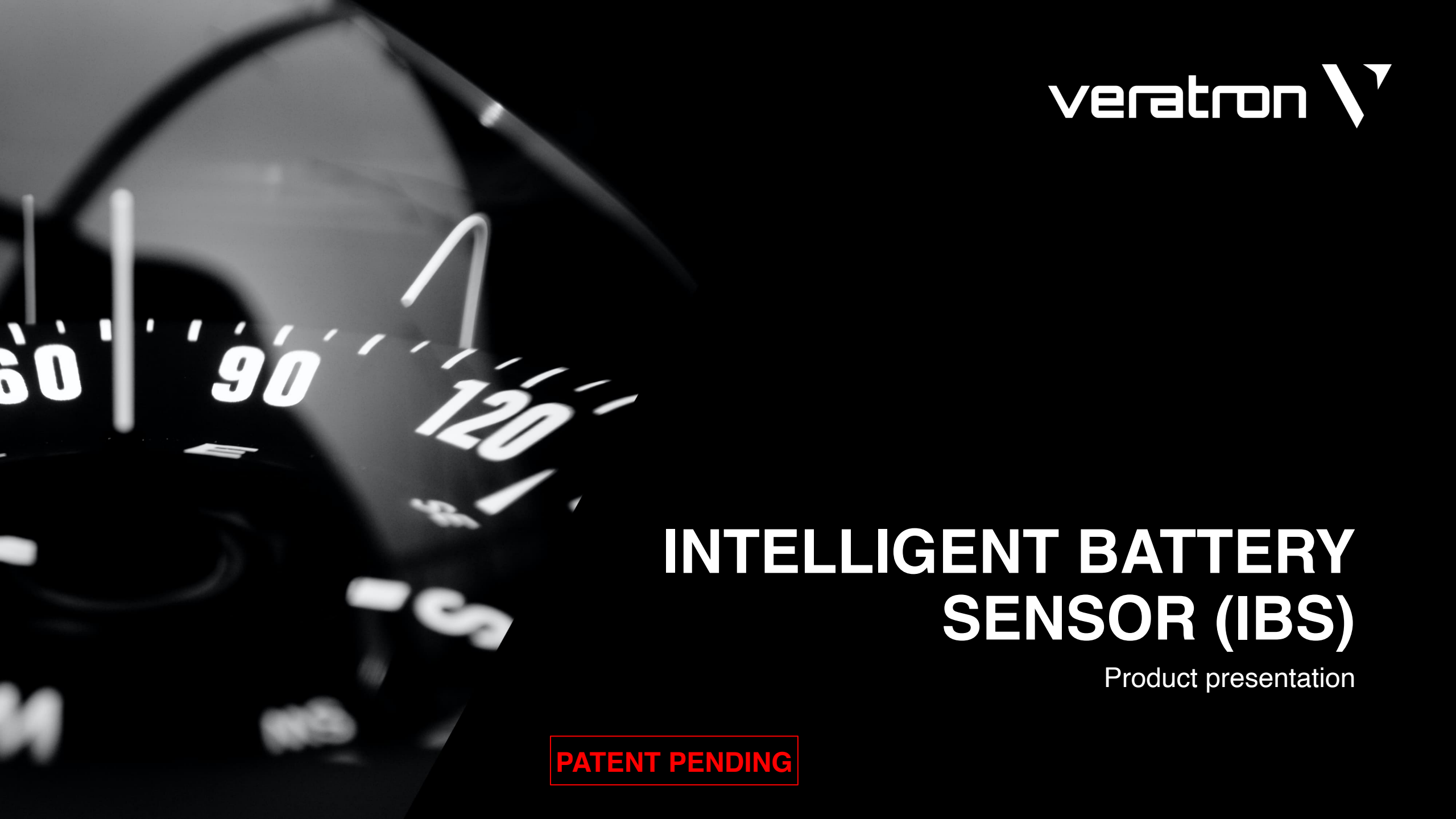


The Veratron logo consists of the word "veratron" in a lowercase, sans-serif font, followed by a stylized white 'V' symbol that resembles a downward-pointing arrow or a checkmark.

veratron 

The background of the slide is a close-up, black and white photograph of a speedometer. The needle is positioned between the 90 and 120 marks. The numbers 60, 90, and 120 are clearly visible on the dial.

INTELLIGENT BATTERY SENSOR (IBS)

Product presentation

PATENT PENDING

Phi Number

MARINEPOOL 



01

PRODUCT OVERVIEW

FEATURES OVERVIEW

- ▼ **The Intelligent Battery Sensor (IBS) system reliably and accurately measures the battery parameters to be displayed on every NMEA 2000® capable display**
- ▼ **Battery information:**
 - ▼ Voltage, current and temperature
 - ▼ State Of Charge
 - ▼ State Of Health
 - ▼ State Of Function
 - ▼ Battery Autonomy (time remaining)
- ▼ **Supported Battery types:**
 - ▼ 12V Starter, Gel and AGM battery types supported
 - ▼ 24V (available Fall 2020)



B00042501



PATENT PENDING

State Of Charge (SOC)

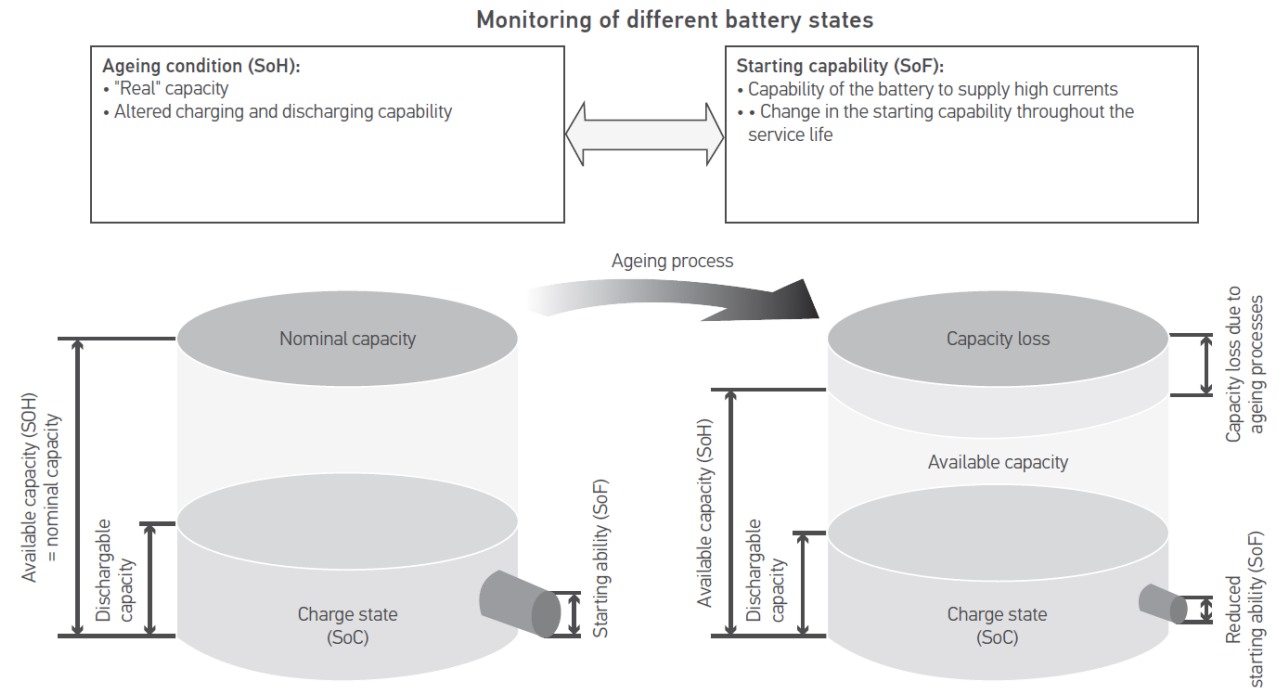
Current charge status of the battery, defined in percentage

State Of Health (SOH)

Ageing status of the battery, defined in percentage

State Of Function (SOF)

Future cranking capability of the engine based on the currently measured current and voltage



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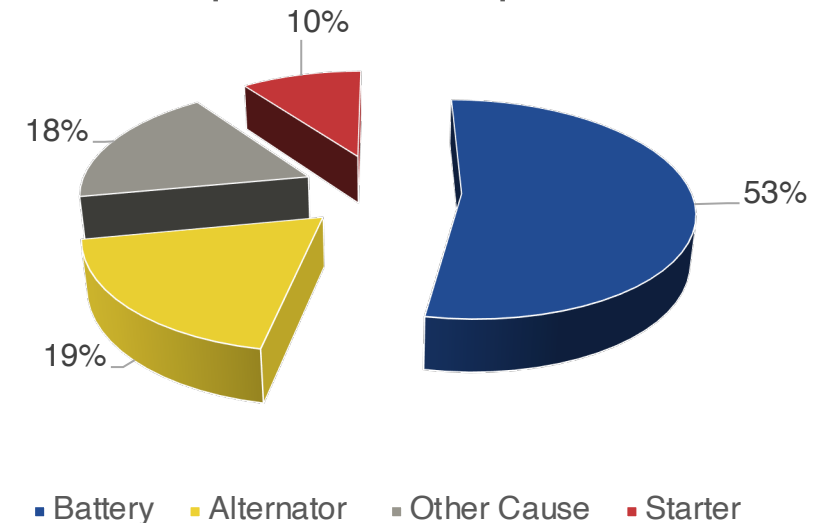


02

SYSTEM BENEFITS

- ▼ **The Intelligent Battery Sensor (IBS) informs you about the current energy status, allowing you to plan your energy supply**
- ▼ **In order to carefully preserve the energy of the boat battery, it is necessary to know its State of Charge, the ageing status (State Of Health) and any changes to the battery, as weak batteries are the main cause of trouble in the boat.**
- ▼ **Real time measurements during the charging/discharging processes**
- ▼ **Fully integrate within OceanLink™ displays with dedicated battery management section**

Electrical problems on power boats



PATENT PENDING

- ▼ **The LinkUP IBS can be directly integrated into the boat's electrical system through the standardized NMEA 2000® protocol**
- ▼ **The LinkUP IBS can be wirelessly programmed with your mobile device to set the battery capacity, its instance and the related alarms**
- ▼ **The LinkUP is compliant to ISO 8846:1990 as request by directive 2013-53(EC). It can be installed in the engine room**
- ▼ **The LinkUP IBS helps to prevent chronic battery problems as it delivers in real time:**
 - **Faulty charging system overcharging or lower charging**
 - **Faulty battery compartment “overheating”**
 - **Preventive maintenance “battery ageing”**
- ▼ **Compatible with the newest GlassCockpit devices**



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6.8 kn

25 BS

206 deg

AWA HEADING

25

4 1 deg TWD

03

TECHNICAL DETAILS

SYSTEM SUMMARY

▼ Intelligent Battery Sensor (IBS)

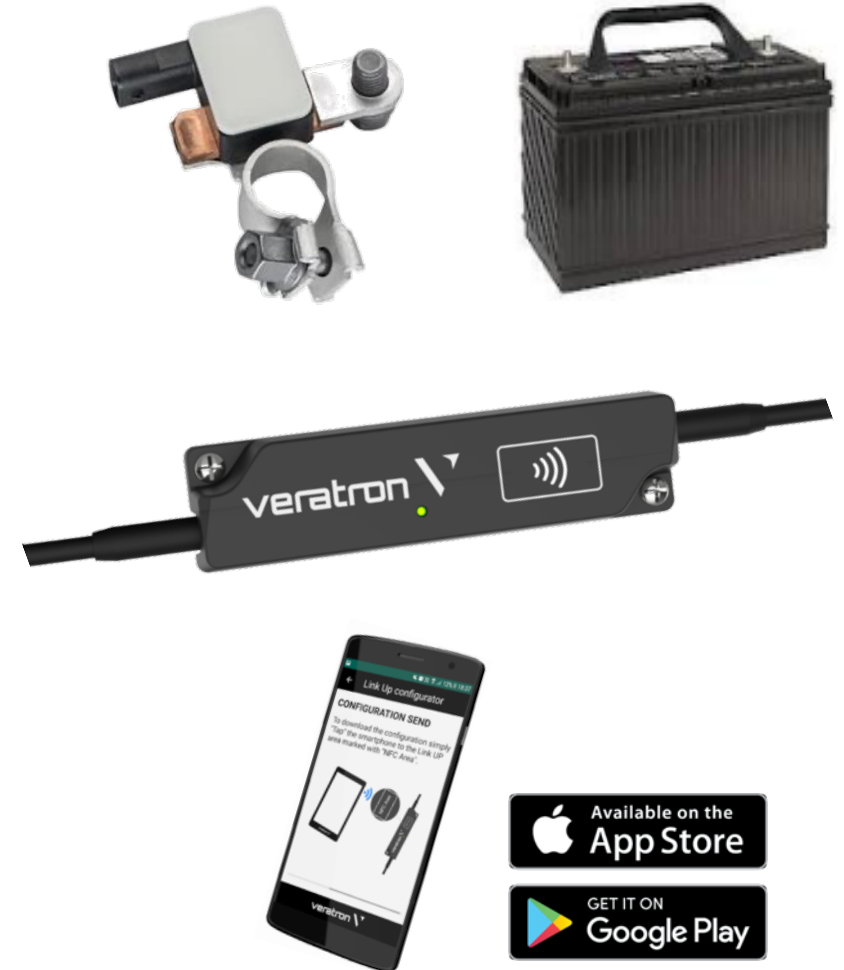
- ▼ Measures the battery parameters, connected to the standard battery negative pole terminal

▼ LinkUp gateway for IBS

- ▼ Provides NMEA 2000® interfacing
- ▼ Transfers the battery settings to the IBS
- ▼ Wireless configurable through mobile device
- ▼ Dedicated harness to interface the IBS and the battery poles

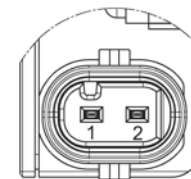
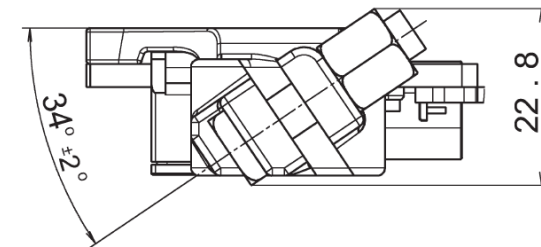
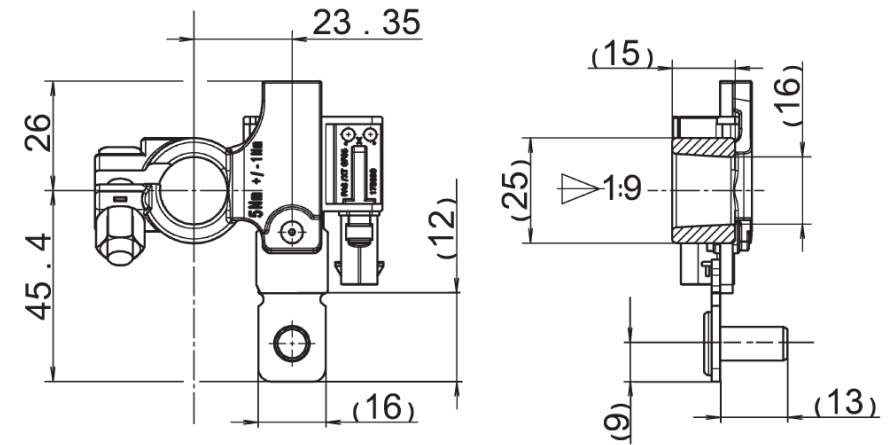
▼ LinkUp configurator App

- ▼ Mobile App available for Android and iOS platforms



PATENT PENDING

Datasheet	
Operating voltage	6 – 16.5 V
Permanent load current	± 155 A
Maximum current	± 1500 A (500 ms)
Nominal resistance (shunt)	100 $\mu\Omega$
Operating temperature	- 40°C to 115°C
Protection class	IP 6K7
Pole terminal tightening torque	5 Nm ± 1 Nm
Threaded bolt GND connection	M8
Max battery capacity	249 Ah



- ▼ Hirschmann connector to interface the LinkUp gateway (mating part available on the LinkUp harness)

PATENT PENDING

LINK UP FOR IBS

- ▼ The IBS Link Up is the NMEA 2000® gateway for the IBS sensor
- ▼ The Link Up is available in other variant to upgrade several sensors (PWM, 0-400 Ohm and pyrometer) to NMEA 2000 certified
- ▼ The supply voltage is provided to both the sensor and the Link Up from the battery itself
- ▼ The internal galvanic isolation of the Link Up decouples the NMEA 2000® backbone power from the LinkUp power supply as per NMEA requirement



PATENT PENDING

- ✔ **User-friendly configuration through wireless interface and companion smartphone App**
- ✔ **Simply setup the parameters of your battery and then “tap” your smartphone onto the dedicated area of the device to configure it instantly**
- ✔ **Thanks to its passive antenna the device does not need to be powered to be programmed!**

Configurable parameters:

- ✔ **Battery Capacity and Type**
- ✔ **Battery instance**
- ✔ **Warning thresholds**



PATENT PENDING

LINK UP / IBS INTERFACE

- ▼ The IBS provides an M8 threaded bolt (1) where the LinkUp GND is connected to
- ▼ M8 ring-type faston terminals are provided to connect to the battery positive terminal
- ▼ Watertight 3A fuse
- ▼ Standard Micro-C M12 5 pins connector to interface the NMEA 2000® backbone



PATENT PENDING

- ▼ The system transmits the battery data over NMEA 2000® by using standardized PGNs, where available, to ensure maximum integration with other NMEA 2000® capable devices



Data Name	PGN
Battery Voltage	127506 127508
Current consumption	127508
State Of Charge (SOC)	127506
State Of Health (SOH)	127506
Battery Temperature	127508
Time Remaining (Autonomy)	127506
Available Capacity	127513
Nominal Capacity (set by the user)	127513
Battery Type (set by the user)	127513
Nominal Voltage (set by the user)	127513

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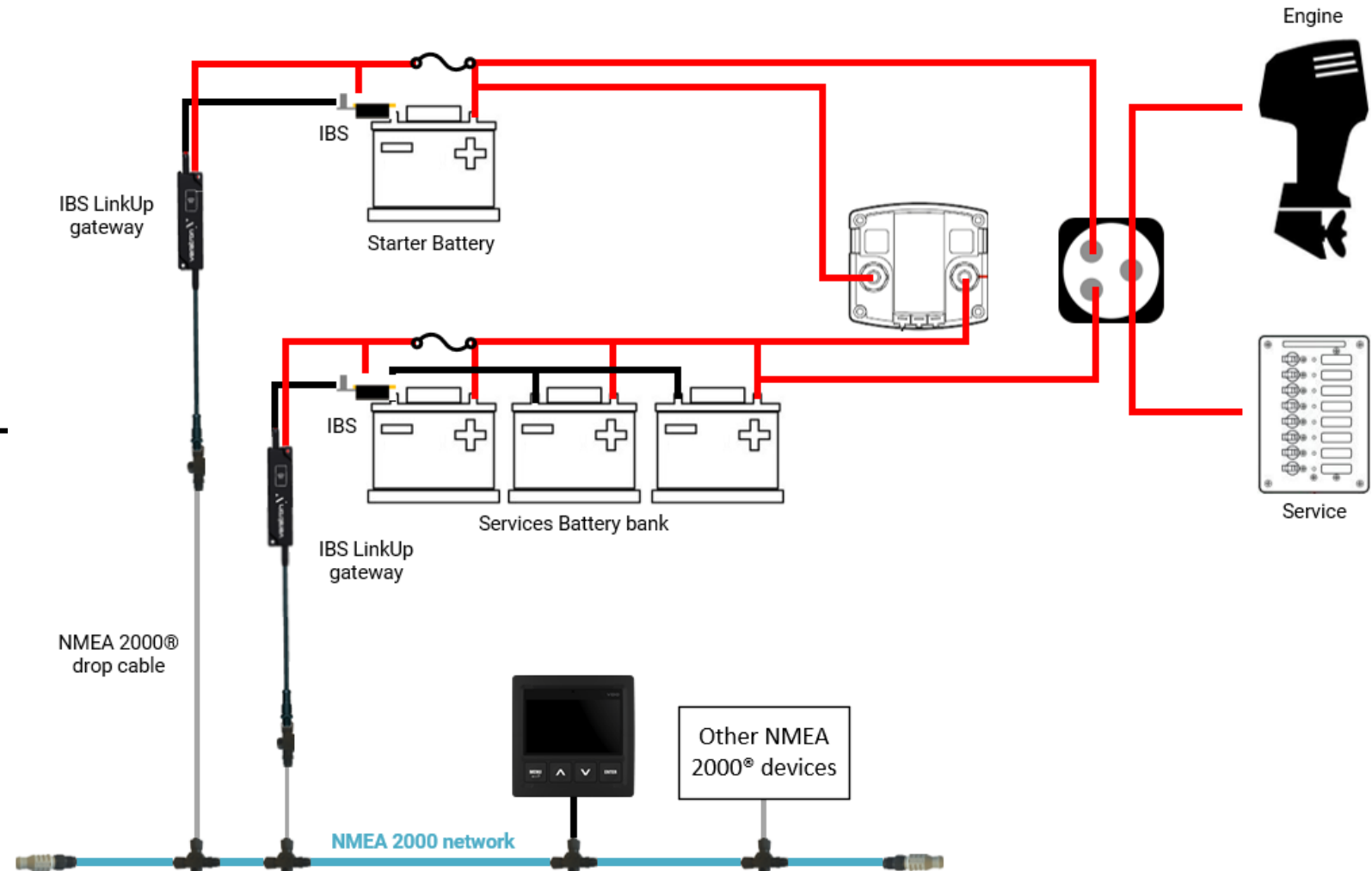


04

USE CASES

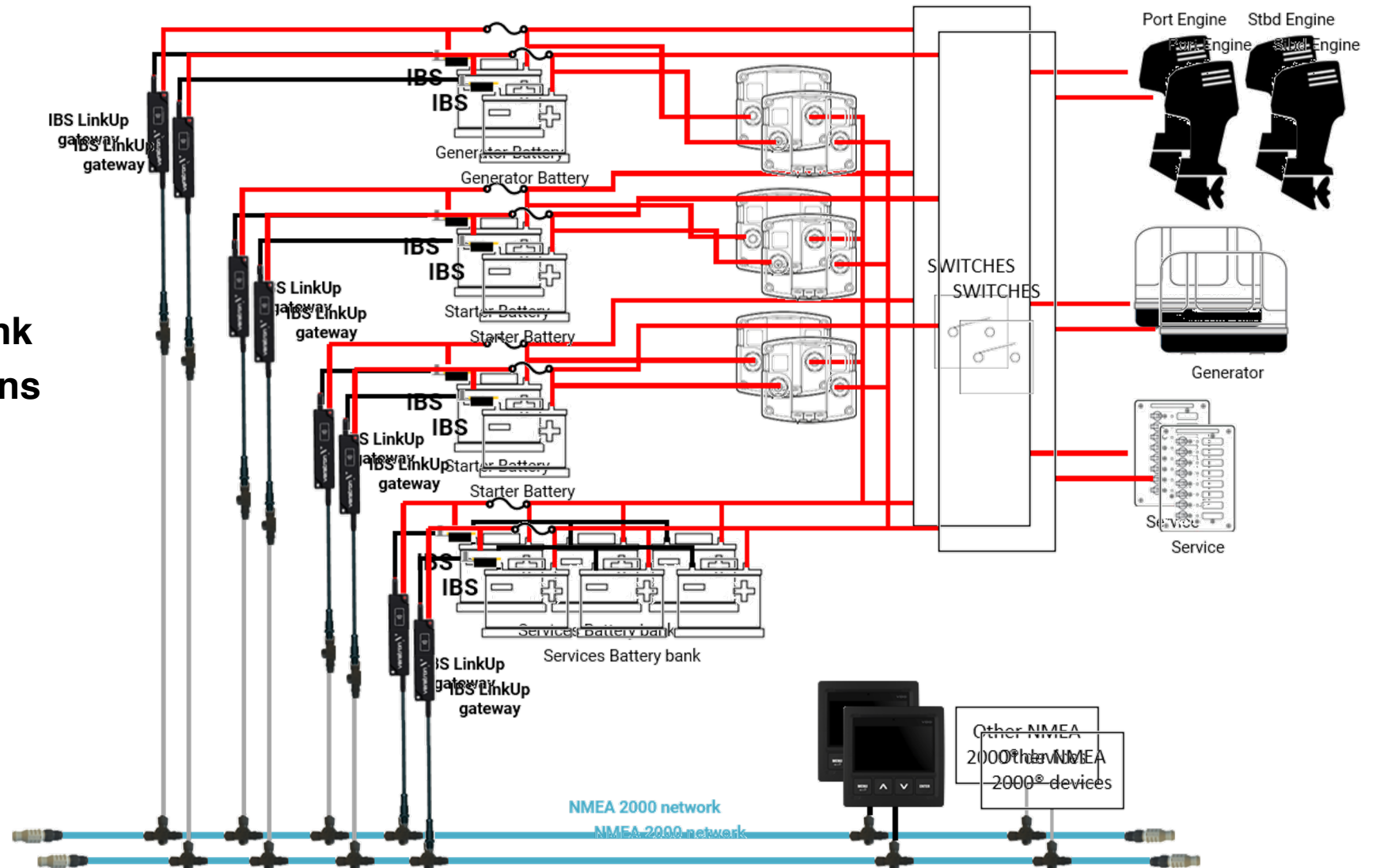
USE CASE

- ▼ Single Engine
- ▼ 1x Starter battery
- ▼ 1x Services battery bank with parallel connections
- ▼ The IBS provides the real-time status of each battery/battery bank



USE CASE

- ▼ Dual Engine
- ▼ Generator
- ▼ 2x starter batteries
- ▼ 1x Generator battery
- ▼ 1x Services battery bank with parallel connections





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