

TBS battery monitor differences explained

Currently TBS offers three different battery monitor models. These are:

- Expert Lite
- Expert Pro
- Expert Modular

Each model has specific properties, which enables us to offer a proper solution for a wide range of applications.

In general, our entry model Expert Lite is focussed on a simple readout by utilizing most of the display area to show a large battery state of charge bar graph. Although it still offers great accuracy, the feature set is more limited compared to the higher end Expert Pro and Expert Modular. This makes the Expert Lite the ideal instrument for less technical end-users and relatively simple battery installations.

The Expert Pro is physically identical to the Expert Lite, but offers a larger amount of features and a more detailed display. Most of the additional features are very useful when installing the battery monitor in more advanced battery systems. Programming voltage or state of charge alarms more extensively, recalling certain history events or the capability to extend the input voltage range with an optional voltage prescaler, are some of the additional features offered by the Expert Pro.

The Expert Modular is our latest battery monitor product and offers an even greater feature list than the Expert Pro. It also follows a different physical approach, by making the shunt 'active' and controlling the external display unit through a digital link. This results in a higher measurement accuracy, a much faster installation time and a perfect integration with our DC Modular lineup of busbars and fuseholders. The Expert Modular can monitor up to three battery banks and supports 12V, 24V and 48V batteries out of the box. Up to four different alarms can be programmed and are able to work independently.

In the table on the next we have listed the most important specification and feature differences between our three battery monitor models.

Specification / Feature	 Expert Lite	 Expert Pro	 Expert Modular
Supported battery voltages	12V, 24V	12V, 24V (175Vmax with external prescaler)	12V, 24V, 48V
Number of battery inputs	2	2	3
Max. current range with included shunt	+/-500A	+/-500A	+/-600A
Battery capacity range	20..999Ah	20..9990Ah	10..10000Ah
Shunt technology	Passive	Passive	Active
Display unit installation depth	72mm	72mm	36mm
Effective LCD viewing area	7.5cm ²	7.5cm ²	11.2cm ²
Internal alarm relay capacity	1A/30Vdc	1A/30Vdc	5A/30Vdc (1A/70Vdc)
Available parameters to readout	Volt, Amp, Amphour, SoC(%)	Volt, Amp, Amphour, SoC(%), Time remaining, Temperature	Volt, Amp, Amphour, SoC(%), Time remaining, Temperature, Power, Midpoint voltage, Maintenance hours
Advanced Peukert compensated battery modelling	Yes	Yes	Yes
Lithium compatible	Yes	Yes	Yes
State of Charge bar	Yes	Yes	Yes
Temperature sensor input	No	Yes	Yes
Optional communication interface	No	Yes	Yes
Historical event storage	No	Yes	Yes
Connection cables included	No	No	Yes
Simultaneous second parameter readout	No	No	Yes
Audible alarm	No	No	Yes
Operation possible without display unit	No	No	Yes
Operation possible with two connected display units	No	No	Yes
Shunt compatible with DC Modular grid size	No	No	Yes
Setup wizard	No	No	Yes
Readable alarm and setup messages (numerical display)	No	No	Yes