

Lynx Smart BMS NG

www.victronenergy.co.nz

500A (M10) and 1000A (M10)



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. The maximum energy storage capacity can be multiplied by paralleling multiple Lynx Smart BMSs, which also ensures redundancy should one battery bank fail. 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.

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.

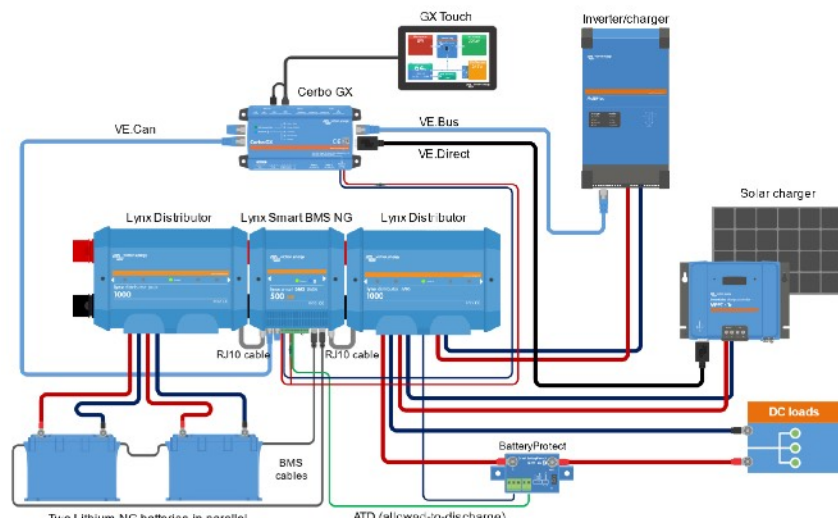
Parallel redundant Lynx Smart BMS

- The new parallel redundancy feature for the Lynx Smart BMS and Lynx Smart BMS NG series allows multiple Lynx BMSes in one installation. Each has its own battery bank, and together they form a single redundant battery system. Up to 5 BMS-es can be paralleled.

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.



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