

Model 3546 LA

2 A max out • 90-264 VAC input

- 3-step charge control with current detection
- Universal input voltage
- Wake up and low current start-up of deeply discharged batteries
- Safety indication and protection: against reverse polarity, short circuit, charging battery packs with the wrong number of cells and safety timer run-out
- Approvals:

- Household safety, EN 60335-1 & -2-29 (6V, 12V, 18V and 24V)

- Medically certified

Safety: EN 60601-1 ed. 3.1

Home healthcare EN 60601-1-11

EMC: EN 60601-1-2 ed. 4

- UL approved

- Custom specifications on request:

Charging parameters, connectors, cords, logo print, housing/open frame/IP rating and certificates. For more information: [custom design info sheet](#)

Blueline



Available versions

12V / 2A

24V / 1A

Notes:

Plug-in/Desktop unit

Exchangeable AC and DC plugs

Exchangeable DC cable connectors available

Version with fixed battery clips available

Order plugs & mains cord separately

MASCOT type 3546 Lead Acid chargers:	12V Lead Acid	18V Lead Acid
Input voltage: / Line frequency	90 - 264VAC / 47 - 63Hz	
Max output power	29.4W	28.9W
Charge control: Charge indication:		
Step 0 < 30min Yellow	CC 100mA ± 25mA, when batt voltage < 10.5V.	CC 100mA ± 25mA, when batt voltage < 16V.
Step 0 > 30min Red (4 blinks)	0A / 0V	0A / 0V
Step 1 (Constant Current) Yellow	CC 2.0A ± 0.1A, when 10.5V < Vbat < 14.7V.	CC 1.3A ± 0.1A, when 16V < Vbat < 22.05V.
Step 2 (Constant Voltage) Flashing Yellow	CV 14.7V ± 0.2V, until I charge < 500mA or max. 4h.	CV 22.05V ± 0.2V, until I charge < 300mA or max. 4h.
Charge timer (step2, CV)	4h	4h
Safety timer (all steps) Red (5 blinks)	72h	72h
Step 3 (Charge Completed) Green	13.7V	20.5V
Restart voltage	13.0V	19.5V
Formation Charge (Step 0)	Low current start-up of deeply discharged battery.	
Float charge	CC pulses at safe float voltage level for maximum topping of battery capacity.	
Indication when "Battery not connected"	Flashing Green (1s/1s)	
Temperature compensation of charge voltage (optional)	-3.5mV/°C pr cell. Nominal charge voltage at 20°C. (min 2.2V/cell, max 2.67V/cell)	
Ripple:	< 100mV p-p	
Efficiency (at 100% load) approx.:	85 %	
Switch frequency approx.:	35kHz	
Leakage current from battery with mains switched off:	< 300 µA at nominal battery voltage (< 0.22 Ah/month)	
Protection:	Protected against reversed polarity. Error Indication: Red (2 blinks) Short circuit proof. Error Indication: Red (3 blinks) Charging of wrong lower voltage battery pack will be limited to 100mA and terminated after 30min. Indication: Red (4 blinks) Safety timer. Error Indication: Red (5 blinks) No charge (or charge terminated) if connecting wrong battery pack with higher voltage. Indication: LED is OFF.	
Temperature range:	Operating: -25 to +40°C. Transport and short time storage: -25 to +85°C	
Safety:	Medical EN 60601-1 / Home Health care EN 60601-1-11/ Battery Charger EN 60335-2-29	
Insulation class :	Class II	
Insulation voltage: Primary – secondary:	4000VAC / 5700VDC	
EMC standards:	EN 55014-1 and -2, Emission EN 61000-6-3, Immunity EN 61000-6-1, EN 60601-1-2	
Input terminal:	2-pins IEC 320 connector, C8.	
Output terminals:	DC connector, Battery clips, Push-on terminals or open ends.	
IP-Grade:	4X	
Rec. battery capacity:	10Ah (C/5) to 25Ah (<500mA charge current as EoC detection) or up to 100Ah (utilizing the 4h CV timer as EoC detection)	6.5Ah (C/5) to 15Ah (<300mA charge current as EoC detection) or up to 50Ah (utilizing the 4h CV timer as EoC detection)
Dimensions:	123.5 × 49.5 × 37 mm	
Weight:	220g	

MASCOT type 3546 Lead Acid chargers:	24V Lead Acid	
Input voltage: / Line frequency	90 - 264VAC / 47 - 63Hz	
Max output power	29.4W	
Charge control: Charge indication:		
Step 0 < 30min Yellow	CC 100mA ± 25mA, when batt voltage < 21V.	
Step 0 > 30min Red (4 blinks)	0A / 0V	
Step 1 (Constant Current) Yellow	CC 1.0A ± 0.1A, when 21V < Vbat < 29.4V.	
Step 2 (Constant Voltage) Flashing Yellow	CV 29.4V ± 0.2V, until I charge < 250mA or max. 4h.	
Charge timer (step2, CV)	4h	
Safety timer (all steps) Red (5 blinks)	72h	
Step 3 (Charge Completed) Green	27.4V	
Restart voltage	26.0V	
Formation Charge (Step 0)	Low current start-up of deeply discharged battery.	
Float charge	CC pulses at safe float voltage level for maximum topping of battery capacity.	
Indication when "Battery not connected"	Flashing Green (1s/1s)	
Temperature compensation of charge voltage (optional)	-3.5mV/°C pr cell. Nominal charge voltage at 20°C. (min 2.2V/cell, max 2.67V/cell)	
Ripple:	< 100mV p-p	
Efficiency (at 100% load) approx.:	85 %	
Switch frequency approx.:	35kHz	
Leakage current from battery with mains switched off:	< 300 µA at nominal battery voltage (< 0.22 Ah/month)	
Protection:	Protected against reversed polarity. Error Indication: Red (2 blinks) Short circuit proof. Error Indication: Red (3 blinks) Charging of wrong lower voltage battery pack will be limited to 100mA and terminated after 30min. Indication: Red (4 blinks) Safety timer. Error Indication: Red (5 blinks) No charge (or charge terminated) if connecting wrong battery pack with higher voltage. Indication: LED is OFF.	
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Input terminal:	2-pins IEC 320 connector, C8.	
Output terminals:	DC connector, Battery clips, Push-on terminals or open ends.	
IP-Grade:	4X	
Rec. battery capacity:	10Ah (C/5) to 25Ah (<500mA charge current as EoC detection) or up to 100Ah (utilizing the 4h CV timer as EoC detection)	5Ah (C/5) to 12.5Ah (<250mA charge current as EoC detection) or up to 50Ah (utilizing the 4h CV timer as EoC detection)
Dimensions:	123.5 × 49.5 × 37 mm	
Weight:	220g	

distributed by:



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ENERGIESYSTEME Irrtümer u. Änderungen vorbehalten.