



## ReadyShunt™

The integrated solution for optimizing the most popular battery chemistries



- Can be added to parent/host component at any time
- Integrated battery metering solution
- System current measurements
- Energy production & consumption metrics

Morningstar's ReadyShunt is part of the ReadyBlock suite of add-on-- yet built-in-- functionality available in Morningstar "host" components featuring the ReadyRail expansion system. "Add-on" in the sense that ReadyBlocks can be integrated into a system at any time, either on inception or later as needs arise. "Built-in" because once added, ReadyBlocks become part of the host component, seamlessly integrated into both its hardware and software.

No additional configuration or connections are required. ReadyBlocks automatically activate, are recognized, and are ready to go immediately after being snapped into a ReadyRail.

### Key Features and Benefits

- Provides a comprehensive and integrated battery metering solution for lead-acid and other commonly used battery types—and with that, visibility on all critical battery information including SOC (state-of-charge) and other key metrics essential to battery health
- Compatible with LiveView monitoring built-into GenStar MPPT and other Morningstar charging platforms. Current measurement data is automatically integrated into the LiveView dashboard for data logging, without relying on inefficient third-party metering add-ons requiring different interfaces and special configuration. No additional software required—ReadyShunt does it all
- Highly configurable, and able to accommodate a wide range of shunt sizes with both 50mV and 100mV scaling options. Compatible with Morningstar shunts along with others
- Enables battery charging with system-wide maximum current when multiple charging sources are present—the battery charge rate will not be exceeded under any conditions
- Makes automated actions based on accurate current measurements possible, with shunt data available for use in logic configuration to aid decision making
- Available both in a kit with 50mv/500A shunt, or as a block only



ReadyShunt installed in a GenStar MPPT charger

## ReadyShunt Features and Specification Table

<b>Versions</b>	RB-SHUNT-KIT-500*, RB-SHUNT**
<b>Add-on Items</b>	SHUNT-500-50, SHUNT-100-50, SHUNT-50-50
<b>LED Indications Block Status LED</b>	<b>Off:</b> Block is not powered / could not start <b>Green:</b> Normal operation <b>RED:</b> Block fault condition
<b>Number of Shunt Inputs</b>	2
<b>Shunt A Operation &amp; Shunt B Operation LEDs</b>	<b>Off:</b> Shunt input is off, configured as "None" <b>Green:</b> Shunt is connected, OK <b>RED:</b> Shunt is open circuit / not connected
<b>Weight</b>	~2.5 Ounces (70 Grams)
<b>Dimensions</b>	3.96 x 0.874 x 2.42 in (100.5 x 22.2 x 61.5 mm)
<b>Electrical</b>	
<b>Shunt Scaling Options</b>	50 mV / 100 mV
<b>Measurement Accuracy<sup>3</sup></b>	< 0.4%
<b>Self Consumption</b>	< 0.8W
<b>Shunt Location<sup>1</sup></b>	Positive or Negative wiring
<b>Maximum Potential b/w Shunts<sup>2</sup></b>	1.5V
<b>Current Measurement Options:</b>	Net Battery, Charging Source, Load, Passive Monitoring Real-time current (Amps) Battery SOC (%) Positive/Negative/Net

<b>Protections</b>	<ul style="list-style-type: none"> <li>Detects a broken or missing shunt signal wire</li> <li>Self-diagnosing and reporting over Blockbus and host device LED</li> </ul>
<b>Mechanical</b>	
<b>Mounting</b>	35 mm DIN rail / ReadyRail
<b>Enclosure Rating</b>	IP 20; Type 1; Indoor
<b>Weight</b>	~2.5 Ounces (70 Grams)
<b>Environmental</b>	
<b>Operating Temperature</b>	-40°C to +60°C
<b>Storage Temperature</b>	-40°C to +60°C
<b>Altitude</b>	3000 Meters
<b>Humidity</b>	100% non-condensing
<b>Shunt Specs (RB-SHUNT-500 Version Only)</b>	
<b>Shunt Rating</b>	500A
<b>Shunt Scaling</b>	50mV
<b>Shunt Accuracy</b>	+/- 0.25%
<b>Shunt Power Conductor Terminal Bolts</b>	3/8 - 16
<b>Shunt Sense Terminal Screws</b>	M4

\* **ReadyShunt Block Kit:** Includes a single 500A 50mV Shunt. A snap-in ReadyBlock enabling complete intelligent monitoring, battery or external current monitoring including key metrics energy in/out (Amp hours), current measurement for system sources, loads and more

\*\* **ReadyShunt Block:** Shunt sold separately. A snap-in ReadyBlock enabling complete intelligent monitoring and battery or external current monitoring including key metrics energy in/out (Amp hours), current measurement for system sources and loads, and more

### Footnotes:

- Both shunts must be installed in the same leg (positive or negative). To prevent a loss of accuracy, the potential difference in the wiring between the two shunts should be less than 300mV. This limitation does not apply to shunts wired to separate ReadyShunts
- To prevent damage to the ReadyShunt, limit the potential difference between the two shunts to less than 1.5V. The shunts should be installed as close together as possible using larger wires as needed to minimize voltage drop. This limitation does not apply to shunts wired to separate ReadyShunts
- Accuracy at full-scale current. If two shunts are connected, accuracy will decrease if there is greater than 300mV potential difference between shunts

