# Charger for Li-ion batteries - switch mode

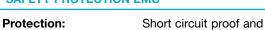
- 3-step charge control with current detection
- Input voltage 198-264 VAC
- Wake up and low current start-up of deeply discharged batteries
- Error indication for reverse polarity, short circuit, charging of wrong (lower Voltage) battery pack, defect battery and safety timer run-out
- · Mounting bracket included
- Approvals:
  - Medically certified Safety: EN 60601-1 ed. 3.1 EMC: EN 60601-1-2 ed. 4
  - UL approved

For updates: see www.mascot.no



## **TECHNICAL SPECIFICATIONS**

# SAFETY PROTECTION EMC



protected against reversed polarity and thermal run-off.

Prevents sparking.

Charge timer: (step 2): 1h

Safety timer: 72h

Insulation class: Class II (Double insulated)

Insulation voltage

Primary – secondary: 4000VAC / 5700VDC
Electrical safety std: EN/IEC/ANSI 60601

EMC standards EN 60601-1-2: 2015 (Edition 4)

Input terminal: 2-pin IEC 60320

or fixed mains cable

Output terminals: Cord with open ends

IP-code: IP44

(IP41 with 2-pin IEC 60320)

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**GENERAL INPUT/OUTPUT** 



Leakage current from batt.

with mains switched off: <170µA@29.2V

Temperature range

• Operating: -25 °C - +40 °C • Storage: -25 °C - +65 °C Derating: Approx. - 30 % at 40 °C

Ripple:< 100 mV p-pDimensions (L×W×H): $210 \times 113 \times 53 \text{ mm}$ Weight:With mains cable 1400g

With IEC60320 1150g

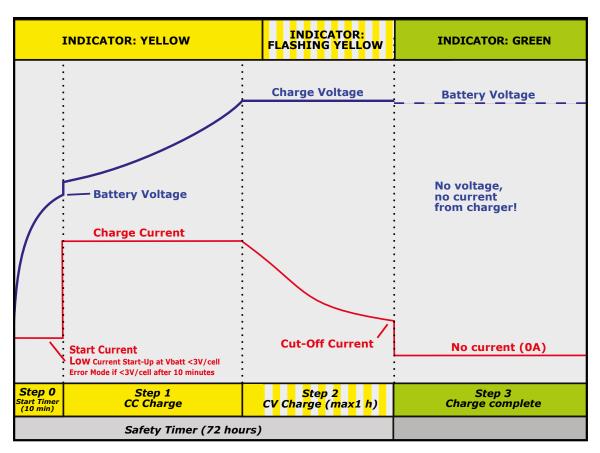
### **VERSIONS**

		Step 0 < 10min (yellow)	Step 0 > 10min (Red: 4 blinks)	Step 1 (yellow)	Step 2 (Flash yellow)	Step 3 (green)	
Cells	Max output power (W)	Low Current start-up for deeply discharged batt.	Battery voltage too low	Charge Current	Charge Voltage	Charge term when current is:	Restart
3	252W	CC 1A±0.4A when batt volt < 9V		20A +0.2/-0.3A	12.6V ±0.2V	< 1A or max. 2 hr.	12.3V ±0.1V
4	294W	CC 1A±0.2A when batt volt < 12V		17.5A +0.2/-0.3A	16.8V ±0.2V	< 1A or max. 2 hr.	16.4V ±0.1V
7	294W	CC 0.8A±0.4A when batt volt < 21V	0A/0V	10A +0/-0.3A	29.4V ±0.2V	< 0.8A or max. 1 hr.	28.7V ±0.1V
8	293W	CC 5A±0.2A when batt volt < 24V		8.7A +0.1/-0.3A	33.6V ±0.2V	< 0.5A or max. 1 hr.	32.8V ±0.1V
10	294W	CC 0.5A±0.1A when batt volt < 30V		7A +0/-0.3A	42.0V ±0.2V	< 0.5A or max. 1 hr.	41.0V ±0.1V





# Charging characteristics and LED indication \*



<sup>\*</sup> an animated video of this charging progress is available on our website

### 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**

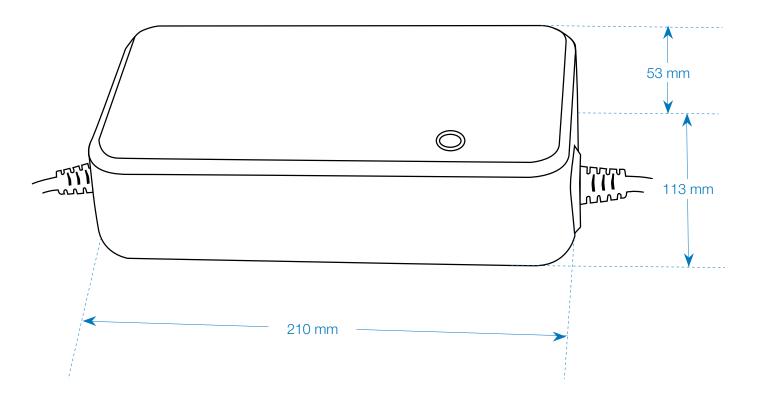
2 red blinks: Battery is connected to charger with wrong polarity!
3 red blinks: Charger output is shorted. Check output cable connection!
4 red blinks: Battery voltage is low. Check battery status or voltage.
5 red blinks: Safety timer has run out. Check battery status or capacity.

LED off: Battery voltage is too high. Check battery voltage.

## WAIT MODE INDICATIONS

Yellow with 1 red blink: Battery temperature is too low (<0°C) Yellow with 2 red blink: Battery temperature is too high (>45°C)





# Mounting bracket, part no. 205800

