

FLOAT BATTERY CHARGERS



UL-1564



CSA-C22.2



Seismic Zone 4
Qualification



**Advanced
technology
microprocessor
control**

**Constant potential
DC power supplies
for:**

- Floating & charging stationary batteries
- Power for utility, UPS and communications or industrial type loads

A combination of advanced technology microprocessor control and performance-engineered modular construction make AT10.1 Series chargers and rectifiers easy to set up, easy to operate, and easy to maintain.



APPLICATIONS

Utility & Communications

- Power Generation
- Substations
- Microwave Relay Sites
- Switchgear

Manufacturing

- Emergency dc Power
- DC Operated Breakers
- Alarm Systems

Commercial

- Alarm Systems
- Uninterruptible Power Systems
- DC Control Systems

Transportation

- Signal Systems
- Switchgear
- Alarm Systems

DESIGN FEATURES

Modular Construction

- Rectifier, microprocessor control, input/output, power transformer, filter and alarm assemblies are all modular and easily replaceable.

Thirty-Year Life

- All units are engineered for a greater than 30-year life with an MTBF of 100,000 hours.

Field Service Less than 60 Minutes

- For fast service, enclosure and instrument panel are easily removable without disturbing chassis or installed conduit. Schematic and diagnostic information plates are mounted on enclosure. Modular construction and self-diagnostics result in an MTTR of less than 60 minutes.

Install on Wall, Stand or Rack

- Units are easily wall mounted, with the exception of larger units which are floor mounted. Floor stands or rack-mounting provisions are optional.

Fast, Online Adjustment

- Control, alarm and operating level set points are adjusted digitally from the front panel while online, without the need to vary loads or external conditions.

Engineered for Safety and Acceptance

Units are designed and tested for worldwide applications

- NEMA Compliant
- UL-1564 NRTL
- CSA C22.2 Certified
- CE/IEC Compliant (*Group 2 only*)
- Meets FCC requirements for part 15 subpart J class A
- Seismic Zone 4 Analyzed /Qualified

Microprocessor circuits control virtually all functions and settings through front panel switches.

Press to choose digital display of Volts/Amperes/Equalize hours remaining.

Press to select float or equalize mode.

Choose from three equalize methods: continuous, timed, or automatically timed after AC interrupt.

Press to adjust voltage settings or timer hours when in EDIT mode. Press to test LED lamps when in normal mode.

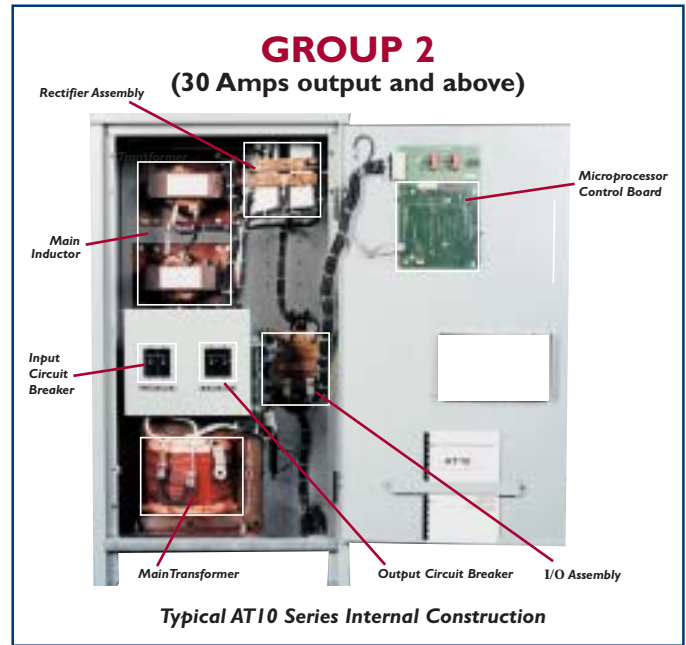
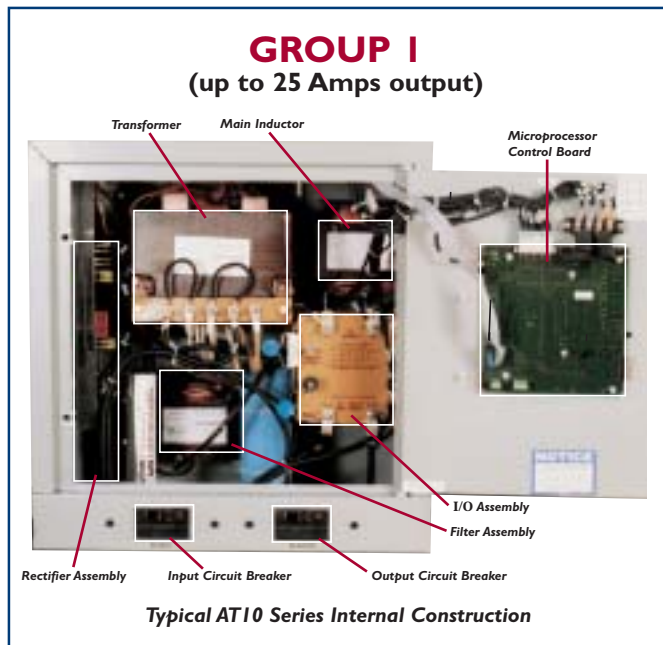


1% digital meter shows voltage, amperage and hours. Also displays self-diagnostics error codes.

LED lamps indicate abnormal conditions. A summary relay contact or optional individual relay contacts provide remote indication.

Press to switch to EDIT mode and to ENTER voltage settings and timer hours.

All controls can be disabled for tamper-free operation. Operational conditions remain displayed.



SPECIFICATIONS

AC Input

- **Voltage Group 1:** 120/208/240 Volts 60Hz 480Vac 60Hz 220Vac 50/60Hz (special order) 380/416 Vac 50/60Hz (special order)
- **Voltage Group 2:** Must specify
- **Input Voltage Tolerance:** +10%, -12%
- **Input Frequency Tolerance:** ±5%
- **Efficiency:** 85-90% (typical at 130Vdc) at 50-100% load

DC Output

- **Voltage Ratings:** 12, 24, 48, or 130Vdc nominal
- **Current Ratings:** 6, 12, 16, 20, 25, 30, 40, 50, 75, 100Adc
- **Continuous Rating:** 110% rated current at maximum equalize voltage at 50°C
- **Voltage Regulation:** ±0.25% for line, load and temperature variations
- **Electrical Noise:** 30mVrms/32dBnC weighted maximum on filtered units
- **Surge Withstand Capability:** Meets IEEE-472/ANSI C37.90a

STANDARD FEATURES

- 1% Digital LED meter for Vdc, Adc, timer hours and alarm settings
- AC On indicating light
- AC input and dc output circuit breakers
- 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
- Self-diagnostics
- Local or remote voltage sense with redundancy to protect against remote sense failure
- High dc voltage shutdown
- Reverse polarity protection
- Front panel controls can be disabled for security
- MOV surge suppressors, input and output
- I/O compression lugs
- Switchboard wire, UL VW-1
- Membrane front panel
- ANSI 61 gray finish, baked epoxy powder
- Alarm assembly with local LEDs and summary relay contact for ac failure, dc failure, high Vdc, low Vdc, positive and negative ground fault

- Redundant control loops for higher reliability
- A redundant analog circuit for LVDC alarm, totally independent of the microprocessor

OPTIONS/ACCESSORIES

- Output filter for 30mVrms ripple with battery
- Battery eliminator filter
- Individual alarm contacts for each of the alarms
- Input lightning arrestor
- Medium or high AIC circuit breakers
- Temperature compensation via remote probe
- Ground pad with #4 AWG lug
- Fungus proofing (tropicalization)
- Floor stand
- Relay rack mounting
- Drip shield
- Cabinet heater
- NEMA 4 or NEMA 12 enclosures
- Provision for locking front panel

The classic model — with output ratings to 25 Amperes — now with more features!



Cabinet Style 586

(Shown with Optional Penthouse and Drip Shield.)



Cabinet Style 594

AT10.1 Group I: Input, Output, Heat Loss, Cabinet Style & Shipping Weight

Ampere Rating	6A		12A		16A		20A		25A											
AC Input Voltage	120	208	240	480	120	208	240	480	120	208	240	480								
Output Voltage: 12Vdc	Float Adjust: 11.5-14.5Vdc						Equalize Adjust: 12-15.5Vdc													
AC Input Amperes (Nominal)	1.4	0.9	0.8	0.4	2.6	1.5	1.4	0.7	3.6	2.1	1.8	0.9	4.2	2.4	2.1	1.1	5.3	3.1	2.7	1.4
AC Input Circuit Breaker (120V)	10A		10A		10A		10A		10A		10A		30A		40A					
DC Output Circuit Breaker	15A		20A		25A		30A		30A		40A		40A		40A					
Heat Loss - Watts (BTU/hr.)	43 (146)		77 (264)		100 (341)		123 (420)		123 (420)		151 (517)		151 (517)		151 (517)					
Cabinet Style	586		586		586		586		586		586		586		586					
Shipping Weight, lb. (kg)	44 (20)		44 (20)		67 (30)		67 (30)		67 (30)		67 (30)		67 (30)		67 (30)					
Output Voltage: 24Vdc	Float Adjust: 23-29.5Vdc						Equalize Adjust: 24-31Vdc													
AC Input Amperes (Nominal)	3.2	1.8	1.6	0.8	6.0	3.5	3.0	1.5	7.8	4.5	3.9	2.0	9.6	5.5	4.8	2.4	12	6.9	6.0	3.0
AC Input Circuit Breaker (120V)	10A		10A		15A		15A		15A		15A		30A		40A					
DC Output Circuit Breaker	15A		20A		25A		30A		30A		40A		40A		40A					
Heat Loss - Watts (BTU/hr.)	56 (190)		94 (321)		120 (409)		146 (497)		146 (497)		178 (609)		178 (609)		178 (609)					
Cabinet Style	586		586		586		586		586		586		586		586					
Shipping Weight, lb. (kg)	44 (20)		58 (26.3)		75 (34)		75 (34)		75 (34)		75 (34)		75 (34)		75 (34)					
Output Voltage: 48Vdc	Float Adjust: 46-57Vdc						Equalize Adjust: 48-61Vdc													
AC Input Amperes (Nominal)	6.5	3.8	3.3	1.7	12	6.9	6.0	3.0	16	9.2	8.0	4.0	20	12	10	5.0	25	14	13	6.3
AC Input Circuit Breaker (120V)	10A		20A		20A		25A		25A		30A		30A		40A					
DC Output Circuit Breaker	15A		20A		25A		30A		30A		40A		40A		40A					
Heat Loss - Watts (BTU/hr.)	80 (274)		127 (433)		158 (538)		188 (643)		188 (643)		229 (781)		229 (781)		229 (781)					
Cabinet Style	586		586		594		594		594		594		594		594					
Shipping Weight, lb. (kg)	58 (26)		75 (34)		110 (50)		110 (50)		110 (50)		110 (50)		110 (50)		110 (50)					
Output Voltage: 130Vdc	Float Adjust: 115-140Vdc						Equalize Adjust: 123-145Vdc													
AC Input Amperes (Nominal)	12	6.9	6.0	3.0	26	15	13	6.5	28	16	14	7.0	34	20	17	8.5	43	25	22	11
AC Input Circuit Breaker (120V)	20A		35A		50A		60A		60A		60A		60A		60A					
DC Output Circuit Breaker	15A		20A		25A		30A		30A		40A		40A		40A					
Heat Loss - Watts (BTU/hr.)	145 (494)		210 (716)		255 (871)		300 (1023)		300 (1023)		351 (1199)		351 (1199)		351 (1199)					
Cabinet Style	586		594		594		594		594		594		594		594					
Shipping Weight, lb. (kg)	80 (36)		147 (67)		193 (88)		193 (88)		193 (88)		193 (88)		193 (88)		193 (88)					

Models with higher ratings: AT10.1 Group 2 models with single-phase ac input ratings, and dc output ratings to 100Adc, described in this brochure; also SCR/SCRIF Series models with dc output ratings to 800Adc at 12 through 260Vdc.



Cabinet Style 5017



Cabinet Style 5018

**Expanded
output ratings —
now to
100 Amperes.
Same great
features as
Group I!**

AT10.1 Group 2: Input, Output, Heat Loss, Cabinet Style & Shipping Weight

Ampere Rating	30A		40A		50A		75A		100A							
AC Input Voltage	120	208	240	480	120	208	240	480	120	208	240	480	120	208	240	480
Output Voltage: 12Vdc	Float Adjust: 11.5-14.5Vdc				Equalize Adjust: 12-15.5Vdc											
AC Input Amperes (Nominal)	7.2-4.1-3.6-1.8		9.6-5.5-4.8-2.4		12-6.9-6.0-3.0		18-10-8.9-4.5		24-14-12-6.0							
AC Input Circuit Breaker (120V)	10A		15		15		25		35							
DC Output Circuit Breaker	50		60		80		100		150							
Heat Loss - Watts (BTU/hr.)	131 (448)		173 (589)		213 (728)		316 (1078)		418 (1428)							
Cabinet Style	5017		5017		5017		5018		5018							
Shipping Weight, lb. (kg) (Note 2)	140 (63)		155 (70)		170 (77)		220 (100)		280 (127)							
Output Voltage: 24Vdc	Float Adjust: 23-29.5Vdc				Equalize Adjust: 24-31Vdc											
AC Input Amperes (Nominal)	13-7.3-6.3-3.2		17-9.7-8.4-4.2		21-12-10.5-5.3		32-18-16-7.9		42-24-21-10.5							
AC Input Circuit Breaker (120V)	20		25		35		40		70							
DC Output Circuit Breaker	50		60		80		100		150							
Heat Loss - Watts (BTU/hr.)	162 (554)		209 (714)		259 (885)		379 (1293)		501 (1709)							
Cabinet Style	5017		5017		5017		5018		5018							
Shipping Weight, lb. (kg) (Note 2)	150 (68)		180 (82)		190 (86)		250 (113)		320 (145)							
Output Voltage: 48Vdc	Float Adjust: 46-57Vdc				Equalize Adjust: 48-61Vdc											
AC Input Amperes (Nominal)	23-13-11-5.6		30-17-15-7.5		38-22-19-9.4		56-33-28-14.1		75-43-38-19							
AC Input Circuit Breaker (120V)	35		40		50		70		100							
DC Output Circuit Breaker	50		60		80		100		150							
Heat Loss - Watts (BTU/hr.)	219 (747)		282 (962)		344 (1174)		498 (1699)		656 (2238)							
Cabinet Style	5017		5017		5017		5018		5018							
Shipping Weight, lb. (kg) (Note 2)	170 (77)		220 (100)		240 (109)		340 (154)		440 (200)							
Output Voltage: 130Vdc	Float Adjust: 115-140Vdc				Equalize Adjust: 123-145Vdc											
AC Input Amperes (Nominal)	53-31-26.5-13.3		71-41-35-18		89-51-44-22		133-77-66-33									
AC Input Circuit Breaker (120V)	70		100		Note 1		Note 1									
DC Output Circuit Breaker	50		60		80		100									
Heat Loss - Watts (BTU/hr.)	366 (1250)		459 (1567)		556 (1897)		793 (2708)									
Cabinet Style	5017		5018		5018		5018									
Shipping Weight, lb. (kg) (Note 2)	220 (100)		300 (136)		300 (136)		440 (200)									

Models with higher ratings: SCR/SCRF Series models are available with dc output ratings to 800Adc at 12 through 260Vdc.
 NOTES: 1. 120Vac input not available. 2. Shipping weights are approximate.