

EA08A

Generator Automatic Voltage Regulator Operation Manual



Self Excited Automatic Voltage Regulator
For use in Brushless Full Harmonic or Harmonic and Auxiliary Winding

1. SPECIFICATION

Sensing Input

Terminal E1 ~ 110V = 95 ~ 135V
 Terminal E1 ~ 220V = 180 ~ 250V
 Terminal E1 ~ 380V = 360 ~ 515V
 Frequency 50/60 Hz, Jumper selectable

X1、X2 Z1、Z2

40 ~ 500HZ

Voltage Regulation

< ±0.5% (with 4% engine governing)

Voltage Build-up

Harmonic Residual Volt. > 5 VAC

Output Voltage

Voltage Max. 150 VDC @ 220VAC
 Current Continuous 8A
 Max. Intermittent 12A for 10 sec

External Volts Adjustment

±10% @ 1KΩ

Thermal Drift

0.05% per °C change in AVR ambient

Analog Voltage Input

10% generator voltage per 1VDC

Current Compensation

N : 5 A or N : 1A Input
 Maximum 4% @ P.F. = 0.8

Dimensions

150mm L * 135mm W * 55.3mm H

Weight

600g ± 2%

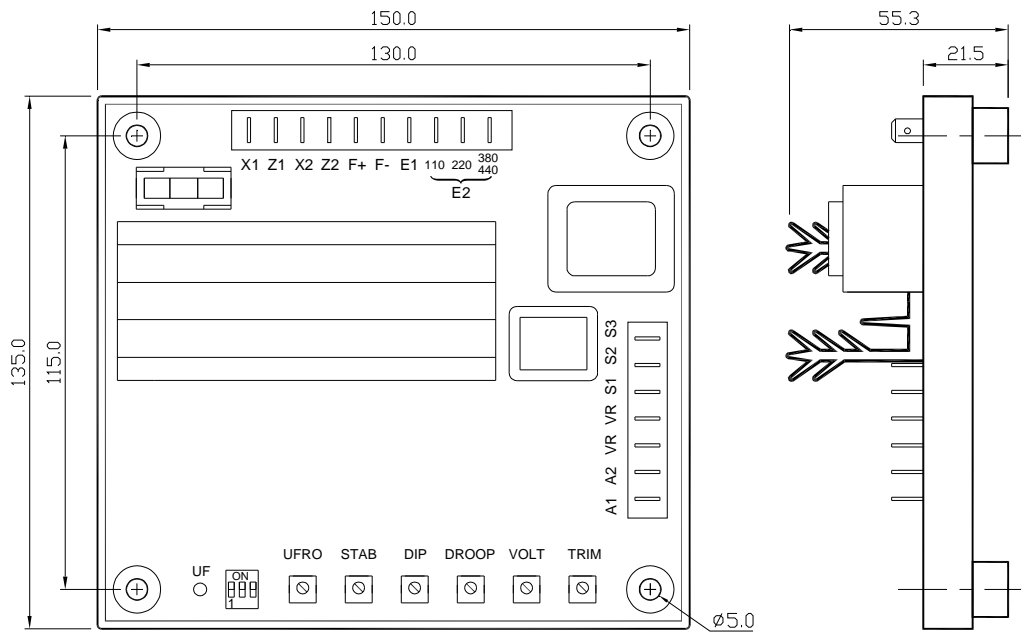


Figure 1 Outline Drawing

UNIT : mm

ATTENTION

1. AVR can be mounted directly on the engine, genset, switchgear, control panel, or any position that will not affect operation. For dimension reference, please see Figure 1.
2. All voltage readings are to be taken with an average-reading voltmeter Meggers and high-potential test equipment must not be used. Use of such equipment could damage the AVR.

2. WIRING

1. E1, 110, 220, 380V Sensing Input terminal.
2. F+, F- : Excitation Output.
3. X1-X2, Z1-Z2 Power Input terminal. When using single phase power input, please connect to X1 - X2 or Z1 - Z2. For 3 phase power input, please connect to X1, X2, Z2 terminals. The power input can be PMG, Harmonic, Full Harmonic and Auxiliary Winding.
4. S1-S2 : Current compensation input. Current Transformer secondary current = 5A.
5. S2-S3 : Current compensation input. Current Transformer secondary current = 1A.
6. VR-VR External Voltage Adjustment 1K Ω .
7. Analog Voltage Input Can accept remote DC voltage to adjust generator output voltage.

3. ADJUSTMENTS

- TRIM : Analog Voltage Input Adjustment.
 - VOLT : Voltage Adjustment.
 - DROOP : Droop Adjustment.
 - DIP : To set the frequency related voltage dip.
 - STAB : Stability Adjustment.
 - UFRO : UFRO Knee Point set.
 - DIP SWITCH : Function Selection Switch.
1. Voltage Compensation : ON => for over 550KW
 2. Reaction Time Range : ON => for 90 ~ 550KW
 3. Rated Frequency 50/60Hz Selection :
ON = 60Hz OFF = 50Hz

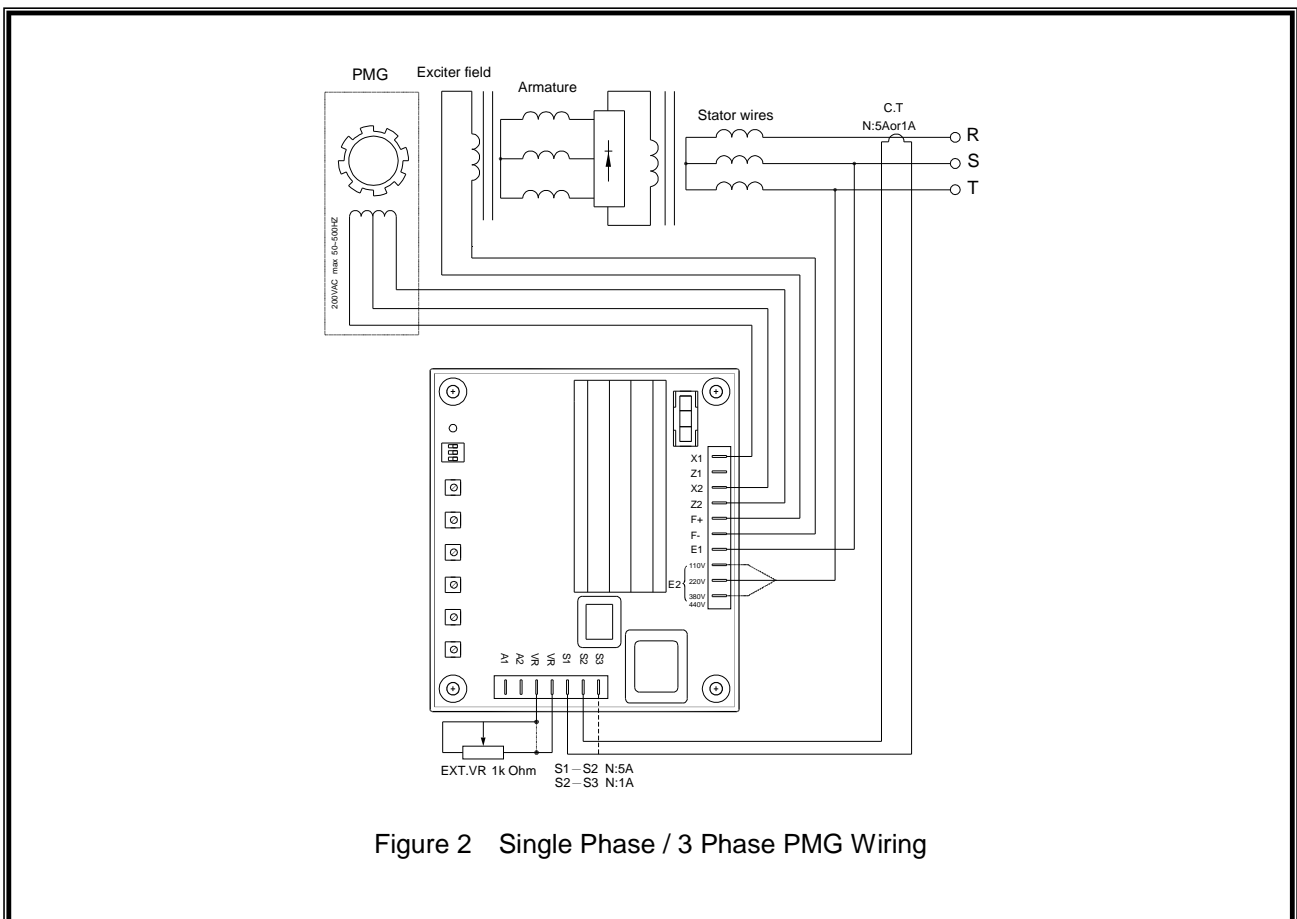


Figure 2 Single Phase / 3 Phase PMG Wiring

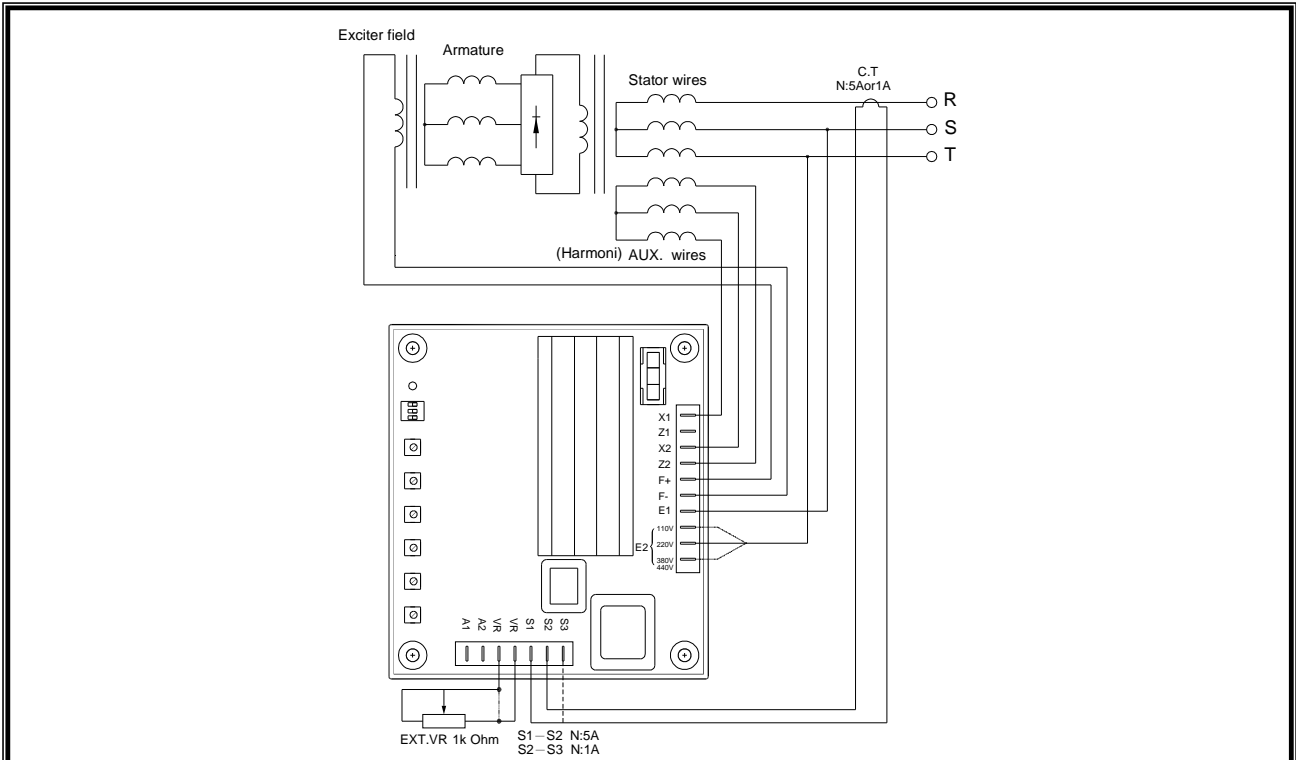


Figure 3 3 Phase (Auxiliary Winding, Full Harmonic, Self Excited) Wiring

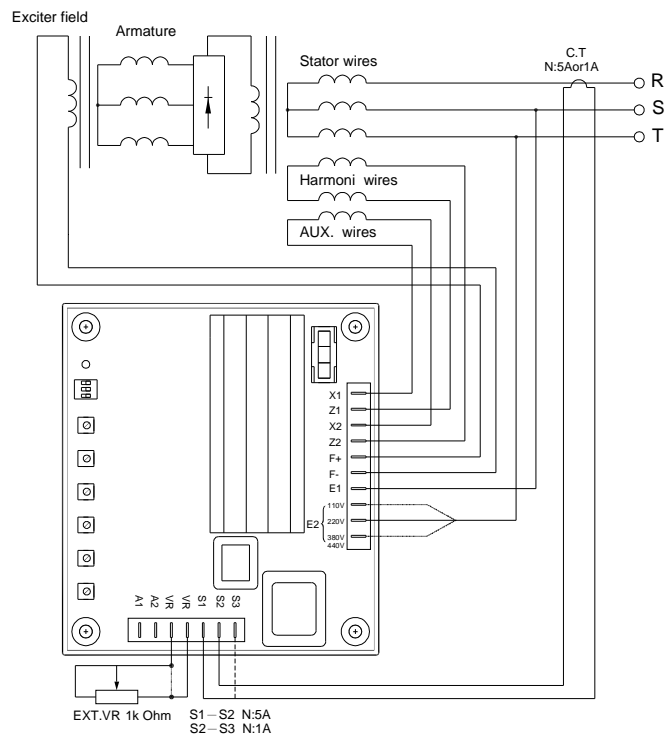


Figure 4 Auxiliary Winding & Harmonic Wiring

- ※ Use only original supplied spare protection fuse for fuse replacement. (10A).
- ※ Please accept our sincere apology if any modification in performance, specification or appearance is made without prior notice.