The circuitry of the R448 Automatic Voltage Regulator (AVR) provides closed loop control of the alternator output voltage by regulating the exciter field current. The R448 can be powered by Shunt, AREP or PMG field excitation systems and is fitted as standard on:

► 5000 Series Alternators

► 6000 Series Alternators

► 7000 Series Alternators

Specification
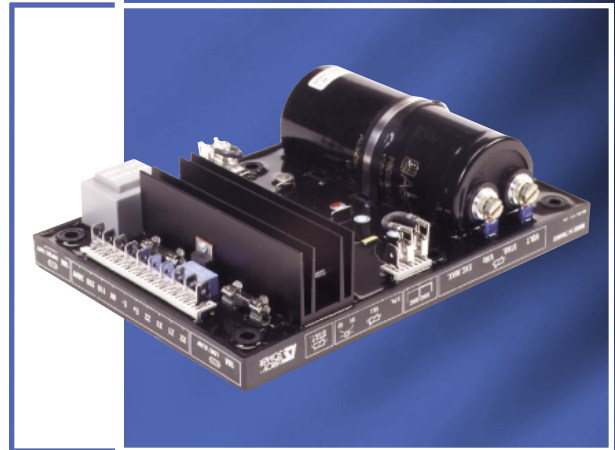
► Voltage regulation ± 0.5%

► Short circuit capability: 3 x I_{rated} for 10 seconds (AREP or PMG excitation)

► Voltage sensing:
   95 to 140 volts (50/60 Hz) or
   170 to 260 volts (50/60 Hz) or
   340 to 520 volts (50/60 Hz)

► Response time:
   Normal (1 sec) for ± 20% voltage variation
   or Rapid (0.3 sec) for ± 20% voltage variation

► Remote voltage adjustment range of: ± 5%

Load Adjustment Module (LAM)

On load impact, the rotation speed of the generator set decreases. When it passes below the preset frequency threshold, the LAM causes the voltage to drop by approximately 15% and consequently the amount of active load applied is reduced by approximately 25% until the speed reaches it's rated value again.
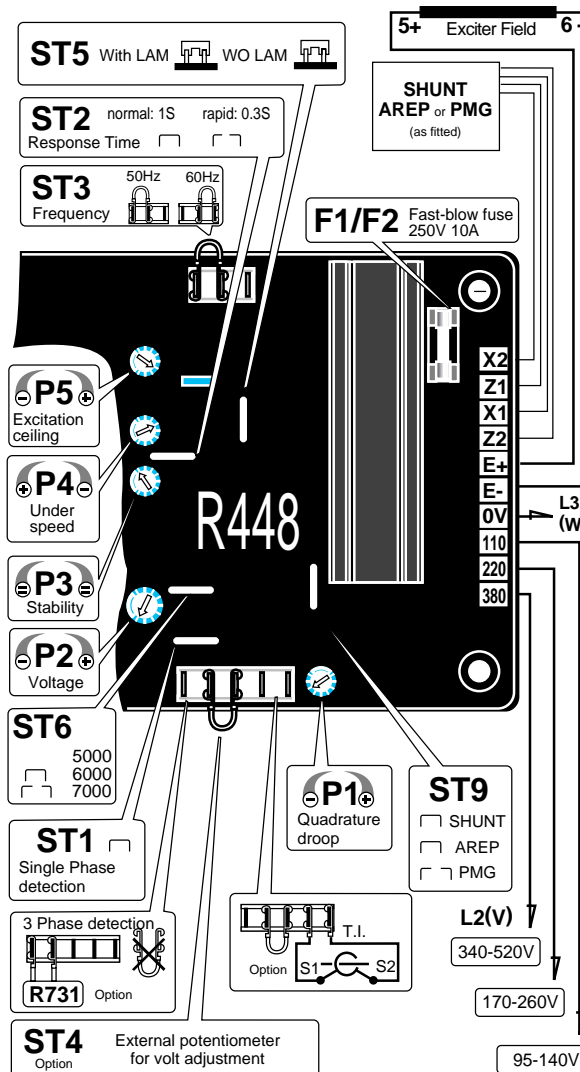
F G WILSON

AVR R448

Automatic Voltage Regulator

Adjustment capability

The R448 AVR features the following adjustment capabilities (Please note that no adjustments should be made prior to careful consultation of the alternator installation and maintenance manual):-

► Quadrature droop adjustment

► AVR Voltage adjustment

► Stability adjustment

► LAM Threshold (underspeed) adjustment

► Excitation ceiling adjustment

► Selection of single phase or three phase* voltage sensing

► Selection of normal or rapid response time

► 50 Hz or 60 Hz frequency option

► Remote voltage adjustment option

► LAM enable/disable option

► Alternator frame selection

► Excitation system selection

* **Optional R731 three phase sensing module required**

AVR448/FGW/0302