SPECIFICATIONS FOR 4040 LiFe	4-cell LiFePO4	6-cell LiFePO4	8-cell LiFePO4	10-cell LiFePO4
Available versions	x			
Input voltage: / Line frequency	90-264Vac 47-63Hz			
Active power factor correction:	Yes			
Max output power:	116.8W	116W	116.8W	
Step 0 < 30min Yellow	CC 500mA ± 50mA, when batt voltage < 10.5V.	CC 350mA ± 25mA, when batt voltage < 15.0V.	CC 350mA ± 25mA, when batt voltage < 21.0V.	CC 350mA ± 25mA, when batt voltage < 25.0V.
Step 0 > 30min Red (4 blinks)	0A / 0V			
Step 1 (Constant Current) Yellow	CC 8.0A ± 0.2A, when 10.5V < Vbat < 14.6V	CC 5.3A ± 0.2A, when 15.0V < Vbat < 21.9V	CC 4.0A ± 0.2A, when 21.0V < Vbat < 29.2V	CC 3.2A ± 0.2A, when 25.0V < Vbat < 36.5V
Step 2 (Constant Voltage) Flashing Yellow	CV 14.6V ± 0.2V < 5.5A until I charge < 450mA or max. 1h	CV 21.9V ± 0.2V < 3.7A until I charge < 350mA or max. 1h	CV 29.2V ± 0.2V < 2.8A until I charge < 350mA or max. 1h.	CV 36.5V ± 0.2V < 2.2A until I charge < 350mA or max. 1h
Charge timer (step2, CV)	1h			
Safety timer (all steps) Red (5 blinks)	72h			
Step 3 (Charge Completed) Green	14.0V ± 0.2V	21.0V ± 0.2V	28.0V ± 0.2V	35.0V ± 0.2V
Restart voltage	13.2V	19.8V	26.4V	33.0V
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 too high >60°C: Error Red (7 blinks) Battery temperature < 0 °C (too cold) or > 45°C (too hot): No charge, wait until temp. is OK.			
Ripple:	< 100mV p-p			
Efficiency (at 230V 100% load) approx.:	91%			
Switch frequency approx.:	45-75kHz			
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 terminated 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.:	5.5A	3.8A	3.1A	2.3A
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 or mains cable (3pins IEC 320 connector, C6 on request)			
Output terminals:	DC connector, Battery clips, Push-on terminals or open ends.			
IP-Grade:	41			
Rec. battery capacity:	4-320Ah	2.65-212Ah	2.0-160Ah	1.60-128Ah
Dimensions:	203.5 × 87 × 43.5 mm			
Weight:	590g			
Other:	CBC functionality: Configurable Battery Charger. Charging history: Log of 10 latest charge cycles. Automatic detection of diode in series with battery.			

SPECIFICATIONS FOR 4040 LiFe	11-cell LiFePO4	12-cell LiFePO4	13-cell LiFePO4	16-cell LiFePO4
Available versions		x		
Input voltage: / Line frequency	90-264Vac 47-63Hz			
Active power factor correction:	Yes			
Max output power:	116.4W	116.5W	119W	117.6W
Step 0 < 30min Yellow	CC 200mA ± 25mA, when batt voltage < 27.5V.	CC 200mA ± 25mA, when batt voltage < 30.0V.	CC 200mA ± 25mA, when batt voltage < 32.5V.	CC 200mA ± 25mA, when batt voltage < 41.6V.
Step 0 > 30min Red (4 blinks)	0A / 0V			
Step 1 (Constant Current) Yellow	CC 2.9A ± 0.2A, when 27.5V < Vbat < 40.15V	CC 2.65A ± 0.2A, when 31.2V < Vbat < 43.8V	CC 2.5A ± 0.2A, when 32.5V < Vbat < 47.45V	CC 2.0A ± 0.2A, when 41.6V < Vbat < 58.4V
Step 2 (Constant Voltage) Flashing Yellow	CV 40.15V± 0.3V < 2.0A until I charge < 200mA or max. 1h.	CV 43.8V ± 0.3V < 1.8A until I charge < 200mA or max. 1h.	CV 47.45V ± 0.3V < 1.7A until I charge < 200mA or max. 1h	CV 58.4V ± 0.3V < 1.4A until I charge < 200mA or max. 1h.
Charge timer (step2, CV)	1h			
Safety timer (all steps) Red (5 blinks)	72h			
Step 3 (Charge Completed) Green	38.5V ± 0.2V	42.0V ± 0.3V	45.5V ± 0.3V	56.0V ± 0.3V
Restart voltage	36.3V	39.6V	42.9V	52.8V
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 too high >60°C: Error Red (7 blinks) Battery temperature < 0 °C (too cold) or > 45°C (too hot): No charge, wait until temp. is OK.			
Ripple:	< 100mV p-p			
Efficiency (at 230V 100% load) approx.:	91%			
Switch frequency approx.:	45-75kHz			
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 terminated 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.:	2.1A	1.9A		1.5A
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 or mains cable (3pins IEC 320 connector, C6 on request)			
Output terminals:	DC connector, Battery clips, Push-on terminals or open ends.			
IP-Grade:	41			
Rec. battery capacity:	1.45-116Ah	1.33-106Ah	1.25-100Ah	1-80Ah
Dimensions:	203.5 × 87 × 43.5 mm			
Weight:	590g			
Other:	CBC functionality: Configurable Battery Charger. Charging history: Log of 10 latest charge cycles. Automatic detection of diode in series with battery.			