

The circuitry of the R449 Automatic Voltage Regulator (AVR) provides closed loop control of the alternator output voltage by regulating the exciter field current. The R449 can be powered by either AREP or the PMG field excitation systems and is fitted as standard on following alternators:

- ▶ 8100 Series Alternators
- ▶ 9100 Series Alternators

### Specification

- ▶ Voltage regulation  $\pm 0.5\%$
- ▶ Short circuit capability:  $3 \times I_{\text{rated}}$  for 10 seconds (AREP or PMG excitation)
- ▶ Voltage sensing:
  - 85 to 130 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  $\pm 20\%$  voltage variation
  - or Rapid (0.3 sec) for  $\pm 20\%$  voltage variation
- ▶ Capable of remote voltage adjustment:  $\pm 5\%$

### 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.



## AVR R449



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## Automatic Voltage Regulator

