

Expert Compact

Precision battery monitoring
in compact busbar form factor



Description

Determining the amount of energy available in a battery is a complex task because factors such as battery age, discharge current and temperature all affect its actual capacity. An Expert battery monitor uses high-performance measuring circuits combined with advanced software algorithms to accurately calculate the remaining capacity of your battery.

The Expert Compact is the latest addition to our range of precision battery monitors. By further miniaturizing our measurement and control electronics, we designed the Expert Compact in a clever busbar-style or “smart shunt” form factor. This provides excellent flexibility for integration into any busbar system.

This advanced battery monitor not only displays the true state of charge of your battery system but also includes a wide range of additional features to optimally manage your batteries and control external equipment.

The Expert Compact is compatible with lead-based and lithium batteries (LiFePO₄) and can monitor up to two battery banks.

The voltage sense input for battery bank 2 can also be configured for other functions, such as midpoint voltage measurement, keyswitch input, or backlight control.

The Expert Compact is available in two versions: a 600A model and a 1200A model. It supports input voltages up to 70Vdc, allowing direct monitoring of any lead- or lithium-based battery bank from 12V to 48V.

In addition to a battery temperature sensor input, the Expert Compact features a potential-free alarm relay output. This output can be used to control external equipment whenever a programmable alarm limit is exceeded.

Although the Expert Compact operates perfectly in stand-alone mode after configuration, the integrated QuickLink port provides a wide range of expansion options, such as connecting displays, communication interfaces, the Connect communication hub, and the alarm relay output expander. This port also supports our upcoming miniature “QuickLink Micro BT” Bluetooth interface, enabling monitoring and control via the Dashboard Mobile app.

Installation is quick and simple, requiring only one fused supply wire from the battery positive to the Expert Compact and a single QuickLink cable to connect a display or other accessory.

Mounting options

The Expert Compact is only supplied with a fused supply wire as standard. For proper mounting, our DC Modular product lineup offers ideal solutions: M8 Single Insulated Studs (1 pc of art# 5071160) for the 600A model and M8 Dual Insulated Studs (2 pcs of art# 5072160) for the 1200A model.

The Expert Compact features connection bolt spacing similar to an ANL fuse, allowing the 600A model to be mounted on a DCM M8 ANL fuse holder (art# 5073500 and 5073550).



Expert Compact 600A + Single Studs



Expert Compact 1200A + Dual Studs

Features

- Read your battery bank like a fuel gauge
- Delivers essential insights into the status of your battery bank
- Simple installer friendly ‘plug and play’ installation
- Available parameters for readout: voltage, current, consumed amp-hours, remaining battery capacity, time remaining, and power
- Extensive alarm programming capabilities
- History event storage
- Programmable alarm relay
- Wide range of communication options

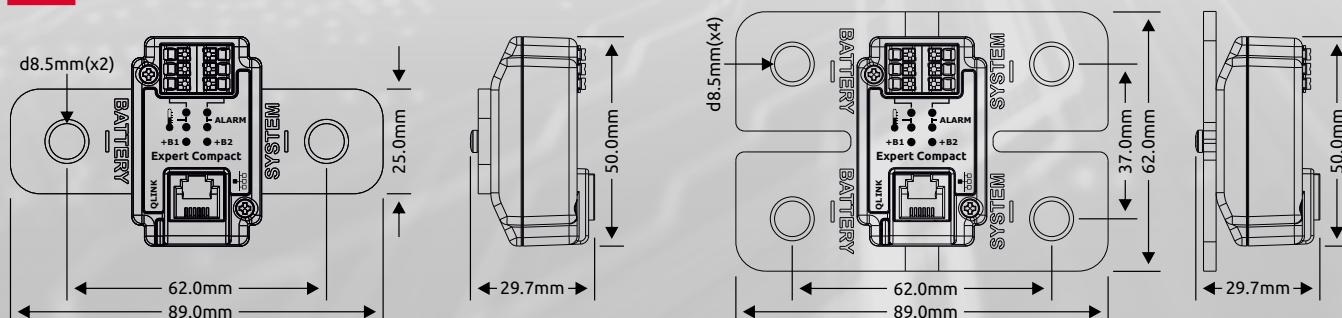
Global technical specifications

Parameter	Expert Compact 600A	Expert Compact 1200A
Supply voltage range	7..70Vdc	
Supply current (@ 12V/24V/48V)	8mA / 5mA / 4mA	
Input current range	-600..+600A ¹⁾	-1200..+1200A ¹⁾
Battery capacity range	10..10000Ah	
Temperature range	-20..+60°C (operating) / -30..+70°C (storage)	
Readout resolutions (Volts / Amps / Ah SoC / Time rem. / Power / Temperature)	$\pm 0.01\text{Vdc}$ / $\pm 0.01\text{A}$ - 1A (variable) / $\pm 0.01\text{Ah}$ - 10Ah (variable) / $\pm 1\%$ SoC $\pm 1\text{ min}$ - 1 hr (variable) / $\pm 0.01\text{W}$ - 1kW (variable) / $\pm 0.5^\circ\text{C}$	
Measurement accuracy	voltage $\pm 0.3\%$ / current $\pm 0.4\%$	
Protection class	IP30	
Dimensions (L x W x D)	89.0 x 50.0 x 29.7mm	89.0 x 62.0 x 29.7mm

1) Maximum rating for 20 minutes. Continuous ratings are respectively $\pm 500\text{A}$ and $\pm 1000\text{A}$

Note: the given specifications are subject to change without notice

Dimensions



Basic application diagram

