Battery monitor
BMV-700 & BMV-702

quick installation guide

Included

Battery monitor
Shunt
UTP cable
Pos. supply cable (x2)

Method A

Method B

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.
Connect the negative pole of the battery last!

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

**BMV-702** configured for battery TEMPERATURE monitoring
Connecting multiple batteries *without* midpoint voltage monitoring: 24 V

**OK**

![Correct Wiring Diagram](image1.png)

**WRONG**

![Incorrect Wiring Diagram](image2.png)

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

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Applying midpoint voltage monitoring: 24 V

**GOOD**

![Correct Wiring Diagram with Midpoint Monitoring](image3.png)

**WRONG**

![Incorrect Wiring Diagram with Midpoint Monitoring](image4.png)

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

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

**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 \textit{without} midpoint voltage monitoring : 48 V

\textbf{OK}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{ok.png}
\caption{Fig. 9}
\end{figure}

\textbf{WRONG}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{wrong.png}
\caption{Fig. 10}
\end{figure}

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

\textbf{Applying midpoint voltage monitoring : 48 V}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{good.png}
\caption{Fig. 11}
\end{figure}

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

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{good.png}
\caption{Fig. 12}
\end{figure}

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

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

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.