SPECIFICATIONS FOR 4340 NiMH

	4-8 cell	6-12 cell	10-20 cell	15-30 cell
Available versions	x			
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)
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)
-ΔV sensitivity mV/cell	3mV/cell (approx.)			
SoftStart current	200mA ± 50mA2@ Vbat < 5.0V	200mA ± 50mA2@ Vbat < 7.8V	150mA ± 50mA2@ Vbat < 13.0V	100mA ± 50mA2@ Vbat < 19.5V
Fast charge current	5.8A ± 250mA	3.9A ± 200mA	2.35A +0.10 /-0.2A	1.55A +0.10 /-0.2A
Top off charge	730mA ± 100mA	560mA ± 100mA	370mA ± 100mA	245mA ± 50mA
Trickle charge current	200mA ± 50mA	200mA ± 50mA	150mA ± 50mA	100mA ± 25mA
Efficiency at 100% load	0.89	0.9	0.9	0.9
-ΔV mask start timer	3 min, no -ΔV de-tection 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, approx.	65kHz			
Temperature range	-20 to +40ºC (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 0.5ºC/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 × 42 mm			
Weight	400g			
Other	Possible options on request: Charger parameters programmable with "Configurator tool". Constant current charge (no battery management). 0dV detection for EoC.			

SPECIFICATIONS FOR 4340 NiMH

	20-40 cell
Available versions	x
Input voltage	90 - 264VAC / 47 - 63Hz
Max. output power	80W
Min. output voltage for -ΔV detection	26.0V (min 20 cells x min 1.3V pr. cell)
Max. output voltage for -ΔV detection	64.0V (max 40 cells x max 1.60V pr. cell)
-ΔV sensitivity mV/cell	3mV/cell (approx.)
SoftStart current	100mA ± 25mA2@ Vbat < 26.0V
Fast charge current	1.25A +0 /-0.2A
Top off charge	210mA ± 50mA
Trickle charge current	100mA ± 25mA
Efficiency at 100% load	0.9
-ΔV mask start timer	3 min, no -ΔV de-tection 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, approx.	65kHz
Temperature range	-20 to +40ºC (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 × 42 mm
Weight	400g
Other	Possible options on request: Charger parameters programmable with "Configurator tool". Constant current charge (no battery management). 0dV detection for EoC.