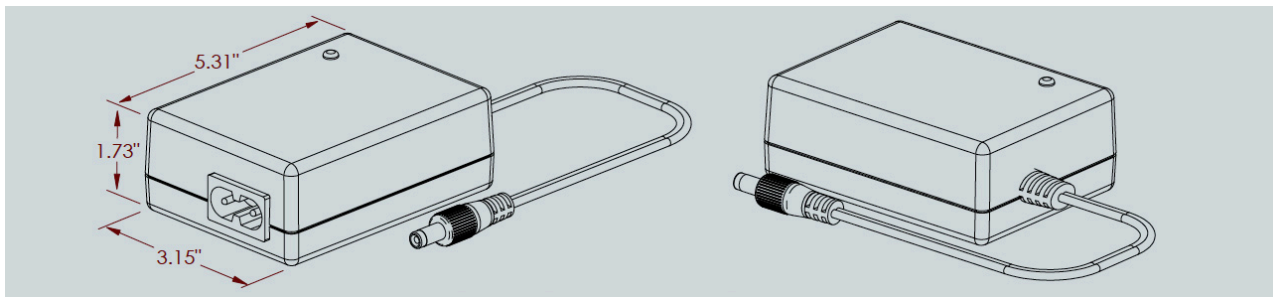




Switch mode Lead Acid chargers are designed to effectively charge Sealed Lead Acid batteries while protecting the batteries from overcharging. All charger ratings are based on a nominal auto-detected input of 90-264 47-63Hz. The output current ranges from 2A to 4A.

**Features:**

- 3 step charge control with microprocessor
- Low current start up of deeply discharged batteries (step 0)
- Protected against reverse polarity and short circuit
- Charges 12 or 24V Lead Acid batteries
- Complies with medical standard EN 60601-1 3ed
- LED status indicator
- Custom specifications on request
- With NTC upon request



Category	Specifications
Model number	452440-SB 452440-SC
Input rating	Nominal 95-130VAC and 198-264VAC
Nominal voltage rating	12 VDC / 24VDC
Maximum output power	58W (24V 74W)
Recommended batt. capacity	20 - 200Ah
Switch frequency	≈ 40kHz
Leakage current w/ mains disconnected	<200uA (0.15Ah / month)
Operating/storage temperature	-25°C - +40°C / -25°C - +85°C
Ripple	<100 mV p-p
Insulation class	Class II (class 1 on request)
Electrical safety approvals	EN 60601-1 3rd ed, EN60335-2-29, EN 60601-1-11 Class 11
EMC standards	EN 60601-1-2 (Medical), EN 61000-6-3 (Emission), EN 61000-6-1 (Immunity)
Termination	Low current detection
Input / output connection	2 pin IEC 320-C7 connector / Battery clips
Dimensions/weight	5.31" x 3.15" x 1.73" (135 x 80 x 44mm) / .77lbs. (390g)

\* Other output connections available upon request



**Functionality:**

Once the charger is attached to a Lead Acid battery and then plugged, the charging process will begin. The charger will subject the Lead Acid battery to three steps of charging.

During the first step, the charger enters into 'fast charge' mode. During this step, the charger is in constant current mode with the current rate remaining at its maximum rating.

In step two, the battery will be nominally 80-95% charged (LED changes to orange), and the charger switches into constant voltage mode (current is no longer being provided at its maximum rate). The charger will continue to provide a constant voltage until the charge current decreases to the charge termination level.

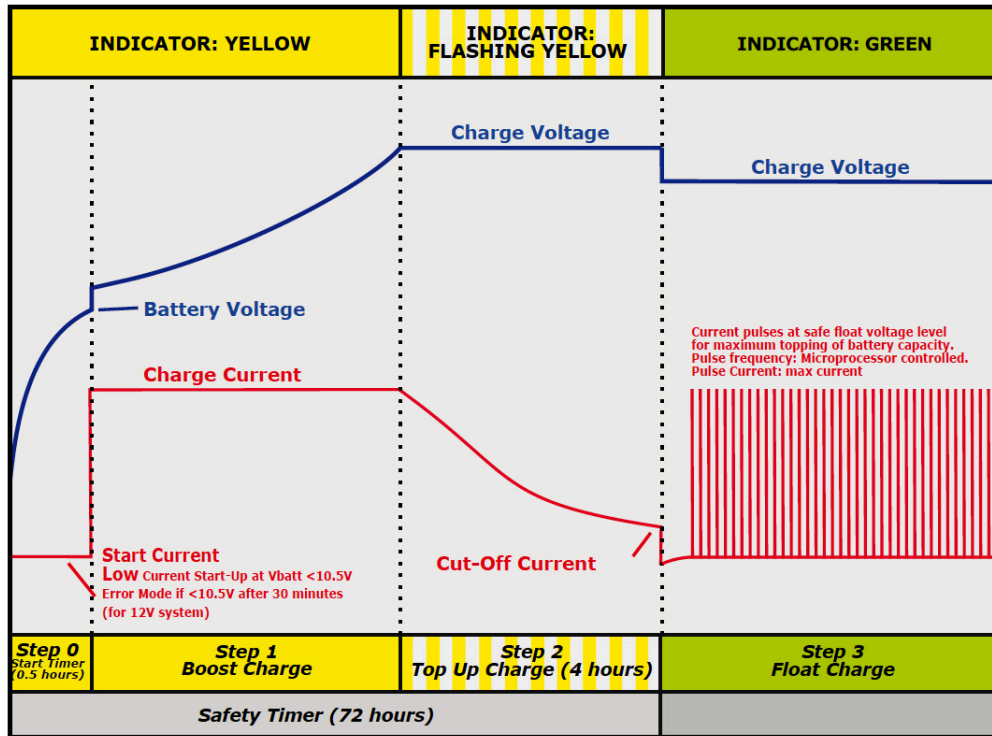
In the third step, will place the charger in float / standby mode as the battery will be fully charged. Because the charge voltage is at standby level, the charger can stay connected to the battery. Should the battery be used, the charger can return to rapid charging (step 1).

Versions / Characteristics			Step 0 <30min.	Step 0 >30min.	Step 1	Step 2	Step 3	Float charge
			yellow	red=error	yellow	flashing yellow	green	green
Model #	Voltage rating	Max output power (W)			Charge current	Charge voltage	Charge start Vbat	
452440-SB	12V	58W	1.2A batt Volt <10.5V	<0.2A	4A +/- 0.2A	14.7V +/- 0.1V	13.7V +/- 0.2V	4.0A
452440-SC	24V	74W	0.6A batt volt <21V	<0.2A	2.5A +/- 0.2A	29.4V +/- 0.1V	27.4V +/- 0.2V	2.5A

**LED status indicator:**

The Lead Acid charger has an LED status indicator to inform the user of its status. (red= error)  
 During step 1, the LED will appear yellow in color. While in step 2, the LED will flash yellow in color.  
 During step 3, the LED will appear green in color.

**Charge curve:**



\* When specifying product, please consult with Cell-Con to verify that the specifications identified on this data sheet are current.

