

BATTERY CHARGER, 454340-N, NiMH

SPECIFICATIONS	4-8	6-12	10-20	15-30	20-40
Cell-Con part number:	454340-NB	454340-ND	454340-NE	454340-NK	454340-NM
Input voltage:	90-264VAC/47-63Hz				
Max output power:	80W				
Min. output voltage for -ΔV detection:	5.0V (min 4 cells x min 1.25V pr. cell)	7.8V (min 6 cells x min 1.3V pr. cell)	13.0V (min 10 cells x min 1.3V pr. cell)	19.5V (min 15 cells x min 1.3V pr. cell)	26V (min 20 cells x min 1.3V pr. cell)
Max. output voltage for -ΔV detection:	13.6V (max 8 cells x max 1.7V pr. cell)	20.4V (max 12 cells x max 1.7V pr. cell)	34V (max 20 cells x max 1.7V pr. cell)	51.0V (max 30 cells x max 1.7V pr. cell)	64V (max 40 cells x max 1.6V pr. cell)
-ΔV sensitivity mV/cell:	3mV/cell (approx.)				
SoftStart current:	200mA ±50mA @Vbat <5.0V	200mA ±50mA @Vbat <7.8V	150mA ±50mA @Vbat <13.0V	100mA ±50mA @Vbat <19.5V	100mA ±25mA @Vbat <26.0V
Fast charge current:	5.8A ±250mA	3.9A ±200mA	2.35A +0.10 /-0.2A	1.55A +0.10 /-0.2A	1.25A +0 /-0.2A
Top off charge:	730mA ±100mA	560mA ±100mA	370mA ±100mA	245mA ±50mA	210mA ±50mA
Trickle charge current:	200mA ±50mA		150mA ±50mA	100mA ±25mA	
Efficiency at 100% load:	0.89	0.9			
-ΔV mask start time:	3 min, no -ΔV detection in this period.				
SoftStart timer:	30 min				
Top-off timer:	1 hour				
Safety timer - The charger switch to trickle charge if no ΔV is detected before the safety timer has run out:	5 hours				
Switch frequency:	65kHz				
Temperature range:	-20 to +40°C (these values are only for the charger, not for the batteries).				
Charge control:	ΔV principle. Fast charging stops when the voltage has dropped 3mV/cell below its maximum recorded level.				
Voltage changes during charging:	ΔV detection is disabled if the voltage changes quickly. This to avoid false ΔV if an external load kicks in during charging.				
Leakage current from battery with mains switch off:	<1 mA at nominal battery voltage (<0.72 Ah/month)				
Safety:	**Medical** EN 60601-1 / **Home Health Care** EN 60601-1-11/ **Battery Charger** EN 60335-2-29 / **A/V and Comm. Tech**: IEC 62368-1				
EMC standards:	EN 55014-1 and –2, Emission EN 61000-6-3, Immunity EN 61000-6-1, EN 60601-1-2				
Insulation class:	Class II (Class I on request)				
LED-indication:	SoftStart / Fast charge: Yellow Top off charge: Flashing Yellow Trickle charge: Green Battery not connected: Flashing Green (1s/1s) Protection Protected against reversed polarity. Error indication: Red (2 blinks). Short circuit proof. Error indication: Red (3 blinks). Low battery voltage (SoftStart timer). Error indication: Red (4 blinks). No charge (or charge terminated) if connecting wrong battery pack with higher voltage. Indication: LED is OFF.				
NTC input, on request (std is 10kohm, B-value approx. 4000):	+dT/dt principle. Fast charging stops when the temperature increment is over 0.5°C/min. Battery temperature is too low (<0°C). Wait mode. Indication: Yellow with 1 red blink. Battery temperature is too high (>40°C). Wait mode. Indication: Yellow with 2 red blinks. High temperature (>60°C). Error Indication: Red (5 blinks). NTC missing or shorted. Error Indication: Red (6 blinks).				
Resetting:	A new charging cycle starts by reconnecting a battery at the output, or by disconnecting and connecting the mains voltage.				
Input terminal:	2-pins IEC 320 connector, C8 or mains cable (3pins IEC 320 connector, C6 on request).				
Output terminals:	DC connector, Battery clips, Push-on terminals or open ends.				
IP-grade:	IP4X (IP44 on request)				
Dimensions:	172.5×73×42mm				
Weight:	400g				
Other:	Possible options on request: Charger parameters programmable with “Configurator tool”. Constant current charge (no battery management). 0dV detection for EoC.				

CELL-CON
Battery & Charger Solutions

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