

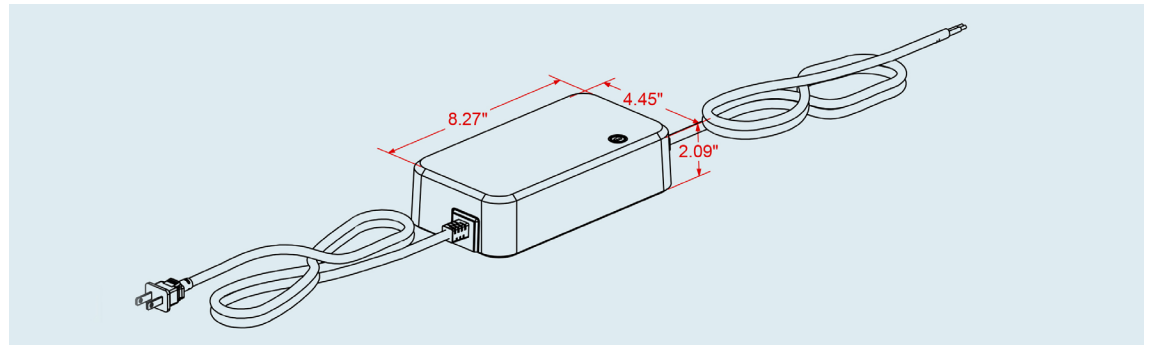
Switch mode Lead Acid chargers are designed to effectively charge Lead Acid batteries while protecting the batteries from overcharging. All charger ratings are based on a nominal input of 120 VAC. The output current ranges from 10A - 20A



LEAD ACID CHARGER, 300W

**Features:**

- Medically certified / UL approved
- Safety: EN 60601-1 ed. 3.1
- EMC: EN 60601-1-2 ed. 4
- Wake up and low current start-up of deeply discharged batteries
- Eco-design compliance: DoE & CEC
- 3 step charge control with current detection as charge termination
- Error indication for reverse polarity, short circuit, charging lower voltage batteries, and safety timer run out



Category	Specifications
Model number	453540-S Series
Input rating	Nominal 198-264 VAC / 50Hz (Upon request: 110-120 VAC / 60Hz; )
Versions	12V, 24V
Switch frequency	≈ 65kHz
Leakage current from battery	<130mA @ 24V (with mains switched off)
Operating/storage temp.	-25°C - +40°C / -25°C - +65°C
Ripple	< 100 mV p-p
Insulation class	Class II (double insulated)
Insulation voltage	4000VAC (primary) / 5700VDC (secondary)
Electrical safety standards	EN / IEC / ANSI 60601-1
EMC standards	EN 60601-1-2: 2015 (Edition 4)
IP-code	IP 44
Input connection	2 pin IEC 60320 or fixed mains cables
Output connection	Battery clips
Dimensions / weight	8.27" x 4.45" x 2.09" / with mains cable 3.08lbs / with IEC60320 2.53lbs



\* Other output connections available upon request

## Charger Specifications

Versions		Charge control (LED Indication)						
		Step 0 <30min (yellow)	Step 0 >30min (red-error)	Step 1 (yellow)	Step 2 (Flash yellow)	Step 3 (Green)	Float Charge	Restart
453540-SB	12V	2.4A +/- 0.5A (batt. volt < 10.5A)	< 0A	20A +/- 0.3A (batt. volt >10.5V) (to Vbat = 14.7V)	14.7V +/- 0.1V (until I charge <2.4A or >4hr) tapering charge current	13.7V +/- 0.1V (until I charge >18A) supply current up to max 20A for possible parallel load	20V +/- 0.1V Pulsing curr. at safe float volt level for max. topping of batt. capacity	>18A or <13V in 10 sec.
453540-SC	24V	1.4A +/- 0.5A (batt. volt < 21V)		10A +/- 0.3A (batt. volt < 21V) (to Vbat = 29.4V)	29.4V +/- 0.2V until I charge <1.4A or >4hr) tapering charge current	27.4V +/- 0.1V until I charge <8.5A) supply current up to max 10A for possible parallel load	27.4V +/- 0.1V Pulsing curr. at safe float volt level for max. topping of batt. capacity	>18A or <13V in 10 sec.

\* If step 0 is >10 minutes, the LED will flash red 4x indicating a low battery voltage. Zero current flows.

\*\* Step 2, CV has a backup timer set between 1-2 hours depending on charger model.

- All chargers have a safety timer set for 72 hours.

- Available in 115VAC version on request.

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

### Charging characteristics and LED indication

#### BATTERY NOT CONNECTED INDICATIONS

Battery not connected is indicated by flashing green. In this mode charger will apply short pulses attempting to wake up deeply discharged batteries.

#### ERROR INDICATIONS (in flashing red)

- 2 red flashes: Battery is connected to charger with wrong polarity.
- 3 red flashes: Charger output is shorted. Check output cable connection.
- 4 red flashes: Battery voltage is low. Check battery status or voltage.
- 5 red flashes: Safety timer has run out. Check battery status or capacity.
- LED off: Battery voltage is too high. Check battery voltage.

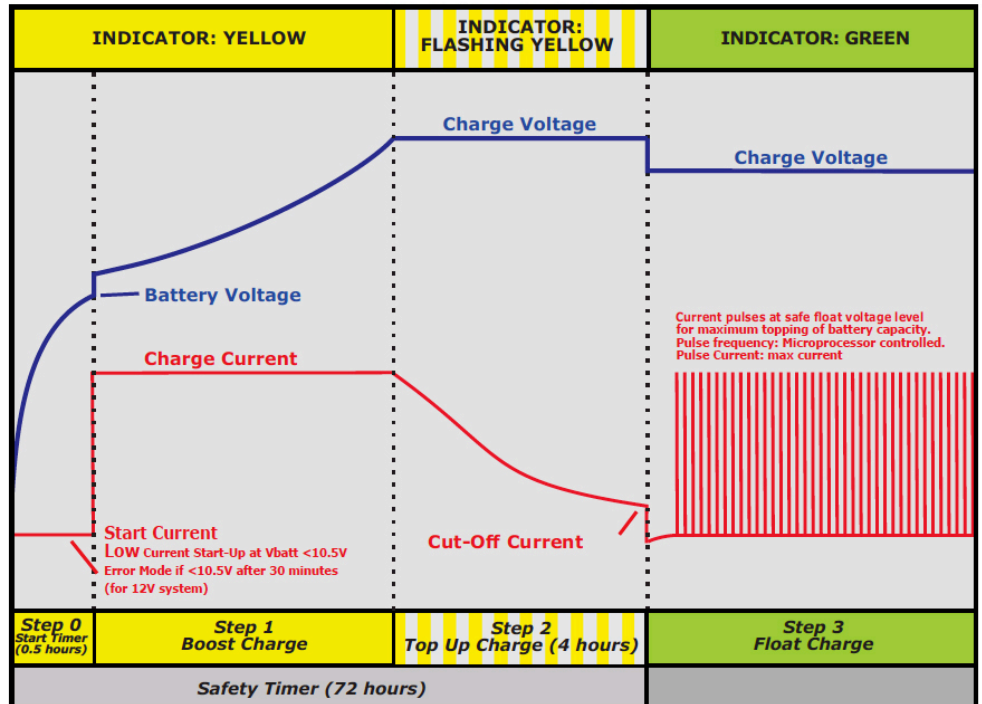
#### WAIT MODE INDICATIONS

Yellow with 1 red flash:

Battery temperature is too low (<0°C)

Yellow with 2 red flashes:

Battery temperature is too high (>45°C)



### Mounting Bracket Included

