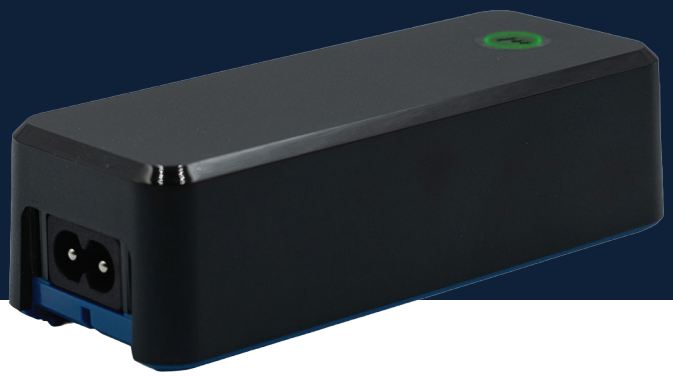
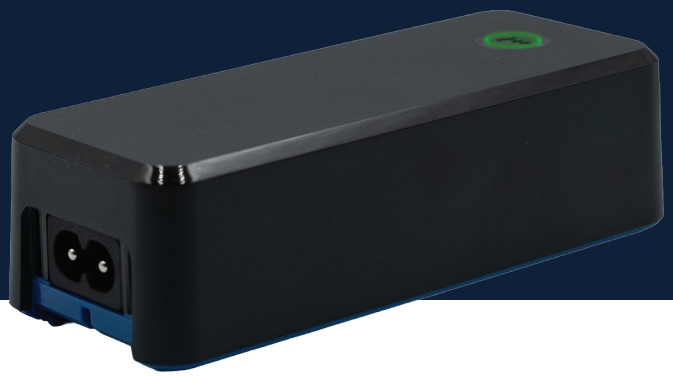


BATTERY CHARGER, 453546-L, LI-ION

SPECIFICATIONS	1 CELL	2 CELLS	3 CELLS	4 CELLS	5 CELLS
Cell-Con part number:	453546-LA	453546-LB	453546-LC	453546-LD	453546-LE
Input voltage:	90-264VAC				
Line frequency:	47-63Hz				
Max output power:	10.5W	21W	27.7W	26.9W	28.4W
Step 0 <10min Yellow:	CC 100mA ±25mA, when battery voltage <3V	CC 100mA ±25mA, when battery voltage <6V	CC 100mA ±25mA, when battery voltage <9V	CC 100mA ±25mA, when battery voltage <12V	CC 100mA ±25mA, when battery voltage <15V
Step 0 >10min Red (4 blinks):	0A / 0V				
Step 1 (constant current) Yellow:	CC 2.5A ±0.3A, when 3V <Vbat <4.2V	CC 2.5A ±0.3A, when 6V <Vbat <8.4V	CC 2.2A ±0.2A, when 9V <Vbat <12.6V	CC 1.6A ±0.15A, when 12V <Vbat <16.8V	CC 1.35A ±0.2A, when 15V <Vbat <21.0V
Step 2 (constant voltage) Flashing Yellow:	CV 4.2V ±0.05V, until I charge <100mA or max. 1h	CV 8.4V ±0.1V, until I charge <100mA or max. 1h	CV 12.6V ±0.1V, until I charge <100mA or max. 1h	CV 16.8V ±0.1V, until I charge <100mA or max. 1h	CV 21.0V ±0.1V, until I charge <100mA or max. 1h
Charge timer (step2, CV):	1h				
Safety timer (all steps) Red (5 blinks):	72h				
Step 3 (charge completed) Green:	0A				
Restart voltage:	4.1V	8.2V	12.3V	16.4V	20.5V
Formation charge (step 0):	Low current start-up of deeply discharged battery				
Wake-up of deeply discharged battery:	Yes, will apply voltage which deactivates deep discharge protection in battery pack				
Indication when “battery not connected”:	Flashing Green (1s/1s)				
NTC input, on request (std is 10kohm, B-value approx. 4000):	0–45 °C: Normal charge. Battery temperature <0 °C (too cold) or >45°C (too hot): No charge, wait until temp. is OK.				
Ripple:	<100mV p-p				
Efficiency (at 100% load) approx:	0.7	0.85			
Switch frequency approx.:	35kHz				
Leakage current from battery with mains switched off:	<300µA 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 terminated after 10min. 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 / **Storage:** -25 to +85°C				
Safety:	**Medical**: EN 60601-1 / **Home Health Care**: EN 60601-1-11 (VNOM≥110VAC) / **Battery Charger**: EN 60335-2-29				
Insulation class:	Class II				
Insulation voltage: primary–secondary:	4000VAC/5700VDC				
EMC standards:	EN 55014-1 and –2, EN 61000-6-3, EN 61000-6-1, EN 60601-1-2				
Input termina:	2-pins IEC 320 with C8 connector for exchangeable mains plug (EU, US, UK and AUS) or mains cord with C7 connector				
Output terminals:	Cord with/without plug. Exchangeable plugs available.				
IP-Grade:	IP41				
Rec. battery capacity:	2.5Ah (1C) to 10Ah (<100mA charge current as EoC detection) or up to 100Ah (utilizing the 1h CV timer as EoC detection)	2.2Ah (1C) to 10Ah (<100mA charge current as EoC detection) or up to 88Ah (utilizing the 1h CV timer as EoC detection)	1.6Ah (1C) to 10Ah (<100mA charge current as EoC detection) or up to 64Ah (utilizing the 1h CV timer as EoC detection)	1.35Ah (1C) to 10Ah (<100mA charge current as EoC detection) or up to 54Ah (utilizing the 1h CV timer as EoC detection)	1.15Ah (1C) to 10Ah (<100mA charge current as EoC detection) or up to 46Ah (utilizing the 1h CV timer as EoC detection)
Dimensions:	123.5×49.5×37mm				
Weight:	220g				

CELL-CON
Battery & Charger Solutions

www.cell-con.com
2 Enterprise Lane, Bedford, PA 15522 | P: 814.623.7057 | sales@cell-con.com



BATTERY CHARGER, 453546-L, LI-ION

SPECIFICATIONS	6 CELLS	7 CELLS	8 CELLS	10 CELLS	14 CELLS
Cell-Con part number:	453546-LF	453546-LG	453546-LH	453546-LJ	453546-LN
Input voltage:	90-264VAC				
Line frequency:	47-63Hz				
Max output power:	29W	29.4W	28.6W	29.4W	
Step 0 <10min Yellow:	CC 100mA ±25mA, when battery voltage <18V	CC 100mA ±25mA, when battery voltage <21V	CC 100mA ±25mA, when battery voltage <24V	CC 100mA ±25mA, when battery voltage <30V	CC 60mA ±15mA, when battery voltage <42V
Step 0 >10min Red (4 blinks):	0A / 0V				
Step 1 (constant current) Yellow:	CC 1.15A ±0.1A, when 18V <Vbat <25.2V	CC 1.0A ±0.1A, when 21V <Vbat <29.4V	CC 0.85A ±0.1A, when 24V <Vbat <33.6V	CC 0.7A ±0.07A, when 30V <Vbat <42V	CC 0.5A ±0.05A, when 42V <Vbat <58.8V
Step 2 (constant voltage) Flashing Yellow:	CV 25.2V ±0.2V, until I charge <100mA or max. 1h	CV 29.4V ±0.2V, until I charge <100mA or max. 1h	CV 33.6V ±0.2V, until I charge <100mA or max. 1h	CV 42V ±0.3V, until I charge <100mA or max. 1h	CV 58.8V ±0.5V, until I charge <75mA or max. 1h
Charge timer (step2, CV):	1h				
Safety timer (all steps) Red (5 blinks):	72h				
Step 3 (charge completed) Green:	0A				
Restart voltage:	24.6V	28.7V	32.8V	41V	57.4V
Formation charge (step 0):	Low current start-up of deeply discharged battery				
Wake-up of deeply discharged battery:	Yes, will apply voltage which deactivates deep discharge protection in battery pack				
Indication when “battery not connected”:	Flashing Green (1s/1s)				
NTC input, on request (std is 10kohm, B-value approx. 4000):	0–45 °C: Normal charge. Battery temperature <0 °C (too cold) or >45°C (too hot): No charge, wait until temp. is OK.				
Ripple:	<100mV p-p				
Efficiency (at 100% load) approx:	0.85				
Switch frequency approx.:	35kHz				
Leakage current from battery with mains switched off:	<300µA 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 terminated after 10min. 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 / **Storage:** -25 to +85°C				
Safety:	**Medical**: EN 60601-1 / **Home Health Care**: EN 60601-1-11 (VNOM≥110VAC) / **Battery Charger**: EN 60335-2-29				
Insulation class:	Class II				
Insulation voltage: primary–secondary:	4000VAC/5700VDC				
EMC standards:	EN 55014-1 and –2, EN 61000-6-3, EN 61000-6-1, EN 60601-1-2				
Input termina:	2-pins IEC 320 with C8 connector for exchangeable mains plug (EU, US, UK and AUS) or mains cord with C7 connector				
Output terminals:	Cord with/without plug. Exchangeable plugs available.				
IP-Grade:	IP41				
Rec. battery capacity:	1Ah (1C) to 10Ah (<100mA charge current as EoC detection) or up to 40Ah (utilizing the 1h CV timer as EoC detection)	0.85Ah (1C) to 10Ah(<100mA charge current as EoC detection) or up to 34Ah (utilizing the 1h CV timer as EoC detection)	0.7Ah (1C) to 10Ah (<100mA charge current as EoC detection) or up to 28Ah (utilizing the 1h CV timer as EoC detection)	0.5Ah (1C) to 7.5Ah (<75mA charge current as EoC detection) or up to 20Ah (utilizing the 1h CV timer as EoC detection)	0.3Ah (1C) to 5.6Ah (cut off current as EoC)
Dimensions:	123.5×49.5×37mm				
Weight:	220g				

CELL-CON
Battery & Charger Solutions

www.cell-con.com
2 Enterprise Lane, Bedford, PA 15522 | P: 814.623.7057 | sales@cell-con.com