SPECIFICATIONS FOR 4041 LiFe

	1c LiFePO4	2c LiFePO4	3c LiFePO4	4c LiFePO4
Available versions				X
Input voltage: / Line frequency	90 - 264VAC / 47 - 63Hz			
Max output power	18.25W	36.5W	42W	42W
Step 0 < 30min Yellow	CC 556mA when batt voltage < 2.625V.	CC 556mA when batt voltage < 5.25V.	CC 426mA when batt voltage < 7.88V.	CC 320mA when batt voltage < 10.5V.
Step 0 > 30min Red (4 blinks)	0A / 0V			
Step 1 (Constant Current) Yellow	CC 5A ± 0.36A, when 2.625V < Vbat < 3.65V.	CC 5A ± 0.36A, when 5.25V < Vbat < 7,3V.	CC 3.84A ± 0.24A, when 7.88V < Vbat < 10,95V.	CC 2.88A ± 0.2A, when 10.5V < Vbat < 14.6V.
Step 2 (Constant Voltage) Flashing Yellow	CV 3.65V ± 0.05V < 3.75A , until I charge < 560mA or max. 1h.	CV 7,3V ± 0.1V < 3.75A , until I charge < 560mA or max. 1h.	CV 10,95V ± 0.1V < 2.88A , until I charge < 400mA or max. 1h.	CV 14.6V ± 0.1 < 2.16A , until I charge < 300mA or max. 1h.
Charge timer (step2, CV)	1h			
Safety timer (all steps) Red (5 blinks)	72h			
Step 3 (Maintenance voltage) Green	3.5V	7.0V	10.5V	14.0V
Restart voltage	3.3V	6.6V	9.9V	13.2V
Efficiency (at 100% load) approx.	0.85			
No load consumption	< 0,5 W			
Switch frequency approx.	65kHz			
Ripple	< 100mV p-p			
Formation Charge (Step 0)	Low current start-up of deeply discharged battery.			
Indication when “Battery not connected”	Flashing Green (1s/1s)			
Leakage current from battery with mains switched off	<0.3 mA			
NTC input, on request (std is 10kohm, B-value approx. 4000)	0 – 45 °C: Normal charge. Battery temperature < 0 °C (too cold) or > 45°C (too hot): No charge, wait until temp. is OK.			
Protection	Error indications: LED off: Battery voltage too high. Check battery voltage 2 red blinks: Battery is connected to charger with reverse polarity. 3 red blinks: Charger output is shorted. Check cable/connectors. 4 red blinks: Battery voltage is low after start timer has run out, 10min. 5 red blinks: Timeout safety timer. 6 red blinks: Defect battery. Abnormal voltage changes 7 red blinks: Temperature too high, disconnect mains to reset 8 red blinks: Thermistor open or short (if mandatory)			
Temperature range	Operating: -25 to +40oC. Transport and short time storage: -25 to +85oC			
Safety	Medical IEC 60601-1 / Home Health care IEC 60601-1-11, Household IEC60335-1 / Battery Charger IEC 60335-2-29, A/V and Comm. tech: IEC 62368-1,			
Insulation class	Class II			
Insulation voltage: Primary – secondary	4000VAC / 5700VDC			
EMC standards	Household IEC 55014-1 and–2, Emission IEC 61000-6-3, Immunity IEC 61000-6-1, Medical IEC 60601-1-2			
Input terminal	2-pins IEC 320 connector, C8.			
Output terminals	DC connector, Battery clips, Push-on terminals or open ends.			
IP-Grade	IP41 (IP67 on Request)			
Rec. battery capacity	2.5Ah (2C) to 56Ah (<560mA charge current as EoC detection) or up to 200Ah (utilizing the 1h CV timer as EoC detection)	2.5Ah (2C) to 56Ah (<560mA charge current as EoC detection) or up to 200Ah (utilizing the 1h CV timer as EoC detection)	1.92Ah (2C) to 40Ah (<400mA charge current as EoC detection) or up to 153Ah (utilizing the 1h CV timer as EoC detection)	1.44Ah (2C) to 30Ah (<300mA charge current as EoC detection) or up to 115Ah (utilizing the 1h CV timer as EoC detection)
Dimensions	131× 57,5 × 36 mm			
Weight	230g			
	CBC functionality: Configurable Battery Charger. Charging history: Log of latest charge cycles.			

Other	

SPECIFICATIONS FOR 4041 LiFe

	5c LiFePO4	6c LiFePO4	7c LiFePO4	8c LiFePO4
Available versions				X
Input voltage: / Line frequency	90 - 264VAC / 47 - 63Hz			
Max output power	42W			
Step 0 < 30min Yellow	CC 256mA when batt voltage < 13,13V.	CC 213mA when batt voltage < 15.75V.	CC 183mA when batt voltage < 18.4V.	CC 160mA when batt voltage < 21V.
Step 0 > 30min Red (4 blinks)	0A / 0V			
Step 1 (Constant Current) Yellow	CC 2.3A ± 0.18A, when 13.13V < Vbat < 18.25V.	CC 1.92A ± 0.17A, when 15.75V < Vbat < 21.9V.	CC 1.64A ± 0.17A, when 18.4V < Vbat < 25.6V.	CC 1.44A ± 0.17A, when 21V < Vbat < 29.2V.
Step 2 (Constant Voltage) Flashing Yellow	CV 18.25V ± 0.1V < 1.73A, until I charge < 300mA or max. 1h.	CV 21.9V ± 0.2V < 1.44A, until I charge < 200mA or max. 1h.	CV 25.6V ± 0.2V < 1.23A, until I charge < 150mA or max. 1h.	CV 29.2V ± 0.2V < 1.08A, until I charge < 150mA or max. 1h.
Charge timer (step2, CV)	1h			
Safety timer (all steps) Red (5 blinks)	72h			
Step 3 (Maintenance voltage) Green	17.5V	21.0V	24.5V	28.0V
Restart voltage	16.5V	19.8V	23.1V	26.4V
Efficiency (at 100% load) approx.	0.85			
No load consumption	< 0,5 W			
Switch frequency approx.	65kHz			
Ripple	< 100mV p-p			
Formation Charge (Step 0)	Low current start-up of deeply discharged battery.			
Indication when “Battery not connected”	Flashing Green (1s/1s)			
Leakage current from battery with mains switched off	<0.3 mA			
NTC input, on request (std is 10kohm, B-value approx. 4000)	0 – 45 °C: Normal charge. Battery temperature < 0 °C (too cold) or > 45°C (too hot): No charge, wait until temp. is OK.			
Protection	Error indications: LED off: Battery voltage too high. Check battery voltage 2 red blinks: Battery is connected to charger with reverse polarity. 3 red blinks: Charger output is shorted. Check cable/connectors. 4 red blinks: Battery voltage is low after start timer has run out, 10min. 5 red blinks: Timeout safety timer. 6 red blinks: Defect battery. Abnormal voltage changes 7 red blinks: Temperature too high, disconnect mains to reset 8 red blinks: Thermistor open or short (if mandatory)			
Temperature range	Operating: -25 to +40oC. Transport and short time storage: -25 to +85oC			
Safety	Medical IEC 60601-1 / Home Health care IEC 60601-1-11, Household IEC60335-1 / Battery Charger IEC 60335-2-29, A/V and Comm. tech: IEC 62368-1,			
Insulation class	Class II			
Insulation voltage: Primary – secondary	4000VAC / 5700VDC			
EMC standards	Household IEC 55014-1 and–2, Emission IEC 61000-6-3, Immunity IEC 61000-6-1, Medical IEC 60601-1-2			
Input terminal	2-pins IEC 320 connector, C8.			
Output terminals	DC connector, Battery clips, Push-on terminals or open ends.			
IP-Grade	IP41 (IP67 on Request)			
Rec. battery capacity	1.15Ah (2C) to 30Ah (<300mA charge current as EoC detection) or up to 92Ah (utilizing the 1h CV timer as EoC detection)	0.96Ah (2C) to 20Ah (<200mA charge current as EoC detection) or up to 77Ah (utilizing the 1h CV timer as EoC detection)	0.82Ah (2C) to 15Ah (<150mA charge current as EoC detection) or up to 66Ah (utilizing the 1h CV timer as EoC detection)	0.72Ah (2C) to 15Ah (<150mA charge current as EoC detection) or up to 58Ah (utilizing the 1h CV timer as EoC detection)
Dimensions	131× 57,5 × 36 mm			
Weight	230g			
	CBC functionality: Configurable Battery Charger. Charging history: Log of latest charge cycles.			

Other	

SPECIFICATIONS FOR 4041 LiFe

	9c LiFePO4	10c LiFePO4	11c LiFePO4	12c LiFePO4
Available versions				
Input voltage: / Line frequency	90 - 264VAC / 47 - 63Hz			
Max output power	42W			
Step 0 < 30min Yellow	CC 142mA when batt voltage < 23.63V.	CC 128mA when batt voltage < 26.25V.	CC 116mA when batt voltage < 28.88V.	CC 107mA when batt voltage < 31.5V.
Step 0 > 30min Red (4 blinks)	0A / 0V			
Step 1 (Constant Current) Yellow	CC 1.28A ± 0.15A, when 23.63V < Vbat < 32.85V.	CC 1.15A ± 0.14A, when 26.25V < Vbat < 36.5V.	CC 1.05A ± 0.13A, when 28.88V < Vbat < 40.15V.	CC 0.96A ± 0.12A, when 31.5V < Vbat < 43.8V.
Step 2 (Constant Voltage) Flashing Yellow	CV 32.85V ± 0.2V < 0.99A, until I charge < 150mA or max. 1h.	CV 36.5V ± 0.2V < 0.86A, until I charge < 100mA or max. 1h.	CV 40.15V ± 0.3V < 0.78A, until I charge < 100mA or max. 1h.	CV 43.8V ± 0.3V < 0.72A, until I charge < 100mA or max. 1h.
Charge timer (step2, CV)	1h			
Safety timer (all steps) Red (5 blinks)	72h			
Step 3 (Maintenance voltage) Green	31.5V	35.0V	38.5V	42.0V
Restart voltage	29.7V	33V	36.3V	39.6V
Efficiency (at 100% load) approx.	0.85			
No load consumption	< 0,5 W			
Switch frequency approx.	65kHz			
Ripple	< 100mV p-p			
Formation Charge (Step 0)	Low current start-up of deeply discharged battery.			
Indication when “Battery not connected”	Flashing Green (1s/1s)			
Leakage current from battery with mains switched off	<0.3 mA			
NTC input, on request (std is 10kohm, B-value approx. 4000)	0 – 45 °C: Normal charge. Battery temperature < 0 °C (too cold) or > 45°C (too hot): No charge, wait until temp. is OK.			
Protection	Error indications: LED off: Battery voltage too high. Check battery voltage 2 red blinks: Battery is connected to charger with reverse polarity. 3 red blinks: Charger output is shorted. Check cable/connectors. 4 red blinks: Battery voltage is low after start timer has run out, 10min. 5 red blinks: Timeout safety timer. 6 red blinks: Defect battery. Abnormal voltage changes 7 red blinks: Temperature too high, disconnect mains to reset 8 red blinks: Thermistor open or short (if mandatory)			
Temperature range	Operating: -25 to +40oC. Transport and short time storage: -25 to +85oC			
Safety	Medical IEC 60601-1 / Home Health care IEC 60601-1-11, Household IEC60335-1 / Battery Charger IEC 60335-2-29, A/V and Comm. tech: IEC 62368-1,			
Insulation class	Class II			
Insulation voltage: Primary – secondary	4000VAC / 5700VDC			
EMC standards	Household IEC 55014-1 and–2, Emission IEC 61000-6-3, Immunity IEC 61000-6-1, Medical IEC 60601-1-2			
Input terminal	2-pins IEC 320 connector, C8.			
Output terminals	DC connector, Battery clips, Push-on terminals or open ends.			
IP-Grade	IP41 (IP67 on Request)			
Rec. battery capacity	0.64Ah (2C) to 15Ah (<150mA charge current as EoC detection) or up to 51Ah (utilizing the 1h CV timer as EoC detection)	0.58Ah (2C) to 10Ah (<100mA charge current as EoC detection) or up to 46Ah (utilizing the 1h CV timer as EoC detection)	0.52Ah (2C) to 10Ah (<100mA charge current as EoC detection) or up to 42Ah (utilizing the 1h CV timer as EoC detection)	0.48Ah (2C) to 10Ah (<100mA charge current as EoC detection) or up to 38Ah (utilizing the 1h CV timer as EoC detection)
Dimensions	131× 57,5 × 36 mm			
Weight	230g			
	CBC functionality: Configurable Battery Charger. Charging history: Log of latest charge cycles.			

Other	

SPECIFICATIONS FOR 4041 LiFe

	13c LiFePO4	14c LiFePO4	15c LiFePO4	16c LiFePO4
Available versions				
Input voltage: / Line frequency	90 - 264VAC / 47 - 63Hz			
Max output power	42W			
Step 0 < 30min Yellow	CC 98mA when batt voltage < 34.13V.	CC 91mA when batt voltage < 36.75V.	CC 85mA when batt voltage < 39.38V.	CC 80mA when batt voltage < 42V.
Step 0 > 30min Red (4 blinks)	0A / 0V			
Step 1 (Constant Current) Yellow	CC 0.89A ± 0.11A, when 34.13V < Vbat < 47.45V.	CC 0.82A ± 0.1A, when 36.75V < Vbat < 51.1V.	CC 0.77A ± 0.1A, when 39.38V < Vbat < 54.75V.	CC 0.72A ± 0.09A, when 42V < Vbat < 58.4V.
Step 2 (Constant Voltage) Flashing Yellow	CV 47.45V ± 0.3V < 0.66A, until I charge < 100mA or max. 1h.	CV 51.1V ± 0.3V < 0.62A, until I charge < 100mA or max. 1h.	CV 54.75V ± 0.3V < 0.58A, until I charge < 100mA or max. 1h.	CV 58.4V ± 0.3V < 0.54A, until I charge < 80mA or max. 1h.
Charge timer (step2, CV)	1h			
Safety timer (all steps) Red (5 blinks)	72h			
Step 3 (Maintenance voltage) Green	45.5V	49.0V	52.5V	56.0V
Restart voltage	42.9V	46.2V	49.5V	52.8V
Efficiency (at 100% load) approx.	0.85			
No load consumption	< 0,5 W			
Switch frequency approx.	65kHz			
Ripple	< 100mV p-p			
Formation Charge (Step 0)	Low current start-up of deeply discharged battery.			
Indication when “Battery not connected”	Flashing Green (1s/1s)			
Leakage current from battery with mains switched off	<0.3 mA			
NTC input, on request (std is 10kohm, B-value approx. 4000)	0 – 45 °C: Normal charge. Battery temperature < 0 °C (too cold) or > 45°C (too hot): No charge, wait until temp. is OK.			
Protection	Error indications: LED off: Battery voltage too high. Check battery voltage 2 red blinks: Battery is connected to charger with reverse polarity. 3 red blinks: Charger output is shorted. Check cable/connectors. 4 red blinks: Battery voltage is low after start timer has run out, 10min. 5 red blinks: Timeout safety timer. 6 red blinks: Defect battery. Abnormal voltage changes 7 red blinks: Temperature too high, disconnect mains to reset 8 red blinks: Thermistor open or short (if mandatory)			
Temperature range	Operating: -25 to +40oC. Transport and short time storage: -25 to +85oC			
Safety	Medical IEC 60601-1 / Home Health care IEC 60601-1-11, Household IEC60335-1 / Battery Charger IEC 60335-2-29, A/V and Comm. tech: IEC 62368-1,			
Insulation class	Class II			
Insulation voltage: Primary – secondary	4000VAC / 5700VDC			
EMC standards	Household IEC 55014-1 and–2, Emission IEC 61000-6-3, Immunity IEC 61000-6-1, Medical IEC 60601-1-2			
Input terminal	2-pins IEC 320 connector, C8.			
Output terminals	DC connector, Battery clips, Push-on terminals or open ends.			
IP-Grade	IP41 (IP67 on Request)			
Rec. battery capacity	0.44Ah (2C) to 10Ah (<100mA charge current as EoC detection) or up to 35Ah (utilizing the 1h CV timer as EoC detection)	0.41Ah (2C) to 10Ah (<100mA charge current as EoC detection) or up to 33Ah (utilizing the 1h CV timer as EoC detection)	0.38Ah (2C) to 10Ah (<100mA charge current as EoC detection) or up to 31Ah (utilizing the 1h CV timer as EoC detection)	0.36Ah (2C) to 8Ah (<80mA charge current as EoC detection) or up to 29Ah (utilizing the 1h CV timer as EoC detection)
Dimensions	131× 57,5 × 36 mm			
Weight	230g			
	CBC functionality: Configurable Battery Charger. Charging history: Log of latest charge cycles.			

Other	