

## Enclosed Guardian Range of UL Approved Automatic Battery Chargers



### Description

The Guardian is a highly efficient, high performance charger. The output is configured for accurate fast charging, optimum battery life and reliability. Due to utilizing high impedance transformer technology the low ripple output (<1%) is suitable for charging sealed or vented batteries e.g. Nickel Cadmium (NiCd), Lead Acid sealed (VRLA), vented and plate cells. The units may be used in a wide range of industrial charging applications, including standby engines, pumps and generators.

Each unit consists of a transformer, rectifier and control circuit, mounted in a stainless steel enclosure complete with charging ammeter and voltmeter and optional mains circuit breaker. The control circuit ensures that charger maintains the battery voltage at the pre-calibrated float level, while supplying any additional load current up to the specified maximum.

### Auto Boost (Equalizing) Operation

Auto boost operation provides an increased output voltage when batteries are below a preset point. Once the batteries have reached the boost voltage the charger reverts to its float voltage. This operation equalizes the batteries, maximizing battery life and capacity.

### Boost Initiate Operation

The boost initiate forces the charger to enter an auto boost cycle (see above) even if battery voltage is above the preset point, once this operation is completed the charger returns to its float voltage.

### Temperature Compensation

Temperature compensation provides control of the output voltage based upon temperature, as temperature increases the charging voltage is decreased at a negative coefficient of 3mV/°C/Cell.

### Charge fail & alarms option

A self diagnostic 'charge fail' circuit and relay output is provided along with under and over voltage warnings. The volt free relays de-energize in the event of a charging fault or high/low battery state.

- **CE cUL US Approvals**
- **Heavy duty float charging:**  
10A or 20A @ 12V,DC or 24V,DC output
- **Short circuit and reverse polarity protection**
- **Lead Acid or Ni-Cd calibrations**
- **Auto boost operation**
- **Charge fail relay output**
- **Under volts and over volts alarms**
- **Temperature compensation**
- **NFPA110 Alarms**

### Product Specification

#### Power Supply:

nominal operating voltages	120V,AC ± 6%
	230V,AC ±10%
permissible voltage variation	(see above)
nominal operating frequency	50/60Hz

#### DC Charge Output:

maximum current A,DC	20	20
nominal voltage V,DC	24	12
float / boost voltages	see table overleaf	

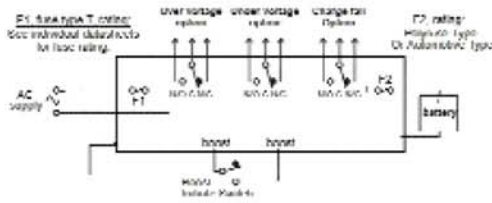
#### Charge Fail Output:

relay type	volt free SPDT contacts relay de-energized on fault
contact rating	1A @ 30V,DC (resistive load)

#### General:

operating temperature	-10 to +55°C
overall dimensions	see table overleaf
weight	see table overleaf
EMC emission / immunity	EN 58801-2 / EN50082-2

## Electrical connection



Notes:

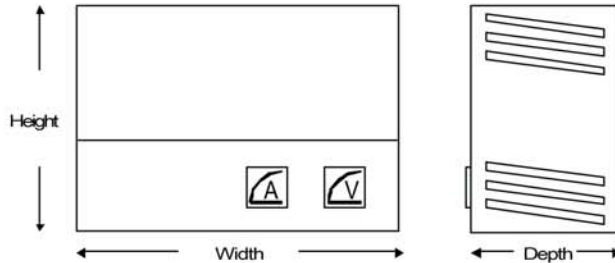
- 1) battery output is isolated from chassis

## Calibration

Battery type		float volts (V,DC)	boost volts (V,DC)
12V	Lead Acid (6 cells)	13.6	14.1
	Ni-Cd (10 cells)	14.1	16.0
24V	Lead Acid (12 Cells)	27.2	28.2
	Ni-Cd (18 Cells)	25.38	28.8
	Ni-Cd (20 Cells)	28.2	32.0

The above are factory standard settings, specials are available on request.

## Dimensions



	W	D	H	Weight
EG150x300	278mm	120mm	280mm	8.4Kg
	10.9"	4.7"	11"	17.9lbs
EG600	300mm	300mm	210mm	15Kg
	11.8"	11.8"	8.3"	31.8lbs

Fixing hole dimensions:

Width (between holes) - 173mm (6.8")

Height (between holes) - 255mm (10")

Fixing holes  $\varnothing$  = 6mm (0.2")

## How to order

When ordering, please specify -

PRODUCT	Nominal Output V,DC		Nominal Output Current		OPTIONS					
	12	24	10	20	Remote Temp. Compensation	Mains Circuit Breaker	NFPA110 Alarms			
EG1501210	•		•		TC	•	Charge Fail / Loss of AC	Under Volts	Over Volts	Boost Initiate
EG3002410	•	•	•		A	•				
EG3001220	•			•	MCB					
EG6002420		•		•						

INPUT VOLTAGE		
CODE	120V,AC	230V,AC
A	•	
B		•

BATTERY TYPE				
	Lead Acid	10 Cell Ni Cad	18 Cell Ni Cad	20 Cell Ni Cad
LA	•			
10		•		
18			•	
20				•

Nominal Output V,DC		
	12	24
Under Volts Alarm	12.5	25
Over Volts Alarm	15.5	31
Delay on under volts	120 seconds	

Product	Input volts	Battery type	Options	Options	Options
EG3002410	B	LA	TC	A	

The above 3 part number codes must be filled in to complete your order.

Insert options when required, if no options are required, leave empty.

**EG3002410 B LA TC A**

The above example shows the order code for a 230V,AC input, 24V@10A,DC output charger, calibrated for a vented lead acid battery, with remote temperature compensation and NFPA110 alarms (charge fail / loss of mains, under volts and over volts) options.

	<p>North American Distributor - PC &amp; S / Panel Components &amp; Systems, Inc.</p> <p>149 Main Street Stanhope New Jersey 07874 Phone (800) 523 9194 Fax (973) 448 1674</p>	<p>213 Jespersen Avenue Spruce Grove Alberta T7X 2J1 Phone (877) 962 0557 Fax (780) 962 0557</p>
	<p>8539 Monroe Road (Suite 104) Charlotte North Carolina 28212 Phone (704) 535 3357 Fax (704) 535 6288</p>	