



## RR12V-19 Fitting Guide



RR12V-19 is 12 volt regulator for 3 phase, permanent magnet alternators with a 25 Amp, 300 watt output. It uses an additional voltage sense wire to maintain the system voltage at the required level. This regulator is designed for all lead/acid, sealed, gel & AGM batteries.

The unit is simple to wire if you follow basic guidelines. Refer to the shop workshop manual/wiring diagram for the vehicle. This guide does not over-ride safety precautions given in the shop manual which must be followed at all times.

### Fitting

1. Identify which of the wires at the regulator connection becomes live only when the ignition is in the on position. Yamaha & Kawasaki often use brown, Suzuki Orange, Honda - Black. Ensure you confirm this with a suitable tester or consult the wiring diagram. Mark this wire as 'switched live'.
2. Remove the battery from your bike.

**IMPORTANT: An accidental spark or incorrect polarity applied to the unit during installation can destroy it. Units returned with burnt out rectifiers caused by wrong polarity or short circuiting will not be replaced under warranty. Remove the battery while installing this part.**

2. If applicable remove the old regulator/rectifier. Mount the new unit securely to the bike. The case does not have to be grounded.
3. Identify the 3 AC output wires coming from the generator, usually white or yellow and connect the 3 yellows from the new unit to these.

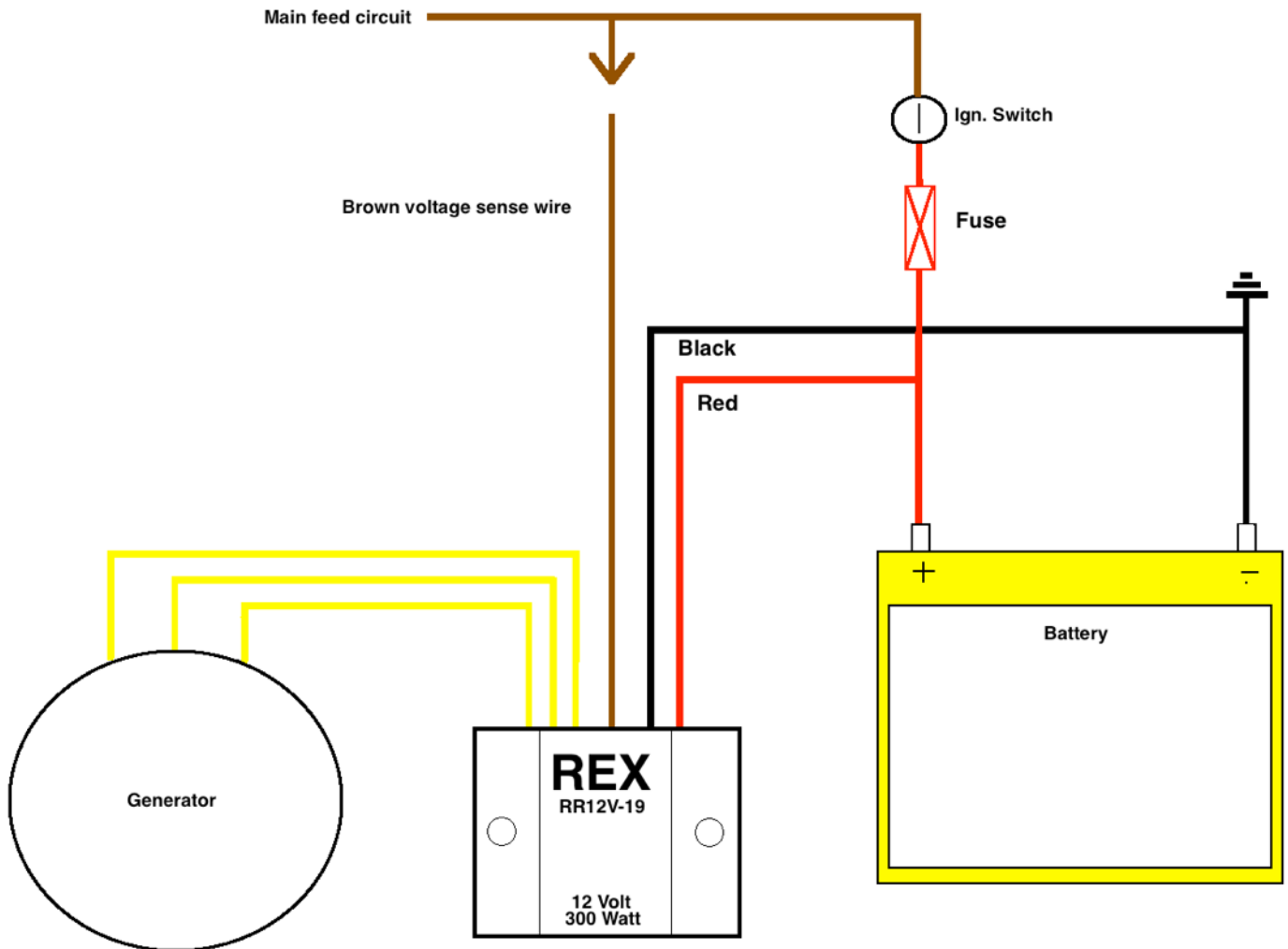
***It does not matter which order these connect to the regulator.***

4. Make high quality connections with the correct crimping pliers for the terminals. Poor quality connections cause faults. The red wire is positive, the black is negative. Yamaha use black for ground. Some Suzuki models use black, black/white or black/yellow. Honda often use green for negative. Refer to the vehicle's wiring manual to confirm.
5. Connect the brown sense wire from the regulator to the switched live at the regulator connection you previously identified.
6. Double check all connections. Once satisfied you have made the connections correctly refit the battery.

### Testing

Measure the battery voltage with the engine off. Start the engine and check it again, rev the engine to 2,500 RPM the voltage at the battery should be between 13.8 to 14.5 volts with the lights on or off. The battery must be fully charged and in good condition. If you have a lithium battery and the charging voltage is not correct, replace it for the correct type of battery technology.

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### Trouble Shooting

A new faulty unit is VERY unlikely. In nearly every case the problem proves to be in the vehicle's electrical system or due to it being wrongly connected. Powder coating and paint are common causes of poor earthing and connections. Ageing electrical systems tend to 'collect' faults.

If the voltage is not correct and you have a lead acid battery, first check the sense wire is correctly connected - check you have connected it to the main switched circuit and not some subsystem such as accessory wiring. If the battery drains flat in short space of time when the bike is not used, check the regulator brown is not connected directly to the battery + terminal.

If you suspect the new part to be faulty, it MUST be returned to our workshops for testing. We have the specialist equipment needed to run these items in accurate test conditions.