

Choosing the Right Voltage Regulator: Step-by-Step Guide

1. Check the generator nameplate for information on the excitation voltage and current. This can give you an idea of the size of the voltage regulator you need.
2. Look for the model number of the regulator if it's provided on the nameplate.
3. Determine whether you'll be using the regulator alone or in parallel with another generator. In most cases, the regulator will be used alone in "island mode" with just one generator.
4. Contact us with either the model number or the excitation current and voltage, and we'll recommend a suitable regulator for your needs.
5. If you don't have access to this information, you can use an ohmmeter to measure the field ohms. Look for wires marked F+ or F-, or j/k, X-XX, A1 and A2. The reading can range from 2 ohms to 50 ohms, so be sure to confirm the reading. If you have an older slipring generator, you'll need to isolate one of the carbon brushes and use a piece of cardboard to scratch your probe on each of the sliprings to get an accurate ohm reading.
6. It's a good time to check your generator and see if it's working correctly by using a 12v automotive battery connected directly to the two field wires. To do this, you need to start the engine and run it at 50/60 Hz. Most meters have an Hz setting. Most generators produce a small residual AC voltage that's enough to get an Hz reading on your meter. Your Hz reading is your guide to the engine RPM since they are directly related to each other. Normally, 1800 RPM is 60 Hz.
7. Using battery excitation normally produces $\frac{3}{4}$ of the rated voltage output from the generator. For example, if your generator is wired for single-phase 240V, you will probably get something close to 180V.
8. With your ohms reading and after checking that your generator is working correctly, please call us for a AVR recommendation. Let us guide you further in order to get your generator working.