

2440 LA Max. 4.0 A



tech spec

Charger for lead acid batteries

- 3-step charge control with microprocessor
- Low current start up of deeply discharged batteries (step 0)
- Unaffected by fluctuations in mains voltage
- Protected against reverse polarity and short circuit proof
- IP67 version available (both housing styles)
- Custom design on request: timer, charge current, other
- Temp. comp. charge voltage w. external temp sensor available



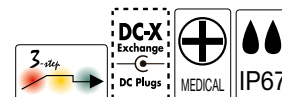
2440 IP67

Approvals:

- Home Healthcare EN 60601-1-11
- 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 12V



GENERAL INPUT/OUTPUT

Input voltage:	90 - 264 VAC
Line frequency:	47 - 63 Hz
Max output power:	58W (24V: 74W)
Ripple:	< 100 mV p-p
Efficiency (at 100% load):	> 85%
Switch frequency approx.:	40 kHz
Leakage current with mains disconnected:	<200uA (0,15Ah/month)
Temperature range	
• Operating:	-25 to +40 °C
• Storage:	-25 to +85 °C
Dimensions (L×W×H):	135 × 80 × 44 mm
Weight:	390 g (890 g IP67)

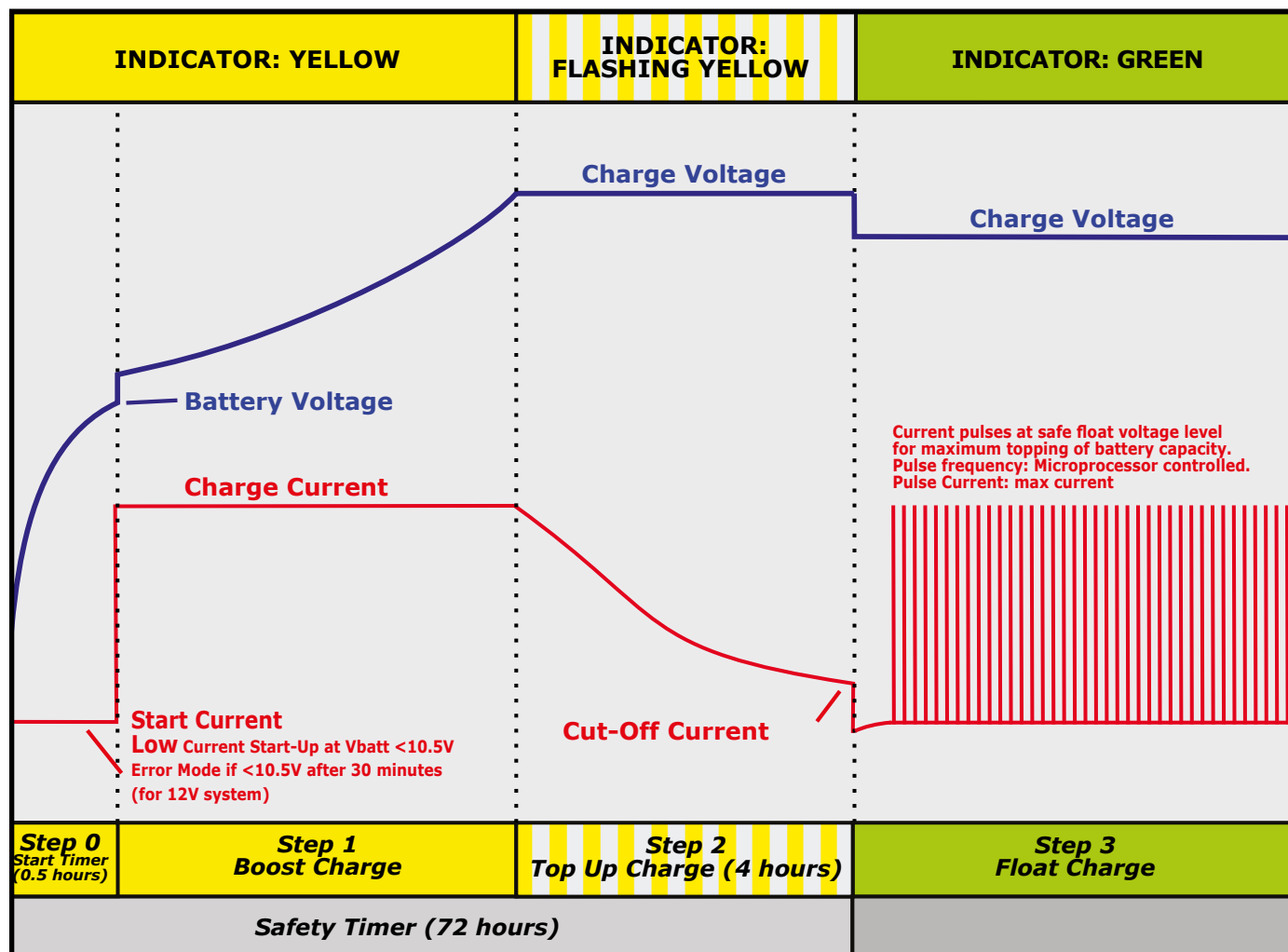
SAFETY PROTECTION EMC

Protection	Against reversed polarity and short circuit proof. Safety timer: charging of lower voltage batt (e.g. 6V/12V) will be limited to 1,2A/0,6A and term. after 30 min.
Insulation class:	Class II (Class I on request)
Insulation voltage	
Primary-secondary:	4000VAC / 5700 VDC
Electrical safety std:	EN/IEC 60335-2-29, EN/IEC/ANSI 60601-1 (3.1 Ed) & EN/IEC 60601-1-11
EMC standards:	EN 55014-1 and -2, EN/IEC 61000-6-3, EN/IEC 61000-6-1, EN/IEC 60601-1-2
Input terminal:	2-pin IEC60320/C8 (3-pin C14) or fixed cord on request
Output terminals:	Battery clips or DC conn
IP-grade:	41 (IP67 on request)
Rec. battery capacity:	20 - 200 Ah

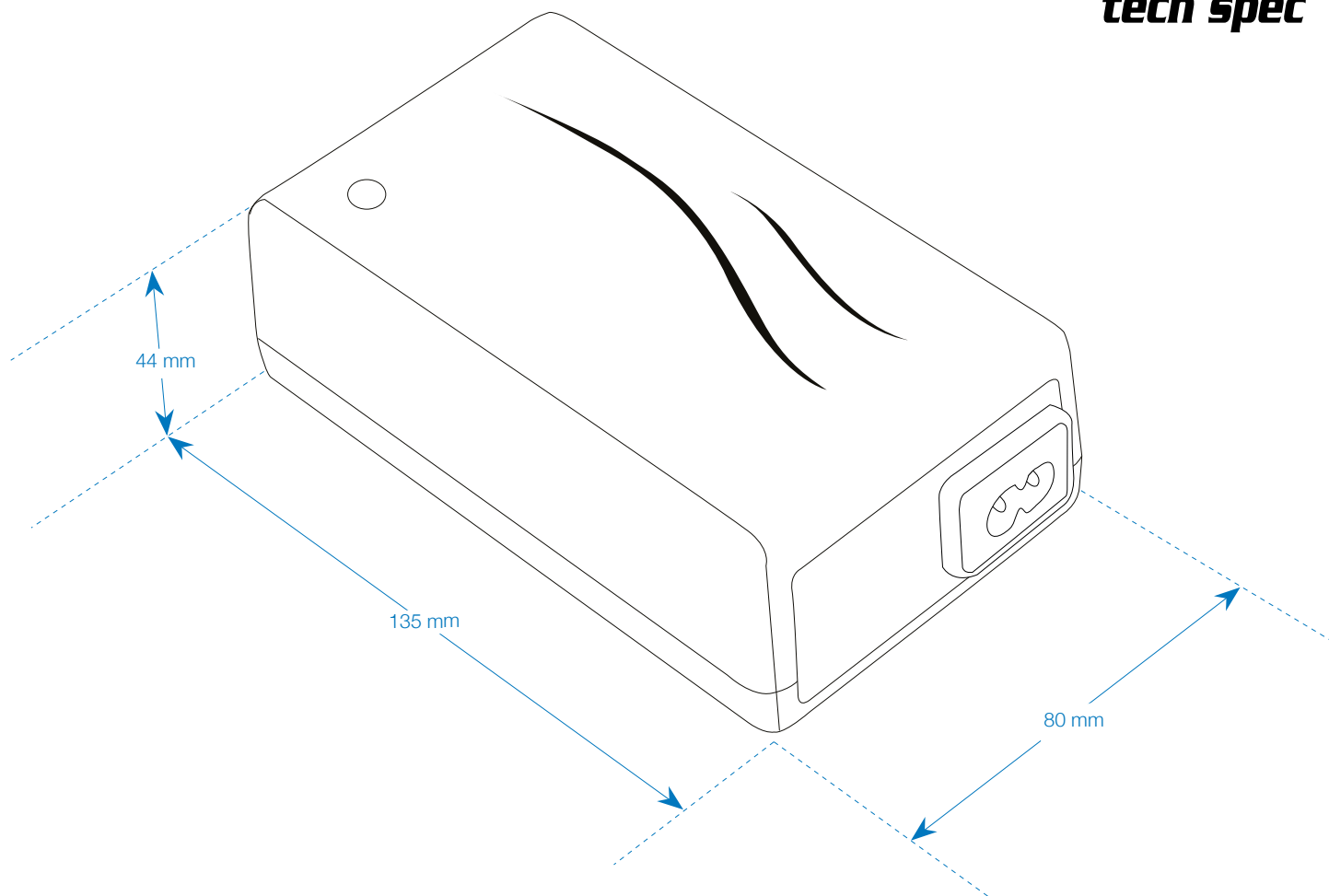
Voltage versions – see next page

Charge control - Ladekontroll (LED indication)

	Step 0 < 30 min	Step 0 > 30 min	Step 1	Step 2	Step 3	Float charge
	(Yellow)	(Red=error)	(Yellow)	(Flash Yellow)	(Green)	
6V	1.2A ± 0.2A (batt volt < 5.25V)	< 0.2A	4.0A ± 0.2A (batt volt > 5.25V) (until Vbat = 7.35V)	7.35V ± 0.1V (until I charge < 1.2A or > 4hr) tapering charge current	6.85V ± 0.1V (until I charge > 4.0A) supply current up to max 4.0A for possible parallel load	4.0A Pulsing current at safe float volt. level for max topp. of batt.
12V	1.2A ± 0.2A (batt volt < 10.5V)	< 0.2A	4A ± 0.2A (batt volt > 10.5V) (until Vbat = 14.7V)	14.7V ± 0.1V (until I charge < 1.2A or > 4hr) tapering charge current	13.7V ± 0.2V (until I charge > 4.0A) supply current up to max. 4.0A for possible parallel load	4.0A Pulsing current at safe float volt. level for max topp. of batt.
24V	0.6A ± 0.2A (batt volt < 21V)	< 0.2A	2.5A ± 0.2A (batt volt < 21V) (until Vbat = 29.4V)	29.4V ± 0.1V (until I charge < 0.6A or > 4hr) tapering charge current	27.4V ± 0.2V (until I charge > 2.5A) supply current up to max 2.5A for possible parallel load	2.5A Pulsing current at safe float volt. level for max topp. of batt.
36V	0.4A ± 0.1A (batt volt < 31.5V)	< 0.2A	1.6A ± 0.1A (batt volt > 31.5V) (until Vbat = 44.1V)	44.1V ± 0.2V (until I charge < 0.4A or > 4hr) tapering charge current	41.1V ± 0.2V (until I charge > 1.6A) supply current up to max 1.6A for possible parallel load	1.6A Pulsing current at safe float volt. level for max topp. of batt.
48V	0.3A ± 0.1A (batt volt < 42V)	< 0.2A	1.3A ± 0.1A (batt volt > 42V) (until Vbat = 58.8V)	58.8V ± 0.3V (until I charge < 0.3A or > 4hr) tapering charge current	54.8V ± 0.3V (until I charge > 1.2A) supply current up to max 1.2A for possible parallel load	1.2A Pulsing current at safe float volt. level for max topp. of batt.



Charging characteristics and LED indication
(LED) indikasjon (data for 12V version)



Mounting brackets

TYPE 201970

1 mounting bracket per unit
Available separately

