victron energy BLUE POWER

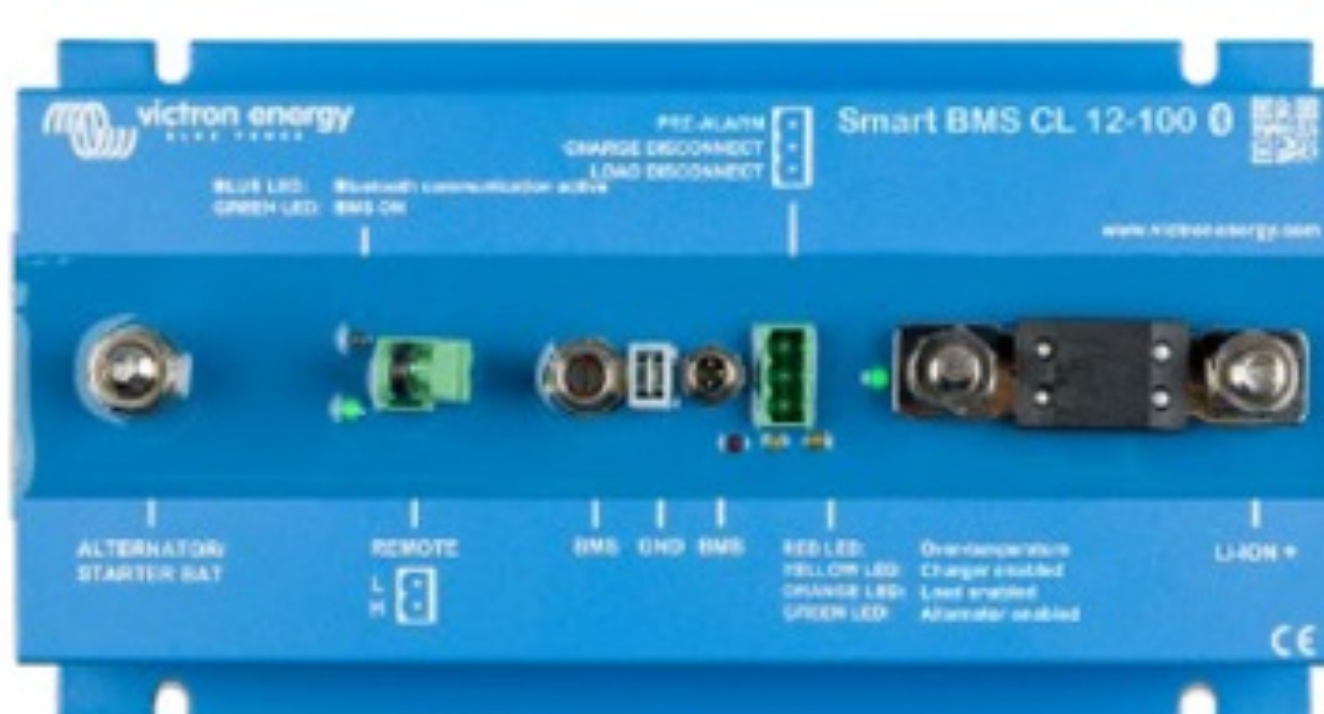**SmallBMS with pre-alarm**

VE.Bus BMS V2

Lynx Smart BMS 500 A

Lynx Smart BMS 1000 A

Smart BMS CL 12/100

Smart BMS 12/200

Feature highlights common to all models:
- Specifically designed for use with our Lithium Smart Battery 12,8 V & 25,6 V range.
- Communicates directly with the lithium battery via the battery's M8 circular connector cables.
- Protects the lithium battery cells from overvoltage, undervoltage or a too low or high temperature by turning off loads or charge sources via its "load disconnect" and "charge disconnect" terminals.
- The maximum number of batteries that can be connected to the BMS is 20.

System Voltages:
- The SmallBMS, VE.Bus BMS V2 and the Lynx Smart BMS can connect to a 12, 24 or 48 V system.
- The other BMS models can only connect to a 12 V system.

System connection:
- The SmallBMS and VE.Bus BMS V2 require that all loads and charge sources are directly connected to the battery. The BMS turns them off in case of a battery cell voltage or temperature alarm via the "load disconnect" and "charge disconnect" terminals.
- The Lynx Smart BMS has a safety DC contactor (500 A or 1000 A, depending on model). It disconnects the system from the battery or battery bank in case of a battery cell voltage or temperature alarm and can be used as a main system on/off switch.
- The Smart BMS 12/200 has a dedicated system output to which both, loads and chargers, can be connected. The system output will disconnect in case of a battery cell voltage or temperature alarm.

Alternator:
- The Smart BMS CL 12/100 and Smart BMS 12/200 have a dedicated alternator input. This input will activate when the alternator is running, and the starter battery has reached a sufficient voltage. It will current limit the alternator supply and block reverse current from the lithium battery into the starter battery. It disconnects in case of a battery cell voltage or temperature alarm.
- The Lynx Smart BMS has an alternator ATC mode, so additional alternator protection is not needed.

Pre-alarm options:
- All models have a pre-alarm output.

Remote on/off options:
- All models have a "remote on/off" terminal.
- The "Smart" BMS models can also be turned on and off via Bluetooth and the VictronConnect app.

Bluetooth and the VictronConnect app
- All "Smart" BMS models are equipped with Bluetooth and can be monitored, operated, and configured via the VictronConnect app. They all support Instant Readout to display key data at a glance without the need for a paired connection to the BMS.

Battery monitor
- The Lynx Smart BMS has a full-featured built-in battery monitor.

Communication options:
- The VE Bus BMS V2 can directly control a VE.Bus inverter or inverter/charger in case of a battery cell undervoltage, overvoltage or temperature alarm.
- The VE.Bus BMS V2 and Lynx Smart BMS can be used for communication or control via a GX device and can control compatible inverter/chargers and solar chargers via DVCC control without the need to use the load and/or charger disconnect terminals.
- The Lynx Smart BMS can monitor up to 4 Lynx distributor modules.

Optional accessories:
- The VictronConnect app (free download) for "Smart" BMS modules.
- Pair of M8 circular connector 3 pole cables, to extend the battery BMS cables.
- Cable for Smart BMS CL 12/100 to MultiPlus.
- VE.Direct non inverting remote on/off cable.
- Inverting remote on-off cable.
- Non inverting remote on-off cable.

System design recommendations:
- The **SmallBMS** for 12, 24 or 48 V systems without inverter/chargers.
- The **VE.Bus BMS V2** for 12, 24 or 48 V systems with inverter/chargers and a GX device
- The **Lynx Smart BMS** for 12, 24 or 48 V systems with digital integration and with the need to have a safety relay to disconnect DC loads and/or inverters or inverter/chargers, like is the case in yachts or recreational vehicles.
- Available in two different versions: 500 A and 1000 A (both with M10 busbar).
- The **Smart BMS CL 12/100** for 12 V systems with an alternator.
- The **Smart BMS 12/200** for 12 V systems with an alternator and DC loads and an inverter or inverter/charger.

Comparison overview:

- The below overview is a comparison and a brief summary of the BMS features. For full technical specifications, see the individual BMS datasheets.

Features	Small BMS	VE.Bus BMS V2	VE.Bus BMS	Lynx Smart BMS 500 A or 1000 A	Smart BMS CL 12/100	Smart BMS 12/200	BMS 12/200
System voltage	12, 24 or 48 V	12, 24 or 48 V	12, 24 or 48 V	12, 24 or 48 V	12 V	12 V	12 V
System connection	No	No	No	500 A or 1000 A	No	200 A	200 A
Alternator port	No	No	No	Yes (Alternator ATC mode)	100 A	100 A	80 A
Battery monitor	No	No	No	Yes	No	No	No
Bluetooth	No	No	No	Yes	Yes	Yes	No
Data communication	No	VE.Bus communication with inverter/charger(s) and a GX device.	VE.Bus communication only direct with inverter/charger(s), not with a GX device.	VE.Can communication with a GX device NMEA 2000	No	No	No
Control via GX device (DVCC)	No	Yes	No	Yes	No	No	No
Allowed to discharge terminal(s)	High/free floating 1 A	High/free floating 1 A	High/free floating 2 A	Relay 0.5 A	High/free floating 10 mA	High/free floating 10 mA	No
Allowed to charge terminal(s)	High/free floating 10 mA	High/free floating 10 mA	High/free floating 10 mA	Relay 0.5 A	High/free floating 10 mA	High/free floating 10 mA	No
Pre-alarm terminal(s)	Free floating/high 1 A	Free floating/high 1 A	Free floating/high 1 A	Programmable relay 2 A	Free floating/high 1 A	Free floating/high 1 A	No
Remote on/off terminal	Yes	Yes	No	Yes	Yes	Yes	Yes
Auxiliary output	No	Yes, 1 A	No	Yes, 1.1 A	No	No	No
Auxiliary input	No	Yes, 1 A	No	No	No	No	No
Possible to update firmware	No	No	No	Yes	Yes	Yes	No
Weight (kg)	0.1	0.12	0.1	1.9 (500 A) or 2.7 (1000 A)	1.6	2.0	1.8
Dimensions (mm)	106 x 42 x 23	24 x 95 x 106	105 x 78 x 32	190 x 180 x 80 (500 A) or 230 x 180 x 100 (1000 A)	65 x 120 x 224	65 x 120 x 340 mm	65 x 120 x 260
Protection	IP20	IP20	IP20	IP22	IP65	IP65	IP65
Remarks	-	-	End-of-life, use a VE.Bus BMS V2 instead	Is part of the Lynx Distribution System	-	-	End-of-life, use a Smart BMS 12/200 instead
Datasheet	smallBMS with pre alarm	VE.Bus BMS V2	VE.Bus BMS	Lynx Smart BMS	Smart BMS CL 12/100	Smart BMS 12/200	BMS 12/200

Lithium Battery 12,8V & 25,6V Smart
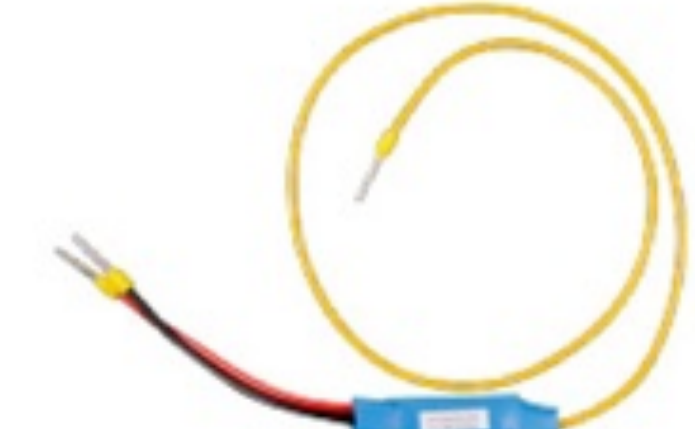
M8 circular connector 3 pole cable

Cable for Smart BMS CL 12/100 to MultiPlus

VE.Direct non inverting remote on/off cable

Inverting remote on-off cable

Non inverting remote on-off cable