

# EA08A

## *Generator Automatic Voltage Regulator Operation Manual*



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



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# 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%

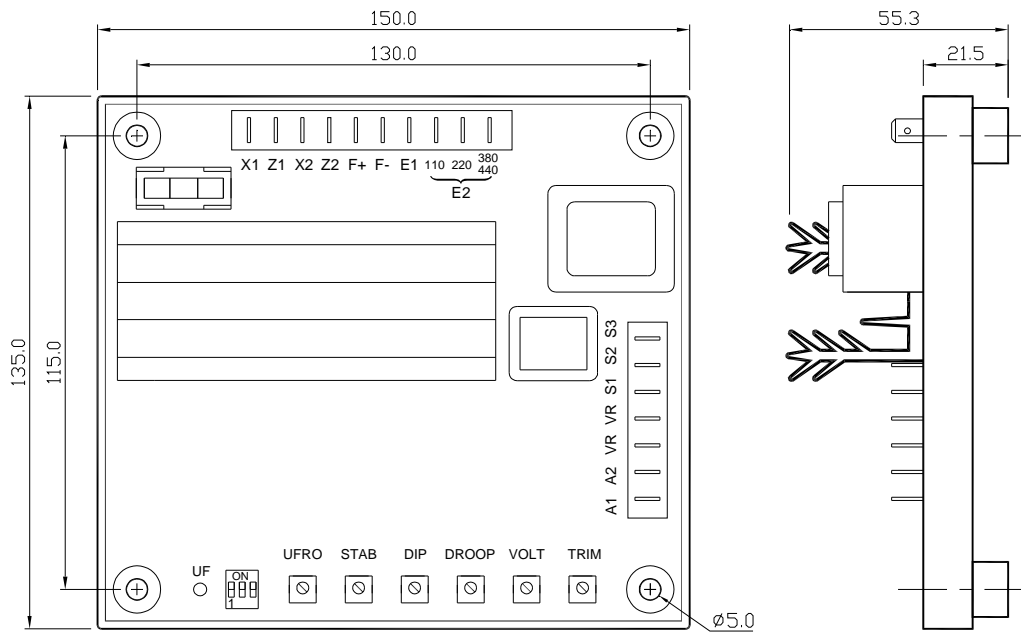


Figure 1 Outline Drawing

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 $\Omega$ .
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

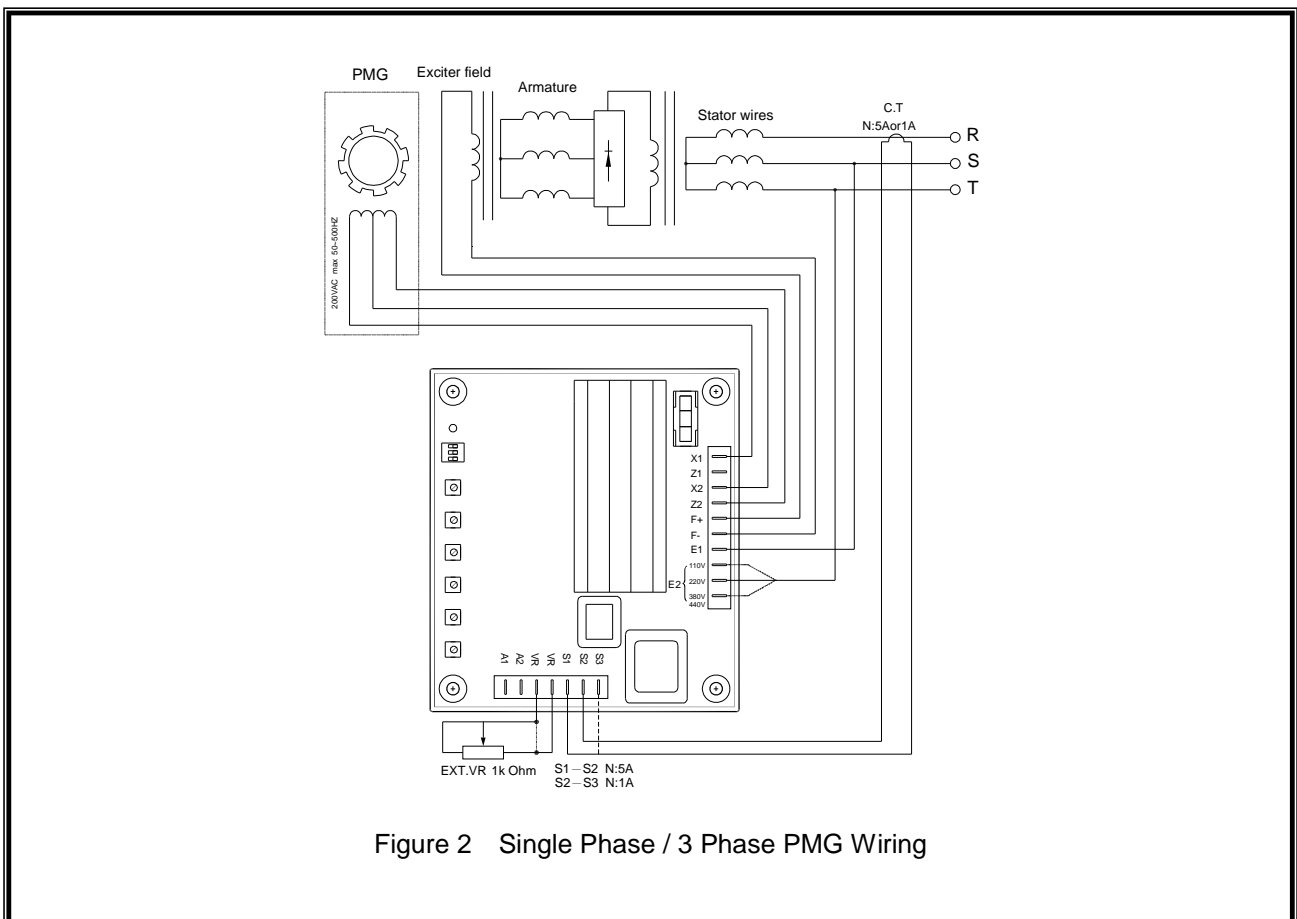


Figure 2 Single Phase / 3 Phase PMG Wiring

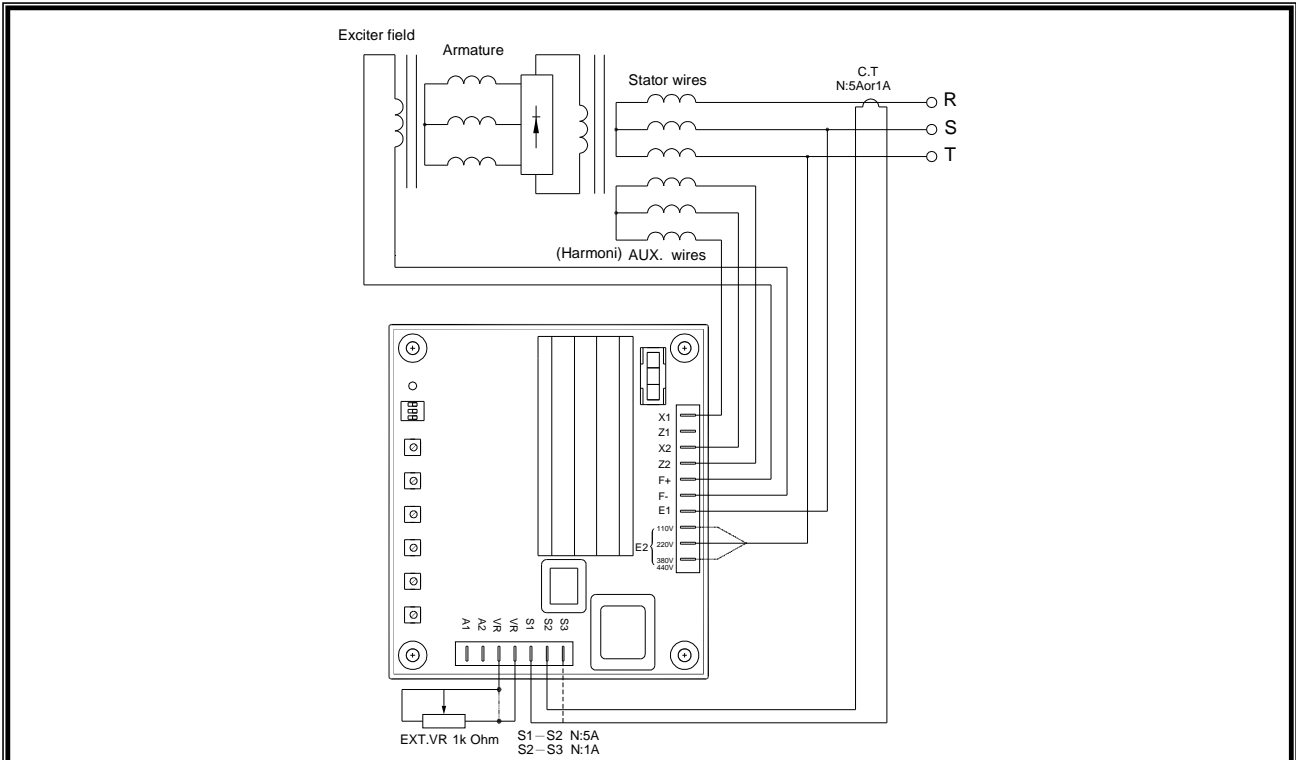


Figure 3 3 Phase (Auxiliary Winding, Full Harmonic, Self Excited) Wiring

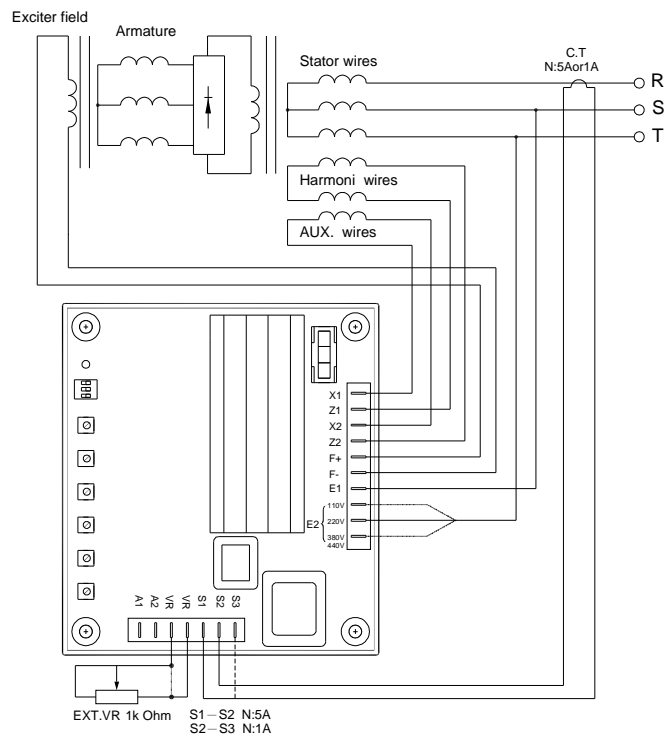


Figure 4 Auxiliary Winding & Harmonic Wiring

- ※ 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.