ADVR-440

Generator Automatic Voltage Regulator
Operation Manual

Hybrid Analog/Digital, Voltage Regulator

Compatible with Stamford AS440*

AS465-2*

*All manufacturer names and numbers are used for reference purpose only and do not imply that any part is the product of these manufacturer.

SECTION 1 : SPECIFICATION

Sensing Input (7, 8) Average Reading

Voltage	110 / 220 Vac, 1 phase 2 wire
	Jumper setting
	90 – 130 Vac @ 110 Vac
	180 – 260 Vac @ 220 Vac
Frequency	50/60 Hz (Jumper setting)

Power Input (7, Z2)

Voltage	40 – 300 Vac, 1 phase 2 wire
Frequency	40 – 60 Hz (Jumper setting)

Excitation Output (F1, F2)

110V 1 phase	Continuous 33 Vdc 4A
	Max. 45Vdc 7.5A for 10 secs.
220V 1 phase	Continuous 63 Vdc 4A
	Max. 90Vdc 7.5A for 10 secs.
Resistance	Min. 15 ohms, Max.100 ohms
Fuse Spec.	Slow blow 5 x 20mm S505-6.3A

External Voltage Adjustment (1, 2)

Max.+/- 10% @ 1 K ohm 1 watt potentiometer

Voltage Regulation

Less than +/- 0.5% (with 4% engine governing)

Build Up Voltage

5 Vac 25 Hz residual volts at power input terminal

Soft Start Ramp Time

4 seconds +/- 10%

Typical System Response

Less than 20 milliseconds

EMI Suppression

Internal electromagnetic interference filtering

Static Power Dissipation

Max. 4 watts

Quadrature Droop Input (S1, S2)

Burden	Less than 0.1 ohm
Max. sensitivity	0.07A for 5% droop (PF=0)
	Droop adjustable
Max. input	0.33A

Analogue Voltage Input (A1, A2)

Input resistance	More than 2K ohm
Max. input	+/- 5Vdc or +10Vdc
Sensitivity	1Vdc for 5% Generator Volts
	TRIM adjustable

Under Frequency Protection (Factory Presets)

50 Hz system knee point at 45 Hz

60 Hz system knee point at 55 Hz

Over Excitation Protection

Set point 40 – 110Vdc @ power input 220 Vac
EXT. adjustable
Set point 110Vdc +/- 10% @ power input 220 Vac
(Factory Presets)
The output will drop after a 10 seconds delay

Voltage Thermal Drift

Less than 3% at temperature range -40 to +70 ˚C

Under Frequency Knee Point Thermal Drift

Less than +/- 0.1 Hz at -40 to +70 ˚C

Environment

Operating Temperature	-40 to +70 ˚C
Storage Temperature	-40 to +85 ˚C
Relative Humidity	Max. 95%
Vibration	5.5 Gs @ 60 Hz

Dimensions

135.0 (L) x 100.0 (W) x 45.0 (H) mm
5.31 (L) x 3.94 (W) x 1.77 (H) inch

Weight

405 g +/- 2%
0.89 lb +/- 2%

SECTION 2 : APPEARANCE / DIMENSIONS / INSTALLATION DRAWING

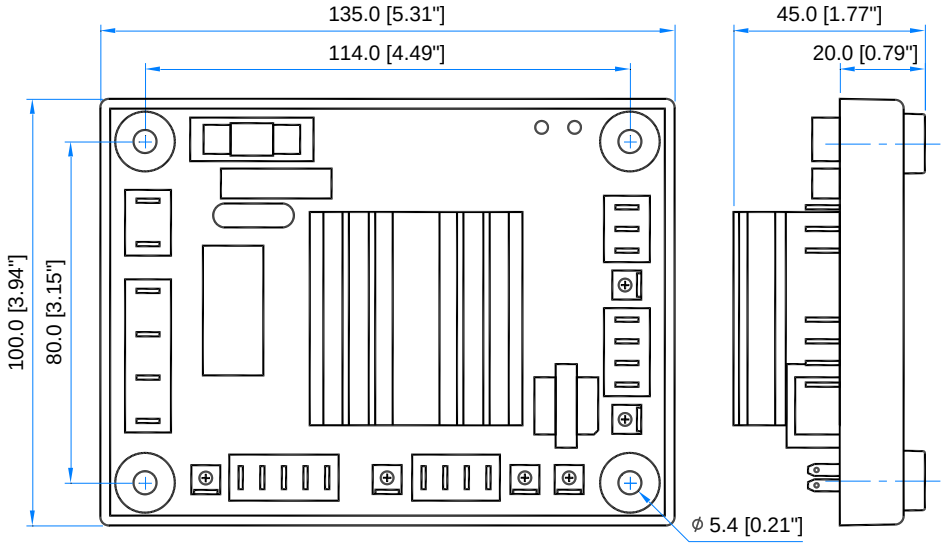
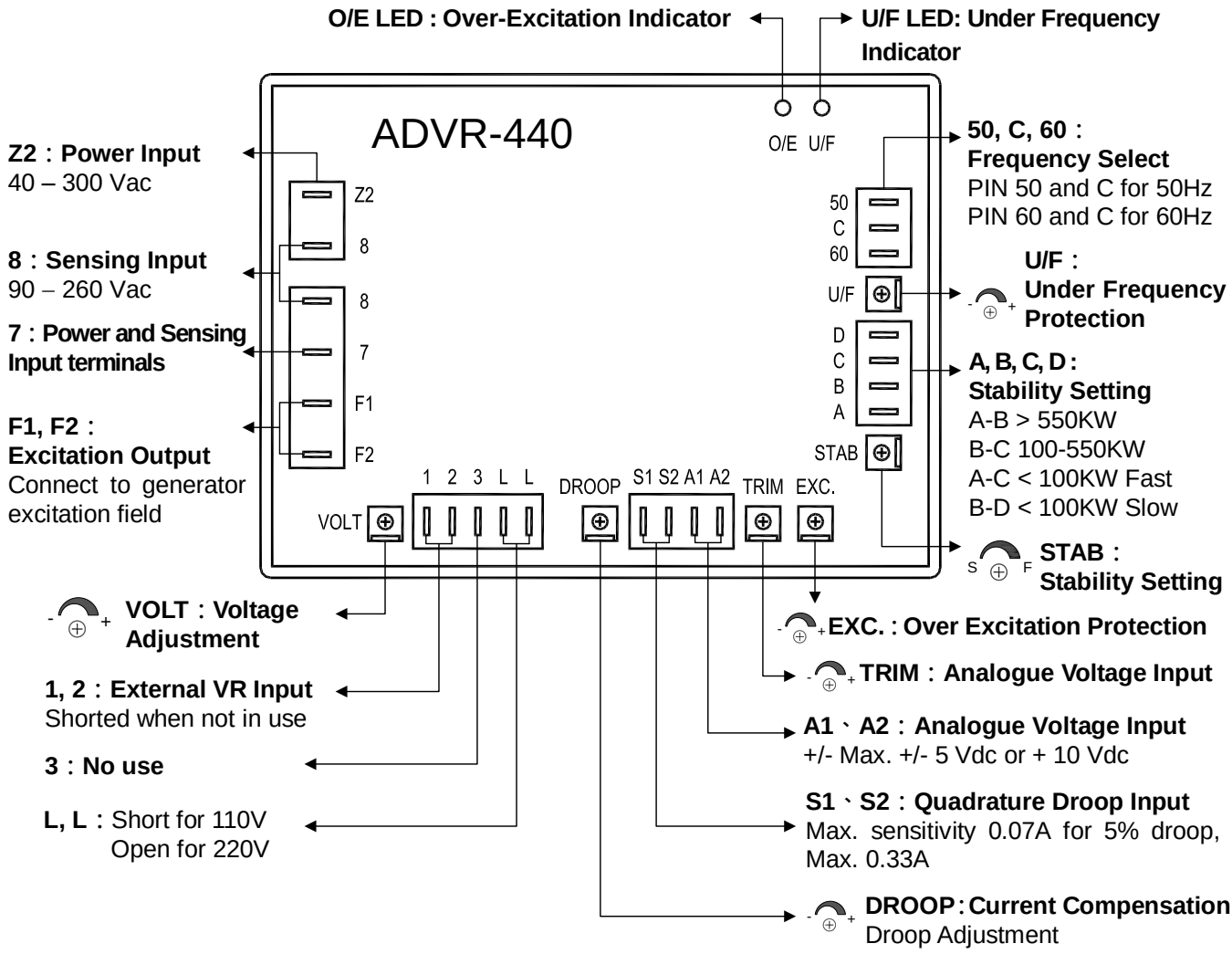


Figure 1 Outline Drawing

SECTION 3 : POTENTIOMETER ADJUSTMENT



SECTION 4 : CONNECTION DIAGRAMS

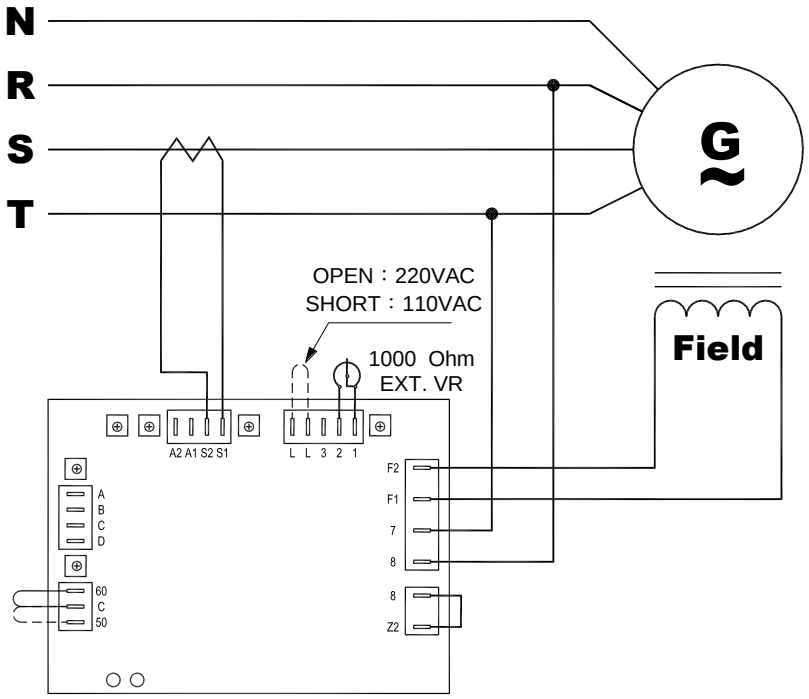


Figure 3　110/220 Vac

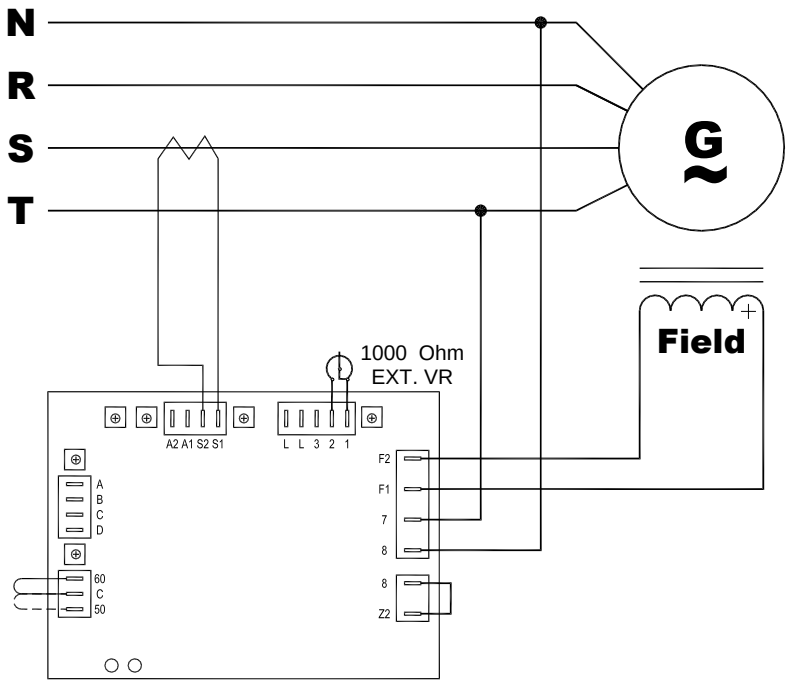


Figure 4　380/440 Vac

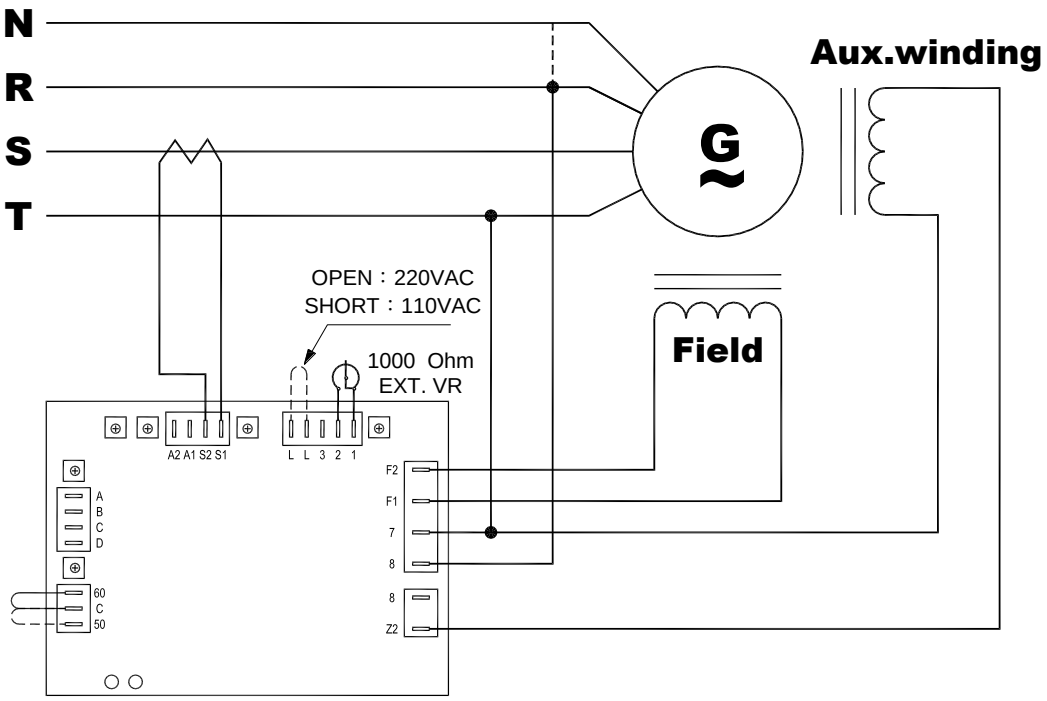


Figure 5 Auxiliary Winding

ATTENTION

1. **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. **Improper setting of under-frequency protection could cause the output voltage of the unit to drop or become unstable under with changes in load. Avoid making any changes to the U/F setting unless necessary.**

※ Use only the replacement fuses specified in this user manual.

※ Appearance and specifications of products are subject to change for improvement without prior notice.