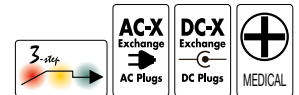


- 3-step charge control with current detection
- Universal input voltage (90-264 VAC)
- Wake up and low current start-up of deeply discharged batteries
- Error indication for reverse polarity, short circuit, charging battery packs with wrong number of cells and safety timer run-out
- With NTC input on request
- Order plugs and mains cord separately
- ECO-design compliance: DoE and CEC
- 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](http://www.mascot.no)

**TECHNICAL SPECIFICATIONS**



**GENERAL INPUT/OUTPUT**

<b>Input voltage:</b>	90-264 VAC
<b>Line Frequency:</b>	47 – 63Hz
<b>Switch frequency, approx.:</b>	40 kHz
<b>Leakage current from batt. with mains switched off:</b>	<0,4mA @ nominal battery voltage
<b>Temperature range</b>	
• <b>Operating:</b>	-25 °C - +40 °C
• <b>Storage:</b>	-25 °C - +85 °C
<b>Ripple:</b>	< 100 mV p-p
<b>Dimensions (LxWxH):</b>	124 x 50 x 37 mm
<b>Weight:</b>	220g

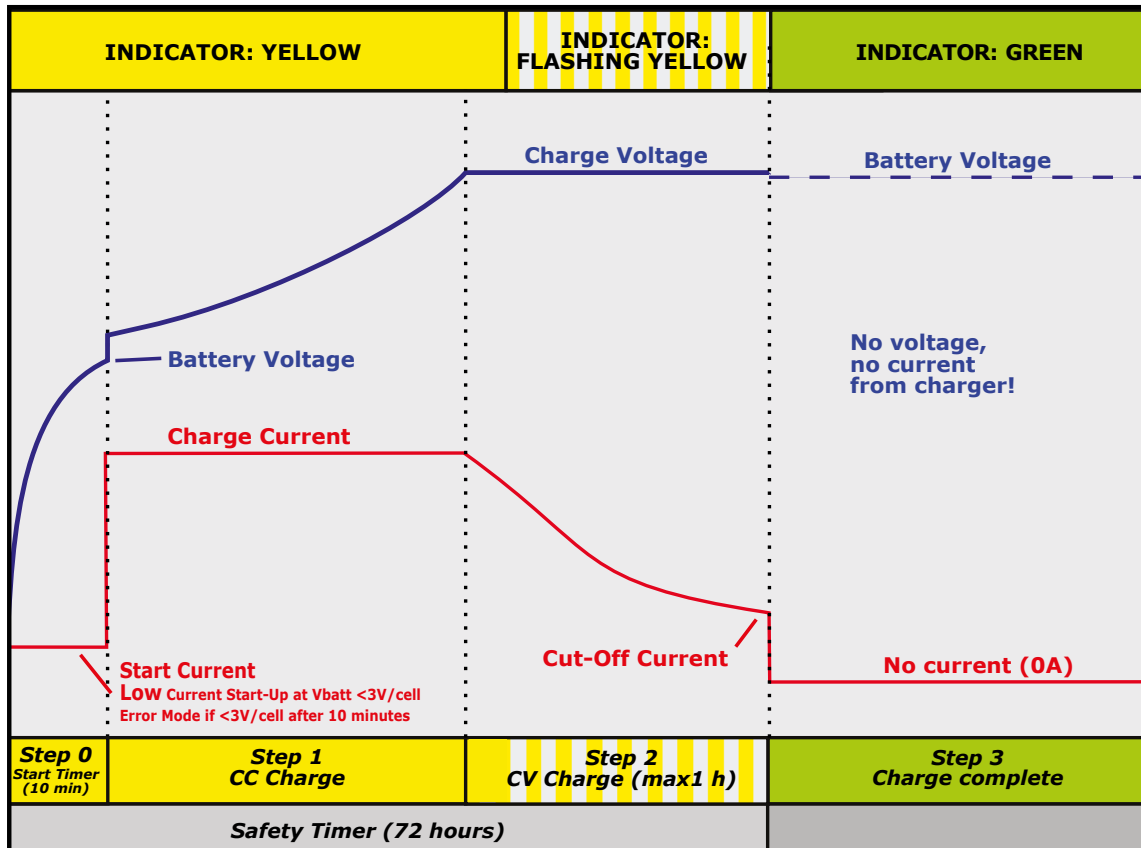
**SAFETY PROTECTION EMC**

<b>Protection:</b>	Protected against reversed polarity and short circuit proof Class II
<b>Insulation class:</b>	Class II
<b>Insulation voltage</b>	
<b>Primary – secondary:</b>	4000VAC / 5700VDC
<b>Electrical safety std:</b>	EN/IEC 60335-2-29, EN/IEC/ANSI 60601-1
<b>EMC standards</b>	
• <b>Medical</b>	EN 60601-1-2
• <b>Emission</b>	EN 55014-1, EN 61000-6-3
• <b>Immunity</b>	EN 55014-2, EN 61000-6-1
<b>Input terminal:</b>	2-pin IEC 60320 connector C8
<b>Output terminals:</b>	DC connector, battery clips, push on terminals or open ends 4X
<b>IP-code:</b>	4X

**VERSIONS**

CHARGE CONTROL		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
2	23W	CC 100mA±25mA when batt. < 6V	0A/0V	2.5A ±0.3A	8.4V ±0.1V	< 100mA or max. 1 hr.	8.2V
3	28W	CC 100mA±25mA when batt. < 9V		2.2A ±0.2A	12.6V ±0.1V		12.3V
4	28W	CC 100mA±25mA when batt. < 12V		1.6A ±0.15A	16.8V ±0.1V		16.4V
7	29W	CC 100mA±25mA when batt. < 21V		1.0A ±0.1A	29.4V ±0.2V		28.7V
10	29W	CC 100mA±25mA when batt. < 30V		0.7A ±0.07A	42V ±0.3V		41V

## Charging characteristics and LED indication \*



\* 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

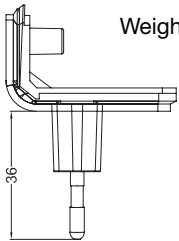
- Yellow with 1 red blink: Battery temperature is too low ( $< 0^{\circ}C$ )
- Yellow with 2 red blink: Battery temperature is too high ( $> 45^{\circ}C$ )



## Exchangeable AC plugs

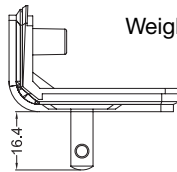
### EU plug adapter

Part no. 127000  
Weight: 20,9 g



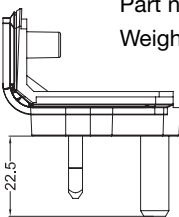
### US plug adapter

Part no. 127100  
Weight: 13,4 g



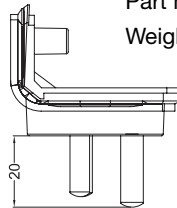
### UK plug adapter

Part no. 127200  
Weight: 29,2 g



### AUS plug adapter

Part no. 127300  
Weight: 21,4 g



**2-pin IEC 60320 C7 mains cord**  
1800 mm  
EU part no. 131306, UK part no. 131148,  
US part no. 131368, AU part no. 013108

