

AT30 SERIES

FLOAT BATTERY CHARGERS 3 PHASE INPUT



NRTL/C
UL 1012/UL 1564
Compliant



Seismic Zone 4
Qualification

ABS certification available
upon request

Microprocessor Control Battery Charger

Constant potential DC power supplies for:

- Floating & charging stationary batteries
- Power for Industrial loads



HINDLEPOWER

A combination of advanced technology microprocessor control and performance engineered modular construction make AT30 Series battery chargers easy to set up, easy to operate, and easy to maintain...



Critical adjustments can be disabled for tamper proof operation.

APPLICATIONS

- Power Generation
- Substations
- Microwave Relay Sites
- Switchgear
- Emergency DC Power
- DC Operated Breakers
- Alarm Systems
- Uninterruptible Power Systems
- DC Control Systems
- Signal 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 AT30 chargers are engineered for greater than 30-year life with a MTBF of 100,000 hours.

Trouble Diagnosis: Less Than 60 Minutes

- Trouble Diagnosis and Repair in an MTTR of less than 60 minutes.
- All service can be performed from front of opened unit without disturbing chassis or installed conduit.

Flexible Installation

- All AT30 chargers can be floor mounted.
- AT30 chargers in Style-5018 enclosure can be wall or rack mounted.

Fast, Online Adjustment

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

Engineered for Safety and Acceptance

- The AT30 battery charger is designed and tested for worldwide applications.
 - Meets NEMA PE 5-1996 specification for utility type battery charger
 - NEMA-1/IP20 type standard enclosure
 - Meets FCC requirements for part 15 subclass J class A
- Agency Approvals (for models in Style-5018 & Style-5030 enclosures only):
 - CSA C22.2 Certified
 - Complies with UL 1012 battery charger and UL 1564 power supply specifications via CSA-NRTL/C listing
 - CE/IEC Compliant
 - Seismic Zone 4 qualified enclosures



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 light
- Manual equalize timer (0-255 hr.) with indicating light
- 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 (HVSD)
- Reverse polarity protection
- Front panel controls can be disabled for security
- MOV surge suppressors, input and output
- CU-AL I/O compression lugs
- Switchboard insulation system number-coded wiring
- Membrane front panel
- ANSI 61 gray epoxy powder coat finish
- Alarm assembly with local LEDs and summary relay contact for ac failure, dc failure, high Vdc, low Vdc, positive and negative ground fault
- Redundant analog circuit for summary alarm operates on low dc voltage, independent of microprocessor
- Custom parts data package and production test data reports shipped with each unit
- User-friendly operating manual with standard drawings
- Quick setup sheet

OPTIONS AND ACCESSORIES

- DC output filter per NEMA PE5-1996 30 mVrms w/battery (12/24/48 Vdc) 100 mVrms w/battery (130 Vdc)
- Battery eliminator filter
- Medium or high AIC circuit breakers (see table below)
- Auxiliary alarm relay pc board (2 form C contacts for all alarms, solderless compression terminals, contact rating is 0.5A @ 125 Vac/Vdc, accepting #22-14 AWG wire)
- Copper ground pad (with CU-AL compression lug)
- AC Input lightning arrestor
- Fungus proofing (tropicalization)
- Static proofing
- Enclosure drip shield
- External Temperature compensation (tempco) via remote probe
- Relay rack mounting (Style-5018 only)
- Wall mounting (Style-5018 only)
- Padlock w/hasp for front panel door
- Cabinet heater assembly
- NEMA 4/12 type enclosure w/fan
- Communications module for DNP3 Level 2 or MODBUS protocols
- Forced load sharing module (for two units of identical rating only)
- Analog ac ammeter
- Analog ac voltmeter
- Zero-center ground detection meter
- End of discharge alarm
- Battery discharge alarm
- Custom drawing package w/optional CAD and PDF files
- ABS certification upon request

TECHNICAL SPECIFICATIONS

AC Input

- **Voltage**
208, 240, 480 or 550 Vac 60Hz
220, 380, or 416 Vac 50/60Hz
- **Input Voltage Tolerance**
+ 10%, - 12%
- **Input Frequency Tolerance**
± 5%
- **Power Factor**
0.80 typical full load
- **Efficiency**
89-93% (typical at 130Vdc)

DC Output

- **Voltage Ratings**
12, 24, 48, or 130 Vdc nominal
- **Current Ratings**
25-1000 Adc (see ratings table on previous pages)
- **Voltage Regulation**
± 0.25% for line, load and frequency variations
- **Electrical Noise/Ripple**
32 dBnC weighted maximum on filtered units
- **Surge Withstand Capability**
Meets IEEE-472/ANSI C37.90a

Environmental

- **Operating Ambient Temperature**
32°F to 122°F (0°C to 50°C) without derating
- **Operating Altitude**
3300 feet (1000 meters) above sea level without derating
- **Relative Humidity**
5% to 95% (without condensation)
- **Audible Noise**
Less than 65 dBA at any point 5ft (1.5m) from any vertical surface of enclosure

INPUT / OUTPUT PROTECTION AMPERE INTERRUPTING CAPACITY

ORDERING CODE	CIRCUIT BREAKER TYPE	AC BREAKER RATINGS* (208/240/480 Vac)	DC BREAKER RATINGS (125/250 Vdc)
S	STANDARD	5,000 AIC	5,000 AIC
M	MEDIUM AIC	25,000 AIC	10,000 AIC
H	HIGH AIC	65,000 AIC	25,000 AIC

OPTIONAL AC FUSE RATING (208-600 Vac)	OPTIONAL DC FUSE RATING (12/24/48/130 Vdc)
200,000 AIC	20,000 AIC

*Contact your sales representative for 500-600 Vac circuit breaker AIC ratings.



Style-5018



Style-5030



Style-163



Style-198

AT30: Input, Output, Heat Loss

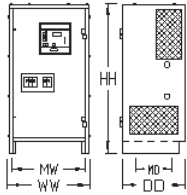
Ampere Rating	25A	30A	40A	50A	75A	100A	125A
Ordering Code	025	030	040	050	075	100	125
AC Input Voltage*	208 240 480	208 240 480	208 240 480	208 240 480	208 240 480	208 240 480	208 240 480
Output Voltage: 12Vdc	Float Adjust: 11.0-14.5Vdc			Equalize Adjust: 11.7-15.5Vdc			
AC Input Amperes (nominal)				3.3 3 1.5	5.2 4.5 2.2	6.9 6 3	8.6 7.5 3.7
AC Input Circuit Breaker				5A 5A 5A	10A 10A 5A	10A 10A 5A	15A 15A 5A
DC Output Circuit Breaker				80A	100A	150A	175A
Heat Loss - Watts (BTU/hr)**				229 (783)	340 (1160)	448 (1529)	560 (1911)
Cabinet Style				5018	5018	5018	5030
Shipping Weight, lb (kg)***				160 (73)	230 (105)	280 (128)	350 (159)
Output Voltage: 24Vdc	Float Adjust: 22-29.5Vdc			Equalize Adjust: 23.4-31Vdc			
AC Input Amperes (nominal)				6.5 5.6 2.8	9.7 8.4 4.2	12.9 11.2 5.6	16.2 14 7
AC Input Circuit Breaker				10A 10A 5A	15A 15A 5A	20A 20A 10A	25A 25A 10A
DC Output Circuit Breaker				80A	100A	150A	175A
Heat Loss - Watts (BTU/hr)**				289 (987)	427 (1457)	560 (1911)	700 (2309)
Cabinet Style				5018	5018	5018	5030
Shipping Weight, lb (kg)***				210 (95)	260 (118)	295 (134)	375 (170)
Output Voltage: 48Vdc	Float Adjust: 44-58Vdc			Equalize Adjust: 46.8-61Vdc			
AC Input Amperes (nominal)				12 10.3 5.1	17.8 15.4 7.7	23.7 20.6 10.3	29.7 25.7 12.9
AC Input Circuit Breaker				15A 15A 10A	25A 25A 10A	30A 30A 15A	40A 40A 20A
DC Output Circuit Breaker				80A	100A	150A	175A
Heat Loss - Watts (BTU/hr)**				398 (1358)	584 (1994)	762 (2602)	953 (3253)
Cabinet Style				5018	5018	5018	5030
Shipping Weight, lb (kg)***				260 (118)	350 (159)	410 (186)	460 (209)
Output Voltage: 130Vdc	Float Adjust: 110-140Vdc			Equalize Adjust: 117-145Vdc			
AC Input Amperes (nominal)	16 13 7	18.2 15.7 7.9	23.7 20.5 10.3	29.2 25.3 12.6	43 37.2 18.6	56.7 49.1 24.6	75.8 65.7 32.9
AC Input Circuit Breaker	20A 20A 10A	25A 25A 10A	30A 30A 15A	40A 40A 20A	60A 60A 25A	80A 80A 30A	100A 100A 50A
DC Output Circuit Breaker	40A	50A	60A	80A	100A	150A	175A
Heat Loss - Watts (BTU/hr)**	361 (1232)	416 (1421)	532 (1817)	647 (2208)	928 (3169)	1201 (4099)	1478 (5045)
Cabinet Style	5018	5018	5018	5018	5018	5030	5030
Shipping Weight, lb (kg)***	300 (136)	325 (148)	335 (152)	360 (164)	405 (184)	580 (264)	640 (290)

*Contact factory for other ac input voltages not listed. **Heat loss is stated for nominal number of cells at float voltage and 100% current. ***Shipping weights are approximate.

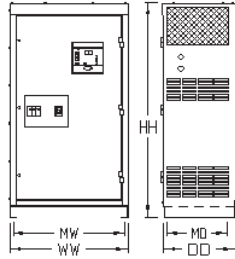
HINDLEPOWER

Enclosure Dimensions					
Cabinet Style		5018	5030	163	198
Overall Dimensions in (mm)	HH	37.95 (964)	54.25(1378)	62.00 (1575)	80.00 (2032)
	WW	20.90 (531)	30.00 (762)	42.00 (1067)	58.00 (1473)
	DD	16.77 (426)	19.14 (486)	24.00 (610)	30.00 (762)
Mounting Dimensions in (mm)	MW	18.50 (470)	27.90 (710)	40.00 (1016)	52.00 (1321)
	MD	9.00 (229)	15.00 (381)	18.00 (457)	18.00 (457)

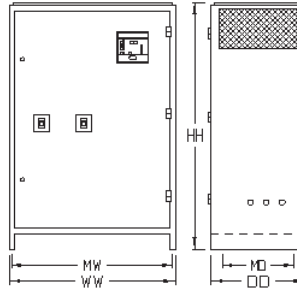
For detailed CAD drawings of all AT30 NEMA-1 type enclosures (and optional NEMA-4/12 type enclosures), please visit the Support section of our web site www.hindlepowerinc.com



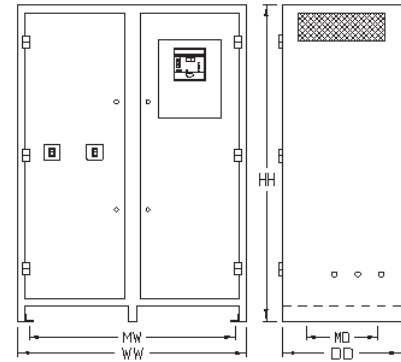
Style-5018



Style-5030



Style-163



Style-198

Standard AT30 NEMA-1 Type Enclosure Styles

ss, Cabinet Style & Shipping Weight

150A	200A	250A	300A	400A	500A	600A	800A	1000A
150	200	250	300	400	500	600	800	1K0
208 240 480	208 240 480	208 240 480	208 240 480	208 240 480	208 240 480	208 240 480	208 240 480	208 240 480
8.6 7.5 3.7	13.8 12 6	17.3 15. 7.5	20.7 10 9					
15A 15A 10A	20A 20A 10A	25A 25A 10A	30A 30A 15A					
200A	250A	350A	400A					
668 (2279)	890 (3039)	1113 (3799)	1327 (4531)					
5030	5030	5030	5030					
420 (191)	490 (223)	510 (132)	550 (250)					
19.4 16.8 8.4	26 22.4 11.2	32.4 28 14	38.8 33.7 16.8	51.8 44.9 22.4	64.7 56.1 28.1	77.7 67.3 33.7	103.6 89.8 45	129.5 112.2 56.1
25A 25A 15A	35A 35A 15A	50A 50A 20A	50A 50A 25A	70A 70A 30A	100A 100A 40A	100A 100A 50A	150A 150A 60A	175A 175A 80A
200A	250A	350A	400A	500A	600A	800A	1000A	N/A
833 (2843)	1101 (3759)	1376 (4699)	1652 (5638)	2202 (7518)	2730 (9319)	3275 (11183)	4367 (14910)	5459 (18638)
5030	5030	5030	5030	163	163	163	198	198
440 (200)	520 (236)	580 (264)	600 (273)	680 (309)	740 (336)	860 (391)	990 (450)	1350 (614)
35.6 31 15.4	47.5 41.1 20.6	59.3 51.4 25.7	71.2 61.7 30.9	94.9 82.3 41.1	118.7 102.9 51.4	142.4 123.4 61.7	189.9 164.6 82.3	237.3 205.7 102.9
50A 50A 20A	60A 60A 20A	80A 80A 35A	100A 100A 40A	125A 125A 60A	150A 150A 70A	200A 200A 80A	250A 250A 125A	300A 300A 150A
200A	250A	350A	400A	500A	600A	800A	1000A	N/A
1131 (3860)	1491 (5091)	1864 (6363)	2237 (7636)	2949 (10068)	3686 (12585)	4424 (15102)	5898 (20137)	7373 (25171)
5030	5030	5030	5030	163	163	198	198	198
480 (218)	540 (245)	665 (302)	750 (341)	860 (391)	1290 (586)	1410 (641)	1810 (823)	2290 (1,041)
90.9 78.8 39.4	120.9 104.8 52.4	151 130.9 65.4	181.1 156.9 78.5	241.2 209 104.5	301.3 261.1 130.6	361.4 313.2 156.6	487.7 417.4 208.7	601.9 521.7 260.8
125A 125A 50A	175A 175A 70A	200A 200A 100A	250A 250A 100A	350A 350A 150A	400A 400A 175A	N/A N/A 200A	N/A N/A 300A	N/A N/A 350A
200A	250A	350A	400A	500A	600A	800A	1000A	N/A
1773 (6054)	2327 (7946)	2909 (9932)	3436 (11731)	4582 (15641)	5727 (16552)	6872 (23462)	9163 (31283)	11271 (38479)
5030	5030	163	163	163	198	198	198	198
665 (302)	750 (341)	845 (384)	900 (490)	1580 (718)	1800 (818)	1950 (886)	2350 (1,068)	2750 (1,250)

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ORDERING INFORMATION

Sample

A	B			C			D	E			F	G	H	J	K	L	M	N	P
AT30	1	3	0	0	5	0	F	4	8	0	S	F	S	X	A	X	X	X	X

Your Code

AT30																			
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	Description	Code	Features		Description	Code	Features		
A	Model	AT30	AT30 series		Model	AT30	AT30 series		
B	Nominal DC Output Voltage	012	12Vdc	G	AC Input Fuses	F	Installed		
		024	24Vdc			X	Not Supplied		
		048	48Vdc						
		130	130Vdc						
C	Nominal DC Output Current	See ratings table on previous pages		H	DC Circuit Breaker***	S	Standard AIC		
						M	Medium AIC		
						H	High AIC		
						0	No DC Breaker		
D	Filtering	U	Unfiltered	J	DC Output Fuses	F	Installed		
		F	Filtered			X	Not Supplied		
		E	Eliminator						
E	AC Input Voltage* (3 Phase)	208	208V 60Hz	K	Auxiliary Relay Board	A	Installed		
		240	240V 60Hz			X	Not Supplied		
		480	480V 60Hz						
		550**	550V 60Hz						
		220	220V 50/60Hz			L	Ground Pad	G	Installed
		380	380V 50/60Hz					X	Not Supplied
416	416V 50/60Hz								
F	AC Circuit Breaker***	S	Standard AIC	M	AC Lightning Arrestor	L	Installed		
		M	Medium AIC			X	Not Supplied		
		H	High AIC						
		0	No AC Breaker						
N	Fungus Proofing	F	Applied	P	Static Proofing	S	Applied		
		X	No Treatment			X	No Treatment		

*Contact factory for other ac input voltages not listed. **Applicable for 550-600 Vac.

***If you do not specifically order an ac input or dc output circuit breaker, fuses will be added automatically.

Other Products Available from HindlePower:

Product	Brochure	Product	Brochure
AT10.1 Series Battery Charger	JF5006	SCR/SCRF Series Battery Chargers	JF5010
AT Series Options & Accessories	JF5020	UMC Universal Maintenance Charger	JF5008
AT Series Communications Module	JF5014	RMC Railroad Maintenance Charger	JF5015
AT-DC Series Distribution Panel	JF5032		
DC Power Console	JF5038		
Single-Cell Portable Battery Charger	JF5007		
Transit Battery Charging Station	JF5023		
DC Disconnect Switch	JF5034		
Battery/Load CEMF Device	JF5035		
Custom Design & Engineering Services	JF5011		

These products and others distributed by

