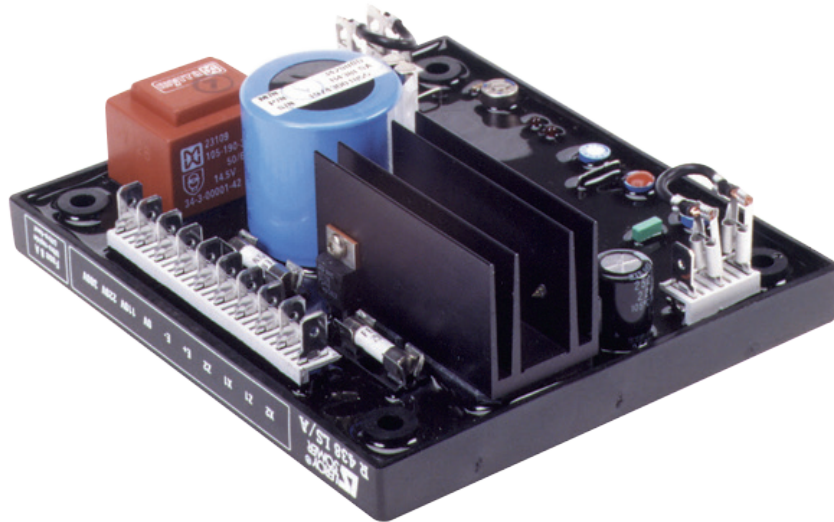


R438 AVR

FOR SHUNT, AREP or PMG ALTERNATORS

DATASHEET



R438 is an analog AVR. It is designed for alternators with a AREP or PMG excitation.

R438 controls the excitation current in order to maintain the output voltage of the alternator. R438 is performant in terms of voltage regulation, simple to set , to use and is reliable.

It can run without LAM (U/f), or with LAM, selection is done by strap ST5. It is in compliance with I.E.C. 60034-1 standard and U.L. 508 / C.S.A. approved.

CHARACTERISTICS

- Voltage regulation : $\pm 0.5\%$.
- U/F function (1).
- LAM function (2).
- Response time : 500 ms.
- Nominal excitation current : 5A.
- Maximum excitation current : 8A during 10 s.
- Supply range and voltage détection : 95 to 520 V.
- Protection : fuse 8A.

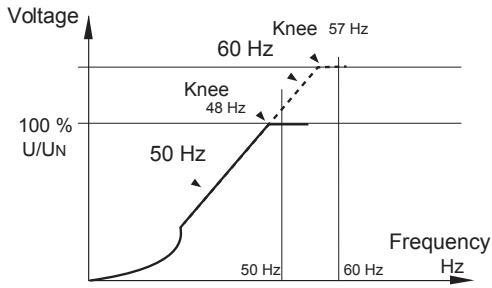
OPERATION RANGE

| | LSA 40 | 42,3 | 44,3 | 46,3 | 47,2 | 49,3 | 50,2 | 51,2 | 53,1 | 54 |
|-------|--------|------|------|------|------|------|------|------|------|----|
| SHUNT | - | - | - | - | - | - | - | - | - | - |
| AREP | ✓ | ✓ | ✓ | - | - | - | - | - | - | - |
| PMG | - | ✓ | ✓ | - | - | - | - | - | - | - |

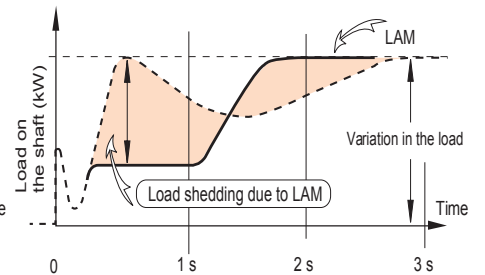
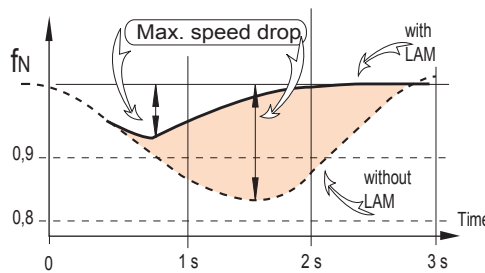
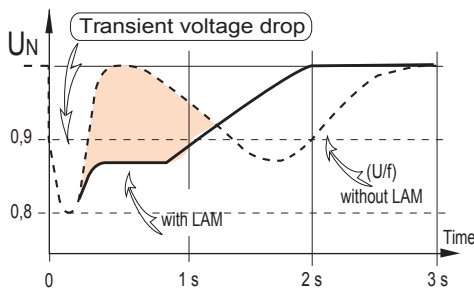
Operation mode : Standalone

MAIN FEATURE

U/F FUNCTION



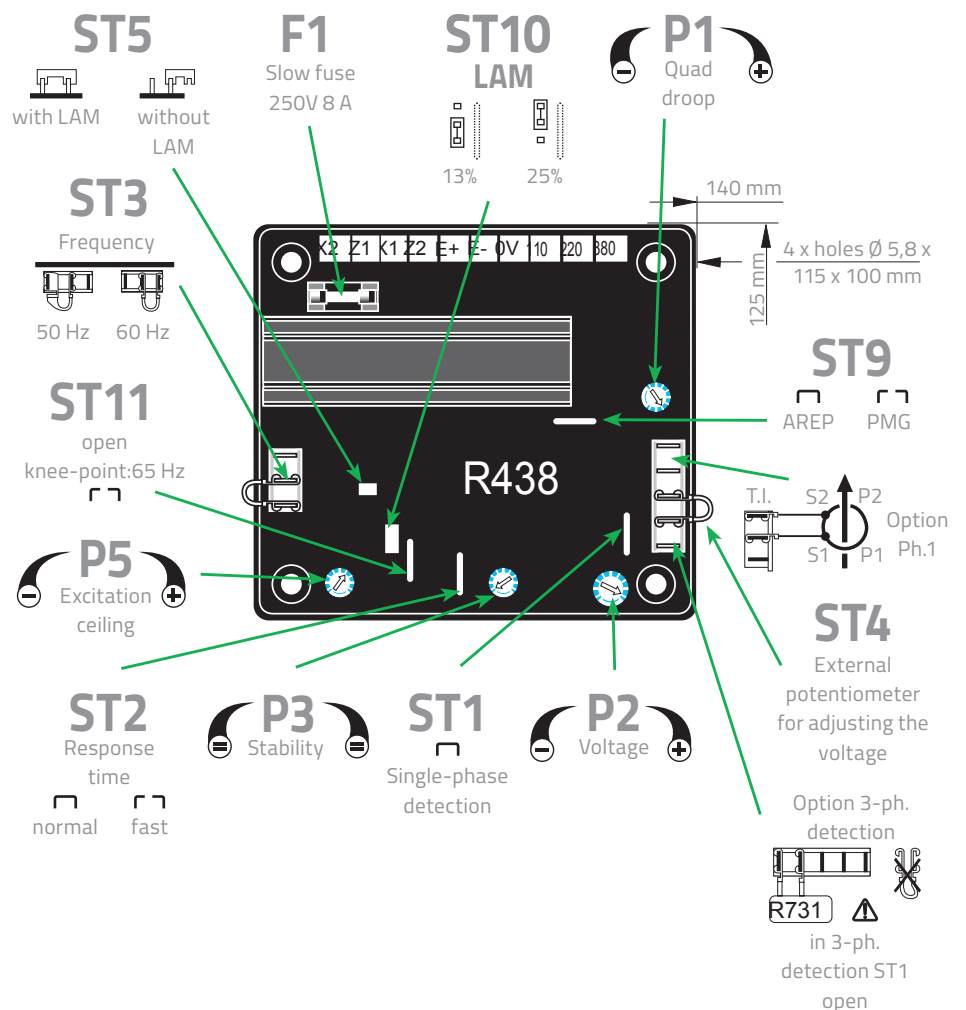
LAM FUNCTION



CONNEXION AND SETTING

Settings are done through the AVR.

- Potentiometer P1 : Quadrature droop setting.
- Potentiometer P2 : Voltage setting.
- Potentiometer P3 : Stability setting.
- Potentiometer P5 : Excitation ceiling setting.



OPERATION CONDITIONS

- Operating temperature range : - 40° C to + 70° C.
- Storage temperature range : - 55° C to + 85° C.
- Hygrometry : 98%.
- Maximum choc : 9 g on 3 axis.
- Vibrations : less than 10 Hz , 2 mm peak magnitude.
- From 10 Hz to 100 Hz : 100 mm/s, below 100 Hz : 8g.
- Optional modules compatible :
 - R731 : three phase voltage sensing.
 - R734 : 3-phase current and voltage sensing for parallel operation.
 - R726 : regulation system changed to "4 - function".