Battery monitor

BMV-700 & BMV-702

quick installation guide
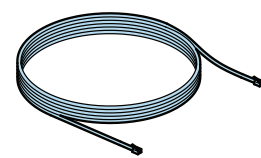
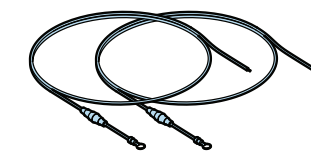**Included**
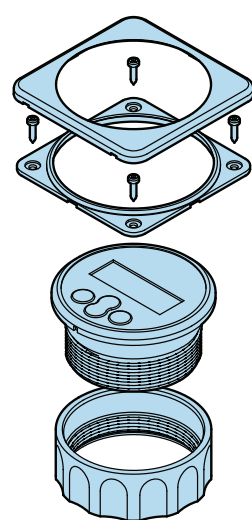
Shunt

UTP cable

Battery monitor
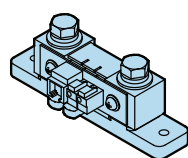
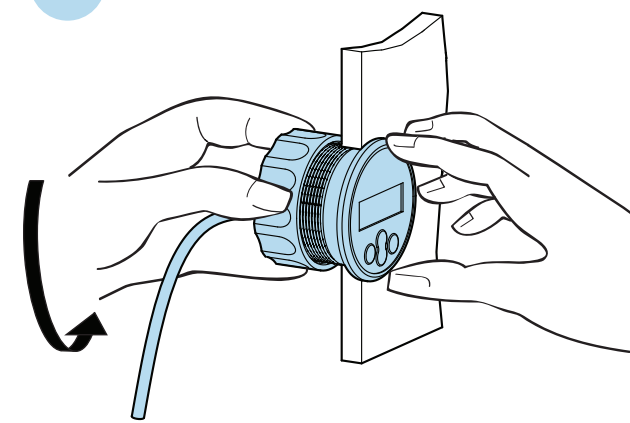Pos. supply cable (x2)

1

Ø 52-53 mm

62.4 mm

52 mm

31 mm
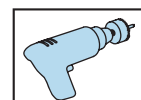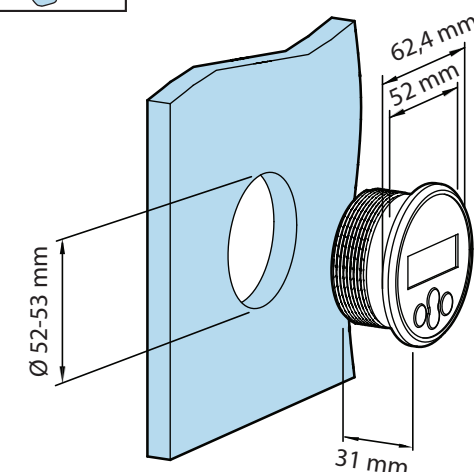
Method A

Method B

2

a or b

a 7 - 18 mm
b 0,5 - 8 mm

3

2

Click!

3

4

5

PZ1
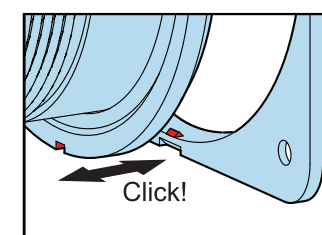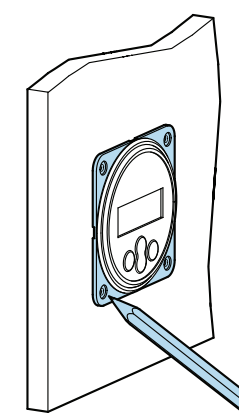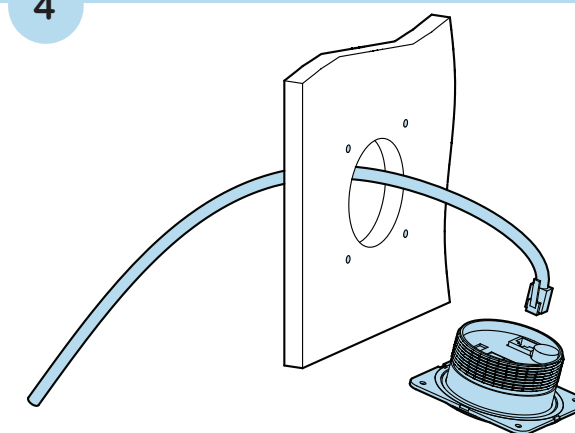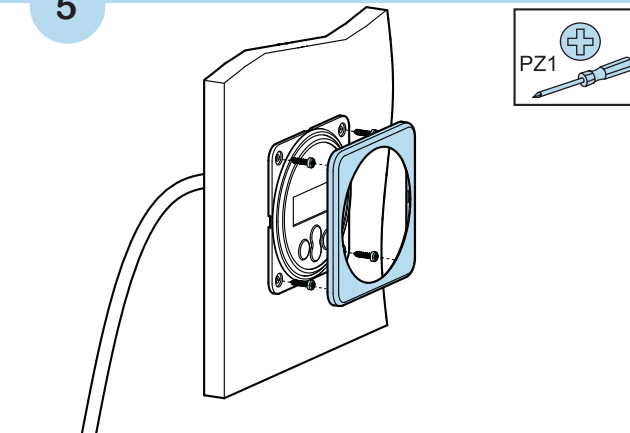
FIRST TIMERS ⓘ

In case of Li-Ion batteries, several settings may have to be changed after the setup wizard is completed. *Please refer to the manual.*

The BMV will automatically adjust itself to the **nominal voltage** of **commonly** used battery systems. *Please refer to the manual.*

WARNING ⚠

Please read this guide carefully to avoid incorrect connections that can cause the battery monitor to malfunction and/or create a fire hazard.

Disconnect the negative pole of the battery before installation.

Battery monitor

Shunt

BMV-702
BATTERY MONITOR

victron energy
BLUE POWER

12.13 V

MAIN

SETUP   +   SELECT
         –

Fig. 1

to battery   to load

UTP   +B2
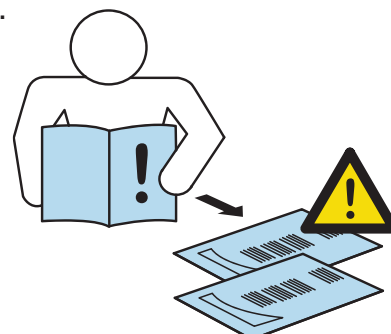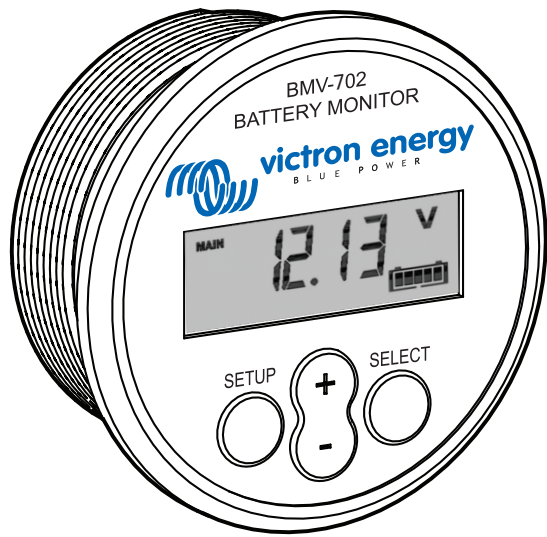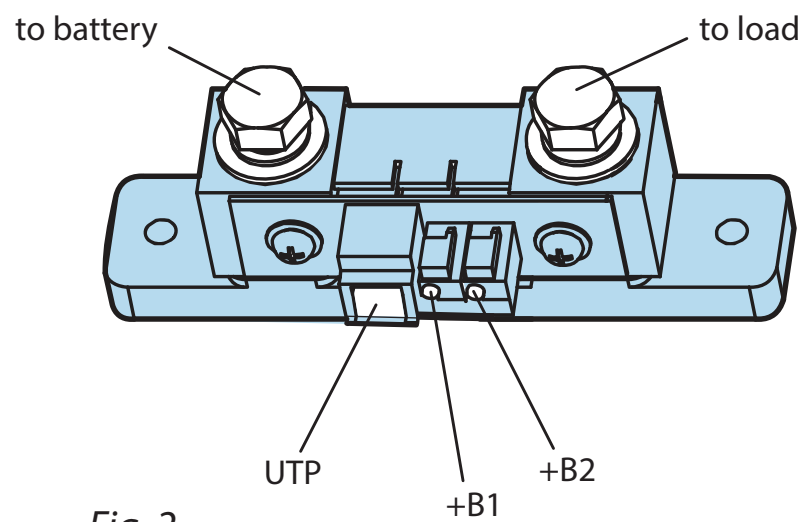   +B1

Fig. 2

Wiring diagrams

⚠ **Connect the negative pole of the battery last!**

BMV-700
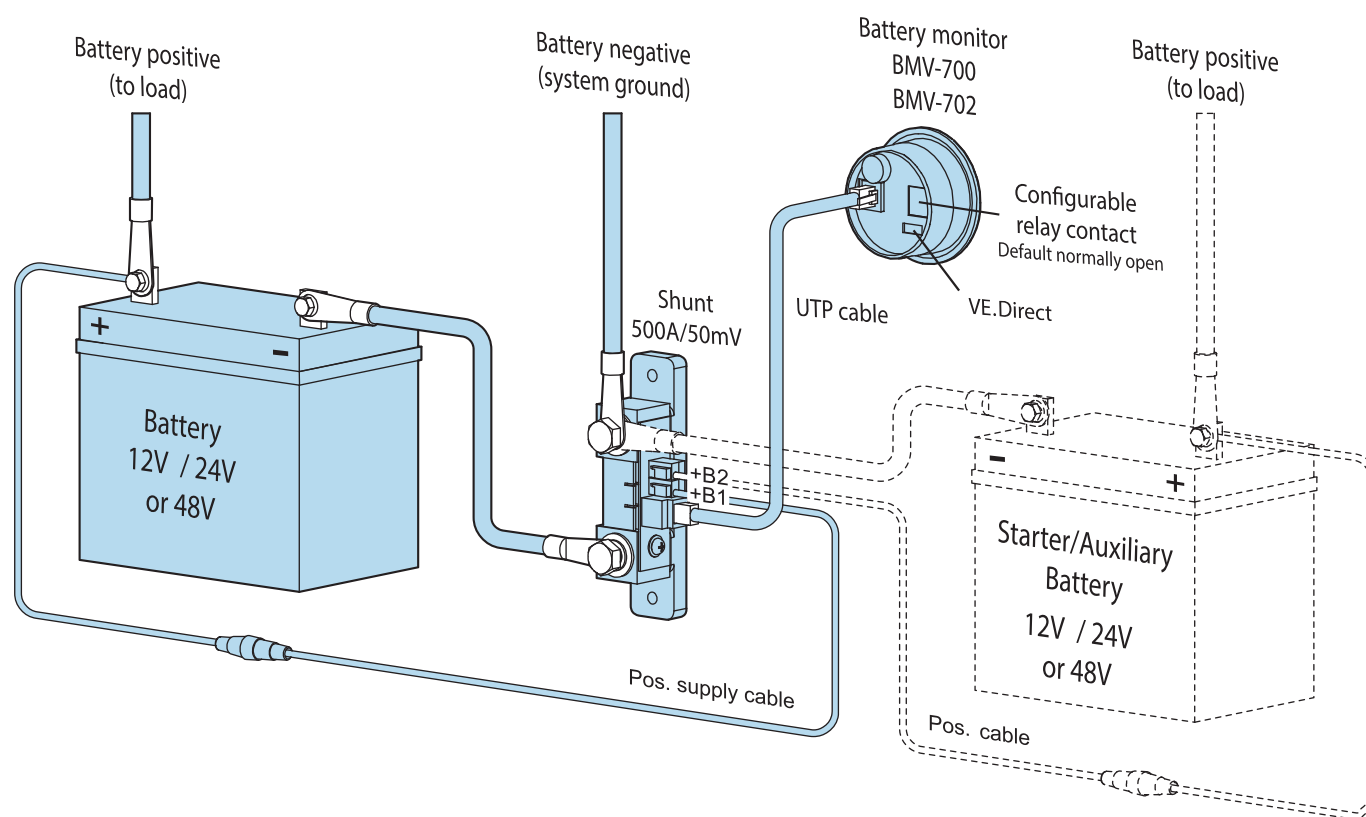**BMV-702** configured for *STARTER/AUXILIARY*-battery monitoring.

Battery positive
(to load)

Battery negative
(system ground)

Battery monitor
BMV-700
BMV-702

Battery positive
(to load)

Configurable
relay contact
Default normally open

Shunt
500A/50mV

UTP cable

VE.Direct

+B2
+B1

Battery
12V / 24V
or 48V

Starter/Auxiliary
Battery
12V / 24V
or 48V

Pos. supply cable

Pos. cable

Fig. 3

BMV-702 configured for battery *TEMPERATURE* monitoring

Battery positive
(to load)

Battery negative
(system ground)

Battery monitor
BMV-702

Temperature sensor
order no: ASS000100000

Configurable relay contact
Default normally open

Shunt
500A/50mV

UTP cable

VE.Direct

+B2
+B1

Battery
12V / 24V
or 48V

V+

Temp. sensor
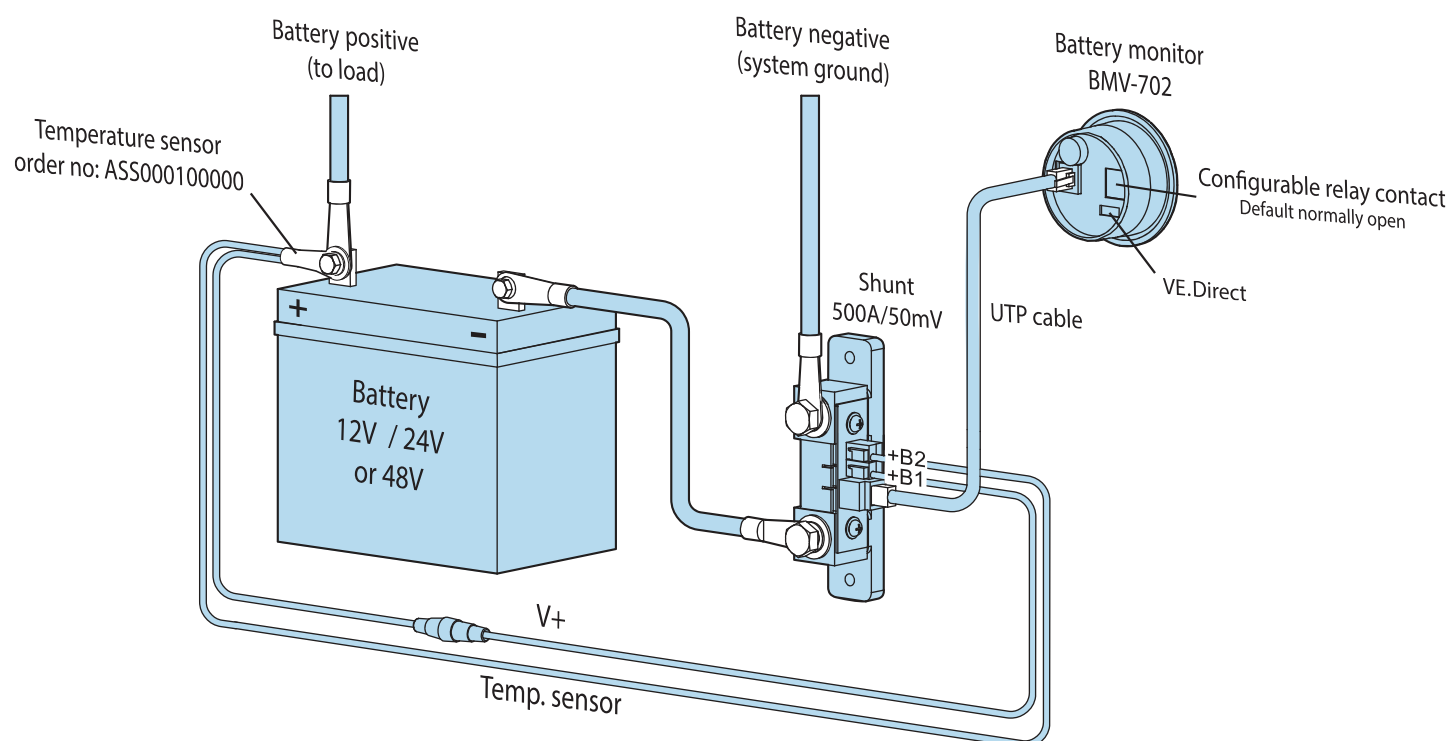
Fig. 4

Connecting multiple batteries *without* midpoint voltage monitoring : 24 V

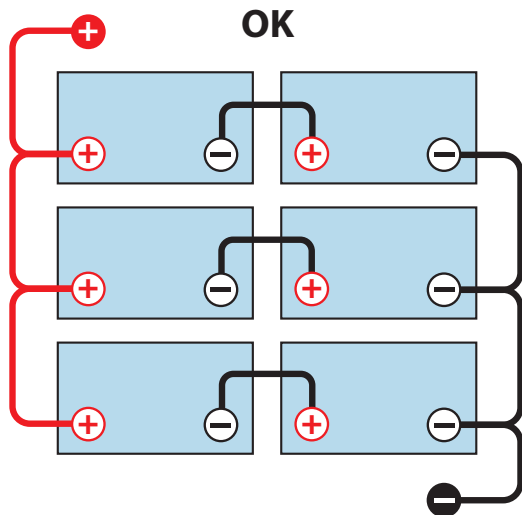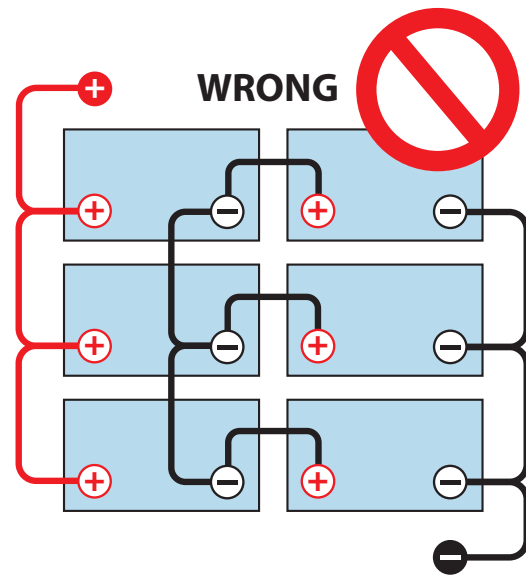**OK**

Fig. 5

WRONG 🚫

Fig. 6

Due to voltage drop over the + and - cables midpoint voltages are not identical

Applying midpoint voltage monitoring : 24 V

⚠️ *Always use busbars when applying midpoint voltage monitoring! Cables to busbars must all have the same length!*
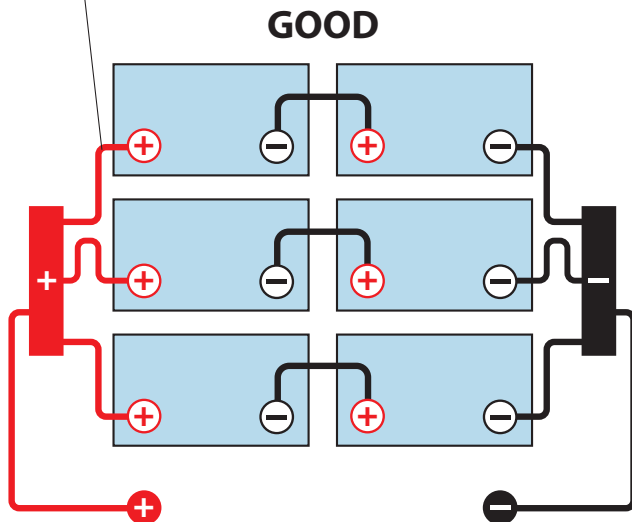
GOOD

This cable should be short. Voltage drop over this cable will distort the midpoint measurement.

+B2

+B1

UTP

Shunt

Fig. 7

BMV 702

Midpoints should not be interconnected: one bad battery can go unnoticed and could damage all other batteries
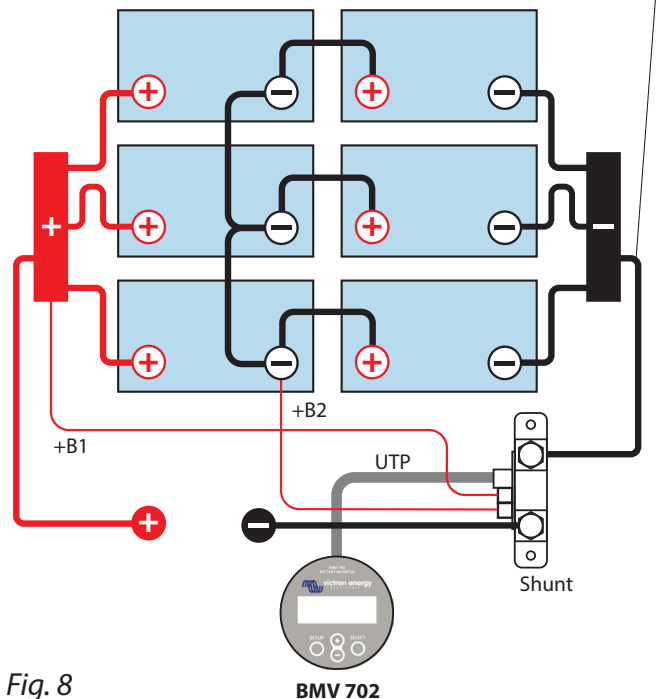
Fig. 8

Midpoints can be interconnected if corrective action is taken in case of an alarm.

In case of one string of 2 batteries +B1 and +B2 can be connected directly to the battery posts.

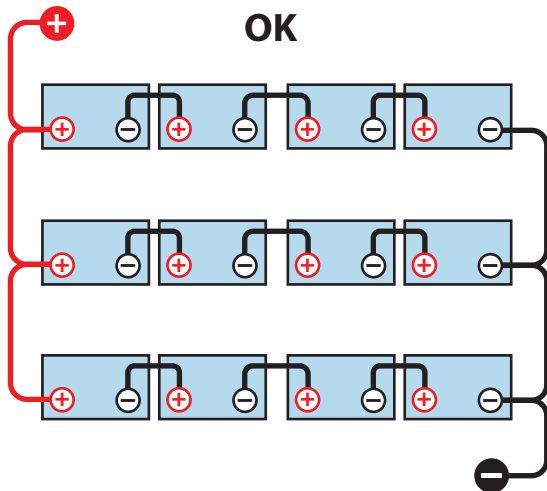# Connecting multiple batteries *without* midpoint voltage monitoring : 48 V

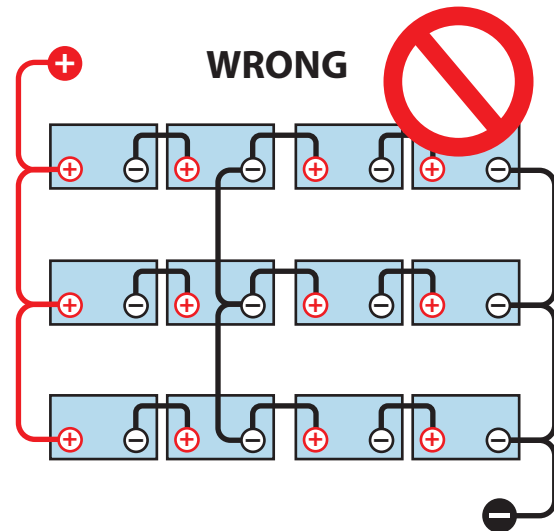**OK**

Fig. 9

WRONG 🚫

Fig. 10

Due to voltage drop over the + and - cables midpoint voltages are not identical

Applying midpoint voltage monitoring : 48 V

⚠️ *Always use busbars when applying midpoint voltage monitoring!*
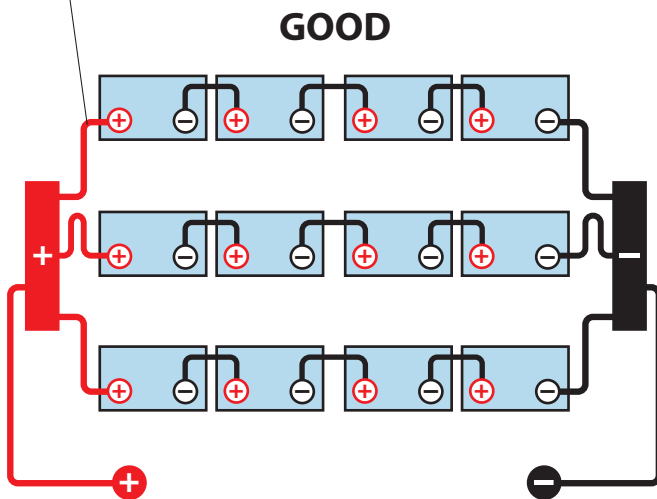*Cables to busbars must all have the same length!*

This cable should be short. Voltage drop over this cable will distort the midpoint measurement.

GOOD

+B2

+B1

UTP

Shunt

BMV 702

Fig. 11

Midpoints should not be interconnected: one bad battery can go unnoticed and could damage all other batteries
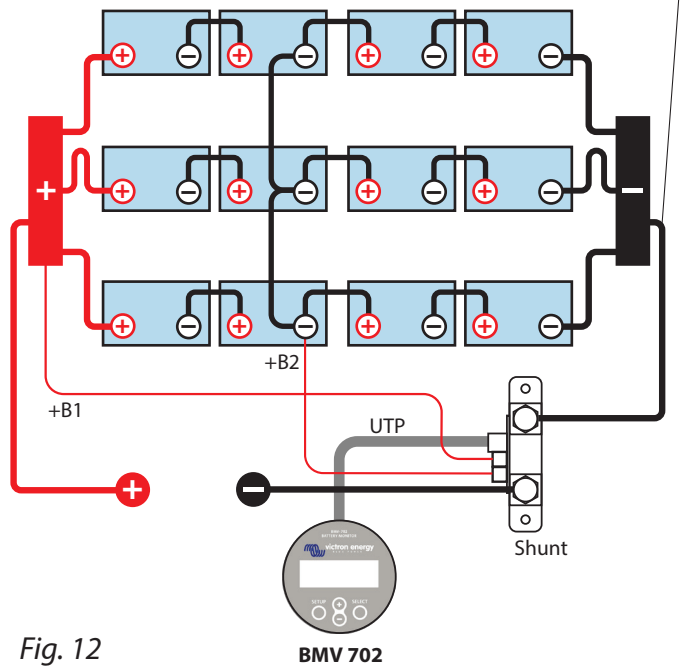
Fig. 12

Midpoints can be interconnected if corrective action is taken in case of an alarm.

In case of one string of 4 batteries +B1 and +B2 can be connected directly to the battery posts.