

	6V Lead Acid	12V Lead Acid	24V Lead Acid	36V Lead Acid
Available versions	x			
Input voltage: / Line frequency	90-264Vac 47-63Hz			
Active power factor correction	Yes			
Max output power	60W	80W	80W	80W
Step 0 < 30min Yellow	CC 700mA, when batt voltage < 5.25V.	CC 700mA, when batt voltage < 10.5V.	CC 350mA, when batt voltage < 21V.	CC 200mA, when batt voltage < 31.5V.
Step 0 > 30min Red (4 blinks)	0A / 0V			
Step 1 (Constant Current) Yellow	CC 8.0A +0.15/-0.3A, when 5.25V <Vbat <7.35V.	CC 5.4A +0.15/-0.3A, when 10.5V <Vbat <14.7V.	CC 2.70A +0.1/-0.3A, when 21V < Vbat < 29.4V.	CC 1.8A +0.1/-0.3A, when 31.5V <Vbat < 44.1V.
Step 2A (Constant Voltage) Yellow	CV 7.35V ± 0.1V when 8.0A > Ich > 5.6A CV.	CV 14.7V ± 0.2V when 5.4A > Ich > 3.8A CV.	CV 29.4V ± 0.2V when 2.7A > Ich > 2.0A CV.	CV 44.1V ± 0.2V when 1.8A > Ich > 1.4A CV.
Step 2B (Constant Voltage) Flashing Yellow	7.35V ± 0.2V 5.6A > Ich > 1.3A or max. 4h.	14.7V ± 0.2V 3.8A > Ich > 1.0A or max. 4h.	CV 29.4V ± 0.2V 2.0A > Ich > 0.5A or max. 4h.	44.1V ± 0.2V 1.4A > Ich > 0.35A or max. 4h.
Enter float charge criteria: Current or timer	Ich < 1.3A or 4h in step 2B.	Ich < 1.0A or 4h in step 2B.	Ich < 0.5A or 4h in step 2B.	Ich < 0.35A or 4h in step 2B
Safety timer (all steps) Red (5 blinks)	72h			
Step 3 Float Charge voltage Green	6.85V	13.7V	27.4V	41.1V
Restart voltage	6.5V	13.0V	26.0V	39.0V
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.			
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)			
Temperature compensation of charge voltage	-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 230V 100% load) approx.	> 87%	> 90%	> 90%	> 90%
Switch frequency approx.	65kHz			
Leakage current from battery with mains switched off	< 1 mA at nominal battery voltage (< 0.72 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 after 30min.(see step 0). 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 +40oC. Transport and short time storage: -25 to +85oC			
Derating at 40oC approx.	6.0A	4.2A	2.2A	1.7A
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			
Insulation class	Class II. (Class I on request)			
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. (3pins IEC 320 connector, C6 on request) or mains cable			
Output terminals	DC connector, Battery clips, Push-on terminals or open ends.			
IP-Grade	IP4X (IP44 on request)			
Rec. battery capacity	40Ah (5x1ch) to 74Ah (< 1.3A as EoC) or up to 400Ah (utilizing the 4h CV timer as EoC)	27Ah (5x1ch) to 50Ah (< 1A as EoC) or up to 270Ah (utilizing the 4h CV timer as EoC)	3.5Ah (5x1ch) to 25Ah (< 0.5A as EoC) or up to 135Ah (utilizing the 4h CV timer as EoC)	9Ah (5x1ch) to 17.5Ah (< 0.35A as EoC) or up to 90Ah (utilizing the 4h CV timer as EoC)
Dimensions	172.5 × 73 × 42 mm			
Weight	460g			

	48V Lead Acid	8V Lead Acid
Available versions	x	
Input voltage: / Line frequency	90-264Vac 47-63Hz	
Active power factor correction	Yes	
Max output power	80W	79W
Step 0 < 30min Yellow	CC 200mA, when batt voltage < 42.0V.	CC 700mA, when batt voltage < 7.0V.
Step 0 > 30min Red (4 blinks)	0A / 0V	
Step 1 (Constant Current) Yellow	CC 1.35A +0.05/-0.2A, when 42V< Vbat< 58.8V.	CC 8.0A +0.15/-0.3A, when 7.0V <Vbat <9.8V.
Step 2A (Constant Voltage) Yellow	CV 58.8V ± 0.2V when 1.35A > Ich > 1.0A CV.	CV 9.8V ± 0.1V when 8.0A > Ich > 5.6A CV.
Step 2B (Constant Voltage) Flashing Yellow	58.8V ± 0.2V 1.0A > Ich > 0.27A or max. 4h.	9.8V ± 0.2V 5.6A > Ich > 1.3A or max. 4h.
Enter float charge criteria: Current or timer	Ich < 0.27A or 4h in step 2B	Ich < 1.3A or 4h in step 2B.
Safety timer (all steps) Red (5 blinks)	72h	
Step 3 Float Charge voltage Green	54.8.4V	9.13V
Restart voltage	52.0V	8.7V
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.	
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)	
Temperature compensation of charge voltage	-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 230V 100% load) approx.	> 91%	> 88%
Switch frequency approx.	65kHz	
Leakage current from battery with mains switched off	< 1 mA at nominal battery voltage (< 0.72 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 after 30min.(see step 0). 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 +40oC. Transport and short time storage: -25 to +85oC	
Derating at 40oC approx.	1.2A	6.0A
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	
Insulation class	Class II. (Class I on request)	
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. (3pins IEC 320 connector, C6 on request) or mains cable	
Output terminals	DC connector, Battery clips, Push-on terminals or open ends.	
IP-Grade	IP4X (IP44 on request)	
Rec. battery capacity	6.8Ah (5xIch) to 13.5Ah (< 0.27A as EoC) or up to 68Ah (utilizing the 4h CV timer as EoC)	40Ah (5xIch) to 74Ah (< 1.3A as EoC) or up to 400Ah (utilizing the 4h CV timer as EoC)
Dimensions	172.5 × 73 × 42 mm	
Weight	460g	
Other	CBC functionality: Configurable Battery Charger. Charging history: Log of 10 latest charge cycles.	