

*We will find a product or make a new one*

## ***Outdoor Battery Charger***

***UP to IP 65***



### **Outdoor Battery Charger for Harsh Weather and hot places**

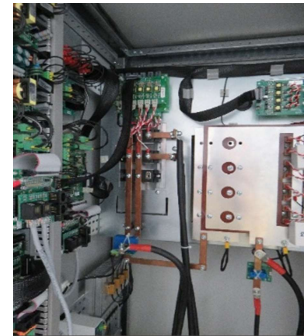
Outdoor Rectifier for Harsh Environments is a growing category of Battery Charger systems that are built to withstand the stresses of an industrial environment.

With floor space in data centers and other climate-controlled areas at a premium, more Rectifier systems are operating in harsh environments that can include vibration, dust, and liquid splatter.

These harsh conditions can affect the life span of regular rectifier equipment leading to unexpected failures. But Hannibal Outdoor UPS for harsh environments has components, batteries, and enclosures that can meet those challenges.

Up to IP65 is available in Hannibal UPS products and also for the Outdoor cabinet we can offer ATEX certificate.

# Outdoor Battery Charger



## GENERAL SPECIFICATIONS

- Input isolation transformer
- Fast control with DSP controller
- Thyristor/IGBT technology
- Float boost and equalize charge
- Auto and manual charge mode
- <1% Voltage Ripple (<4% on 1 phase)
- Alarm adjustable dry contacts
- ModBus Protocol - RS232, RS485
- Operation available while mains fail
- Current limiting (adjustable)
- Automatic start & fault recovery
- Smart fault diagnosing

## Outdoor Specification

- IP 55 for the Harsh Environment Protection
- Waterproof and Dust Filters
- Operation Temperature between -10 to 55 Degrees
- Air Conditioner
- Roof ventilation
- Sun protection

## Hannibal Outdoor Rectifier for Harsh Environments are designed to withstand:

- Temperature swings
- Humidity
- Dirt and debris
- Liquid splatter
- Vibration
- Remote or hard-to-access areas

## Ex Proof Panel with IP65



**Ex-Proof Standards:** These panels are certified to meet **ATEX** (European Directive for Explosive Atmospheres) or **IECEX** standards.

**Materials:** Typically constructed from **stainless steel** or **cast aluminum**,

### IP65 Rating:

•**Dust Tight:** The "6" in **IP65** means the panel is completely dust-tight, providing full protection against dust ingress, ensuring no particles can enter the enclosure.

•**Water Jet Protection:** The "5" means the panel is protected against low-pressure water jets from all directions,



## TECHNICAL SPECIFICATIONS

MODEL	1 PHASE INPUT
<b>INPUT</b>	
Nominal Voltage	110VAC / 127VAC / 208VAC / 220VAC / 230VAC / 240VAC
Nominal frequency	50 or 60 Hz
Transformer	Galvanically isolated
ITHD	<30-35% standard and <4-5% Optional
Input Protection	Thermic Magnetic Overcurrent protection MCB, Overvoltage protection
<b>OUTPUT</b>	
Float charge Adjustment range	75% to 135% of Nominal Output Voltage
Output Voltage Adjustment	75% to 135% of Nominal Output Voltage
Output Current Adjustment	0 -100% of Nominal Output Current
Battery Charging Current	0 -100% of Nominal Output Current
Boost charge adjustment range	75% to 135% of Nominal Output Voltage
Equalizing charger adjustment range	75% to 135% of Nominal Output Voltage
Float Voltage(V/C)	2,24 lead acid Battery 1,40 NiCd Battery
Nominal Output Current	0 to 2000A
Max Output Current	110 % of nominal output current
Filtering	LC Filter
<b>GENERAL PROPERTIES</b>	
Boost Timer	0-600 hours adjustable
Cooling	Fan Forced Cooling(Standard), Natural Cooling(Optional)
Isolation Voltage	1500 or 3000VAC input/chassis and output/chassis
Efficiency at full load	>90%
Protection level	IP55, (consult to Hannibal for IP56 to IP65)
Real-Time Event	With LCD Panel 200 Events and with HMI more than 1000 events (Optional)
Access to Batteries	Batteries and rectifier in the same cabinet with front access(Optional)
Circuit Breakers	Thermic-magnetic circuit breakers for input, Battery and Load (up to 100A)
Reset Button	Used for re-operation in case of failure of the system.
Measurements (Optional)	Load Voltage/Current; Battery Voltage/Current; Utility Voltage; Line Voltage; Frequency; Power Factor
<b>ENVIRONMENT</b>	
Acoustic Noise	45 - 55 dB (according to Power Rating)
Storage Temperature	(-20 °C) – (+70 °C)
Operating Temperature	(-10°C) - (+55°C)
The temperature increasing	less than 2 C/ 10% load for both charger and transformer
Residual voltage level	At full load and no load, peak load = 3%
Relative Humidity	0 - 95% Non-condensing, Heater (Optional)
Max Installation Height	1000m (-1% Power for every 100m after 1000m) Max. 4000m
Color	RAL7035, RAL7032 (Standard), others (Optional)
<b>COMMUNICATION &amp; PARALLELING</b>	
Communication	RS232(Standard), Dry Contacts (Standard), RS485(Optional), TCP(Optional), SNMP(Optional), GSM(Optional)
Paralleling	Parallel Redundant (No need for extra kit for paralleling)
<b>STANDARDS</b>	
Standards	IEC61204-1, IEC62040-2, IEC 60529 ,IEC 60146 IEC60335, ISO9001, ISO14001- ISO27001-CE

## TECHNICAL SPECIFICATIONS

MODEL	3 PHASE INPUT
<b>INPUT</b>	
Nominal Voltage	3*190VAC / 3*220VAC / 3*360VAC / 3*380VAC / 3*400VAC / 3*415VAC (Phase to Phase)
Nominal frequency	50 or 60 Hz
Transformer	Galvanically isolated
ITHD	<30-35% standard and <4-5% Optional
Input Protection	Thermic Magnetic Overcurrent protection MCB, Overvoltage protection
<b>OUTPUT</b>	
Float charge Adjustment range	75% to 135% of Nominal Output Voltage
Output Voltage Adjustment	75% to 135% of Nominal Output Voltage
Output Current Adjustment	0 -100% of Nominal Output Current
Battery Charging Current	0 -100% of Nominal Output Current
Bost charge adjustment range	75% to 135% of Nominal Output Voltage
Equalizing charger adjustment range	75% to 135% of Nominal Output Voltage
Float Voltage(V/C)	2,24 lead acid Battery 1,40 NiCd Battery
Nominal Output Current	0 to 2000A
Max Output Current	110 % of nominal output current
Filtering	LC Filter
<b>GENERAL PROTERTIES</b>	
Boost Timer	0-600 hours adjustable
Cooling	Fan Forced Cooling(Standard), Natural Cooling(Optional)
Isolation Voltage	1500 or 3000VAC input/chassis and output/chassis
Efficiency at full load	>90%
Protection level	IP55, (consult to Hannibal for IP56 to IP65)
Real-Time Event	With LCD Panel 200 Events and with HMI more than 1000 events (Optional)
Access to Batteries	Batteries and rectifier in the same cabinet with front access(Optional)
Circuit Breakers	Thermic-magnetic circuit breakers for input, Battery and Load (up to 100A)
Reset Button	Used for re-operation in case of failure of the system.
Measurements (Optional)	Load Voltage/Current; Battery Voltage/Current; Utility Voltage; Line Voltage; Frequency; Power Factor
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Acoustic Noise	45 - 55 dB (according to Power Rating)
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