

# 3540 LA Max. 294W

## Charger for Lead Acid batteries



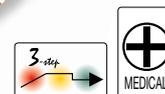
**tech spec**  
*BlueLine*

- 3-step charge control with current detection
- XLR output plug for wheelchairs and scooters available
- Input voltage 198-264 VAC
- Wake up and low current start-up of deeply discharged batteries
- Error indication for reverse polarity, charging of wrong lower voltage battery pack, defect battery and safety timer run-out
- Fixed mains cable, 2-pin IEC 60320 available
- Mounting bracket included
- ECO-design compliance: DoE and CEC
- Custom specifications on request
- Approvals:
  - Home healthcare EN 60601-1-11 (fixed cord versions only)
  - Medically certified: Safety: EN 60601-1 ed. 3.1 EMC: EN 60601-1-2 ed. 4 (24V)
  - UL approved



For updates: see [www.mascot.no](http://www.mascot.no)

## TECHNICAL SPECIFICATIONS



### GENERAL INPUT/OUTPUT

<b>Input voltage:</b>	198-264 VAC
<b>Line Frequency:</b>	47 – 50Hz
<b>Switch frequency, approx.:</b>	65 kHz
<b>Leakage current from batt. with mains switched off:</b>	<130µA @ 24V
<b>Temperature range</b>	
• <b>Operating:</b>	-25 °C - +40 °C
• <b>Storage:</b>	-25 °C - +65 °C
<b>Temp. compensation of charge voltage</b>	-3 to -4mV/°C pr. cell (w. batt. clips only)
<b>Ripple:</b>	< 100 mV p-p
<b>Dimensions (L×W×H):</b>	210 × 113 × 53 mm
<b>Weight:</b>	With mains cable 1400g With IEC60320 1150g

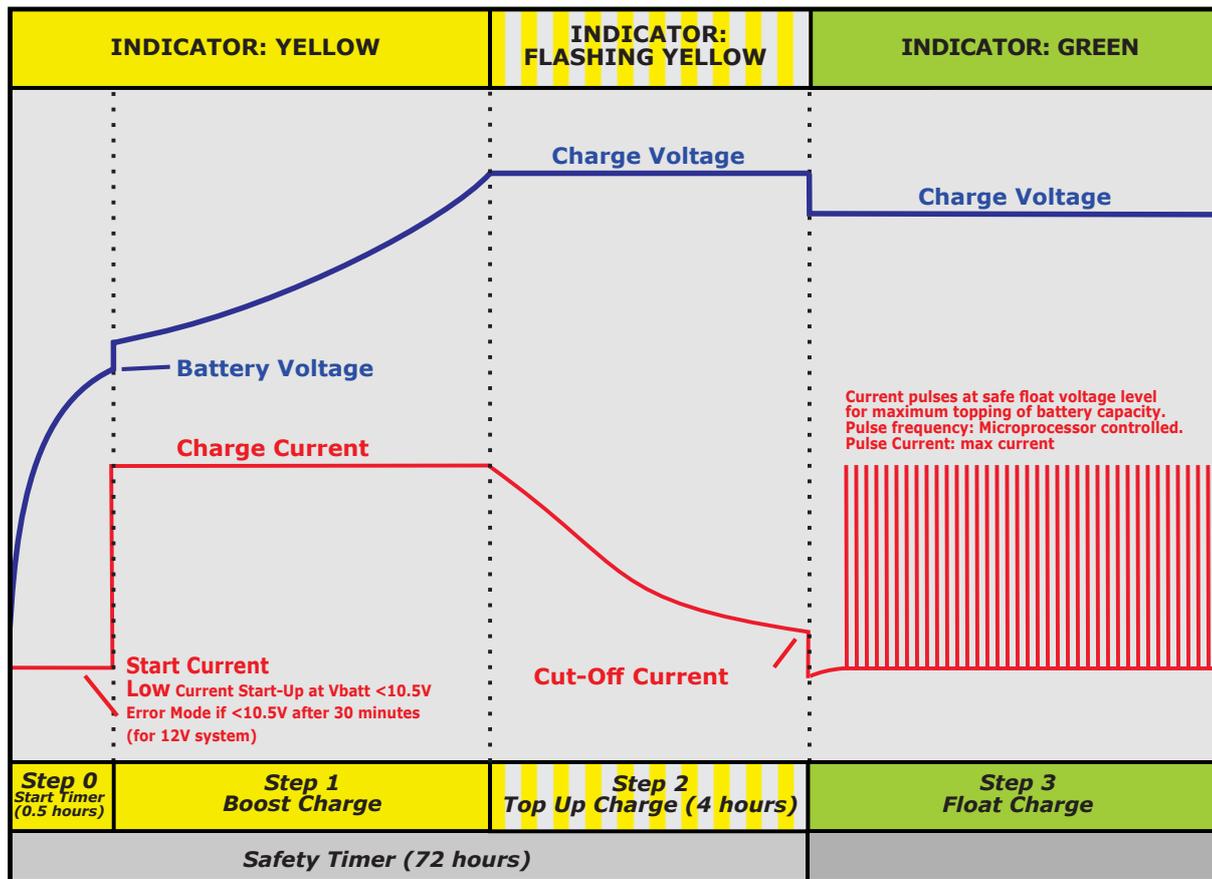
### SAFETY PROTECTION EMC

<b>Protection:</b>	Protected against reversed polarity, short circuit proof and thermal run-off. Prevents sparking. Charge timer: 4h Safety timer: 72h Class II (Double insulated)
<b>Insulation class:</b>	Class II (Double insulated)
<b>Insulation voltage</b>	4000VAC / 5700VDC
<b>Primary – secondary:</b>	EN/IEC/ANSI 60601
<b>Electrical safety std:</b>	EN 60601-1-2: 2015 (Edition 4)
<b>EMC standards</b>	EN 60601-1-2: 2015 (Edition 4)
<b>Input terminal:</b>	Fixed mains cable, 2-pin IEC 60320 available
<b>Output terminals:</b>	XLR plug or cord with insulated battery clips and temp. sensor
<b>IP-code:</b>	IP44 (IP40 w IEC 60320)

## VERSIONS

Charge control (LED indication)							
	Step 0 < 30 min	Step 0 > 30 min	Step 1	Step 2	Step 3	Float charge	Restart
	(Yellow)	(Red=error)	(Yellow)	(Flash Yellow)	(Green)		
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
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	>8,5A or <26V in 10 sec

## Charging characteristics and LED indication



### STEP 1 - BOOST CHARGE

LED-indicator: YELLOW

The charger is in constant current mode (CC), charging with the maximum current until battery voltage reach Top-Up level.



### STEP 2 – TOP-UP CHARGE

The charger is in constant voltage mode. The LED-indication will be FLASHING YELLOW during Top-up charge. The charger stays in this mode until the charge current decreases to charge termination level or the Top-Up Charge Timer runs out. The battery is charged to its full capacity at the end of this step



### STEP 3 – FLOAT CHARGE

The LED-indication on the charger is GREEN and the battery is fully charged.

The charger is in standby mode. The charge voltage is at standby level and the charger may remain connected to the battery. The charger will return to boost charge if the battery is used. A load larger than the cut-off current will initiate a new charge cycle.

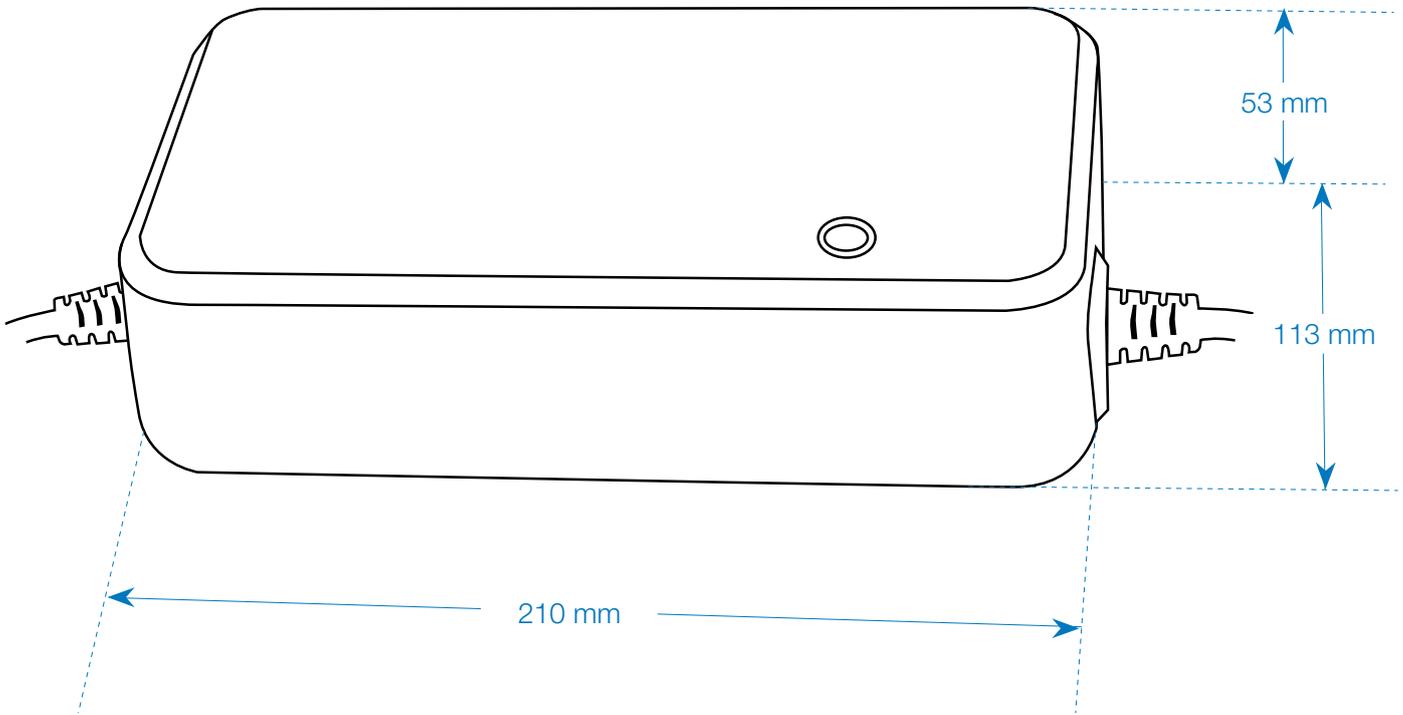


### BATTERY NOT CONNECTED

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

- 2 red blinks: Battery is connected to charger with wrong polarity!
- 4 red blinks: Charging of wrong lower voltage battery pack (e.g. 12V) will be limited to 1.4A and terminated after 30min
- 5 red blinks: Safety timer has run out. Check battery status or capacity.
- 6 red blinks: Defect battery
- LED off: Battery voltage is too high (>32V). Check battery voltage.



**Mounting bracket, part no. 205800**

