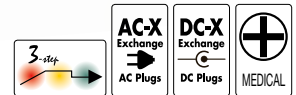


- 3-step charge control with current detection
- Universal input voltage (90-264 VAC)
- Wake up and low current start-up of deeply discharged batteries
- Error indication for reverse polarity, short circuit, charging battery packs with wrong number of cells and safety timer run-out
- With NTC input on 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**

Input voltage:	90-264 VAC
Line Frequency:	47 – 63Hz
Switch frequency, approx.:	56 kHz
Leakage current from batt. with mains switched off:	<0,3mA @ nominal battery voltage
Temperature range	
• Operating:	-25 °C - +40 °C
• Storage:	-25 °C - +85 °C
Ripple:	< 100 mV p-p
Dimensions (LxWxH):	108,5 x 49 x 29 mm
Weight:	150g

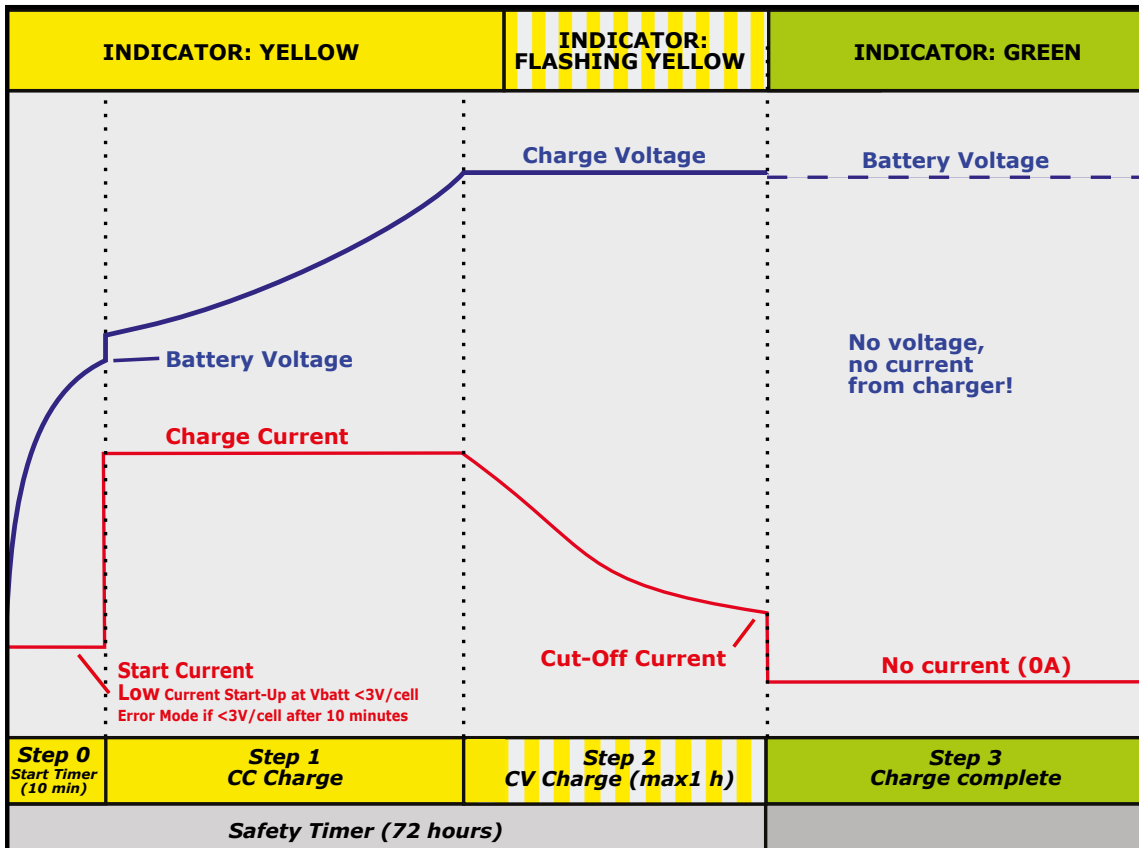
**SAFETY PROTECTION EMC**

Protection:	Protected against reversed polarity and short circuit proof Class II
Insulation class:	Class II
Insulation voltage	
Primary – secondary:	4000VAC / 5700VDC
Electrical safety std:	EN/IEC 60335-2-29, EN 60601-1-11, EN/IEC/ANSI 60601-1
EMC standards	
• Medical	EN 60601-1-2
• Emission	EN 55014-1, EN 61000-6-3
• Immunity	EN 55014-2, EN 61000-6-1
Input terminal:	2-pin IEC 60320 connector C8
Output terminals:	DC connector, battery clips, push on terminals or open ends
IP-code:	41

**Selected versions – see web for complete list**

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
1	6W	CC 100mA±25mA when batt. < 3V	0A/0V	1.5A ±0.1A	4.2V ±0.1V	< 100mA or max. 1 hr.	4.1V
2	13W	CC 100mA±25mA when batt. < 6V		1.5A ±0.1A	8.4V ±0.1V		8.2V
3	15W	CC 100mA±25mA when batt. < 9V		1.2A ±0.1A	12.6V ±0.1V		12.3V
4	16W	CC 100mA±25mA when batt. < 12V		1.0A ±0.1A	16.8V ±0.1V		16.4V
5	16W	CC 100mA±25mA when batt. < 15V		0.8A ±0.1A	21V ±0.1V		20.5V
6	16W	CC 100mA±25mA when batt. < 18V		0.66A ±0.1A	25.2V ±0.1V		24.6V
7	17W	CC 100mA±25mA when batt. < 21V		0.56A ±0.1A	29.4V ±0.1V		28.7V
14	18W	CC 80mA±25mA when batt. < 42V		0.3A ±0.1A	58.8V ±0.1V	< 56mA or max. 1 hr.	57.4V

## 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

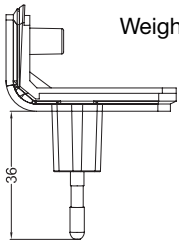
Yellow with 1 red blink: Battery temperature is too low ( $< 0^{\circ}C$ )  
 Yellow with 2 red blink: Battery temperature is too high ( $> 45^{\circ}C$ )



## Exchangeable AC plugs

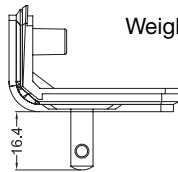
### EU plug adapter

Part no. 127000  
Weight: 20,9 g



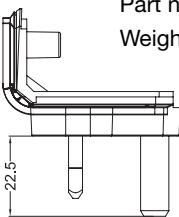
### US plug adapter

Part no. 127100  
Weight: 13,4 g



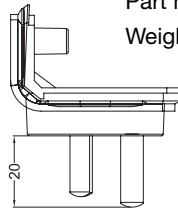
### UK plug adapter

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

