SPECIFICATIONS FOR 4040 LiFe	4-cell LiFePO4	6-cell LiFePO4	8-cell LiFePO4	10-cell LiFePO4		
Available versions			х			
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 \pm 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.:	0.91					
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. Char	ging history: Log of 10 latest charge cycles. Automatic	detection of diode in series with battery.			

SPECIE CATTONS FOR 4604 1.56 11-col 1 Life POP4 12-col 1 Life POP4 12-col 1 Life POP4 13-col 1 Life POP4 Lif					30.4.2025, mascot.ng				
Page 1 Page 1 Figure (Figures) 10 - 24 Page 1 Page 2 Page 1 Page 1 Page 2 P		11-cell LiFePO4	12-cell LiFePO4	13-cell LiFePO4	16-cell LiFePO4				
Address Proceedings Process				Х					
Mass couptripopeer		90-264Vac 47-63Hz	90-264Vac 47-63Hz						
Step 0 < 30mm Yellow	Active power factor correction:		Yes						
Step 10 > 30min Red (4 blints)									
Sep 1 (Constant Current) Yellow Cit 2.98 ± 0.24, when 27.97 \ Yellar < 40.15 \ Yellow Cit 2.68 \ \ \text{ 0.24}, when 27.97 \ Yellar < 40.15 \ Yellar < 43.89 \ Yellow Cit 2.68 \ \ \text{ 0.24}, when 27.97 \ Yellar < 47.89 \ Yellar < 47.89 \ Yellow Cit 2.68 \ \ \text{ 0.24}, when 27.97 \ Yellar < 47.89	<u>'</u>	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 2 (Constant Voltage) Flashing Yellow CV 41, 8V ± 0.3V × 1.84 until 1 charge < 200m A or max. 1h. CV 41, 8V ± 0.3V × 1.84 until 1 charge < 200m A or max. 1h.	Step 0 > 30min Red (4 blinks)	0A / 0V							
Danger timer (atteq.2,CV) 1h		'	· ·	<u> </u>	· · · · · · · · · · · · · · · · · · ·				
Sitesty timer (all steps) Red (5 blinks) 72h 32.0V 42.0V + 0.3V 45.5V + 0.3V 56.0V	Step 2 (Constant Voltage) Flashing Yellow		■ = = = = = = = = = = = = = = = = = = =	•					
Step 3 (Charge Completed) Green 36.5V ± 0.2V 42.0V ± 0.3V 35.6V + 0.3V 45.5V ± 0.3V 56.0V ± 0.3V	Charge timer (step2, CV)		1h						
Restart voltage 36.3V 39.6V 42.9V 52.8V	Safety timer (all steps) Red (5 blinks)	72h							
Formation Charge (Step 0) Wake-up of deeply discharged battery. Wake-up of deeply discharged battery back. Wake-up of deeply discharged by discharged of dischar	Step 3 (Charge Completed) Green	38.5V ± 0.2V	42.0V ± 0.3V	45.5V ± 0.3V	56.0V ± 0.3V				
Wake-up of deeply discharged battery. Yes, will apply voltage which deactivates deep discharge protection in battery pack.	Restart voltage		39.6V	42.9V	52.8V				
Indication when "Battery not connected" NTC input, on request (sid is 10kohn, B-value approx. 4000) Rippic: 4:100mV p-p Efficiency (at 230V 100% load) approx.: 45-75kHz Leakage current from battery with mains switched off: Protection: Protection: Protection: Red (4 binks) Safety time. Error indication: Red (5 blinks) No charge (or charge terminated) if connecting wrong battery pack with higher voltage. Indication: LED is 0FF. Imparture range: Derating at 40c0 approx.: Addica EN 660011-11 / Home Health care EN 60001-1-11 / Battery Charger EN 60335-2-29. AV and Comm. tech: IEC 62368-1 Insulation voltage: Primary – secondary: EMC standards: EN 550141 and ~2, Emission EN 61000-6-3, Immunity EN 61000-6-1, EN 666011-12. Input terminal: Opc connector, Battery clips, Push-on terminals or open ends. IP Grade: 41 Rec. battery capacity: 1.45-116Ah 1.33-106Ah 1.25-100Ah 1.25-100Ah 1.50 Load (3) Charge, wait until temp. is DK. volue of "C (too cold) or > 45°C (too hot): No charge, wait until temp. is DK. volue of "C (too cold) or > 45°C (too hot): No charge, wait until temp. is DK. volue of "C (too cold) or > 45°C (too hot): No charge, wait until temp. is DK. volue of "C (too cold) or > 45°C (too hot): No charge, wait until temp. is DK. volue of "C (too cold) or > 45°C (too hot): No charge, wait until temp. is DK. volue of "C (too cold) or > 45°C (too hot): No charge, wait until temp. is DK. volue of "C (too cold) or > 45°C (too hot): No charge, wait until temp. is DK. volue of "C (too cold) or > 45°C (too hot): No charge, wait until temp. is DK. volue of "C (too cold) or > 45°C (too hot): No charge, wait until temp. is DK. volue of "C (too cold) or > 45°C (too hot): No charge, wait until temp. is DK. volue of "C (too cold) or > 45°C (too hot): No charge, wait until temp. is DK. volue of "C (too cold) or > 45°C (too hot): No charge, wait until temp. is DK. volue of "C (too cold) or > 45°C (too hot): No charge, wait until temp. is DK. volue of "C (too cold) or > 45°C (too hot): N	Formation Charge (Step 0)	Low current start-up of deeply discharged battery.							
NTC input, on request (std is 10kohm, B-value approx. 4000) Finding Company Com	Wake-up of deeply discharged battery.	Yes, will apply voltage which deactivates deep discharge protection in battery pack.							
Value approx. 4000) Ripple: C100mV p-p C100mV p-p	Indication when "Battery not connected"	Flashing Green (1s/1s)							
Efficiency (at 230V 100% load) approx.: Switch frequency approx.: Leakage current from battery with mains switched off: 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. Derating at 40oC approx.: 2.1A 1.9A 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 voltage: Primary – secondary: 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 1.25-100Ah 1.80-100-100-100-100-100-100-100-100-100-1		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.							
Switch frequency approx.: 45-75kHz Leakage current from battery with mains switched off: 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 Insulation class: Medical EN 60601-1 / Home Health care EN 60601-1-17/ Battery Charger EN 60335-2-29. A/V and Comm. tech: IEC 62368-1 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 Insulation See (3 blinks) Nor charge (a blinks) Charging of wrong lower voltage battery pack will be terminated after 30min. (See step 0). Indication: Red (3 blinks) Charging of wrong lower voltage battery pack will be terminated after 30min. (See step 0). Indication: Red (3 blinks) Charging of wrong lower voltage battery pack will be terminated after 30min. (See step 0). Indication: Red (5 blinks) Nor charge (a blinks) Nor charge (contage terminated) if connecting wrong battery pack with higher voltage. Indication: LED is OFF. Temperature range: 0perating: -25 to +40oC. Transport and short time storage: -25 to +85oC 1.5A 1.5A 1.5A 1.5A 1.5A 1.5A 1.5A 1.5A 1.5A 1.5D 1.	Ripple:	< 100mV p-p							
Leakage current from battery with mains switched off: Protection: 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 +400C. Transport and short time storage: 25 to +85oC Derating at 40oC approx.: 2.1A	Efficiency (at 230V 100% load) approx.:	0.91							
switched off: 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 +400c. Transport and short time storase: -25 to +850c Derating at 400c approx.: 2.1A	Switch frequency approx.:	45-75kHz							
Red (4 blinks) Safety timer. Error Indication: Red (5 blinks) No charge (or charge terminated) if connecting wrop battery pack with higher voltage. Indication: LED is OFF Therefore the prediction of the predic		< 1 mA at nominal battery voltage (< 0.72 Ah/month)							
Derating at 40oC approx.: 2.1A 1.9A 1.5A Safety: Medical EN 60601-1 / Home Health care EN 60601-1-1/ 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 Verification of the company of the compan	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.							
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	Temperature range:	Operating: -25 to +40oC. Transport and short time storage: -25 to +85oC							
Insulation class : Class I. (Class I on request)	Derating at 40oC approx.:	2.1A	1.9A		1.5A				
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	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. 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	Insulation class :	Class II. (Class I on request)							
Input terminal: 2-pins IEC 320 connector, C8 or mains cable (3pins IEC 320 connector, C6 on request)	Insulation voltage: Primary – secondary:	4000VAC / 5700VDC							
Output terminals:DC connector, Battery clips, Push-on terminals or open ends.IP-Grade:41Rec. battery capacity:1.45-116Ah1.33-106Ah1.25-100Ah1-80AhDimensions:203.5 × 87 × 43.5 mmWeight:590g	EMC standards:	EN 55014-1 and −2, Emission EN 61000-6-3, Immunity EN 61000-6-1, EN 60601-1-2.							
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 ***	Input terminal:	2-pins IEC 320 connector, C8 or mains cable (3pins IEC 320 connector, C6 on request)							
Rec. battery capacity: 1.45-116Ah 1.33-106Ah 1.25-100Ah 1-80Ah Dimensions: 203.5 × 87 × 43.5 mm *** *** Weight: 590g *** ***	Output terminals:	DC connector, Battery clips, Push-on terminals or oper	a ends.						
Dimensions: 203.5 × 87 × 43.5 mm Weight: 590g	IP-Grade:	41							
Weight: 590g	Rec. battery capacity:	1.45-116Ah	1.33-106Ah	1.25-100Ah	1-80Ah				
	Dimensions:	203.5 × 87 × 43.5 mm							
Other: CBC functionality: Configurable Battery Charger. Charging history: Log of 10 latest charge cycles. Automatic detection of diode in series with battery.	Weight:	590g							
	Other:	CBC functionality: Configurable Battery Charger. Charg	ging history: Log of 10 latest charge cycles. Automatic	detection of diode in series with battery.					