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INGENIERIA Y AUTOMATIZACION
Generamos Confianza

REGULADOR DE VOLTAJE LEROY SOMER R438

CHARACTERISTICS:

- Storage : -55°C ; +85°C
- Operation : -40°C ; +70°C
- Standard power supply: AREP or PMG.
- Rated overload current: 8 A - 10 s
- Electronic protection (overload, short-circuit on opening of voltage sensing circuit): excitation overload current for 10 seconds then return to approximately 1A. The alternator must be stopped (or the power switched off) in order to reset the protection.
- Fuse : F1 on X1, X2. 8A ; slow - 250V
- Voltage sensing : 5 VA isolated via trans-former ;
  - 0-110 V terminals = 95 to 140 V,
  - 0-220 V terminals = 170 to 260 V,
  - 0-380 V terminals = 340 to 520 V.
- Voltage regulation ± 1%.
- Normal or rapid response time via **ST2** jumper (see below).
- Voltage adjustment via potentiometer **P2**.

other voltages via adapter transformer

- Current sensing (parallel operation): C.T. 2.5 VA cl1, secondary 1 A (optional).
- Quadrature droop adjustment via potentiometer **P1**.
- Max. excitation current adjustment via **P5** (see below).

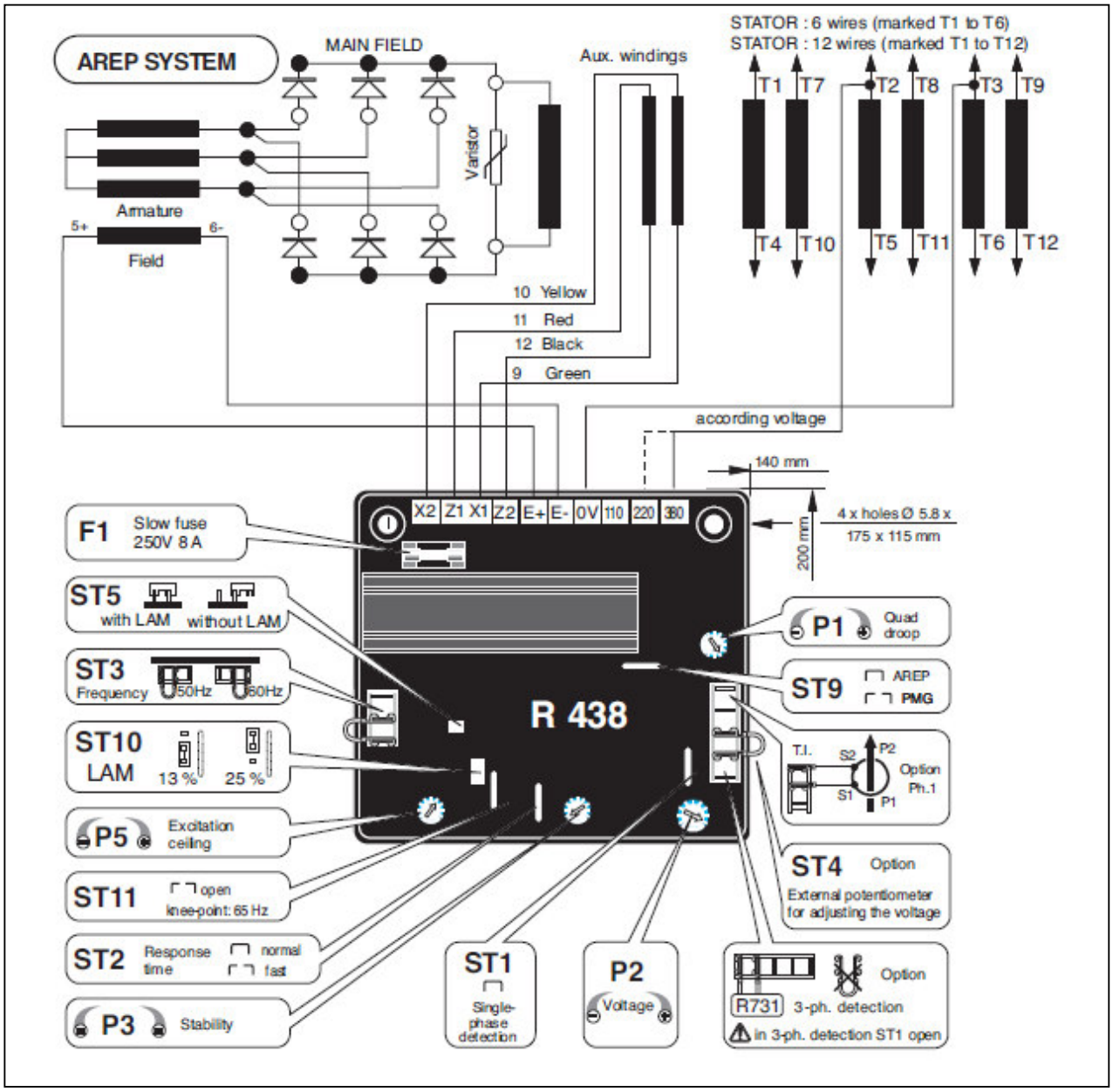
AREP excitation system

For both AREP & PMG excitation systems, the alternator voltage regulator is the R438.

With **AREP** excitation, the R438 electronic AVR is powered by two auxiliary windings which are independent of the voltage match circuit.

The first winding has a voltage in proportion to that of the alternator (characteristic Shunt), the second has a voltage in proportion to the stator current (compound characteristic: Booster effect).

The power supply voltage is rectified and filtered before being used by the AVR monitoring transistor. This principle ensures that regulation is not affected by distortions generated by the load.



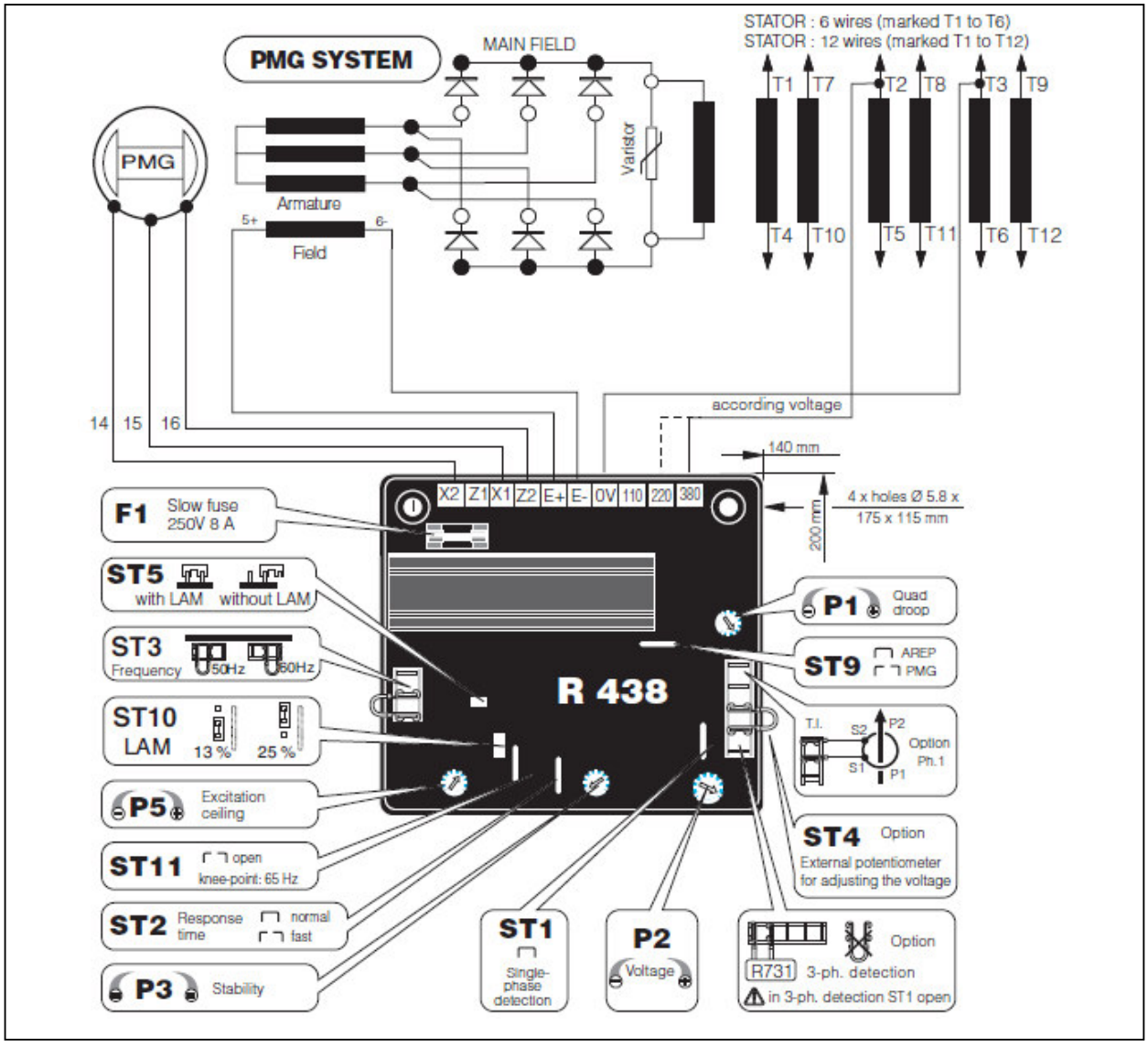
PMG excitation system

This excitation system consists of a «**PMG**» (permanent magnet generator). This is fitted at the rear of the machine and connected to the R438 AVR.

The PMG supplies the AVR with constant voltage which is independent of the main alternator winding. As a result the machine has a short-circuit current capacity and good immunity to distortions generated by the load.

The AVR monitors and corrects the alternator output voltage by adjusting the excitation current.

- 50/60 Hz selection via the **ST3** jumper.



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