

# Power

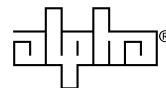
## Spectra Charger

SCR Automatic Battery Charger



- Industrial-grade battery charger
- Microprocessor control and digital display
- Universal control boards; and control disable for tamper-free operation
- Online adjustment
- Modular construction for easy maintenance and replacement
- Battery Eliminator option for use as a DC source without batteries
- UL Listed and CSA label

The Alpha Spectra Industrial Battery Charger incorporates the latest digital and power electronics technologies, making it one of the most reliable battery chargers available. The unique SCR rectifier with a double wound isolation transformer provides precise regulated DC output and current limiting capabilities. Three different output-filtering configurations are available to match powering requirements. Approved UL, CSA and EMI standards. Made in the USA.



# Spectra Battery Charger

## Specifications

### Electrical

AC Input Voltage: 120, 208 or 240V +10%, -12%  
 Phase: 1  
 Frequency: 50 or 60Hz  $\pm$ 3Hz  
 Power Factor: 0.8 typical full load  
 Efficiency: 80 to 90% at 50 to 100% load

DC Output Voltage: 24, 48 or 130VDC nominal  
 Current: 6, 12, 20, 25 or 50ADC  
 Continuous Rating: 110% rated current at max equalize voltage at 50°C  
 Voltage Regulation:  $\pm$ .25% for line, load and temperature  
 Transient Response: <math>\pm 6\%</math> with 20 to 100% step load with battery connected  
 Electrical Noise: 30m Vrms/32BDrrnC weighted maximum on filtered versions (battery eliminator)  
 <math>< 2\%</math>Vrms for 130VDC output  
 <math>< 1\%</math>Vrms for 48VDC output

### Mechanical

NEMA 1 Enclosures: Standard  
 Dimensions S1 (in): 17.5H x 19W x 16.75D  
 (mm): 445H x 483W x 425D  
 Dimensions S2 (in): 26.25H x 19W x 16.75D  
 (mm): 667H x 483W x 425D  
 Dimensions S3 (in): 35H x 19W x 13.75D  
 (mm): 889H x 483W x 425D

### Environmental

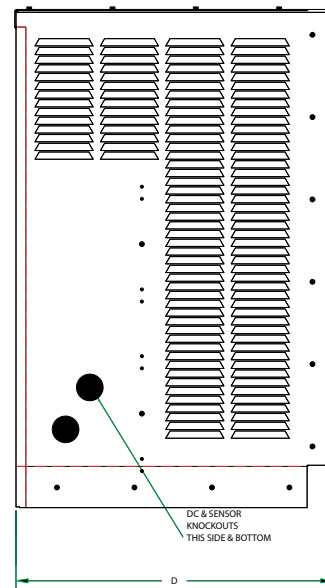
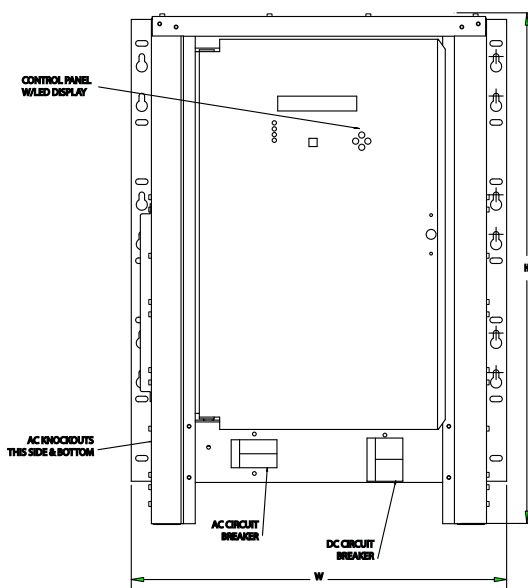
Natural Convection  
 Ambient Temperature: 0 to 40°C (32 to 105°F)  
 Elevation: 1000m (3000ft) without derating  
 Relative Humidity: 0 to 95% (non-condensing)

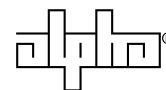
### Standard Features

LCD Display  
 Charger Pause 0-60 Min  
 Reverse Polarity Protection  
 Sprinkler Resistant Ventilation  
 UL Listed  
 Stackable Enclosure  
 Summary Alarm Buzzer  
 AC H/L Voltage Alarm and AC Fail Indication  
 H/L DC Voltage Alarm  
 AC Input and DC Output Circuit Breakers  
 Control Panel and Circuit Breakers Recessed  
 Bottom/Side Cable Entry  
 AC, DC, Float and Equalize Indicator Lights  
 Field Programmable with Security Levels  
 Compression Terminal Strip for Field Wiring

### Optional Features

DC Output Filter  
 Battery Eliminator Filter  
 Input Lightning Arrestor  
 Remote Control Panel  
 Parallel Charging  
 Remote DC Voltage Sensor  
 Special AC Power Connections  
 Local or Remote Voltage Sensor  
 Remote Temperature Compensation  
 Individual Alarm Relay Contact Board (alarm input/output board)  
 Conformal Seal on Electronic Boards  
 Anti-Fungus Coating  
 Special AC Input Voltage  
 19" or 23" Relay Rack Mounting  
 NEMA 4 or 12 Enclosure  
 Cabinet Heater





## ST Series Rating Table

Output Voltage	Float Voltage Range	Equalize Voltage Range	DC Ampere Rating			6A			12A			18A			20A			25A			50A		
			AC Input			120	208	240	120	208	240	120	208	240	120	208	240	120	208	240	120	208	240
24 VDC	24VDC to 30VDC	24VDC to 30VDC	AC Input Amperes (Nominal)			5A	4A	3A	7A	5A	5A	12A	8A	8A	12A	8A	8A	14A	10A	10A	30A	22A	22A
			AC Input Circuit Breaker			10A	10A	10A	10A	10A	10A	15A	15A	10A	15A	15A	10A	20A	15A	10A	40A	30A	30A
			DC Output Circuit Breaker			15A	15A	15A	30A	30A	30A	40A	40A	40A	40A	40A	40A	60A	60A	60A	90A	90A	90A
			Cabinet Style			S1	S1	S1	S1	S1	S1	S1	S1	S1	S1	S1	S1	S1	S1	S1	S3	S3	S3
			Shipping Weight (lbs)			70	70	70	75	70	75	85	85	85	85	85	85	90	90	90	125	125	125
48VDC	48VDC to 60VDC	48VDC to 60VDC	AC Input Amperes (Nominal)			7A	5A	5A	14A	10A	10A	23A	14A	15A	23A	14A	15A	28A	17A	20A	54A	27A	27A
			AC Input Circuit Breaker			10A	10A	10A	20A	10A	10A	30A	20A	15A	30A	20A	15A	30A	25A	20A	70A	40A	40A
			DC Output Circuit Breaker			15A	15A	15A	30A	30A	30A	50A	40A	50A	50A	50A	50A	60A	60A	60A	90A	90A	90A
			Cabinet Style			S1	S1	S1	S1	S1	S1	S1	S1	S1	S1	S1	S1	S1	S1	S1	S3	S3	S3
			Shipping Weight (lbs)			75	75	75	90	90	90	110	110	110	110	110	110	115	115	115	222	222	222
130VDC	120VDC to 150VDC	120VDC to 150VDC	AC Input Amperes (Nominal)			14A	11A	8A	27A	17A	15A	45A	26A	22A	45A	24A	22A	56A	32A	27A	n/a	68A	50A
			AC Input Circuit Breaker			20A	15A	15A	40A	30A	25A	60A	40A	30A	60A	40A	30A	70A	60A	40A	n/a	90A	70A
			DC Output Circuit Breaker			15A	15A	15A	25A	25A	25A	40A	40A	40A	40A	40A	40A	60A	60A	60A	n/a	90A	90A
			Cabinet Style			S1	S1	S1	S1	S1	S1	S2	S2	S2	S2	S2	S2	S2	S2	S2	n/a	S3	S3
			Shipping Weight (lbs)			100	100	100	130	130	130	175	175	175	175	175	175	175	190	190	n/a	340	340

## ST Model Number Configuration

	ST																						
A		B			C			D	E	F	G	H	I	J	K								

If a space has no option selected a zero must be inserted.

Box	ST	Description
A	1	1 Phase
B	024	Nominal DC Output Voltage 24VDC
	048	48VDC
	130	130VDC
C	006	Nominal DC Output Current 6ADC
	012	12ADC
	020	20ADC
	025	25ADC*
	050	50ADC*
D	1	Input Voltage 120
	2	208 (not UL listed)
	3	240
E	0	Filtering Unfiltered
	1	Filtered / Eliminator
F	0	Relays No Relays
	1	Individual Alarm Relay Contact Board

Note: Charger with 208VAC input does not have UL/CSA approval yet.

Box	ST	Description
G	0	Remote Sensing Not Supplied
	1	Remote Control Panel
	2	Remote Temperature Compensation
	3	Remote DC Voltage Sensing
	4	Lines 1 & 2
	5	Lines 1 & 3
	6	Lines 2 & 3
	7	Lines 1, 2 & 3
H	0	Lightning Arrestor Not Supplied
	1	Included
I	0	Charging Not Supplied
	1	Parallel Charging
	2	Series Charging
J	0	Special Treatments Nothing
	1	Fungus Proofing
	2	Conformal Seal On Electronic DC Board
	3	Option 1 and 2
K	0	Other Options Nothing
	1	Lockable enclosure door
	2	NEMA 4 enclosure
	3	NEMA 12 enclosure
	4	19" Rack flanges @6.0" from front
	5	23" Rack flanges @6.0" from front
	7	Lines 1 & 5

For more information visit [www.alpha.com](http://www.alpha.com)

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