Lynx Smart BMS NG

500A (M10) and 1000A (M10)

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Lynx Smart BMS NG 500A

Lynx Smart BMS NG 1000A

VictronConnect

The Lynx Smart BMS NG is a dedicated Battery Management System (BMS) designed specifically for the Victron Lithium NG batteries. These batteries utilise Lithium Iron Phosphate (LiFePO4) technology and are available in 12.8 V, 25.6 V and 51.2 V variants with various capacities. They can be configured in series, parallel, and series/parallel arrangements, allowing for the creation of battery banks with system voltages of 12V, 24V , or 48V. The maximum number of batteries in a single system is 50, enabling a maximum energy storage of 192kWh in a 12V system and up to 384kWh in a 24V and 48V system. For comprehensive details about these batteries, visit the Victron Lithium NG battery product page.

Out of the various BMSes available* for the all new Lithium NG batteries, the Lynx Smart BMS NG is the most feature-rich and complete option and integrates seamlessly with other M10 products in the Lynx Distributor system. It is available in 500 A (M10) and 1000 A (M10) versions[1)].

Built-in 500 A or 1000 A contactor

- Available in 500 A (M10) and 1000 A (M10) versions.
- Acts as a secondary safety system to protect the battery in case primary controls (ATC, ATD and/or DVCC) fail.
- Suitable as a remote controllable main system switch.

Pre-charge circuit

- Prevents high inrush currents when connecting capacitive loads like inverters.
- Eliminates the need for external pre-charging devices.

Monitoring and control

- Bluetooth connectivity for monitoring and control via the VictronConnect App or VE.Can connectivity in combination with GX devices such as the Cerbo GX or Ekrano GX and the VRM portal.
- Readout of cell voltages and temperatures also on GX devices and the VRM portal.
- Built-in battery monitor provides data such as state of charge, voltage, current, historical data, status info and more in real time.
- Diagnostic at a glance with Instant Readout.

DVCC closed loop control as well as ATC/ATD contacts

- Compatible Victron inverter/chargers, the Orion XS 12/12-50A DC-DC battery charger and solar charge controllers are automatically controlled via a connected GX device and DVCC.
- ATC/ATD contacts can be used to control other chargers and loads that have a remote on/off port.

Programmable relay

- Can be used either as an alarm relay (combined with the pre-alarm) or to control an alternator via its external regulator (ignition cable).
- Features Alternator ATC mode for safe alternator disconnection before battery disconnects.

AUX terminal

- Onboard auxiliary power supply (1.1 A @ system voltage) for powering specific loads (i.e. a GX device) post-BMS shutdown.
- Automatic shutdown of BMS and AUX connection if no charge voltage detected within 5 minutes after a low voltage event.

VE.Can and NMEA 2000 data communication

- Easy connection and communication with GX devices via VE.Can using a standard RJ45 network cable.
- Integration into marine networks via NMEA 2000 protocol (requires a VE.Can to NMEA 2000 micro-C male cable).

Lynx Distributor fuse monitoring

- Monitor fuse status of up to 4 connected Lynx Distributors via VictronConnect or GX devices.
- Receive alarms in case of blown fuses.

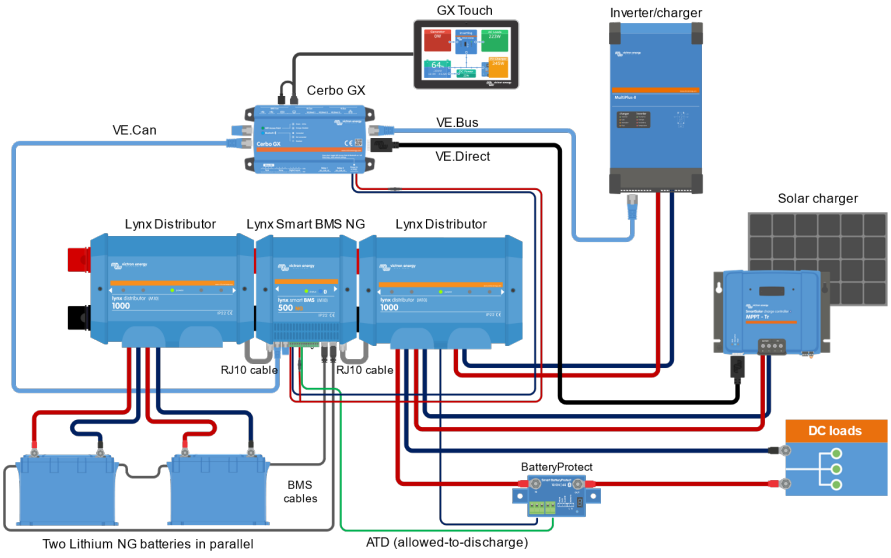
***Note: This draft datasheet serves as a preliminary guide to facilitate planning preparation for the launch for the NG series batteries and BMS-es. A first small batch of Lynx Smart BMS NG and 24/200 Ah batteries is expected in May, and more stock also the first batches of other models are expected by Q3/Q4 2024.**

1) Up to 5 BMS-es can be paralleled. This requires a firmware updated, expected in Q3 2024.

System example – Lynx Smart BMS NG, 2x Lynx Distributor M10 and Lithium NG batteries

This system contains the following components:

- Lynx Distributor M10 with 2 fused paralleled Lithium NG batteries.
- Lynx Smart BMS NG 500A with BMS, contactor and battery monitor.
- A second Lynx Distributor M10 provides fused connections for inverter/charger(s), loads and chargers. Additional modules can be added if more connections are needed.
- A Cerbo GX (or other GX device) to read out the Lynx Smart BMS and Lynx Distributor data.



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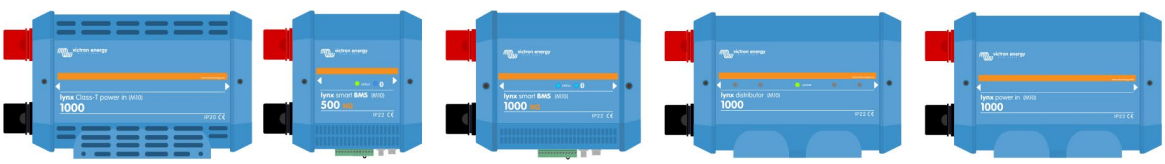
Lynx Smart BMS NG	500 A (M10) (LYN034160310)	1000 A (M10) (LYN034170310)
POWER		
Battery voltage range	9 – 60 VDC	
Maximum input voltage	75 VDC	
Supported system voltages	12, 24 or 48 V	
Reverse polarity protection	No	
Main safety contactor continuous current rating	500 A continuous	1000 A continuous
Main safety contactor peak current rating	600 A for 5 minutes	1200 A for 5 minutes
Power consumption OFF mode	0.3 mA for all system voltages	
Power consumption in Standby mode	Approximately 0.6 W (50 mA at 12 V)	
Power consumption in ON mode	Approx. 2.6 W (217 mA at 12 V) depending on the state of the relays	Approximately 4.2 W (350 mA at 12 V) depending on the state of the relays
Minimum load resistance for pre-charging	10 Ω and above for 12 V systems 20 Ω and above for 24 V and 48 V systems	
AUX output maximum current rating	1.1 A continuous, protected by resettable fuse	
Allow-to-charge port Maximum current rating	0.5 A at 60 VDC, protected by resettable fuse	
Allow-to-discharge port Maximum current rating	0.5 A at 60VDC, protected by resettable fuse	
Alarm relay (SPDT) Maximum current rating	2 A at 60 VDC	
CONNECTIONS		
Busbar	M10 (Torque: 33 Nm) – can be combined with all M10 Lynx products	
VE.Can	RJ45	
I/O	Removable multi-connector with screw terminals	
Battery BTV cables	Male and female circular 3-pole connector with M8 screw ring Up to 50 batteries can be connected in one system	
Lynx Distributor fuse monitoring (up to 4 modules)	RJ10 (cable ships with each Lynx Distributor)	
PHYSICAL		
Enclosure material	ABS	
Enclosure dimensions (h x w x d)	190 x 180 x 80 mm	230 x 180 x 100 mm
Unit weight	1.9 kg	2.7 kg
Busbar material	Tinned copper	
Busbar dimensions (h x w)	8 x 30 mm	
ENVIRONMENTAL		
Operating temperature range	-40 °C to +60 °C	
Storage temperature range	-40 °C to +60 °C	
Humidity	Max. 95 % (non-condensing)	
Protection class	IP22	
STANDARDS		
Safety	EN-IEC 63000:2018	
EMC	EN-IEC 61000-6-3:2007/A1:2011/AC:2012	
QMS	NEN-EN-ISO 9001:2015	



Lynx Distribution products with M10 busbars

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