

# Lithium-Ion HE Battery and Lynx Ion BMS

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24V/100Ah and 24V/200Ah



24V/100Ah HE battery



24V/200Ah HE battery



Lynx-ion BMS 1000A

### Ultra-high energy density

185Wh/kg thanks to Lithium Nickel Manganese Cobalt Oxide (NMC) technology

### Fan cooled

For high charge and discharge currents (up to 2C for short periods)

### Parallel and series connection

Up to 64 batteries can be parallel connected.

For 48V systems two batteries can be connected in series, and up to 32 strings of two batteries can be parallel connected.

### Galvanically isolated CAN-Bus communication

Protocol: VE.Can/NMEA2000

### Lynx-ion BMS: 400A or 1000A

The Lynx-ion BMS reduces wiring and installation time to a minimum: it combines four fused battery connections, four fused DC load connections, a safety contactor and a current shunt with a BMS in one compact enclosure.

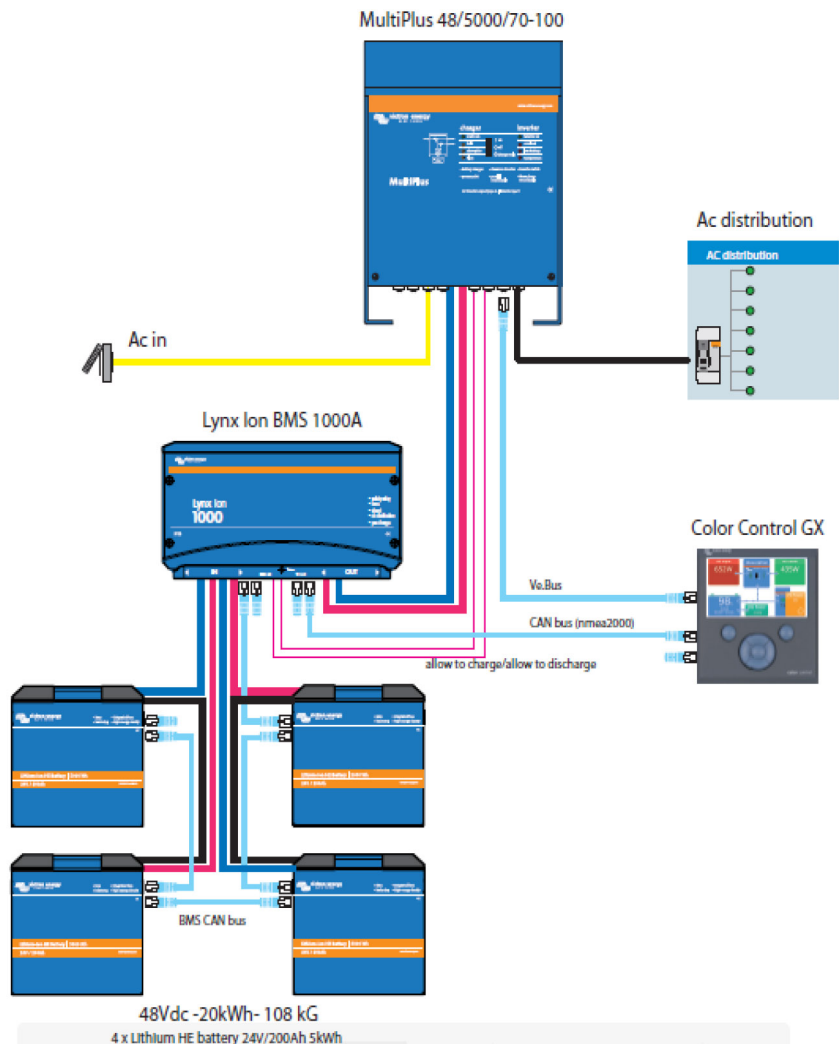
### Monitoring: The Color Control GX or Venus GX

Monitors the complete system.

Is the gateway for remote monitoring on the VRM online portal.

Adds an amazing amount of useful functionality to system (such as a very sophisticated generator start-stop program)

See the Color Control GX and Venus GX datasheet for more information.



Lithium HE battery	24V / 100Ah	24V / 200Ah
Technology	Lithium-Ion NMC	Lithium-Ion NMC
Cell configuration	7S32P	7S64P
Nominal voltage	25,2 V	25,2 V
Nominal capacity	100 Ah	200 Ah
Nominal energy	2,5 kWh	5,0 kWh
Cycle Life @80% DoD (0,3C)	2000	2000
Energy/weight ratio (incl. BMS and enclosure)	159 Wh/kg	175 Wh/kg
Weight (incl. BMS and enclosure)	15,7 kg	28,6 kg
<b>Discharge</b>		
Discharge cut-off voltage	21 V	21 V
Recommended discharge current	30 A (0.3 C)	60 A (0.3 C)
Maximum discharge current (10 minutes)	150 A (1.5 C)	300 A (1.5 C)
Fuses	150 A, fuse inside	300 A, fuse inside
<b>Charge</b>		
Max. charge voltage	29,4 V	29,4 V
Recommended charge voltage	28 V	28 V
Maximum charge current	100 A (1 C)	200 A (1 C)
Recommended charge current	30 A (0.3 C)	60 A (0.3 C)
<b>Configuration</b>		
Series configuration		Yes, up to 2
Parallel configuration		Yes, up to 96
<b>Temperature</b>		
Operating temp. charge		0~45°C
Operating temp. discharge		-20~55°C
Storage temp.		-20~45°C
<b>Mechanical</b>		
Power connections	M8 stud, Max. 15 Nm	M8 stud, Max. 15 Nm
Protection class	IP20	IP20
Cooling	Air, active (1x fan inside)	Air, active (2x fan inside)
Dimensions (l x w x h)	362 x 193 x 214 mm	362 x 193 x 355 mm
<b>Safety</b>		
Battery Management System (BMS)		Integrated slave BMS
Balancing		Passive
Compatible BMS master controller		Lynx Ion BMS
Communication with Lynx Ion BMS		CAN bus
<b>Standards</b>		
EMC: Emission		EN-IEC 61000-6-3
EMC: Immunity		EN-IEC 61000-6-1
Low voltage directive		EN 60335-1
<b>Lynx Ion BMS</b>		
Maximum number batteries in series		2 (= 48 VDC)
Maximum number batteries in parallel		96 (48 V: 48 strings of two batteries)
Supply voltage range		18 to 58 VDC
Power consumption, standby mode		73 mW @ 26,2V and 138 mW @ 52,4V
Power consumption, active mode		8,7 W
Main safety contactor	400A	1000A
Communication port	VE.CAN (NMEA2000, RJ45 connection, galvanically isolated)	
<b>IO</b>		
Auxiliary output	13,5 V / 1 A, short circuit protected	
Allow-to-charge (switched voltage)	13,5 V / 1 A, short circuit protected	
Allow-to-discharge (switched voltage)	13,5 V / 1 A, short circuit protected	
Allow-to-charge (relay output)	1 A @ 60 VDC, potential free	
Allow-to-discharge (relay output)	1 A @ 60 VDC, potential free	
Programmable contact (relay output)	1 A @ 60 VDC, potential free	
External status signal	13,5 V / 140 mA	
<b>Enclosure</b>		
Material	ABS	
Weight	4,6 kg	5,7 kg
Dimensions (lxwxh)	225 x 426 x 117 mm	
<b>Environmental</b>		
Operating temperature range	-20 °C to 50 °C	
Humidity	Max. 95% (non-condensing)	
Protection class	IP22	
<b>Standards</b>		
EMC: Emission	EN-IEC 61000-6-3	
EMC: Immunity	EN-IEC 61000-6-1	
Low voltage directive	EN 60335-1	