HBL

EVO AT SERIES BATTERY CHARGER

EVO® EVOLVED

AT SERIES BATTERY CHARGER

HINDLE HEALTH SYSTEM

PRODUCT

PATENT PENDING

712 Brook St # 107, Rocky Hill, CT 06067 | (860) 257-9800
http://www.hblbatteries.com/

Evo AT Series battery charger designed with YOU in mind.

***Evo* AT Series battery charger** is HindlePower's next generation SCR-based utility battery charger. This evolutionary product is revolutionary in its design and operation and made to exceed your expectations. ***Evo* AT Series battery charger** was conceived, designed and manufactured with three uncompromising goals in mind:

3 GOALS DRIVING THE DESIGN

- **A battery charger that makes your job easier**
- **To retain the quality and integrity of the original AT series battery charger design**
- **To satisfy your NERC and utility industry requirements in an ever-changing world**

Driven by these goals and keeping in mind the simplicity and intuitive nature of the original AT series has resulted in an intelligent design that is still the world's easiest to use.

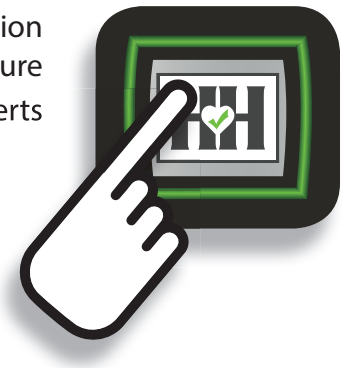
The ***Evo* AT Series battery charger's** open architecture design offers you flexible operation to meet your ever evolving DC power requirements. These new features are paired with the **Hindle Health® System** to make your job quicker and easier than ever before.

	Why purchase EVO?	
Standard Feature	AT10.1/ AT30	EVO EVOLVED
Single Phase	✓	✓
Three Phase	✓	**coming soon**
Indicator LEDs For Common Alarms	✓	✓
Soft Start Feature	✓	✓
Universal Main Control Board	✓	✓
5 Year Product Warranty	✓	✓
High DC Voltage Shutdown	✓	✓
Data/Event Logging	-	✓
HINDLE HEAL+H™ SYSTEM	-	✓
Hindle Health Monitor	-	✓
Hindle Health Button	-	✓
Hindle Health Diagnostics	-	✓
Interactive LCD Display	-	✓
DC circuit breaker status via LCD display	-	✓
AC Ripple Alarm	-	✓
Field Upgradable Firmware	-	✓
User Configured Alarm Relays	-	✓
Adjustable Time-Delay On Alarm Contacts	-	✓
Generic Binary Inputs	-	✓
Generic Analog Inputs	-	✓

HINDLE HEAL+H SYSTEM

The ***Hindle Health System*** offers you peace of mind via real-time status notification that your charger is "healthy" and operating properly. Continuous self-diagnostics ensure trouble-free operation. In the event an issue is detected, the ***Hindle Health System*** alerts you of the problem.

The ***Hindle Health Button*** initiates a systematic diagnosis of all parameters and internal components to confirm your charger is operating properly.



PEACE OF MIND...

HINDLE HEAL+H® SYSTEM

... IN REAL TIME

Hindle Health Status Lights:

An indicator light to let you know your charger is functioning correctly. See green? You know all is well.

Hindle Health Button:

A simple, step by step system check that easily allows the user to verify the internal components are working and operating per the user's set points.

Hindle Health Diagnostics:

A powerful diagnostic program alerting you of potential issues as they occur.

EVO AT SERIES
FEATURES & OPTIONS

EVO AT SERIES STANDARD FEATURES:

- Universal main control board operates in any AT Series evo charger
- Standard Alarm Suite with LED Indicators (AC Failure, Low DC Voltage, High DC Voltage, DC Output Failure, Positive Ground Fault, Negative Ground Fault)
- Common Alarm LED Indicator (for all alarms including: Low AC Voltage, High AC Voltage, End of Discharge, Low DC Current)
- Programmable summary relay contact that can be configured to indicate any or all alarm conditions
- Redundant analog circuit for High DC voltage detection independent of microprocessor control
- Microprocessor and analog High DC voltage detection methods can be enabled to shutdown charger
- Float and multiple equalize charging modes with LCD display indication
- Manual equalize timer (0-999 hr.)
- AC line automatic failure equalize timer (0-255 hr.)
- AC On indicator
- 0.5% Digital metering for Vdc and Adc measurements
- Graphical LCD Display with LED backlight
- AC input and DC output circuit breakers
- Password protection for security
- A redundant analog circuit for Low Level Detect alarm, independent of the microprocessor
- Multiple processor design for exceptional reliability
- Local or remote voltage sense with redundancy in the event of remote sense failure
- Input & output MOV surge suppressors
- Battery Open Alarm
- Reverse polarity protection diode
- Switchboard wire, UL VW-1
- Enclosure pre-treated using a 5-stage iron phosphate process with baked epoxy powder coating in ANSI 61 gray
- Plug-in socket for removable memory card used for event logging and firmware upgrades
- Battery backed up real time clock for date and time stamping events
- Hindle Health System , intelligent self diagnostics
- Standard output filter per NEMA PE5

EVO AT SERIES SUMMARY OF OPTIONS:

- Battery Eliminator DC output filtering: per NEMA PE5
- Medium & High AIC Breakers
- Auxiliary alarm relay board
- Copper ground bus
- AC lightning arrestor
- Fungus proofing (tropicalization)
- Static proofing
- Serial communications modules (RS-232/RS-485)
- Ethernet communications module
- Modbus and DNP3.0 Communication protocols
- Battery temperature compensation
- Fan control contactor
- Custom paint
- NEMA 4/12 type enclosure w/fan
- Rack mounting
- Floor mounting stand
- NEMA Type 2 drip shield
- Barrier type alarm terminal block
- Forced load share
- Zero-center ground detection meter
- AC voltmeter
- AC ammeter
- Cabinet heater assembly
- ABS certification upon request
- Custom drawing package w/ optional CAD and PDF files
- Remote shutdown
- Remote battery shunt
- Generic binary inputs
- Generic analog inputs
- Battery discharge alarm

EVO AT SERIES
SPECIFICATIONS

AC INPUT

Input Voltage:
120, 208, 240, 480
120/208/240, 550/600 (multi-tap) @ 60Hz
220, 380/416 @ 50-60Hz
Input Voltage Tolerance:
+10%, -12%
Input Frequency Tolerance:
±5%
Efficiency:
85-90% typical for 130Vdc at 50-100% load

Safety & Acceptance

- Meets NEMA PE5
- Third party agency approvals:

Seismic qualified IEEE 693/IBC CBC
ABS or CE certification available upon request.

DC OUTPUT

Voltage Ratings:
24, 48, 130 or 260*Vdc nominal
Current Ratings:
6, 12, 16, 20, 25Adc
*260Vdc - 6,12 Adc only
Continuous Rating:
110% rated current at maximum equalize voltage at -10 to +50ºC
Transient Rating:
Per NEMA PE-5
Current Limit Adjustment Range:
50% to 110% rated output
Voltage Regulation:
±0.25% for line, load and temp. variations
*Regulation at max. extended equalize voltages may not meet ±0.25%
Electrical Noise:
32dBrnc

Ripple:
24/48Vdc
- Filtered on battery 30mVrms
- Filtered off battery 1% Vrms
- Battery Eliminator 30mVrms

130Vdc
- Filtered on battery 100mVrms
- Filtered off battery 2% Vrms
- Battery Eliminator 100mVrms
- Super Eliminator 30mVrms

260Vdc
- Filtered on battery 200mVrms
- Filtered off battery 2% Vrms
- Battery Eliminator 200mVrms

Surge Withstand Capability:
Designed to meet IEEE-472, ANSI C37.90a

Environmental

- Operating Ambient Temperature 5°F to 122°F (-10°C to 50°C) w/o derating
- Operating Altitude 3300 feet (1000 meters) above sea level without derating
- Relative Humidity 0% to 95% (without condensation)
- Audible Noise Less than 65 dBA at any point 5ft (1.5m) from any vertical surface of enclosure

PROUDLY ENGINEERED & BUILT BY HINDLEPOWER
MADE IN EASTON
EASTON, PA, USA

MADE IN THE U.S.A.

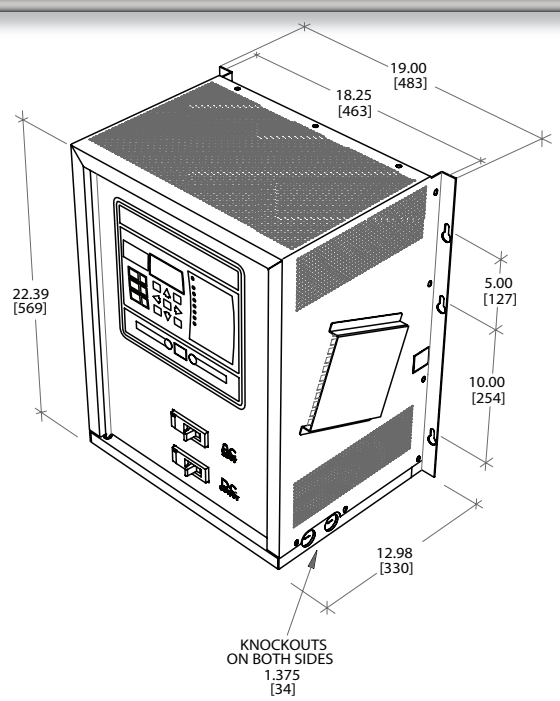
EVO AT SERIES
SPECIFICATION CHART

HOW TO SIZE YOUR BATTERY CHARGER

(SIMPLIFIED FORMULA)

$$\left(\frac{Ah \times 1.R}{t}\right) + L = \text{Continuous Charger Output Rating}$$

Ah=Ampere hours removed
R= Recharge factor (1 = Pb) or (3 = NiCd)
L= Additional standing load
t= Recharge time in hours



	DC Output Rating		Battery Charger AC Circuit Breaker Ampere Rating (standard AIC breakers)								DC Circuit Breaker Rating	Approx. Shipping Weight lbs.(kg)	Heat Loss Watts (BTU/hr)
	Volts	Amps	120 Vac	208 Vac	220 Vac	240 Vac	380 Vac	416 Vac	480 Vac	600 Vac			
Float 22.0- 29.5Vdc Equalize 23.4-31Vdc Ext. Equalize to 32Vdc	24Vdc	6	16	15	15	15	15	15	15	15	10	99 (45)	40 (136)
		12	16	15	15	15	15	15	15	15	20	109 (50)	75 (255)
		16	16	15	15	15	15	15	15	15	25	115 (53)	98 (334)
		20	20	15	15	15	15	15	15	15	30	119 (54)	121 (413)
		25	20	15	15	15	15	15	15	15	40	136 (62)	150 (512)
Float 44–58Vdc Equalize 46.8 – 59Vdc Ext. Equalize to 61Vdc	48Vdc	6	16	15	15	15	15	15	15	15	10	105 (48)	60 (203)
		12	20	15	15	15	15	15	15	15	20	120 (55)	107 (365)
		16	25	16	16	16	16	16	15	15	25	155 (71)	139 (473)
		20	40	20	20	20	16	16	15	15	30	170 (78)	170 (581)
		25	40	20	20	20	16	16	15	15	40	180 (82)	210 (717)
Float 110 – 140Vdc Equalize 117 – 143Vdc Ext. Equalize to 149Vdc	130Vdc	6	25	15	15	15	15	15	15	15	10	130 (59)	99 (337)
		12	50	25	25	25	15	15	15	15	20	155 (71)	167 (571)
		16	50	25	25	25	16	16	15	15	25	215 (98)	213 (727)
		20	63	32	32	32	20	20	20	15	30	225 (103)	259 (883)
		25	63	40	40	40	25	25	20	15	40	265 (120)	316 (1078)
Float 248.4 – 282Vdc Equalize 264 - 287.6Vdc	260Vdc	6	50	25	25	25	20	20	15	15	10	155 (71)	167 (571)
		12	63	32	32	32	20	20	20	15	20	265 (120)	316 (1078)
		All specifications subject to change											

**Regulation at max. equalize voltages may not meet ±0.25%*

EVO EVOLVED ... JUST PART OF THE NEW FACE OF HINDLEPOWER

WE ARE NOW...

YOUR DC ENGINEERING POWERHOUSE !

MORE THAN JUST GREAT BATTERY CHARGERS, WE NOW OFFER FULLY INTEGRATED DESIGNS THAT WORK TOGETHER TO MAKE YOUR JOB EASIER.

FOR MORE INFORMATION:

Call HBL to speak with our professional and knowledgeable team.

Our staff ɓa vailable Monday-Friday from 8:30am-4:30 pm ET for phone assistance or online chat.

Seismic Qualified · ABS
CE certifi cation available upon request

All specifications subject to change.

712 Brook St # 107, Rocky Hill, CT 06067 | (860) 257-9800
http://www.hblbatteries.com/