetermined level, at which point it will switch over to a constant voltage phase and the current will gradually decrease until the Power Module has been fully charged.

A single Power Module will take approximately 2.5 hours to become 90% charged from a fully discharged state. A Geni-Tec System supplied with two docks is capable of charging two Power Modules simultaneously. In this configuration the available current (4.0A) will be shared between the two Power Modules. Two Power Modules will therefore take approximately 5 hours to become charged from a discharged state.

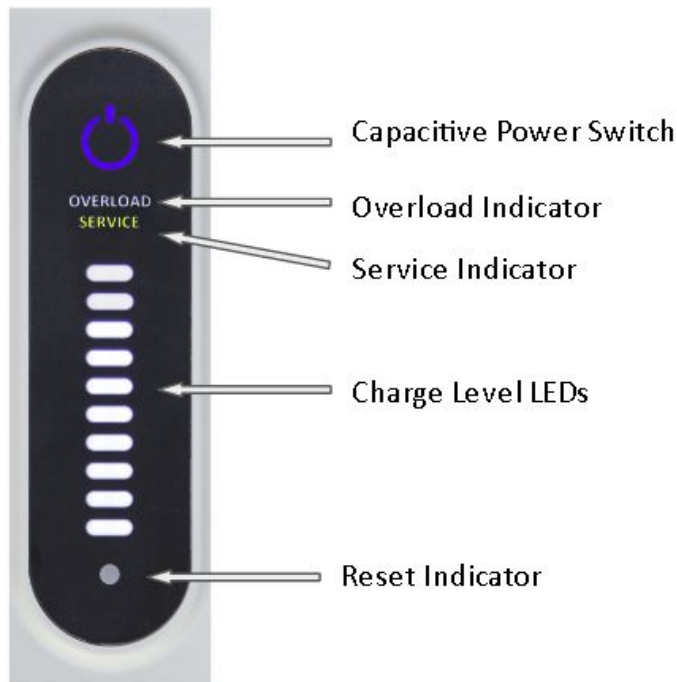
While charging one or two Power Modules the Geni-Tec System can simultaneously power an external load. In this configuration the external load is given priority over the Power Module(s), with regards to available power (max available power = 220W). If the external load exceeds 120W there is a possibility that the charging current will be reduced and the charging time will increase accordingly.

Once fully charged the Power Module(s) will automatically stop charging to prevent damage due to overcharging. The system will then continue to monitor the state of charge of the power module(s) and automatically resume charging if the state of charge falls below 90%.

The system automatically switches over to the Power Module when the external Power Supply is removed. This is fast enough not to interfere with the performance of any connected equipment.

If two Power Modules are being charged simultaneously, then the lower charged battery will receive a greater share of charge current, so that both Power Modules reach maximum charge after the same period of time.

Power Module Display



The Standby Switch uses capacitive sensing technology. Therefore only touch the switch lightly, do not press too hard as this could damage the sensor.

Discharging The 'Standby' symbol will illuminate blue (solid) when 250mA or more is being discharged from either or both of the Power Modules.

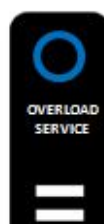
Standby. To turn the system on touch the switch for approximately 3 secs. To turn the system off touch the switch for approximately 5 secs. The switch will illuminate blue when touched.

When the external Power Supply is present, the output voltage can be disabled by touching the standby switch for approximately 3 secs.

The blue LED flashes to indicate the system is in standby mode.

To bring the system back out of standby, the standby switch must be touched again for approximately 3 secs. The output voltage will be re-enabled.

'OVERLOAD'. The overload LED illuminates when the preprogrammed power threshold has been reached. Beyond this level, the system will shut down.



OVERLOAD LED Flashes = Warning maximum current has been reached.

OVERLOAD LED Solid = Maximum power has been reached, and system has shut down.

If the Overload LED (AMBER YELLOW depending on configuration) is illuminated solid, remove the Power Modules and external power supply adaptor if fitted, check that the equipment attached has not developed a fault. The system must be power cycled to reset

‘SERVICE’ - The Service LED (AMBER YELLOW depending on configuration) flashes indicating that the power module:-

1. Safety FET has failed
2. Service interval has been reached.
3. OEM identification has failed.



Caution DO NOT use the Power Module until it has been checked by an appropriately trained technician. If a fault has developed, the Power Module must be removed from service.

If the Power Module is due for a service, this can be done by a trained person, and the service light can be reset.

Safety Features

The Geni-Tec System has been designed specifically for use within a healthcare environment. Great care and attention has been given to the safety features within its design.

1. **Cell Discharge Cut-Off** If the Power Module is allowed to become over discharged the internal cell will automatically shut down, causing the Power Module output to turn off. All LEDs on the front of the power module will extinguish and will no longer illuminate when the “standby” switch is touched. To reset, the Power Module must be attached to a dock or charger and placed on charge.

Charger : Attach Power Module on powered charging dock and allow to recover. and fully charge. This may take 30 minutes but depending on level of over discharge state this can take longer, though typically this will be no longer than 6 hours.

If the Power Module does not recover after this period then it is unrecoverable and should be removed from service.

Dock : *The Dock has a 30 minute charging timer.*

Attach Power Module to Dock(Powered On) and allow to recover. and fully charge. Power Module can typically take up to 30 minutes to begin charging following a discharge cut-off. If charging hasn't begun after 30 minutes, Remove and reattach the Power Module to begin a new charging cycle. In some cases a Power Module may take upto 6 hours or 12 x 30 minute cycles.If the Power Module does not recover after this period then it is unrecoverable and should be removed from service.

Warranty Notice: If the power module is allowed to over discharge to the point that it can no longer recover, then it has entered a deep discharge mode that will inhibit the Power Module from being recharged. This is by design as a protection mechanism, it is not a fault. In such cases, the warranty no longer applies, and the Power Module should be removed from service. The Power Module poses no danger in this state.

2. **Cell Overcurrent** If the output current drawn from the cell exceeds its safe threshold for 10ms or more the internal cell output will be turned off. To reset, the Power Module must be attached to a dock and placed on charge. Once the bargraph display turns back on, the Power Module can be used normally.

3. **Thermistor** The Power Module contains an integrated thermistor. The dock continuously monitors the thermistor value to determine the operating temperature of the battery. If the temperature falls outside the permissible operating temperature, charging is terminated until the temperature returns to an acceptable operating level.
4. **Dock Detect** The Power Module detects the presence of the dock to operate. If the dock cannot be detected, then the internal cell voltage will be isolated from the external Power Module contacts. The Power Module interconnect pins only become 'live' when the Power Module is safely attached to a dock and authenticated. (Patent Pending)
5. **Ingress Protection** The Power Module is sealed to protect against the ingress of dust and water, allowing the unit to be safely cleaned for effective infection control. (Patent Pending)
6. **Power Module Overcurrent** If the output current drawn from the Power Module exceeds a predefined level for a period of 10s or more, the Power Module output will be turned off. To reset, the Power Module must be removed from the dock and then re-attached or the system.
7. **Power Module Overcharge** The system will automatically terminate the charge cycle when a Power Module is fully charged. It is not possible to overcharge a Power Module.
8. **Power Module Over/Under Temperature** If the internal temperature of the Power Module housing exceeds the safe operating temperature range of the internal cell the dock will automatically disable charging & discharging. The internal temperature measurement is determined using a digital temperature sensor.
9. **Power Module Output Isolation** The output isolation of the Power Module is continuously monitored. If the output isolation becomes faulty the 'Service' LED on the Power Module will flash continuously (when connected to a dock and powered on) to warn the user of a faulty Power Module. The Power Module should be removed from service. Note: When disconnected from the dock the 'Service' LED will flash to indicate the fault only when the "Standby" switch is touched.
10. **Power Module Encryption** Each Power Module is factory programmed with an authentication code. Each time a Power Module is attached to a dock (or powered on) it is interrogated to confirm that it is genuine. If a non-genuine Power Module is identified the Power Module will be prevented from charging & discharging. A Power Module that does not pass encryption within 30 min will be assumed to be non-genuine. (Patent Pending) This does not apply to the charger.
11. **External Input Voltage** When the external 28VDC PSU is connected to the system the applied voltage is checked for under voltage, overvoltage and reverse voltage. The protection circuit will prevent an incorrectly applied voltage from damaging the system. The protection circuit also protects the external PSU against over current.
12. **Safety Signal** The dock continuously checks each Power Module for the presence of a safety signal. If the safety signal is not present the Power Module will be prevented from charging & discharging.
13. **System Short Circuit** The system output is protected from a short circuit event by the integrated regulation circuit. The output voltage will be turned off. To reset the output voltage the fault condition must be removed, or the system should be power cycled.

14. **System Transient Current** If the output current drawn from the system exceeds a predetermined level for a period of 15 mS, the output voltage will be turned off. To reset the output voltage the fault condition must be removed, or the system should be power cycled.
15. **System Continuous Current** If the output current drawn from the system exceeds the preprogrammed threshold for a period of 10 seconds, the output voltage will be turned off. To reset the output voltage the system must be power cycled.

NOTE: During discharging at higher loads, it is normal for the Power Module to feel warm to the touch. This includes the gold contacts on the Power Module and the Master dock. The Power Module can operate safely at higher temperatures during discharge than during charging. If the Power Module is fitted to a charging station immediately after a discharge, it is possible that the Power Module does not start charging straight away. It will relax, allowing the temperature to drop before starting its charging cycle., this is designed to help maintain a healthy battery operation. Also note that the rate of charge can also vary depending on the temperature, and this can affect the total charge time experienced by the user.