

1. Description;

The Battery Sensor Hub (BSH) provides an analog to digital conversion connection from simple analog sensors for temperature, current (shunt) and voltage measurement of the battery bank. The analog inputs are transformed into the digital format required for the E-MAAX PRO-N regulators.

Connection to the E-MAAX regulator is via a single plug-in connector, with the "sensing" harness connecting to the various sensors.

Battery (load) current sensing is via a shunt (existing or supplied); 2 connection wires provide the output to the BSH.

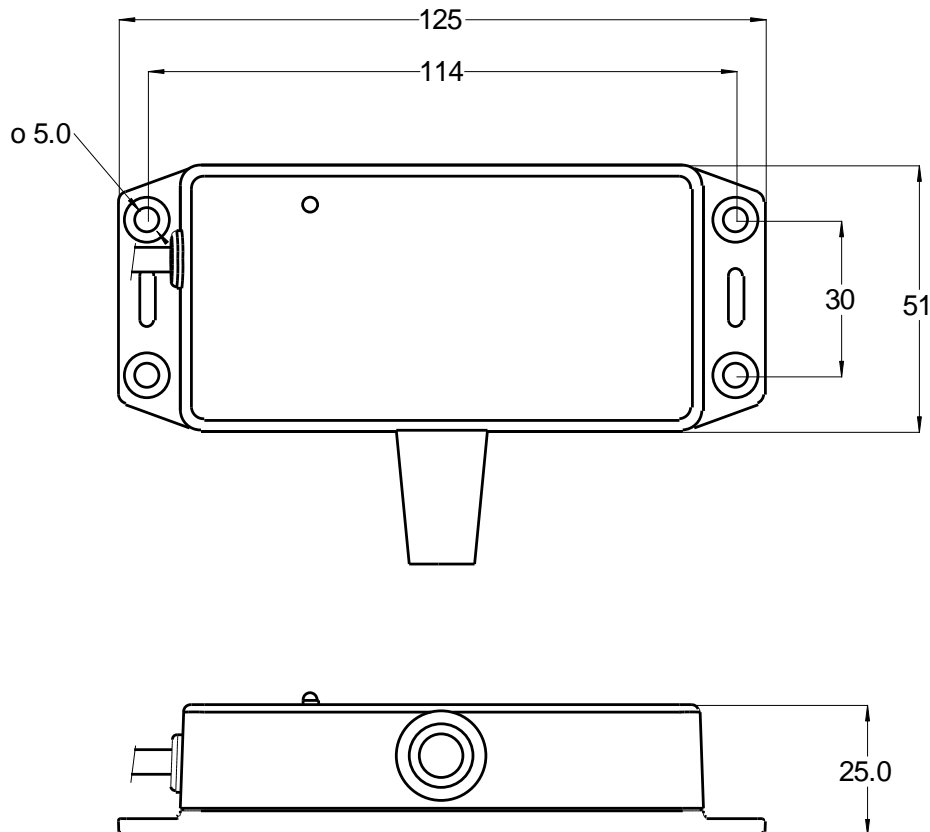
An analog temperature sensor is pre-connected to the BSH sensing harness; it is connected using the 5/16" lug terminal to the



negative battery terminal.

Battery voltage is measured through the red (positive) & black (negative) connection of the harness to the battery.

3. Dimensional outline



All units are millimeters

2. Specifications

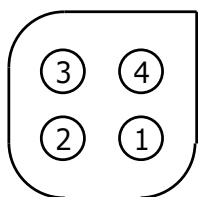
Parameter	Value	Units
Measured Current range*	shunt dependent (+/- 500)	Amp
Current Measurement accuracy*	3	Amp
Measured Voltage range	-5 .. +50	Volt
Voltage Measurement accuracy	0.1	Volt
Measured Battery Temperature range	-20 .. +110	deg Celsius
Battery Temperature Measurement accuracy	2	Celsius deg
Weight	100	grams
Housing material	PVC	-
Operating range	-20 .. +70	deg Celsius
BSH to Regulator cable length	3	m
Operating range	-40 .. +125	deg Celsius
Protection	IP 57	-

*- Depends on the quality of the shunts used and the connections to them

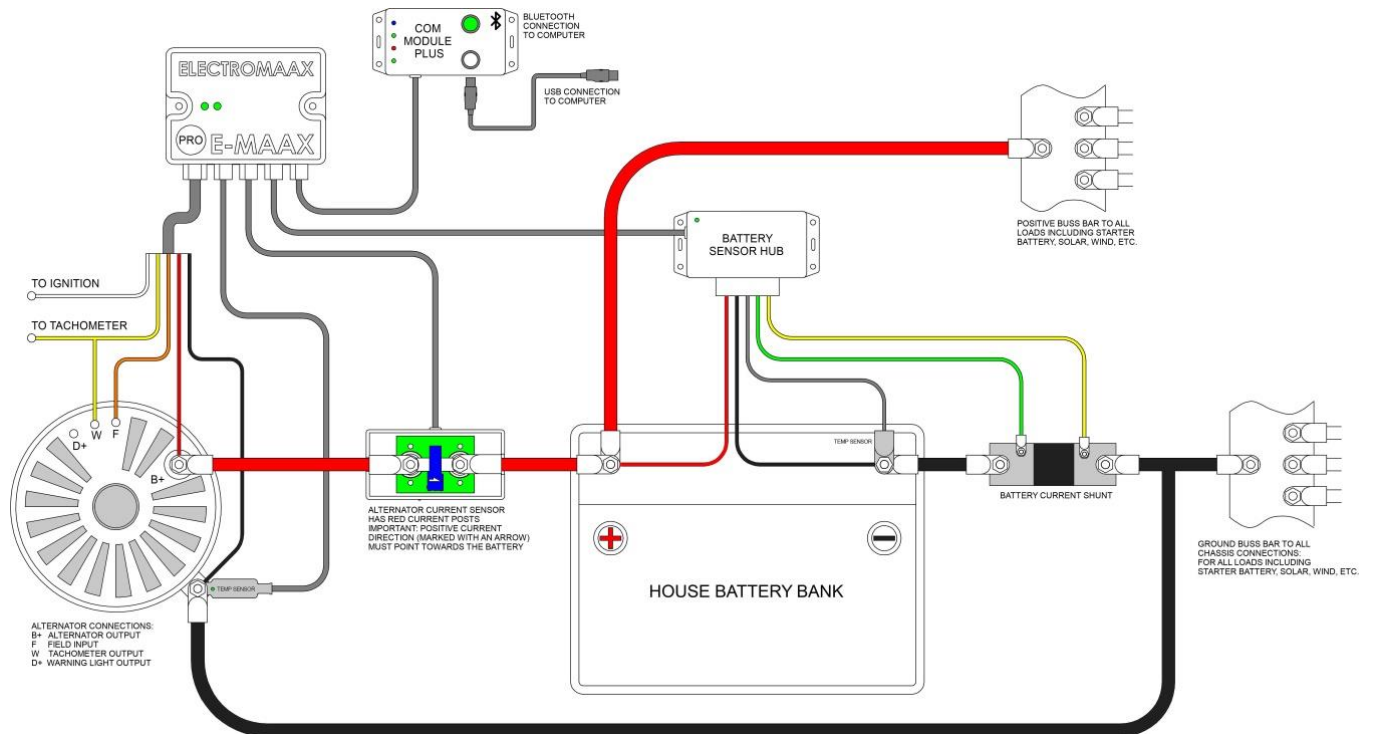
3. Electrical specifications

Parameter	Value	Units
DC voltage supply range	6 .. 40	Volts
Current consumption	0.020	Amps
LED color	Green	-
Visual indication flashing	Power connection -good	
Communications format	RS-485	-
Sensing Harness Wire colors designations	black – battery negative terminal red – battery positive terminal Black / Black white – temperature sensing yellow – shunt – load side green – shunt – battery side	-
Regulator cable connector pin-out	1 - black – battery negative 2 - red – DC supply 3 - white – communication lead "A" 4 - yellow – communication lead "B"	-
Housing material	Plastic, black	-
Sensing Harness Cable length	1.0	m
Operating range	-40 .. +125	deg Celsius
Protection	IP 57	-
Maximum allowable shock	3	G

Regulator connector 4-pin, view from the cable side



Wiring schematic:



Notice

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