

	3-6 cell	4-8 cell	5-10 cell	6-12 cell
Available versions	x			
Input voltage	90-265VAC, 50-60Hz			
No-load voltage	12.8V $\pm$ 0.7V	16.5V $\pm$ 1V	21V $\pm$ 1.2V	24.7V $\pm$ 1.5V
Max. output power	49W	58W	63W	65W
Min. output voltage for $-\Delta V$ detection	3.7V (min 3 cellsx min 1.25V pr. cell)	5.0V (min 4 cellsx min 1.25V pr. cell)	6.2V (min 5 cellsx min 1.25V pr. cell)	7.5V (min 6 cellsx min 1.25V pr. cell)
Max. output voltage for $-\Delta V$ detection	10.8V (max 6 cellsx max 1.8V pr. cell)	14.4V (max 8 cellsx max 1.8V pr. cell)	18V (max 10 cellsx max 1.8V pr. cell)	21.6V (max 12 cellsx max 1.8V pr. cell)
$-\Delta V$ sensitivity mV/cell	10mV/0.6% at 6 cells.	8mV / 0.5%	8mV / 0.5%	8mV / 0.5%
Fast charge current	4.5A $\pm$ 350mA	4.0A $\pm$ 300mA	3.5A $\pm$ 300mA	3.0A $\pm$ 200mA
Top off charge (duration 1h after $-dV$ detection)	630mA $\pm$ 100mA	560mA $\pm$ 80mA	480mA $\pm$ 70mA	420mA $\pm$ 60mA
Trickle charge current	150mA $\pm$ 50mA (continuously)	130mA $\pm$ 50mA (continuously)	100mA $\pm$ 50mA (continuously)	100mA $\pm$ 50mA (continuously)
Leakage current from battery with mains switch off	< 1mA			
Start timer	3 min, no $-\Delta V$ detection in this period			
Top-off timer	1hour			
Safety timer The charger switch to trickle charge if no $\Delta V$ is detected before the safety timer has run out.	2 h			
Switch frequency	40kHz.			
Temperature range	-20 to +40oC (these values are only for the charger, not for the batteries).			
Charge control	$-\Delta V$ principle. Fast charging stops when the voltage has dropped 0.5% below its maximum recorded level.			
Voltage changes during charging	$-\Delta V$ detection is disabled if the voltage changes quickly. This to avoid false $-\Delta V$ if an external load kicks in during charging.			
Battery analyzing	Max. 20 sec after mains connection / battery connection (yellow LED).			
Efficiency	Appr. 78%.			
Fuses	Fusible resistor at input. Polyswitch fuse at the output protects the unit against wrong polarity.			
Insulation class	Class II.			
Electrical safety	EN 60601-1, EN 60950-1, EN 60335-2-29.			
EMC-standards	EN 61000-6-3, EN 61000-6-1, EN 60601-1-2.			
Insulation voltage (prim-sec)	4000V AC / 5700V DC.			
Mains connection	2-pins IEC 320 mains connector.			
Output terminals	Secondary cable with exchangeable plugs.			
LED-indication	Yellow: Initialization/no batt. Orange: Fast charge Green with short yellow flashes: Top off charge: Green: Trickle charge Red-Green flashing (error mode): Battery voltage low			
Resetting	A new charging cycle starts by reconnecting a battery at the output, or by disconnecting and connecting the mains voltage.			
IP-grade	IP41			
Dimensions	135 x 80 x 44mm.			
Weight	390g.			
Other	Possible options on request: +dT/dt, 0dV and timer charge. The charger may be both software and hardware programmable.			

	10-20 cell	12-25 cell	15-30 cell
Available versions	x		
Input voltage	90-265VAC, 50-60Hz		
No-load voltage	41V ± 2V	51V ± 2V	55V ± 3V
Max. output power	65W	67W	65W
Min. output voltage for -ΔV detection	12.5V (min 10 cellsx min 1.25V pr. cell)	15V (min 12 cellsx min 1.25V pr. cell)	19V (min 15 cellsx min 1.25V pr. cell)
Max. output voltage for -ΔV detection	36V (max 20 cellsx max 1.8V pr. cell)	45V (max 25 cellsx max 1.8V pr. cell)	49.5V (max 30 cellsx max 1.65V pr. cell)
-ΔV sensitivity mV/cell	8mV / 0.5%		
Fast charge current	1.8A ± 150mA	1.5A ± 100mA	1.3A ± 100mA
Top off charge (duration 1h after -dV detection)	300mA ± 60mA	210mA ± 50mA (duration 1h after)	175mA ± 50mA (duration 1h after)
Trickle charge current	100mA ± 50mA (continuously)	50mA ± 30mA (continuously)	50mA ± 30mA (continuously)
Leakage current from battery with mains switch off	< 1mA		
Start timer	3 min, no -ΔV detection in this period		
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.	2 h		
Switch frequency	40kHz.		
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 0.5% 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.		
Battery analyzing	Max. 20 sec after mains connection / battery connection (yellow LED).		
Efficiency	Appr. 78%.		
Fuses	Fusible resistor at input. Polyswitch fuse at the output protects the unit against wrong polarity.		
Insulation class	Class II.		
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