

Integrated DC Charging Solutions For Recreational Vehicle Applications

- Dedicated 2nd Alternator Charging System
- Ideal for Class B/C RVs with AGM or Lithium Banks
- 170A in a Small Case Package, Up to 110A at Idle
- Battery Chemistry-Specific Regulation
- Integrates with SG200/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



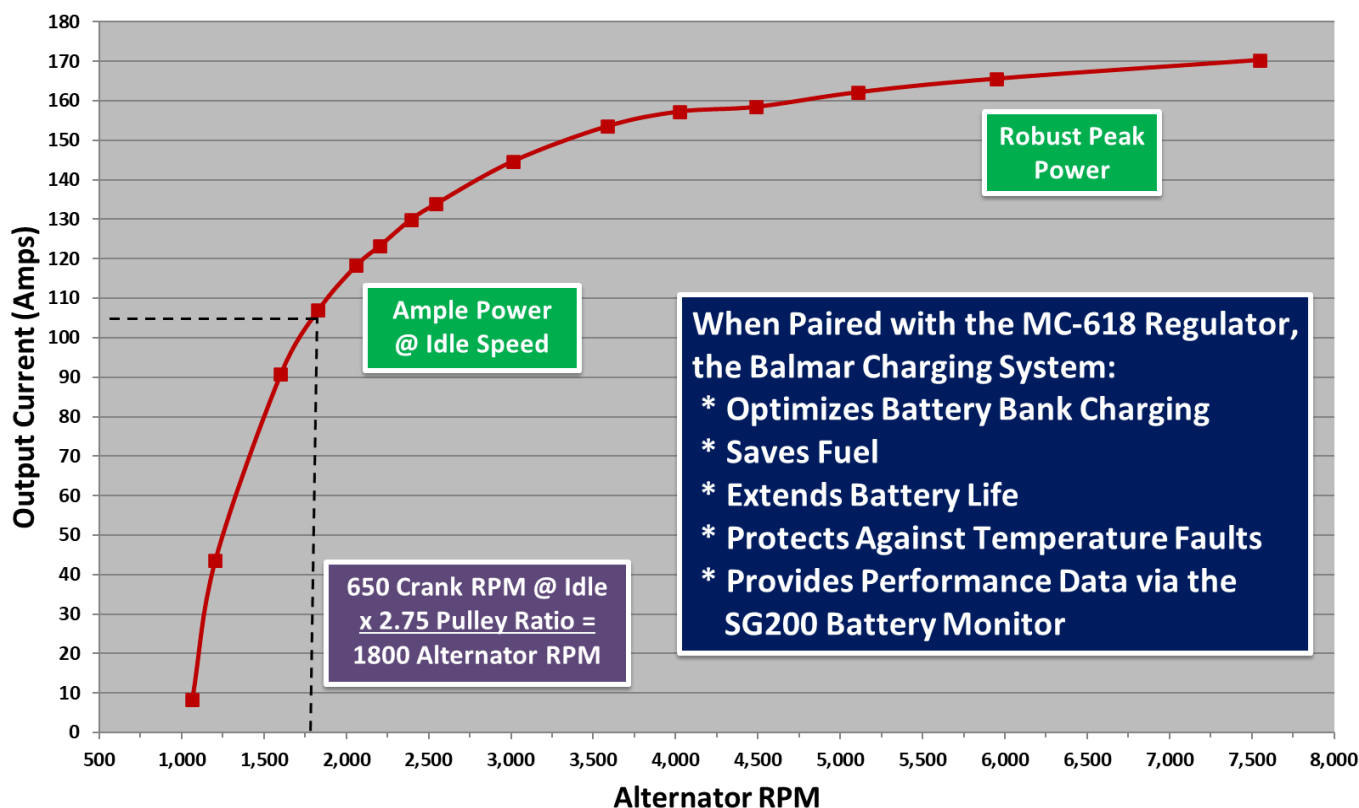
Chassie	XT-Series Output	Power Take Off	Charging Program	Charging Part Number	Kit Contents ⁽¹⁾⁽²⁾
Ford Transit	170 A	5.2 HP	LiFePO ₄	XT-EB-170-K4-KIT	XT-Series 170A Alternator, MC-618 External Regulator, Regulator Harness, Alternator & Battery Temperature Sensors
			AGM	XT-EB-170-K4-KIT2	
Mercedes Sprinter			LiFePO ₄	XT-MS-170-K6-KIT	
			AGM	XT-MS-170-K6-KIT2	
Dodge ProMaster			LiFePO ₄	XT-PM-170-K6-KIT	
			AGM	XT-PM-170-K6-KIT2	

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

⁽²⁾ The ProMaster Kit includes a custom designed 2nd alternator bracket.

XT-Series Alternator Performance

Balmar XT-170 Power Curve
External Ambient (25°C), Saturated Dwell Test



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, thereby reducing the need for a battery heating blanket. At high alternator temperatures, we dynamically adjust the field current to protect against alternator overheating.

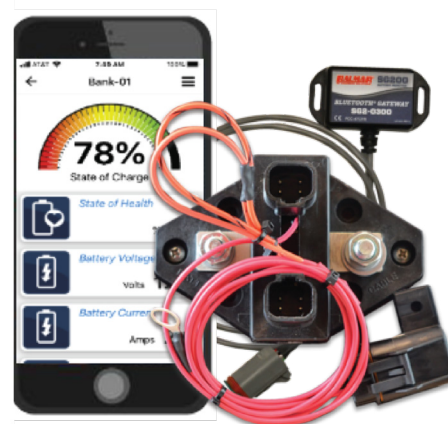
XT-Series Alternator Specifications

Alternator Style: Small Case, Externally Regulated	2nd Alternator Mounting Schemes:
Regulation: External via MC-618, P-Type, Patented Smart Ready® Equipped	Sprinter & Transit: Uses OEM-Supplied Mounting Brackets
Peak Power: 225A (1.7kW)	ProMaster: Balmar Supplied Bracket
Cooling: Dual Internal Fans	Positive Output: Threaded Stud, M8 x 1.25
Bearings: Sealed, Motor Quality Bearings, Heavy Duty Radial (front & rear). 18,000 RPM Continuous Rating	Grounding: Case Ground, Auxiliary Threaded Stud Stud Dimensions: M6 x 1.00"
Case Construction: Ventilated Cast Aluminum Finish: Red Power Coat or Black E-Coat	Diodes +/-: 6 Positive, 6 Negative; 50A Rated, 24V Avalanche
Mounting Foot Bore: XT-Series: 2x 10mm (3/8")	Low RPM Cut-In: 1,300 Alternator RPM Max Max Alternator RPM: 18,000 rpm
Ignition Protection Ratings: USCG Title 33, SAE J1171, CE, ISO 8846	Normal Operating Temperature: 180°F / 82°C Max Operating Temperature: 225°F / 108°C

Battery Monitoring via the SG200

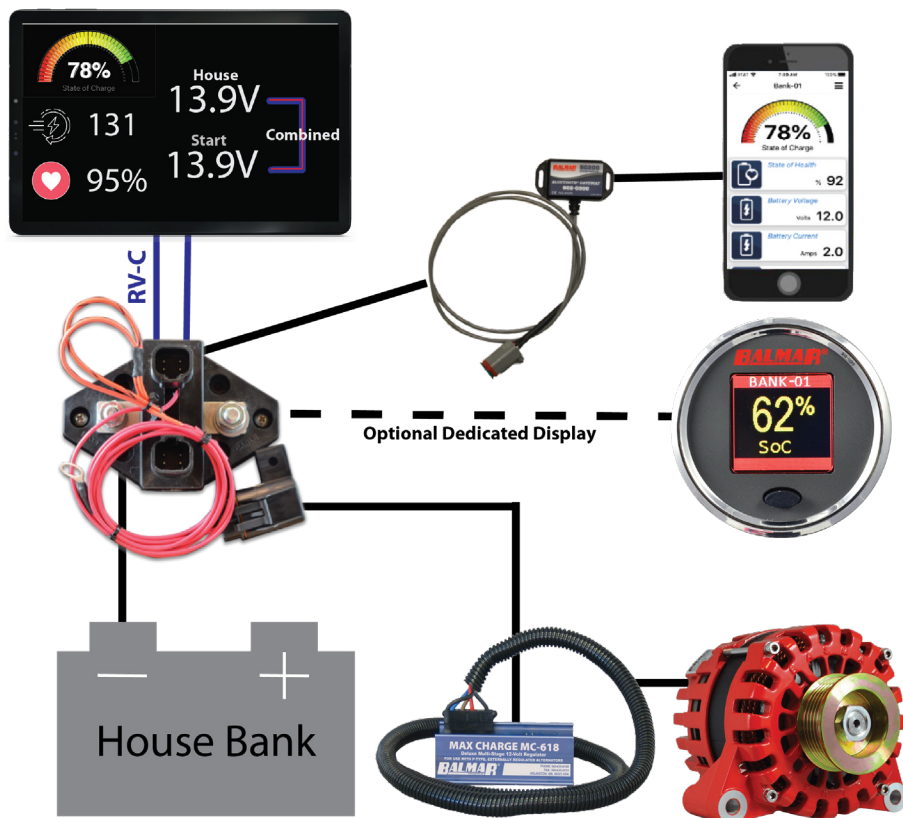
Balmar's Next Generation Monitor

- **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 (LiFePO₄), 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 Longer Cable Runs
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 Connections
SG2-0404	Com Cable, SG200, 3-Way Adapter	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

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