

AT30 SERIES BATTERY CHARGER



- » 5 Year Product Warranty
- » Universal main control board operates in any AT Series charger
- » Alarm assembly with local LEDs and summary relay contact for AC Failure, DC Failure, High Vdc, Low dc, Positive(+) and Negative(-) ground
- » High DC voltage shutdown
- » Forced load share during parallel operation
- » Float/equalize selector switch with indicating lights
- » Manual equalize timer (0-255 hr.) with indicating lights
- » AC line failure automatic equalize timer (0-255 hr.) with indicating light
- » AC On indicating light
- » 1% Digital LED meter for Vdc, Adc, timer hours and alarm settings
- » 6 pulse rectification
- » AC input and DC output circuit breakers
- » Membrane front panel
- » Front panel controls can be disabled for security
- » A redundant analog circuit for LDCV alarm, independent of the microprocessor
- » Redundant control loops for higher reliability
- » Local or remote voltage sense with redundancy to protect against remote sense failure
- » Self-diagnostics
- » Input & output MOV surge suppressors
- » Reverse polarity protection via free wheeling diodes
- » CU-AL I/O compression lugs
- » Switchboard wire, UL VW-1
- » Enclosure pre-treated using a 5-stage iron phosphate process with baked epoxy powder coating in ANSI 61 gray

Safety and Acceptance

- Meets NEMA PE 5-1996, PE 5-1997 (R2003) specification
- NEMA-1/IP20 type standard enclosure
- Third party agency approvals:



CSA C22.2 · NRTL/C · UL 1012/UL 1564 compliant Seismic qualified
ABS · CE certification available upon request

Environmental

- Operating Ambient Temperature 0°F to 122°F (-18°C to 50°C) w/o derating
- Operating Altitude 10,000 feet 3,000 meters) above sea level w/o 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

Specifications

AC Input

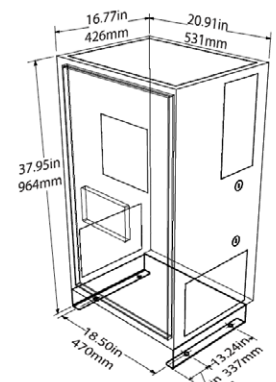
- » **Voltage:**
 - 208 Vac 60Hz
 - 240 Vac 60Hz
 - 480 Vac 60Hz
 - 550-600 Vac 60Hz
 - 220 Vac 50/60Hz
 - 380 Vac 50/60Hz
 - 416 Vac 50/60Hz
- » **Input Voltage Tolerance:**
 - +10%, -12%
- » **Input Frequency Tolerance:**
 - ±5%
- » **Efficiency:**
 - 85-90% typical for 130Vdc at 50-100% load

DC Output

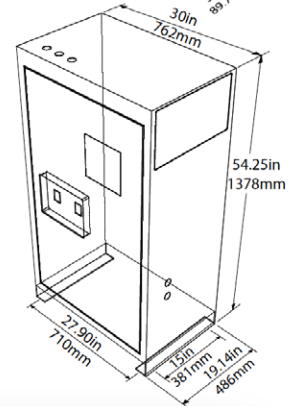
- » **Voltage Ratings:**
 - 12, 24, 48, or 130Vdc nominal
- » **Current Ratings (Acd):**
 - 25, 30, 40, 50, 75, 100, 125, 150, 200, 250, 300, 400, 500, 600, 800, 1000
- » **Continuous Rating:**
 - 110% rated current at maximum equalize voltage at 50°C
- » **Current Limit Adjustment Range:**
 - 50% to 110% rated output
- » **Voltage Regulation:**
 - ±0.25% for line, load and temp. variations
 - *Regulation at max. equalize voltages may not meet ±0.25%
- » **Electrical Noise:**
 - 32dBrc
- » **Ripple:**
 - 12/24/48Vdc
 - Unfiltered on battery 1% Vrms
 - Filtered on battery 30mVrms
 - Filtered off battery 1% Vrms
 - Battery Eliminator 30mVrms
 - 130Vdc
 - Unfiltered on battery 2% Vrms
 - Filtered on battery 100mVrms
 - Filtered off battery 2% Vrms
 - Battery Eliminator 100mVrms
- » **Surge Withstand Capability:**
 - Meets IEEE-472, ANSI C37.90a



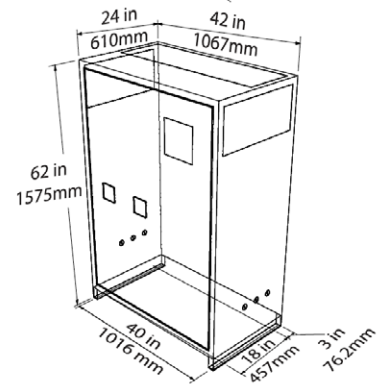
Cabinet Style 5018



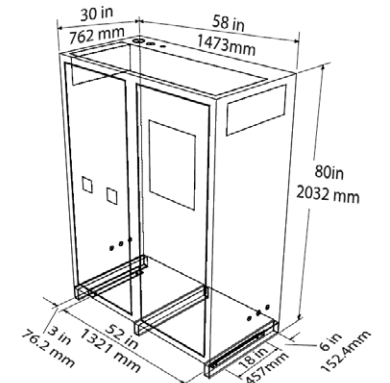
Cabinet Style 5030



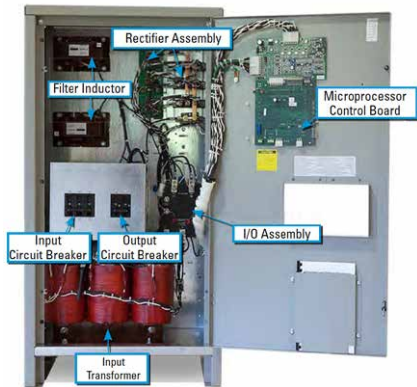
Cabinet Style 163



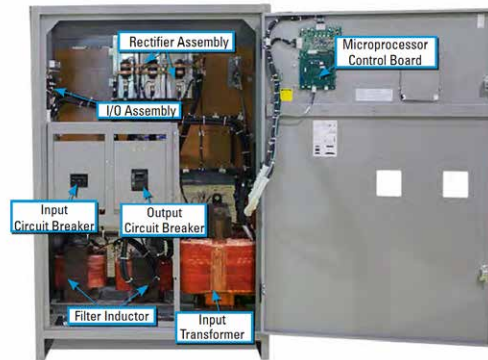
Cabinet Style 198



Configuration



STYLE 5018 CABINET



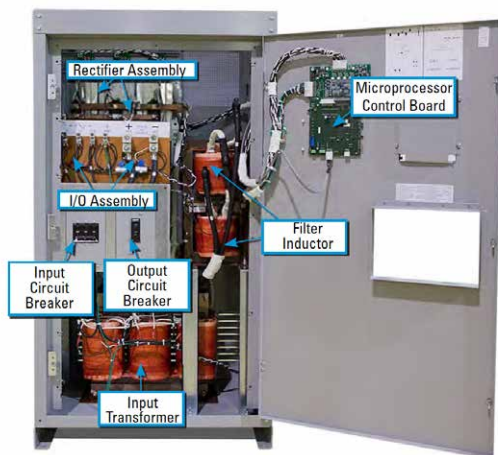
STYLE 163 CABINET

AT30 - SPECIFICATION TABLE

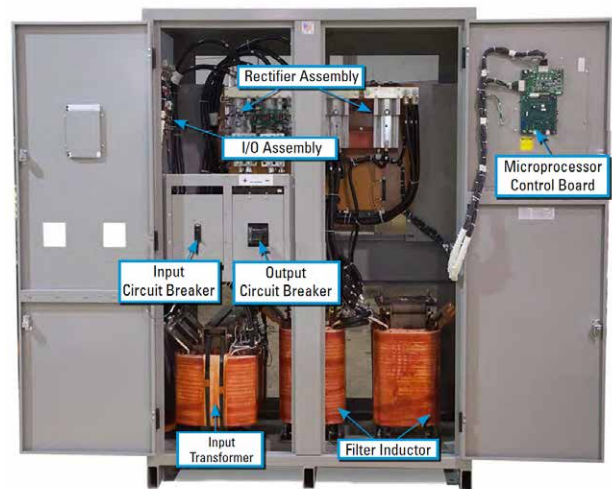
	Output voltage	Output current	Filtr	Input Voltage	Factory configurations & options
AT30					Contact us for configuration

CIRCUIT BREAKER AC & DC RATINGS

Standard	Medium	High
Input: 5kAIC - 120/208/240/480Vac 14kAIC - 600Vac Output: 5kAIC - 125Vdc	Input: 25kAIC - 120/208/240/480Vac 18kAIC - 600Vac Output: 10kAIC - 250Vdc	Input: 65kAIC - 120/208/240/480Vac N/A - 600Vac Output: 20kAIC - 250Vdc



STYLE 5030 CABINET



STYLE 198 CABINET

Customize your AT30

Summary of options

- » DC output filtering: per NEMA PE5 1996, standard and battery eliminator
- » Medium & High AIC Breakers
- » Auxiliary alarm relay board
- » Copper ground bus
- » AC lightning arrestor
- » Fungus proofing (tropicalization)
- » Static proofing
- » Forced load share cable
- » Communications module: DNP3 Level 2 or MODBUS protocols
- » Battery temp. compensation
- » Custom Paint
- » NEMA 4 (12) type enclosure w/ fan
- » NEMA Type 2 Drip Shield
- » Barrier type alarm terminal block
- » End of discharge alarm
- » Battery discharge alarm
- » Zero-center ground detection meter
- » Analog AC voltmeter
- » Analog AC ammeter
- » Cabinet heater assembly
- » CE marking upon request
- » ABS certification upon request
- » Fan control contactor
- » Custom drawing package
- » Mechanical lock for front door

Filtering - Standard

Output filtering is essential whenever there is need for low ac ripple and low noise on the dc bus for critical loads. The standard dc output filtering limits ripple to no more than 30mV RMS on 12, 24 & 48Vdc units, and 100mV RMS on 130Vdc units, measured at the battery terminals. This feature meets the specifications of NEMA standard PE5-1996, and is recommended for installations using VRLA or gelled electrolyte batteries.



Filtering - Battery Eliminator

An additional “battery eliminator” feature is also available, meeting the specifications of NEMA standard PE5-1996 with no battery connected, measured at the dc output terminals. This feature is recommended for sites where the battery may occasionally be disconnected from the dc bus for maintenance. Additional filtering is essential to limit ac ripple and noise for critical dc loads.

Medium & High AIC Breaker

This feature provides thermal-magnetic circuit breakers with higher Ampere Interrupting Capacity ratings than the standard. See the tables on Page 11 for medium and high AIC breaker ratings.



Auxiliary Alarm Relay Board

The AT30 features several industry-standard alarms, with individual LED indicators on the front instrument panel, and are accessible to the user via one (1) Summary Alarm contact on the Main Control PC Board. This feature provides a separate user-accessed pc board, featuring discreet two (2) form-C relay contacts for all six (6) alarms.



Copper Ground Bus

This option provides a convenient means to tie the AT30 to the site building ground. A copper ground bus bar is provided with an extra CU-AL compression box lug.



Communications

This option allows full remote monitoring of the AT30 and control of the front panel features, using MODBUS or DNP3 Level 2 protocols. Standard serial connections are provided for use with local SCADA systems.



Ethernet or Fiber Optic Modem interfaces are also available for use with the AT Communications option. Contact factory for part number.



AC Lightning Arrestor

This option features an industrial-grade surge arrester in polycarbonate housing, rated for 20,000 Amperes. It is recommended for installations with risk of frequent ac surges, such as high elevations or severe weather.



Temperature Compensation

Supplied in a kit, this option adjusts the AT30 dc output voltage up or down, in response to battery temperature fluctuations. Temperature is measured by an epoxy-enclosed thermistor. This probe is mounted on or near the battery, and connected by a cable to the Main Control PC Board. It is compatible with both lead-acid and nickel-cadmium batteries, and recommended for VRLA batteries. Cable lengths of 25, 50, 100, and 200 ft are available.



NEMA Type 4 Cabinet

With this accessory, a fully assembled standard AT30 NEMA-1 vented enclosure is installed within another gasketed, sealed cabinet. The combined assembly meets the NEMA Type 4 (and therefore Type 12 and 13) enclosure specification. All ratings feature forced cooling, with user-supplied 120Vac for the fan.



NEMA Type 2 Drip Shield

Standard AT30 battery chargers are supplied in NEMA Type 1 vented enclosures. The optional drip shield prevents overhead water and small falling particles from entering the top vented panels, protecting internal equipment from damage. The combined standard enclosure and drip shield meets the NEMA Type 2 specification.



AT-DC Distribution Panel

This product augments AT30 with a customized dc distribution panel for user-specified loads. The AT-DC is configurable to various combinations of main and branch breakers. The AT-DC panel is optimally supplied from the factory, mounted to the AT30 and pre-wired to the charger's dc output terminals. For further details, refer to the ATDC product literature (JF5032-00).



Fan Control Contactor

Lead-acid batteries produce hydrogen gas. This small wall-mounted external accessory provides a relay contactor to activate a battery installation vent or exhaust fan. Available in 10A or 20A models, the accessory is factory-set to provide relay closure when the AT30 enters into Equalize mode.

