

### Integrated DC Charging Solutions For Recreational Vehicle Applications

- Dedicated 2<sup>nd</sup> Alternator Charging Systems
- Ideal for Class B/C RVs with Lithium Banks
- Up to 160A at Idle
- Battery Chemistry-Specific Regulation
- Integrates with SG240/RV-C Battery Monitoring System
- Specific Sprinter, Transit and ProMaster Designs



**New XT-Series Charging Systems** from Balmar bring together the latest innovations in alternator design with Balmar's proven regulation technology to deliver incredible charging power for high-capacity AGM and Lithium battery banks. As an integral part of the energy storage systems required to facilitate dry camping, Balmar can dramatically reduce charge times for high-performance battery banks.



**Mercedes Sprinter**



**Ford Transit**



**Dodge ProMaster**

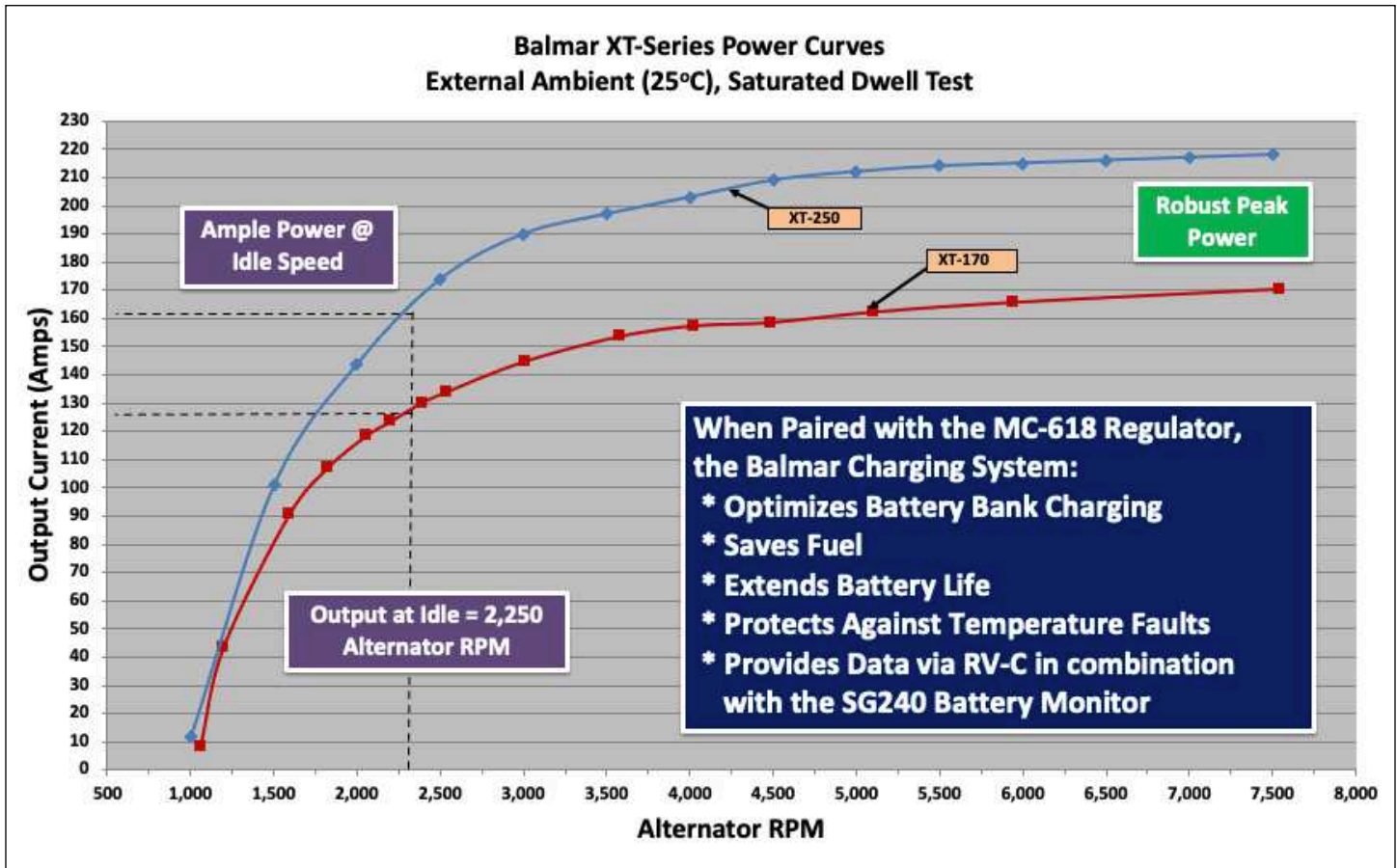


Chassis	XT-Series Output	Power Take Off	Charging Program	Charging Part Number	Kit Contents <sup>(1)(2)</sup>
Ford Transit	170 A	5.2 HP	LiFePO <sub>4</sub>	XT-EB-170-K4-KIT	XT-Series Alternator, MC-618 External Regulator, Regulator Harness, Alternator & Battery Temperature Sensors
	250 A	6.6 HP		XT-EB-250-K4-KIT	
Mercedes Sprinter	170 A	5.2 HP		XT-MS-170-K6-KIT	
	250 A	6.6 HP		XT-MS-250-K6-KIT	
Dodge ProMaster	170 A	5.2 HP		XT-PM-170-K6-KIT	
	250 A	6.6 HP		XT-PM-250-K6-KIT	

<sup>(1)</sup> The Transit and Sprinter Kits are configured to be mounted with the factory-supplied 2nd alternator bracket.

<sup>(2)</sup> The ProMaster Kits include a custom designed 2nd alternator bracket. Contact Balmar Technical Support for more details.

**XT-Series Alternator Performance**



Balmar delivers both a multi-stage charging profile and high power at idle speed. No more need to rev the engine or drive to charge the battery bank. Our temperature protection algorithms preclude charging of lithium banks below 0°C. At high alternator temperatures, we dynamically adjust the field current to protect against alternator overheating.

**XT-Series Alternator Specifications**

<b>Alternator Style:</b> Small Case, Externally Regulated	<b>2nd Alternator Mounting Schemes:</b> Sprinter & Transit: Uses OEM-Supplied Mounting Brackets ProMaster: Aftermarket Supplied Bracket
<b>Regulation:</b> External via MC-618, P-Type, Patented Smart Ready <sup>®</sup> Equipped	
<b>Peak Power:</b> XT-170:225A (2.7kW), XT-250:300A (3.6kW)	
<b>Cooling:</b> Dual Internal Fans	<b>Positive Output:</b> Threaded Stud, M8 x 1.25
<b>Bearings:</b> Sealed, Motor Quality Bearings, Heavy Duty Radial (front & rear). 18,000 RPM Continuous Rating	<b>Grounding:</b> Case Ground, Auxiliary Threaded Stud Stud Dimensions: M6 x 1.00"
<b>Case Construction:</b> Ventilated Cast Aluminum Finish: Red Power Coat or Black E-Coat	<b>Diodes +/-:</b> 6 Positive, 6 Negative; 50A Rated, 24V Avalanche
<b>Mounting Foot Bore:</b> XT-Series: 2x 10mm (3/8") <b>Alternator Weights:</b> 170A: 14.5 lbs, 250A: 15.5 lbs	<b>Low RPM Cut-In:</b> 170A: 1,125 rpm, 250A: 1,350 rpm <b>Max Alternator RPM:</b> 18,000 rpm
<b>Ignition Protection Ratings:</b> USCG Title 33, SAE J1171, CE, ISO 8846	<b>Normal Operating Temperature:</b> 180°F / 82°C <b>Max Operating Temperature:</b> 225°F / 108°C

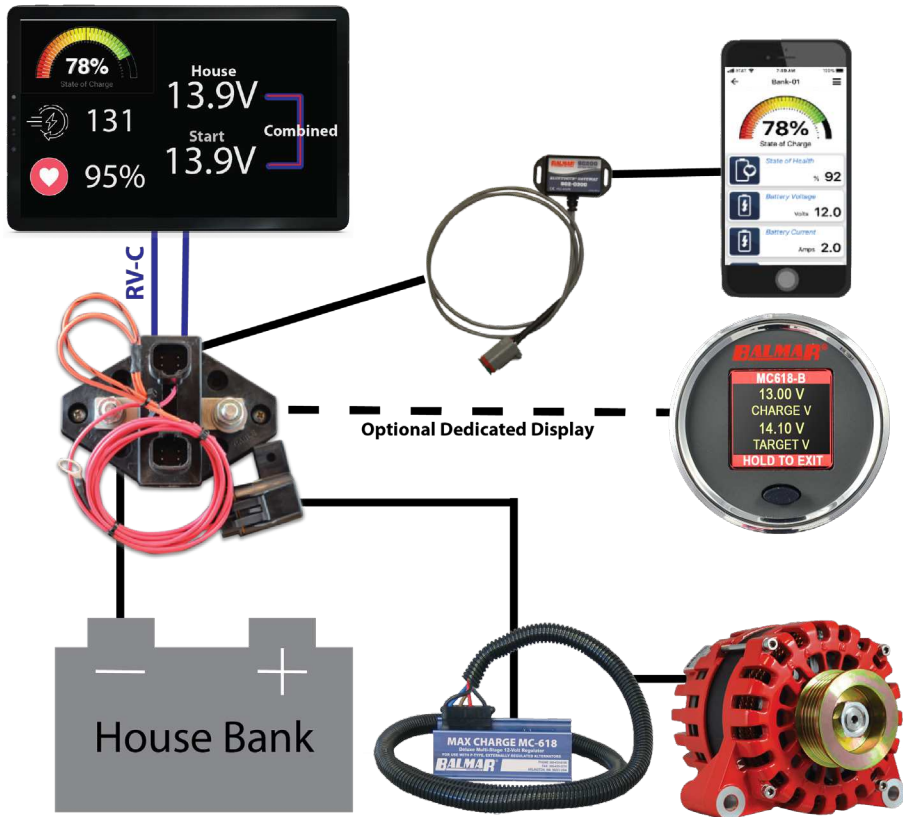
## Battery Monitoring via the SG200 Balmar's Next Generation Monitor

- **Learns & Displays All Critical Battery Parameters**
  - State of Charge (SoC%)
  - State of Health (SoH%)
  - Current Flow, Voltage, Time Remaining
  - History, Faults & Alerts
- **Support for All Common Battery Chemistries & Voltages**
  - Including Lead Acid, Lithium (LiFePO<sub>4</sub>), Standard AGM TPPL AGM, Carbon Foam AGM and GEL Batteries
  - Supports 12V-48V Battery Banks
- **Superior, Self-Calibrating Accuracy**
  - Typically 97% Accurate Upon Learning Batteries
  - Auto-Calibrating
  - Does not Lose Accuracy with Age
- **CANbus Communications**
  - RV-C Capable – Connect to an Existing Multi-Function Display
  - Integrate with the MC-618 Voltage Regulator to View Real-Time DC Charging Information
  - Optional Dedicated 2" Color Display
- **Optional Smartphone App/Bluetooth Gateway**
  - Free iOS and Android Apps
  - View All Parameters on Your Phone
  - Download Free Product Updates
  - Program/Adjust the MC-618 Regulator



**Balmar's Revolutionary State of Health (SoH%) Capability:** All batteries age, diminishing in capacity over time. The SG200 accounts for this and other aging factors to determine State of Health as a percentage of the battery's original capacity. SG200 also ensures State of Charge (SoC%) is based on the actual, aged capacity of the batteries. Accurate information enables owners to confidently manage their battery use, reducing the chances of low or dead battery surprises and associated battery warranty claims.

Part Number	Description	Explanation / Includes
SG200	Battery Monitor Kit, 12V-48V	Standard Unit for Initial Purchase: Includes Color Display, SmartShunt, SmartLink™ Com Cable
SG205		Includes SmartShunt & Bluetooth Gateway Only (No Color Display)
SG240		RV-C CANbus Unit: Includes CANbus SmartShunt Only
SG2-0100	SmartShunt, SG200, 350A, 12V-48V	Add a SmartShunt for Additional Bank: Includes SmartShunt and SmartLink™ Com Cable
SG2-0200	Color Display, SG200, 2 1/16"	Add a Color Display to an existing SmartLink™ Network
SG2-0300	Gateway, SG200, Bluetooth®	Optional 39" Bluetooth® Gateway for Smartphone App
SG2-0400	Com Cable, SG200, 10m	Optional SmartLink™ Com Cable (10 meter) for Extensions and MC-618 Regulator Connection
SG2-0402	Mounting Plate, SG200	Mounting Adapter from SmartGauge™ to SG200 Display
SG2-0403	Com Cable, SG200, 5m	Optional SmartLink™ Com Cable (5 meter) for Extensions and MC-618 Regulator Connection
SG2-0404	Com Cable, SG200 & MC-618	Optional SmartLink™ Com Cable for MC-618 Regulator Connection
SG2-0405	Com Cable, SG240, RV-C M12, 12"	Com Cable connecting to an RV-C CANbus Network via an M12 DeviceNet Connector
SG2-0406	Com Cable, SG240, RV-C Molex, 12"	Com Cable connecting to an RV-C CANbus Network via a Molex Connector



- Monitor battery and alternator performance via the SmartLink™ Network.
- Configure your own DC charging and battery monitoring network!
- Add one or more dedicated 2" Color Displays for viewing data in multiple locations.
- Alternator, regulator and battery information can be displayed anywhere on the Smartlink™ Network.
- Firmware upgrades available via downloads through the Smartphone App and Bluetooth® Gateway.
- RV-C communications from the SmartShunt to any Multi-Function Display. Add alternator and battery information to an existing RV-C Network.

### SG200 Specifications

<b>Standard Configuration:</b>	1 Bank per SmartShunt Device 2 Start/Auxiliary Voltage Sense Lines (Up to 32 devices including Displays and SmartShunts can be added to a single network.)	<b>Display Values:</b>	State of Charge (SoC%) State of Health (SoH%) Voltage (V) Charge/Discharge Current (A) Time Remaining (Hrs) History, Faults & Alerts (Consult User Manual)
<b>Supply Voltage Range:</b>	8V - 60V DC	<b>Max Ah Capacity:</b>	1310 Ah
<b>Average Supply Current:</b>	Display On: 20 mA @12V Sleep Mode: 10 mA @12V	<b>Communications Cable:</b>	4 wire, 22 AWG, Shielded 4 pin Deutsch DT Style
<b>SmartShunt Operating Temperature:</b>	-40°C - +85°C (-40°F - +185°F)	<b>Grounding:</b>	Negative Battery Connection
<b>SmartShunt Max Current:</b>	600A Instantaneous (10 minutes @ ambient) 350A Continuous (For Higher Currents Consult User Manual)	<b>SmartShunt Dimensions:</b>	Length: 4.87" (123.7 mm) Width: 3.34" (84.8 mm) Height: 2.01" (50.9 mm)
<b>Weight:</b>	SmartShunt: 0.62lbs (0.28kg) Color Display: 0.16lbs (0.07kg)	<b>Color Display Dimensions:</b>	Bezel Diameter: 2.37" (60 mm) Base Diameter: 2.05" (52 mm) Depth with Cable Attached: 2.75" (70 mm)
<b>Standards Compliance:</b>	CE EMC Directive 2014/30/EU RoHS 2 Directive 2011/65/EU	<b>Protection Rating:</b>	IP65 (Display), IP67 (SmartShunt)



Contact Balmar at the coordinates below for more information about our products. Balmar and CDI Electronics are sister companies serving Marine, RV and Industrial markets.