

C-CHARGER® EP & EB SERIES™ INDUSTRIAL ELECTRONIC BATTERY CHARGERS

Charles Industries offers two lines of industrial electronic battery chargers in order to provide users with both high-performance and economy charging options. All Charles' industrial electronic battery chargers feature three-step charging to provide fast, efficient, and safe charging of lead acid, gel and NICAD batteries. Durable corrosion-resistant housings are constructed of anodized aluminum to withstand the heat and high humidity of harsh industrial environments. Conformal-coated printed circuit boards also provide outstanding environmental protection. Units are equipped with heat sinks (on models 20 amps or less) or cooling fans (on select 20 amp models and all models 30 amps or greater) for cool and quiet operation.

ELECTRONIC PREMIUM (EP) SERIES

C-Charger Electronic Premium Series Chargers are the superior choice for applications that require high-performance charging with UL Listed products. They are approved to UL's stringent 1236 specifications, testing and evaluation to ensure safety and reliability.

EP Series chargers feature a front panel DC ammeter and voltmeter for easy visual reference of the chargers current status. Units can be adjusted in the field for output voltage and alarm limits. Each unit has AC and DC fuse protection, and meets FCC Class B requirements for no EMI interference. All EP Series chargers are backed by a two-year manufacturer's warranty.

An advanced set of LEDs display operating conditions and alarm warnings that can alert users to potential power problems before the charger's operation is put at risk. Five illuminated LEDs display a variety of conditions:

<u>Alarm</u>	<u>LED Color</u>
Power On	Green
High Rate	Yellow
Low Current	Red
Over Voltage	Red
Under Voltage	Red

EP Series chargers are available with or without an accessory option board. The accessory option board includes:

- Overvoltage and under voltage relay and LED outputs

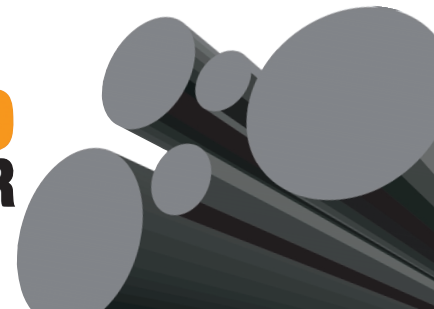


- Summary relay output that activates with under voltage, over voltage, current failure or loss of power
- Loss of power output relay (no LED)
- External temperature compensation - 3.25 mv/degree C./cell (requires optional external temperature compensation probe)

ELECTRONIC BASIC (EB) SERIES

C-Charger Electronic Basic Series Chargers offer an economical battery charging solution without sacrificing performance and reliability. EB Series chargers meet UL 1236 requirements for safety and reliability, and FCC Class A requirements for EMI interference. A front panel DC

ammeter and power-on LED display operating status. Units are field adjustable for output voltage, provide AC and DC fuse protection, and are equipped with cooling fans for efficient heat dissipation. All EB Series chargers are backed by a one-year manufacturer's warranty.



Specifications

ELECTRONIC PREMIUM (EP) SERIES

Model Number	Option Board	Input Voltage (VAC)*	Equalize Rate Output Voltage (VDC)	Float Rate Output Voltage (VDC)	Dimensions (in.)			Approx. Weight (lbs.)
					H	W	D	
6 AMP MODELS								
93-CI1206-EP	Yes	120	14.1	13.65	11	9.5	5	5.5
9N-CI1206-EP	No	120	14.1	13.65	11	9.5	5	5.5
93-CI1206-EPI	Yes	220	14.1	13.65	11	9.5	5	5.5
9N-CI1206-EPI	No	220	14.1	13.65	11	9.5	5	5.5
93-CI2406-EP	Yes	120	28.2	27.3	11	9.5	5	5.5
9N-CI2406-EP	No	120	28.2	27.3	11	9.5	5	5.5
93-CI2406-EPI	Yes	220	28.2	27.3	11	9.5	5	5.5
9N-CI2406-EPI	No	220	28.2	27.3	11	9.5	5	5.5
10 AMP MODELS								
93-CI1210-EP	Yes	120	14.1	13.65	11	9.5	5	5.5
9N-CI1210-EP	No	120	14.1	13.65	11	9.5	5	5.5
93-CI1210-EPI	Yes	220	14.1	13.65	11	9.5	5	5.5
9N-CI1210-EPI	No	220	14.1	13.65	11	9.5	5	5.5
93-CI2410-EP	Yes	120	28.2	27.3	11	9.5	5	5.5
9N-CI2410-EP	No	120	28.2	27.3	11	9.5	5	5.5
93-CI2410-EPI	Yes	220	28.2	27.3	11	9.5	5	5.5
9N-CI2410-EPI	No	220	28.2	27.3	11	9.5	5	5.5
20 AMP MODELS								
93-CI1220-EP	Yes	120	14.1	13.65	11	9.5	5	5.5
9N-CI1220-EP	No	120	14.1	13.65	11	9.5	5	5.5
93-CI1220-EPI	Yes	220	14.1	13.65	11	9.5	5	5.5
9N-CI1220-EPI	No	220	14.1	13.65	11	9.5	5	5.5
93-CI2420-EP	Yes	120	28.2	27.3	11	9.5	5	5.5
9N-CI2420-EP	No	120	28.2	27.3	11	9.5	5	5.5
93-CI2420-EPI	Yes	220	28.2	27.3	11	9.5	5	5.5
9N-CI2420-EPI	No	220	28.2	27.3	11	9.5	5	5.5
30 AMP MODELS								
9N-CI1230-EP	No	120	14.1	13.65	13	9.5	5	7.5
9N-CI2430-EP	No	120	28.2	27.3	15	9.5	5	12
40 AMP MODELS								
9N-CI1240-EP	No	120	14.1	13.65	13	9.5	5	9
9N-CI2440-EP	No	120	28.2	27.3	15	9.5	5	12

NOTES

1. Ambient temperature range: -20°C to +60°C
2. All 6 to 20 amp chargers are equipped with voltmeter and ammeter
3. All 30 to 100 amp chargers are equipped with ammeter only
4. Model C12420 and all 30 amp and greater chargers are equipped with a cooling fan
5. All models are UL, cUL and CE listed



*120 VAC models will accept variance in input voltage from 90-135 VAC and variances in frequency from 45-60 Hz with no degradation of output.
220 VAC models will accept variances in input voltage from 180-220 VAC and variances in frequency from 45-60 Hz with no degradation of output.

ELECTRONIC BASIC (EB) SERIES

Model Number	Input Voltage (VAC)*	Equalize Rate Output Voltage (VDC)	Float Rate Output Voltage (VDC)	Dimensions (in.)			Approx. Weight (lbs.)
				H	W	D	
3 AMP MODELS							
93-CI1203-EB	120	14.1	13.65	7.5	8.9	4	2.1
93-CI2403-EB	120	28.2	27.3	7.5	8.9	4	2.1
5 AMP MODELS							
93-CI1205-EB	120	14.1	13.65	7.5	8.9	4	2.1
93-CI2405-EB	120	28.2	27.3	7.5	8.9	4	2.1
10 AMP MODELS							
93-CI1210-EB	120	14.1	13.65	7.5	8.9	4	2.1
93-CI2410-EB	120	28.2	27.3	10.5	9.6	5	5.5
20 AMP MODELS							
93-CI1220-EB	120	14.1	13.65	7.5	8.9	4	2.1
93-CI2420-EB	120	28.2	27.3	10.5	9.6	5	5.5

NOTES

1. Ambient temperature range: -20°C to +60°C
2. All chargers equipped with ammeter only
3. Model C12420 is equipped with a cooling fan

* 120 VAC models will accept variance in input voltage from 90-135 VAC and variances in frequency from 45-60 Hz with no degradation of output.

Ordering Information

When ordering, please specify:

1. Model number
2. AC input: voltage & frequency
3. Battery type and number of cells
4. Ampere-hour capacity of battery
5. Recharge time desired
6. Description of load

Contact your Charles sales representative for specific product information.



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