

Single Rectifier Part Numbering Guide

SR 2 5 0 B B B A - #
1 2 3 4 5 6 7

Example part is a Single Rectifier, 250 amps, 24 volt system, All LEDS, Alternator Excite Enabled, Battery Combine disabled

1: Unit Type

SR – Single Rectifier

PG – Custom POWER-GATE¹

2: Maximum Continuous Current

050-300 in 50 A increments²

3: Nominal Voltage Rating

A – 12VDC

B – 24VDC

4: LED Options

A – None, LEDS present but not active

B – All (factory default)

C – External Wires for Remote LEDS

I – Custom

5: Alternator Excitation (Trailer Enable Trigger Option)³

A – None (default)

B – Enabled Switched System Trigger

C – Enabled Momentary Starter Trigger

6: Battery Combine Option⁴

A – None (default)

B – Enabled

7: Custom Order Number

4 digits for orders that have special requirements beyond those listed above. . Default is omitted and manufacturer will add these as needed.

¹ Call manufacturer for more details

² POWER-GATE's can be designed to handle continuous currents larger than 300A with custom engineering.

³ If no auxiliary battery is connected to the anode, or the auxiliary anode battery is located in a trailer that may be uncoupled from the tow vehicle, this optional circuit insures the alternator will excite and turn on even if no anode battery is present. When the excitation trigger is activated, first a four-second delay is observed after which the MOSFET array between the alternator (anode) and main battery (cathode) is enhanced for sixty seconds. While enhanced, cathode main battery voltage is conveyed to the alternator anode post which then allows the alternator's regulator to excite and start creating power. After sixty seconds, the excite circuit is disabled and normal isolation functionality resumes.

- Option A denotes no excitation trigger needed and the violet (purple) wire is not provided.
- Option B denotes an enabled excitation trigger, with the trigger source being switched system voltage meaning power is applied to the violet (purple) wire while the ignition is on and the vehicle is running, and power is removed from the trigger when the ignition is off and the vehicle is NOT running. Remember that the excitation circuit will stay energized for 60 seconds after trigger initiation, so the vehicle must be started within the first 60 seconds after trigger initiation. If the vehicle is started 5 minutes after the trigger is initiated, the vehicle will start and the alternator will spin, but the alternator will not create power as the excitation window has already opened and closed. To correct, use must key vehicle off, then restart the vehicle insuring that the vehicle is started and running within the 60 second excitation window.
- Option C denotes an enables excitation trigger, with the trigger source being a momentary pulsed signal coming from the start solenoid. Power is applied to the violet (purple) wire momentarily while the starter is engaged, then power is removed once the vehicle is running and the starter is no longer being cranked. This trigger is the best choice for insuring the alternator regulator excites at start-up, however in some vehicles, access to the starter solenoid may be difficult and if that's the case, the switched system trigger detailed in option B is an alternate solution.

Contact technical support for guidance with respect to excitation trigger if necessary.

⁴ The Battery Combine option allows the user to manually force the cathode battery to be coupled to the anode battery triggered by a user-supplied logic level switch. For example, if the cathode main battery is at 12.5 volts, and the anode auxiliary battery is at 9 volts, one could force the transfer of current from cathode to anode by triggering the battery combine circuit.