

Lithium Power Basic

12 VDC | 50/100/150 Ah
24 VDC | 100 Ah

Our Lithium batteries are a great alternative to conventional batteries in all areas. By utilizing advanced chemistry and system design, WhisperPower provides enormous energy reserves. User can relax and enjoy freedom where ever they go. Lithium Power Basic battery energy management ensures lowest possible energy losses and superfast charging in combination with the safe LiFePO4 chemistry.



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Features

- Suitable for lead acid battery replacement
- Saves up to 70 % in space and weight
- Three times the lifespan of traditional batteries
- High cycle efficiency
- Fast charging up to one hour
- High discharge rate up to 1C
- Integrated Battery Management System (BMS)
- Suitable for parallel operation up to 8 pcs
- Not suitable for serial operation
- Waterproof electronics cabinet
- Best buy price vs. cycle life
- Extremely safe LiFePO4 chemistry

Optional Accessories

- Battery Monitoring (WBM)
- DC Disconnect by Latch Relay (external discharge protection)
- Battery charging by Supreme/ Supreme Pro chargers
- Battery charging by DC alternator with smart regulator (ACR)
- Solar charging by WP solar + smart MPP regulator
- Various DC distribution devices including DC fuses



Lithium Power Basic Series

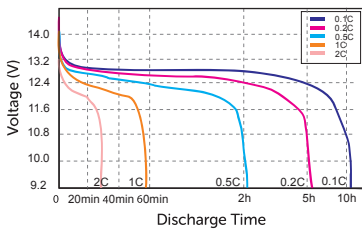


12 VDC | 50 Ah 12 VDC | 100 Ah 12 VDC | 150 Ah 24 VDC | 100 Ah

Article Number	40291201	40291202	40291203	40291205
TECHNICAL SPECIFICATIONS				
Dimensions (W x D x H) in mm	257 x 132 x 200	330 x 173 x 212	483 x 170 x 238	522 x 240 x 224
Weight	8.12 kg	12 kg	16.5 kg	29.6 kg
Terminal connection	M6	M8	M8	M8
CHARGE / DISCHARGE PARAMETERS				
Nominal voltage (VDC)	12.8 VDC	12.8 VDC	12.8 VDC	25.6 VDC
Charge cut off voltage	15.6 VDC	15.6 VDC	15.6 VDC	31.2 VDC
End charge voltage	14.6 VDC ± 0.2 VDC	14.6 VDC ± 0.2 VDC	14.6 VDC ± 0.2 VDC	29.2 VDC ± 0.2 VDC
Maximum charge current 1/C	50 A	100 A	150 A	100 A
Maximum float charge current	25 A	50 A	75 A	50 A
Minimum discharge cutt off voltage	8 VDC	8 VDC	8 VDC	16 VDC
Nominal discharge cutt off voltage	10 VDC	10 VDC	10 VDC	20 VDC
Maximum Discharge current 1/C	50 A	100 A	150 A	100 A
Pulsed discharge current (10 sec.)	60 A	120 A	250 A	100 A
Usable battery capacity at 20°C	50 Ah 640 Wh	100 Ah 1280 Wh	150 Ah 1920 Wh	100 Ah 2560 Wh
Internal Resistance	<20 mΩ	<20 mΩ	<20 mΩ	<20 mΩ
Cycle Life at 1c 100 % DOD	>2000 cycles	>2000 cycles	>2000 cycles	>2000 cycles
Months Self Discharge	<3 %	<3 %	<2 %	<3 %
Temperature range (charging)	0°C up to 45°C	0°C up to 45°C	0°C up to 45°C	0°C up to 45°C
Temperature range (discharging)	-20°C up to 60°C	-20°C up to 60°C	-20°C up to 60°C	-20°C up to 60°C
Temperature range (storage)	0°C up to 40°C	0°C up to 40°C	0°C up to 40°C	0°C up to 40°C
Water dust resistance	IP56	IP56	IP56	IP56
Cell configuration	4S16P	4S32P	4S20P	8S32P
Cell data	26650	26650	32700	26650
Cell chemist	LiFePO4, lithium Iron Phosphate battery	LiFePO4, Lithium Iron Phosphate battery	LiFePO4, Lithium Iron Phosphate battery	LiFePO4, Lithium Iron Phosphate battery
Plastic Case	ABS black	ABS black	ABS black	ABS black

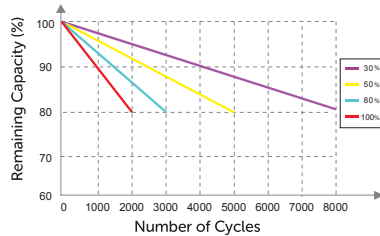
12 VDC 50 Ah / 12 VDC 100 Ah

Different Rate Discharge Curve at 25°C



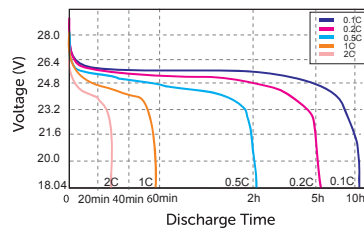
12 VDC 50/100/150 Ah / 24 VDC 100 Ah

Different DOD Discharge Cycle Life Curve @1C

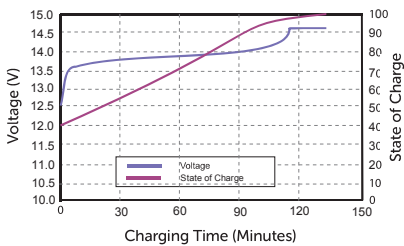


24 VDC 100 Ah

Different Rate Discharge Curve at 25°C

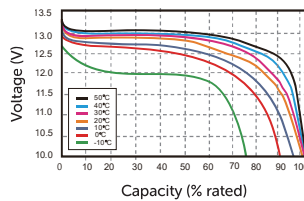


State of Charge Curve at 0.5C 25

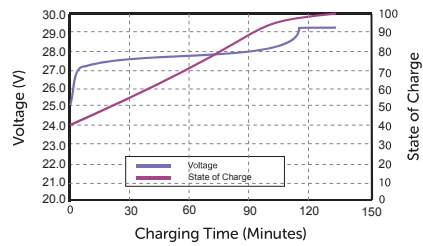


12 VDC 150 Ah

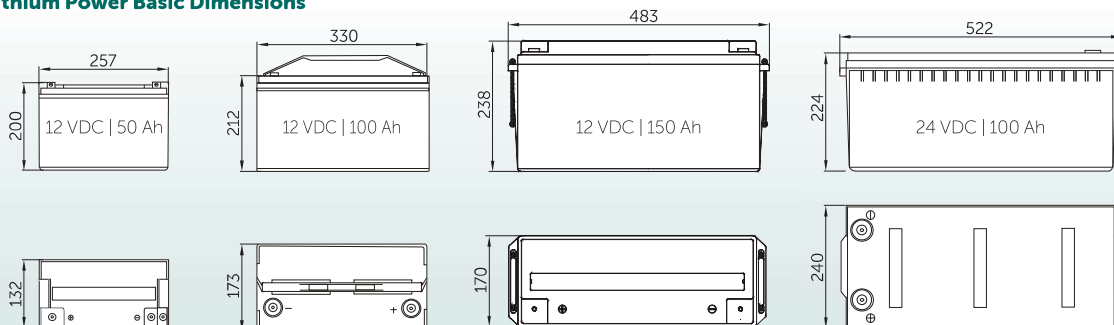
Discharge capacity at various temperatures Discharge at 1C



State of Charge Curve at 0.5C 25



Lithium Power Basic Dimensions



Premium Lithium Batteries

from small to large systems

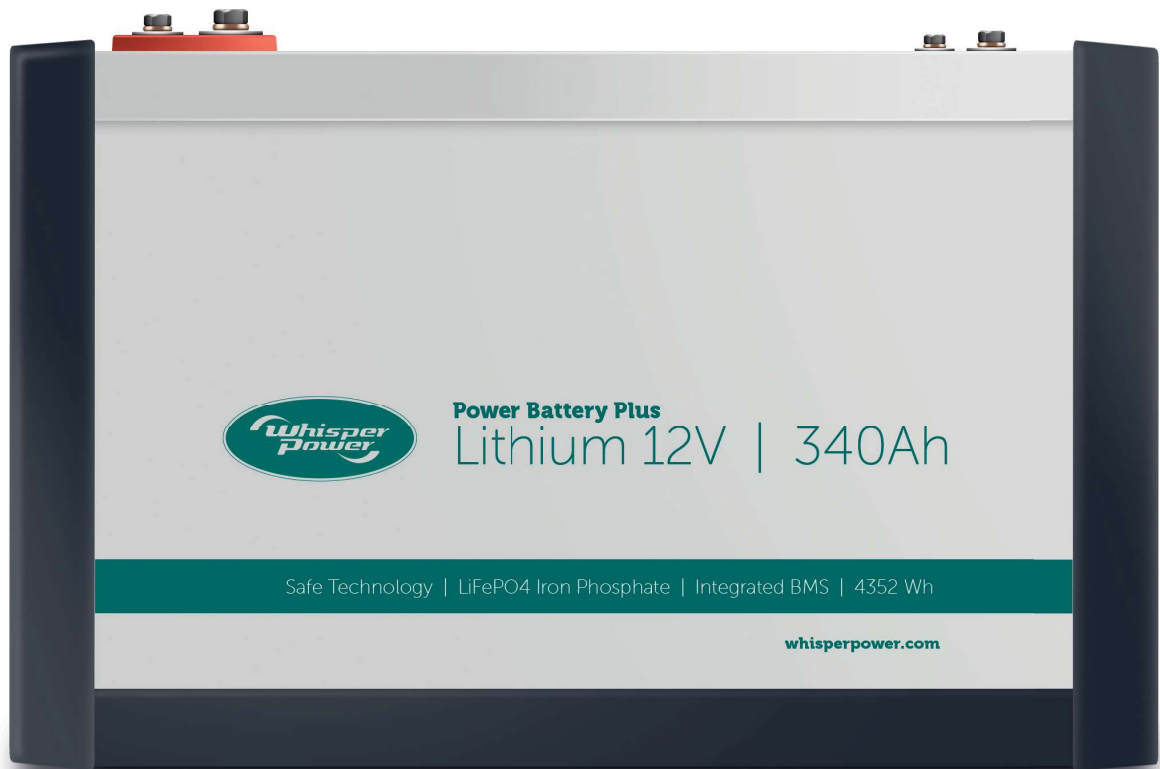
Over the last 20 years, this kind of batteries has become incredibly popular thanks to the use of electric cars. The battery capacities have increased and there has been a significant rise in their use on yachts, motorhomes and cabins in recent years. WhisperPower has the right type of Lithium Battery for every application.

Technology

- Lithium Iron Phosphate battery technology
- LiFePO4 cells of the highest quality used
- As a result perfect thermal stability and safety
- Short circuit proof
- Integrated electronics for cell balancing
- Cobalt free

Features

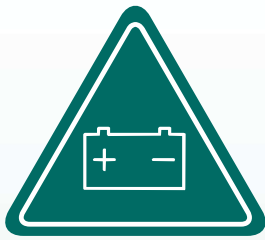
- Long life time > 5000 cycles
- Deep cycle, DOD 90 %
- Fast re-charge, (up to 100 % of Ah capacity) fully charged in 1 hour
- Higher ambient operating temperatures allowed
- Small and light weight, 3 times less than lead acid batteries
- Made in the Netherlands



Models & Battery Sizing

- Series connection to create large 24 / 48 VDC banks
- Communication cables to keep batteries in balance
- Battery monitoring: wizard over internet, remote 5, 7 and 10 inch touch panel optional





Safety

- Passive safety, even without electronics the batteries remain safe
- In case of fire extinguishable with water
- Integrated safety measures




WhisperConnect / CAN connection

- Easy accessible communication ports
- Plug and Play connections between batteries and WIB box
- Connectable in a direct way via WIB box to WhisperTouch panels



Battery monitoring

- Connection for WhisperTouch 7"
- Simple integration into complete WhisperPower system
- 5 inch Touch Battery Monitor optional
- Remote read-out via WhisperCare 



WIB Interface

- Optional WhisperInterface Box with control board for switching between multiple batteries
- 2 x 95 mm² connections per battery pole
- Integrated fuse, 32 VDC - 500 A
- CAN Open port as standard for interfacing / monitoring



Modular DC Distribution Assembly

- Essential heavy duty DC connectors
- To be mounted between battery bank and DC Consumers
- Includes high current busbars and fuse holders and fuses
- Option: integration of the BMS electronic device (see picture)



Robust casing, accessible connectors

- Specially designed casing for extreme environments
- Flexible adaptive Casing technology applied
- BMS electronics integrated, protected against moisture
- Heavy duty battery terminals and easy accessible fuse

Lithium Power Plus

Batteries 12 VDC | 210/340 Ah

Lightweight Lithium Batteries, 23 kg / 50.7 lb or 33 kg / 72.7 lb. Suitable to configure powerful 12, 24 or 48 VDC battery banks. Supplied with all necessary accessories.



Features

- Long Life Lithium battery
- Lithium Phosphate (LiFePO4)
- Most safe Lithium technology today
- Superior abuse tolerance
- Integrated BMS (Battery Management System)
- Glass fibre reinforced plastic (GRFP) casing, Aluminum / PE sandwich side panels
- 2 x 95 mm² wire connection per terminal
- Integrated fuse, 32 VDC / 500 A
- WhisperConnect interface for battery monitoring
- Battery monitoring / historical / time remaining
- Adaptive cell balancing
- Serial string equalisation
- Serial connection 24 / 48 VDC

Power Battery Plus Series

	12 VDC 210 Ah	12 VDC 340 Ah
Article Number	40290209	40290219
TECHNICAL SPECIFICATIONS		
Cell Type / Chemistry	Prismatic - LiFePO4	Prismatic - LiFePO4
Battery NR code	IFpP/36/130/195	IFpP/41/173/205
Dimensions (W x D x H) in mm	417 x 227 x 314	417 x 227 x 314
Dimensions (W x D x H) in inch	16.4 x 8.9 x 12.4	16.4 x 8.9 x 12.4
Weight	23 kg / 50.7 lb	33 kg / 72.7 lb
Ingress Protection	IP50	IP50
Nominal voltage (VDC)	13.2 VDC	12.8 VDC
Maximum voltage	15.4 VDC	15.4 VDC
End charge voltage	14.3 VDC	14.3 VDC
Maximum charge current 100/c	210 A	320 A
Maximum float charge current	70 A	100 A
Minimum battery voltage	8 VDC	8 VDC
Minimum float charge	10 VDC	10 VDC
Maximum discharge current	500 A	500 A
Pulsed discharge current (10 sec.)	800 A	800 A
Pulsed discharge current (60 sec.)	600 A	600 A
Usable battery capacity at 20°C	210 Ah / 2688 Wh	320 Ah / 4352 Wh
Usable battery capacity at - 20°C	130 Ah / 1716 Wh	200 Ah / 2560 Wh
Usable capacity / in comparison to lead acid battery	420 Ah	600 Ah
Charge method	Constant voltage IU	Constant voltage IU
Temperature range (charging)	0°C to 45°C	0°C to 45°C
Temperature range (discharging)	-20°C up to 60°C	-20°C up to 60°C
Temperature range (storage)	-20°C up to 60°C	-20°C up to 60°C
COMPLIANCE SPECIFICATIONS		
Certifications	CE, FCC, UN 38.3, UN ECE R10.06, UL 1642 (Cells)	CE, FCC, UN 38.3, UN ECE R10.06, UL 1642 (Cells)
Shipping Classification	UN 3480	UN 3480



Lithium Batteries Power Plus Accessories

**LITHIUM BATTERIES - TECHNOLOGY: LIFEPO4
(LITHIUM IRON PHOSPHATE) - FOR 12 / 24 / 48 VDC SYSTEMS**

Article Number	Definition	
50214815	WP Power Plus Whisper Interface box WIB 12 VDC / 600 A	
50214817	WP Power Plus Whisper Interface box WIB 24 VDC / 600 A	
50214819	WP Power Plus Whisper Interface box WIB 48 VDC / 600 A	
40290253	WP Power Plus Relay 9 - 36 VDC / 500 A	
40290254	WP Power Plus Relay 12 - 42 VDC / 190 A Bi-stabile relay + cable 1 metre	
40290255	WP Power Plus CAN-bus cable 0.6 metre	
40290256	WP Power Plus CAN-bus Power cable	
40290257	WP Power Plus CAN-bus splitter	
40290258	WP Power Plus CAN-bus terminator female	
40290259	WP Power Plus CAN-bus terminator male	
40290340	WP Power Plus CAN-bus cable to WhisperConnect	
40290346	WP Lithium Power Plus – bracket kit 12 VDC / 210 Ah / 340 Ah	



WP Power Plus Whisper Interface box WIB



ART. NR. 40290255

WP Power Plus CAN-bus cable 0.6 metre



ART. NR. 40290258

WP Power Plus CAN-bus terminator female



ART. NR. 40290259

WP Power Plus CAN-bus terminator male



ART. NR. 40290253

WP Power Plus Relay
9 -36 VDC / 500 A



ART. NR. 40290254

WP Power Plus Relay 12 - 42 VDC / 190 A
Bi-stabile Relay + cable 1 metre



ART. NR. 40290256

WP Power Plus CAN-bus
Power cable

Lithium Power Plus

Modular Battery Rack System

The days of choosing lead acid batteries or niCAD batteries for backup storage or to operate inverters are over. Lithium batteries are the sustainable and suitable alternative for DC power systems, inverter/generator replacement solutions or supplementary systems for peak/energy shaving purposes.



Safety

- In case of fire extinguishable with water
- Integrated safety measures
- No risk of thermal runaway
- Safe and space saving reliable energy storage
- Passive safety, even without electronics the batteries remain safe



For horizontal or vertical installation

Stable and safe to operate

Pre-installed busbars and interface connections. BMS integrated

Drawer system for cells

Light weight aluminum rack

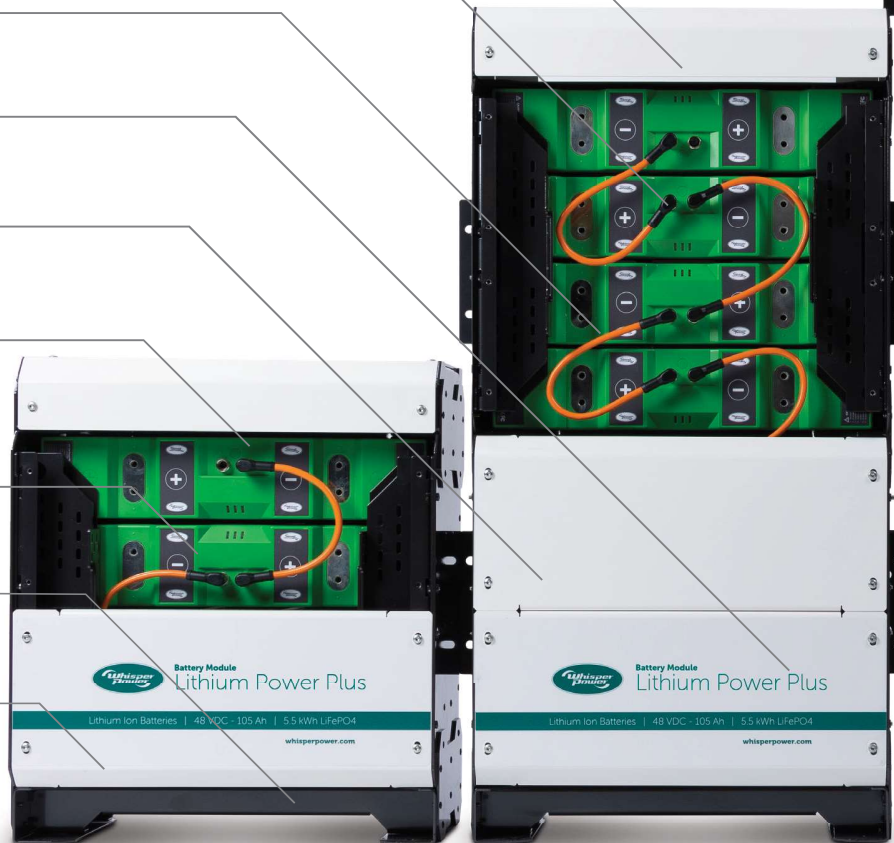
Front access

Designed for harsh marine and mobile use

Plug and Play installation

DC + and - Ready to connect

DNV Approval (optional)

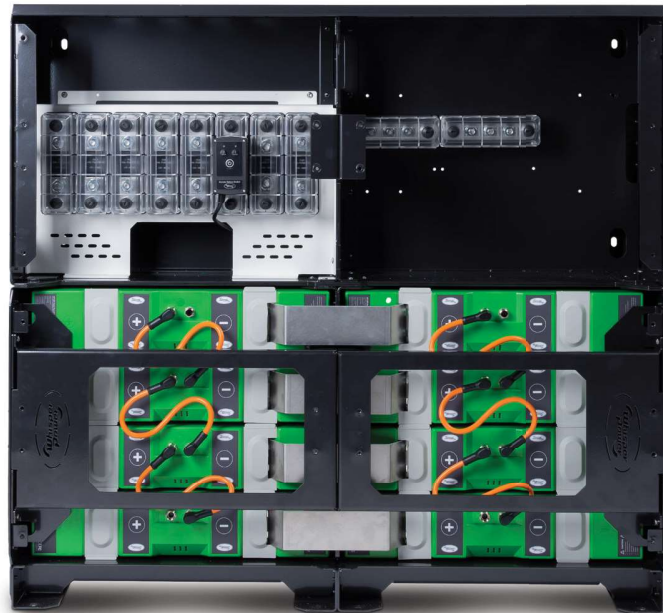


Why Lithium?

High quality 12 VDC Lithium Iron Phosphate (LiFePO4) cells are the basis for WhisperPower's new Lithium storage systems. The new Lithium Power Plus Battery Racks are a sustainable and highly energy dense solution to store electrical energy for use "on demand". Due to the specific characteristics of the WhisperPower LFP ferro Lithium batteries, the battery pack(s) can be charged and discharged at high Amps.

Sustainable and cleaner for the user

Further electrification to replace or supplement fossil power solutions reduces the carbon footprint on a substantial basis. In addition, large cost savings can be achieved because the fossil power system can be used much more efficiently. A higher up-front investment is recouped within a short time.




Custom Build modular battery rack with integrated DC-distribution

Lithium Power Plus modular battery rack system

- Light weight, modular rack design
- For horizontal or vertical mounting
- Pre-installed busbars and cabling
- Easy installation, Plug and Play
- Configurations from 12 – 48 VDC
- Advanced BMS integration with accurate battery monitoring
- Real time and historical cloud-based surveillance (WhisperCare) (optional)
- DNV type approval (optional)
- Safe LiFePO4 chemistry, of the highest density

The added value of WhisperPower

All Lithium battery solutions can be supplied just "as a battery". However, we offer our customers a total solution that eliminates the risk of the user's battery not being charged, discharged or monitored properly. The system approach goes beyond simply supplying a WhisperPower battery charger or combination inverter/charger. If required, we can supply a complete diesel fuel based fast charge system in combination with the Lithium Power Plus rack with integrated BMS, DC bus bar(s) distribution including fuses and an advanced monitoring system that monitors the behavior of the cells inside the battery down to the cell level: WhisperCare. 

Added value services from WhisperPower

- Full integration of (fast) chargers, DC – AC inverters, solar power and back-up generators, all from one brand
- Service & support at location on a world wide base
- Total Power System Design
- Battery System Design



Lithium Power Plus Series

	24 VDC 210 Ah 5.5 kWh	24 VDC 420 Ah 11.1 kWh	24 VDC 630 Ah 16.6 kWh
Article Number	40290223, horizontal 40290203, vertical	40290225, horizontal 40290205, vertical	40290226, horizontal 40290206, vertical
TECHNOLOGY			
Chemistry	LiFePO4	LiFePO4	LiFePO4
Module configuration (12 VDC module)	2s2p	2s4p	2s6p
Number of modules	4	8	12
Nominal voltage	24 VDC	24 VDC	24 VDC
Open circuit voltage	26.4 VDC	26.4 VDC	26.4 VDC
Nominal capacity	210 Ah	420 Ah	630 Ah
Nominal energy	5.5 kWh	11.1 kWh	16.6 kWh
Cycle Life DOD 80 %	> 3500 cycles (at 1C charge/ discharge, 80 % DOD)	> 3500 cycles (at 1C charge/ discharge, 80 % DOD)	> 3500 cycles (at 1C charge/ discharge, 80 % DOD)
Self discharge	< 3 % per month	< 3 % per month	< 3 % per month
Weight modules (excl. Aluminum cabinet)	40 kg / 88.2 lb	80 kg / 176.4 lb	120 kg / 264.6 lb
DISCHARGE			
Discharge cut-off voltage	21.6 VDC	21.6 VDC	21.6 VDC
Recommended discharge current	105 A (0.5 C)	210 A (0.5 C)	315 A (0.5 C)
Maximum discharge current	210 A (1.0 C)	420 A (1.0 C)	630 A (1.0 C)
Discharge pulse current	420 A (2.0 C)	840 A (2.0 C)	1260 A (2 C, 10 sec. SOC > 60 %)
Fuse protection	400 A T-class	2*400A T-class	3*400 A T-class
CHARGE			
Charge method	CCCV	CCCV	CCCV
Maximum charge voltage	29.8 VDC	29.8 VDC	29.8 VDC
Recommended charge voltage	28.6 VDC	28.6 VDC	28.6 VDC
Recommended charge current	105 A (0.5 C)	210 A (0.5 C)	315 A (0.5 C)
Continuous charge current	210 A (1.0 C)	420 A (1.0 C)	630 A (1.0 C)
CONFIGURATION			
Series configuration	Yes, up to 4 (maximum)	Yes, up to 4 (maximum)	On request
Parallel configuration	Yes, up to 2 (maximum)	Yes, up to 2 (maximum)	On request
Redundant mode	Yes, using double BIM	Yes, using double BIM	Yes, using double BIM
ENVIRONMENTAL			
Operating temperature charge	0 up to 55°C / 32 up to 131°F	0 up to 55°C / 32 up to 131°F	0 up to 55°C / 32 up to 131°F
Operating temperature discharge	-20 up to 55°C / -4 up to 131°F	-20 up to 55°C / -4 up to 131°F	-20 up to 55°C / -4 up to 131°F
Storage temperature	-20 up to 45°C / -4 up to 113°F	-20 up to 45°C / -4 up to 113°F	-20 up to 45°C / -4 up to 113°F
Humidity (Non-condensing)	< 95 %	< 95 %	< 95 %
MECHANICAL			
Power connections	M10 stud, maximum 20 NM	M10 stud, maximum 20 NM	2*M10 stud, maximum 20 NM
Cable connections	Option: Top or Bottom	Option: Top or Bottom	Option: Top or Bottom
IP-Protection class	IP 66 cell IP20 connection	IP 66 cell IP20 connection	IP 66 cell IP20 connection
Cooling	Natural air convection	Natural air convection	Natural air convection
Module material	PC-ABS UL94-V0	PC-ABS UL94-V0	PC-ABS UL94-V0
Battery case material	Aluminum Powder coat	Aluminum Powder coat	Aluminum Powder coat
Dimensions (W x D x H) in mm	465 (540) x 280 x 530	465 (540) x 280 x 920	465 (540) x 280 x 1310
Dimensions (L X H X W) inches	18.3 (21.3) x 11 x 20.9	18.3 (21.3) x 11 x 36.2	18.3 (21.3) x 11 x 51.6
Total weight module plus cabinet	± 55 - 60 kg / 121 - 132 lb	± 100 - 110 kg / 220 - 243 lb	± 150 - 160 kg / 331 - 353 lb

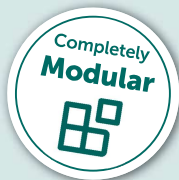


SAFETY

Battery Management System (BMS)	External WP-BIM module
Balancing	Passive method
Communication CAN-bus	WhisperConnect/NMEA2000
EMC: Emission	EN-IEC 61000-6-3:2007 / A1:2011/C11:2012
EMC: Immunity	EN-IEC 61000-6-1:2007
Low voltage directive	EN 60335-1:2012/AC:2014
Certifications	CE, FCC, UN 38.3, UL 1642 (Cells), UN ECE R10.06, EN/IEC 62620 (ESTRIN)
Shipping classification	UN 3480



48 VDC 105 Ah 5.5 kWh	48 VDC 210 Ah 11.1 kWh	48 VDC 315 Ah 16.6 kWh	48 VDC 420 Ah 22.2 kWh
40290231, horizontal 40290211, vertical	40290235, horizontal 40290215, vertical	40290236, horizontal 40290216, vertical	40290218
LiFePO4	LiFePO4	LiFePO4	LiFePO4
4s1p	4s2p	4s3p	4s4p
4	8	12	16
48 VDC	48 VDC	48 VDC	48 VDC
52.8 VDC	52.8 VDC	52.8 VDC	52.8 VDC
105 Ah	210 Ah	315 Ah	420 Ah
5.5 kWh	11.1 kWh	22.2 kWh	22.2 kWh
> 3500 cycles (at 1C charge/ discharge, 80 % DOD)	> 3500 cycles (at 1C charge/ discharge, 80 % DOD)	> 3500 cycles (at 1C charge/ discharge, 80 % DOD)	> 3500 cycles (at 1C charge/ discharge, 80 % DOD)
< 3 % per month	< 3 % per month	< 3 % per month	< 3 % per month
40 kg / 88.2 lb	80 kg / 176.4 lb	120 kg / 264.6 lb	160 kg / 352.7 lb
43.2 VDC	43.2 VDC	43.2 VDC	43.2 VDC
52.5 A (0.5 C)	105 A (0.5 C)	157 A (0.5 C)	210 A (0.5 C)
105 A (1.0 C)	210 A (1.0 C)	315 A (1.0 C)	420 A (1.0 C)
210 A (2 C, 10 sec. SOC >60 %)	420 A (2 C, 10 sec. SOC >60 %)	630 A (2 C, 10 sec. wSOC > 60 %)	840 A (2.0 C)
225A T-class	2*225A T-class	3*225A T-class	600 A T-class
CCCV	CCCV	CCCV	CCCV
59.6 VDC	59.6 VDC	59.6 VDC	59.6 VDC
57.2 VDC	57.2 VDC	57.2 VDC	57.2 VDC
52.5 A (0.5 C)	105 A (0.5 C)	157.5 A (0.5 C)	210 A (0.5 C)
105 A (1.0 C)	210 A (1.0 C)	315 A (1.0 C)	420 A (1.0 C)
No	No	No	No
Yes, up to 4 (maximum)	Yes, up to 2 (maximum)	No	No
Yes, using double BIM	Yes, using double BIM	Yes, using double BIM	Yes, using double BIM
0 up to 55°C / 32 up to 131°F	0 up to 55°C / 32 up to 131°F	0 up to 55°C / 32 up to 131°F	0 up to 55°C / 32 up to 131°F
-20 up to 55°C / -4 up to 131°F	-20 up to 55°C / -4 up to 131°F	-20 up to 55°C / -4 up to 131°F	-20 up to 55°C / -4 up to 131°F
-20 up to 45°C / -4 up to 113°F	-20 up to 45°C / -4 up to 113°F	-20 up to 45°C / -4 up to 113°F	-20 up to 45°C / -4 up to 113°F
< 95 %	< 95 %	< 95 %	<95 %
M10 stud, maximum 20 NM	M10 stud, maximum 20 NM	M10 stud, maximum 20 NM	M10 stud, maximum 20 NM
Option: Top or Bottom	Option: Top or Bottom	Option: Top or Bottom	Option: Top or Bottom
IP 66 cell IP20 connection	IP 66 cell IP20 connection	IP 66 cell IP20 connection	IP 66 cell IP20 connection
Natural air convection	Natural air convection	Natural air convection	Natural air convection
PC-ABS UL94-V0	PC-ABS UL94-V0	PC-ABS UL94-V0	PC-ABS UL94-V0
Aluminum Powder coat	Aluminum Powder coat	Aluminum Powder coat	Aluminum Powder coat
465 (540) x 280 x 530	465 (540) x 280 x 920	465 (540) x 280 x 1310	920 (995) x 340 x 995
18.3 (21.3) x 11 x 20.9	18.3 (21.3) x 11 x 36.2	18.3 (21.3) x 11 x 51.6	36.2 (39.2) x 13.4 x 39.2
± 55 - 60 kg / 121 - 132 lb	± 100 - 110kg / 220 - 243 lb	± 150 - 160 kg / 331 - 353 lb	± 200 - 210 kg / 441 - 463 lb



**Also for horizontal mounting
Even larger on request**

