

Battery safety warnings

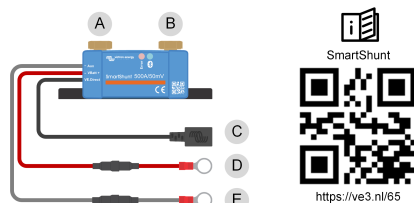


- Working near batteries, including lead-acid and lithium types, is hazardous.
- Lead-acid batteries can emit explosive gases. Do not smoke or create sparks or flames nearby. Ensure adequate ventilation.
- Lithium batteries do not emit gases during normal use, but can deliver very high short-circuit currents and may pose a fire risk if damaged or incorrectly installed.
- Wear eye protection and suitable clothing. Wash hands after working with batteries. If lead-acid electrolyte contacts skin or clothing, wash immediately with soap and water. If it gets into the eyes, rinse with running water for at least 15 minutes and seek medical attention immediately.
- Avoid dropping metal tools onto battery terminals. Remove rings, watches and other metal items before working on a battery. A battery can deliver a short-circuit current high enough to melt metal, causing severe burns.
- Disconnect the negative battery terminal before installation.

1 - Introduction

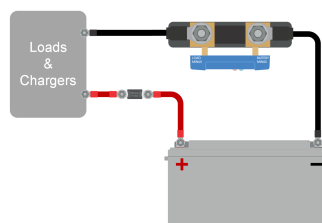
- Familiarize yourself with SmartShunt IP65.
- The full manual is available online. Scan below QR code or navigate to: <https://ve3.nl/65>

#	Connection	Terminal type
A	LOAD MINUS	M10 bolt
B	BATTERY MINUS	M10 bolt
C	VE.Direct (black wire)	VE.Direct plug
D	VBatt+ (red wire)	M10 ring terminal
E	Aux (grey wire)	M10 ring terminal



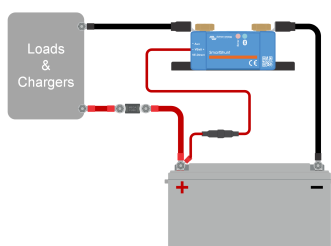
2 - Battery and DC negative

- Connect the negative battery terminal to the SmartShunt IP65 "BATTERY MINUS" terminal (B).
- Connect the negative terminal of the DC electrical system to the SmartShunt IP65 "LOAD MINUS" terminal (A).



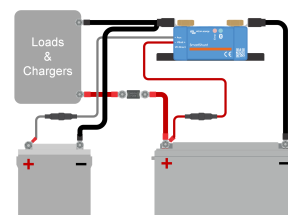
3 - Power

- Connect the red "VBatt+" wire (D) to the positive battery terminal.



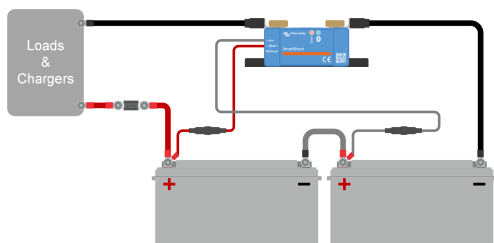
4A - Second battery (option A)

- Connect the grey SmartShunt IP65 "Aux" wire (E) to the positive battery terminal of the second battery.
- Make sure that the negative terminal of the second battery is connected to the "LOAD MINUS" side of the SmartShunt IP65.



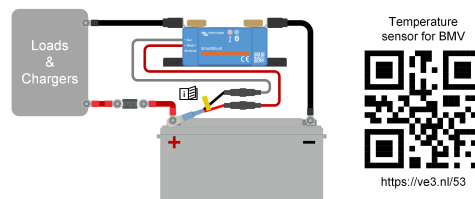
4B - Battery midpoint (option B)

- Connect the grey SmartShunt IP65 "Aux" wire (E) to the battery bank midpoint.



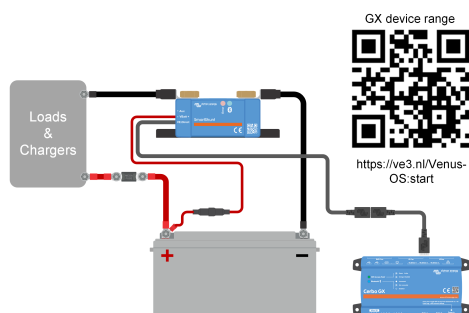
4C - Temperature sensor (option C)

- Use a (not included) "Temperature sensor for BMV". For more info, scan below QR code or navigate to: <https://ve3.nl/53>. For additional instructions consult the SmartShunt IP65 manual.
- Connect the red SmartShunt IP65 "VBatt +" wire (D) to the red wire of the temperature sensor and connect the grey SmartShunt IP65 "Aux" wire (E) to the black wire of the temperature sensor.
- Connect the temperature sensor to the positive terminal of the battery.



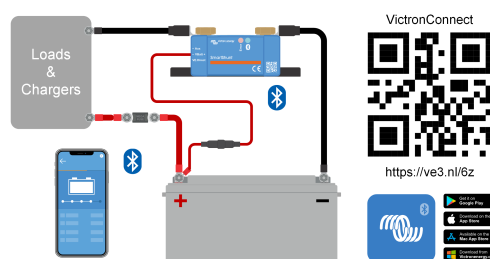
5 - GX device (optional)

- Connect the VE.Direct cable socket (C) to one of the VE.Direct ports on the GX device via a VE.Direct cable ASS03053XXX (not included).
- For an overview of all GX devices scan below QR code or navigate to: <https://ve3.nl/Venus-OS:start>.



6 - VictronConnect app

- Download the VictronConnect app. For more information about the VictronConnect app scan below QR code or navigate to: <https://ve3.nl/6z>.
- Connect with the VictronConnect app to the SmartShunt IP65.



Lithium battery settings

- Set the battery capacity and the functionality of the auxiliary input (if used)
- Set the charged voltage parameter as per the table below.

Nominal battery voltage	Charged voltage setting
12V	13.9V
24V	27.8V
36V	41.7V
48V	55.6V

- Set the charge efficiency to 98%
- Set the Peukert exponent to 1.01

Lead-acid battery settings

- Set the battery capacity and the functionality of the auxiliary input (if used)
- Set the charged voltage parameter as per the table below.

Nominal battery voltage	Charged voltage setting
12V	14.0V
24V	28.0V
36V	42.0V
48V	56.0V

- Set the charge efficiency to 95%
- Set the Peukert exponent to 1.25