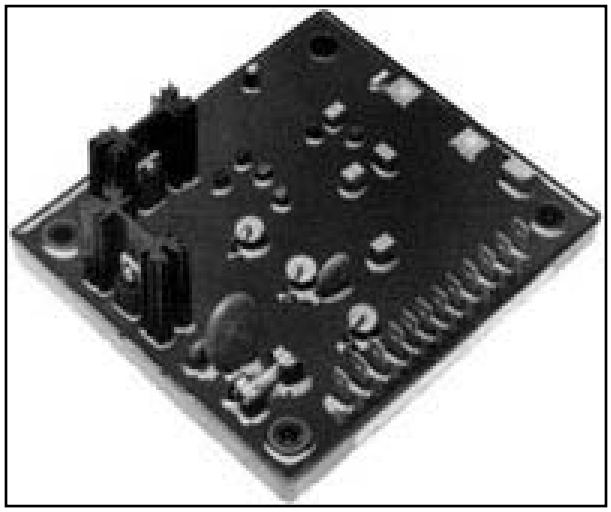

AVC63-4A VOLTAGE REGULATOR

Using enhanced technology, the AVC63-4A full wave voltage regulator is designed for use on 50/60 Hz brushless generators. This potted regulator is small in size, ruggedly constructed, and incorporates solid state technology with frequency compensation, automatic voltage build-up, and overexcitation shutdown as standard.

FEATURES

- Integrated circuitry for compact size, simplicity, high reliability.
- Extremely rugged.
- Exciter field current 4A continuous, 6A forcing.
- Regulation accuracy better than ± 1.0% no load to full load.
- Fast response.
- Frequency compensation.
- Overexcitation shutdown.
- EMI suppression.
- Available from stock.
- Gost R certified

ADDITIONAL INFORMATION

INSTRUCTION MANUAL
Request Publication 9285800991

Basler Electric
12570 STATE ROUTE 143, HIGHLAND, ILLINOIS 62249 USA PHONE 618-654-2341 FAX 618-654-2351

DESCRIPTION

The AVC63-4A model voltage regulator maintains generator line voltage on brushless generators from 5 kW to over 100 kW in size. The voltage regulator senses generator average voltage to maintain a precise regulation band within ± 1 percent. This is accomplished by converting a 120 VAC single phase power input to a controlled DC signal to the generator's exciter field. The solid-state voltage build-up circuit will enable automatic generator line voltage build-up with a voltage input to the regulator of at least 6 VAC. Customer accessible stability, underfrequency and range adjusts enable fine tuning of the voltage regulator to the generator in use.

The overexcitation feature assists in protecting the voltage regulator during an overexcitation fault condition. During this mode, a shutdown signal is sent to the power stage, turning the regulator off. This feature will reset when the voltage input is removed (less than 6 VAC for a minimum of 2 seconds) to the regulator. Figure 1 demonstrates the underfrequency characteristics of the voltage regulator during prime mover low speed conditions. Customer curve selection matches the voltage regulator to 50 or 60 Hz systems.

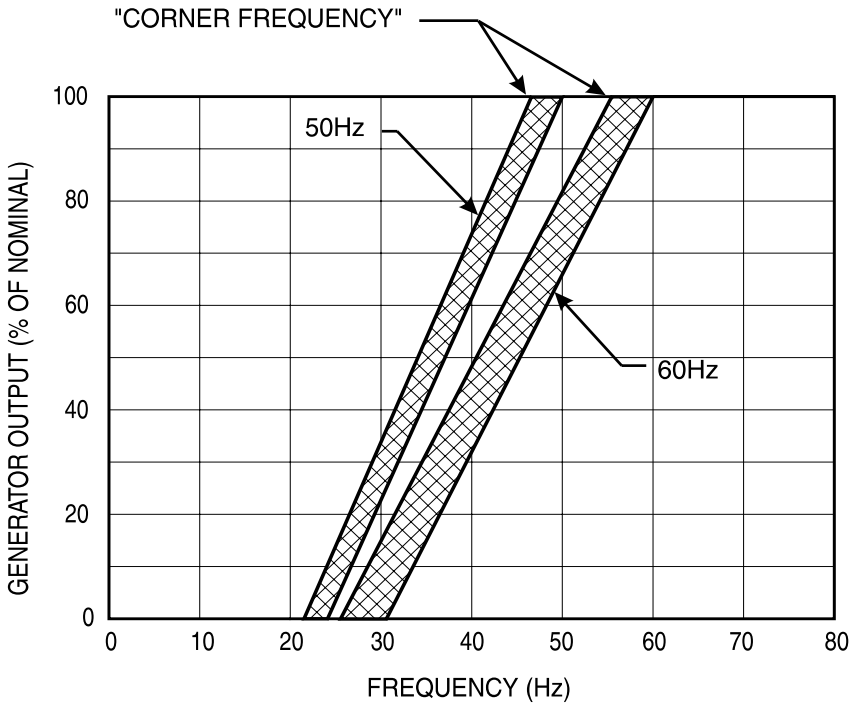

Figure 1 - Frequency Compensation Characteristic

SPECIFICATIONS

DC OUTPUT				EXCITER FIELD RESISTANCE		POWER INPUT		SENSING INPUT
MAX. CONT.		MAX FORCING 1 MIN (120 Vac INPUT)		MIN. OHMS @ 25°C	MAX OHMS	SINGLE PHASE VOLTAGE RANGE	BURDEN	VOLTAGE ADJUST RANGE
AMP	VOLT	AMP	VOLT					
4	63	6	90	15	100	95-139Vac ±10%	450VA	95-139Vac 190-277Vac

SPECIFICATIONS (continued)

DC OUTPUT POWER: 4 Adc at 63 Vdc maximum continuous, 6 Adc at 90 Vdc one minute forcing. (Forcing with 120 Vac nominal input).

EXCITER FIELD DC RESISTANCE: 15 ohms minimum; 100 ohms maximum.

AC POWER INPUT: Operating range: 95-139 Vac single phase, 50/60 Hz ±10%. Burden 450VA.

SENSING INPUT: 95-139 Vac single phase, 50/60 Hz ±10%, or 190-277 Vac single phase, 50/60Hz ±10%.

SENSING BURDEN: 0.25VA.

VOLTAGE ADJUST RANGE: 190-277 Vac.

REGULATION ACCURACY: Better than ±1.0% no load to full load.

RESPONSE TIME: Less than 1.5 cycles for ±5% change in sensing voltage.

EMI SUPPRESSION: Internal electromagnetic interference filtering.

OVEREXCITATION SHUTDOWN: Field voltage shuts down after time delay if exciter field voltage exceeds 100 Vdc ±5%. The time delay is inversely proportional to the magnitude of the detected overvoltage condition up to the 140 Vdc point, thus allowing nominal forcing for approximately 1 minute. Beyond 140 Vdc, the field voltage is removed within 2.0 seconds.

VOLTAGE BUILDUP: Internal provisions for automatic voltage buildup from generator residual voltages as low as 6 Vac.

TERMINATIONS: 1/4 “Fast-On” Terminals.

POWER DISSIPATION: 15 W maximum.

OPERATING TEMPERATURE: -40°C (-40°F) to 60°C (140°F).

STORAGE TEMPERATURE: -40°C (-40°F) to 85°C (185°F).

VIBRATION: Withstands 1.2 Gs at 5 to 26 Hz; 0.036” double amplitude at 27 to 52 Hz; and 5 Gs at 53 to 1000 Hz.

SHOCK: Withstands up to 20 Gs in each of three mutually perpendicular axes.

WEIGHT: 10 oz. (0.28 kg) Net.

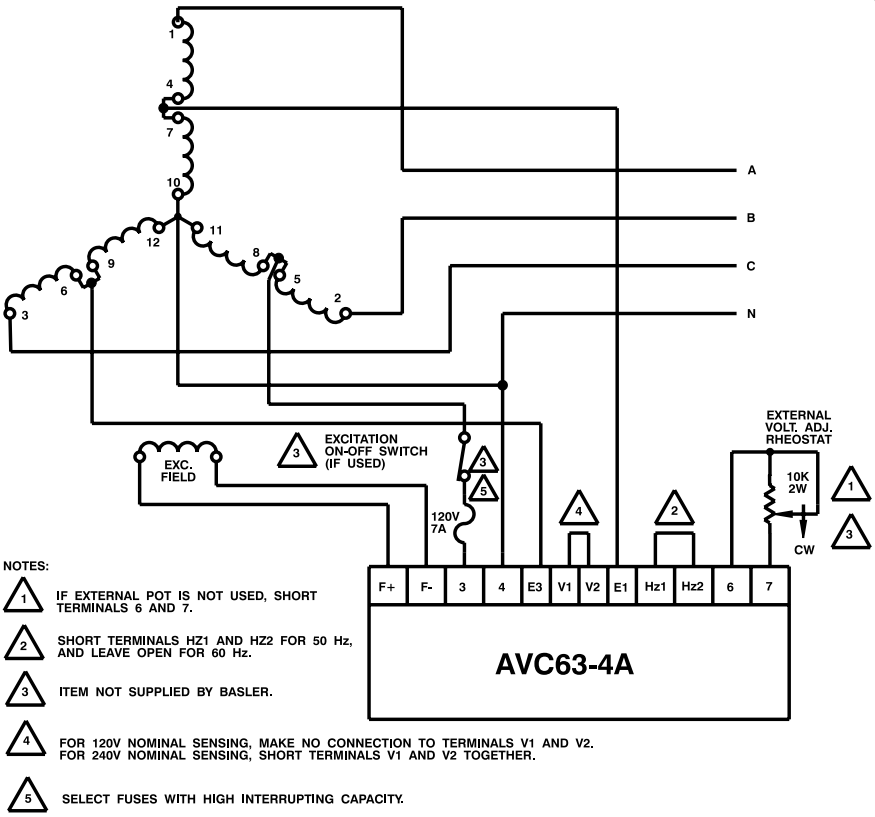

Figure 2 - Typical Interconnection Diagram
277/480V Nominal, 3-Phase, 4-Wire, Wye Connection

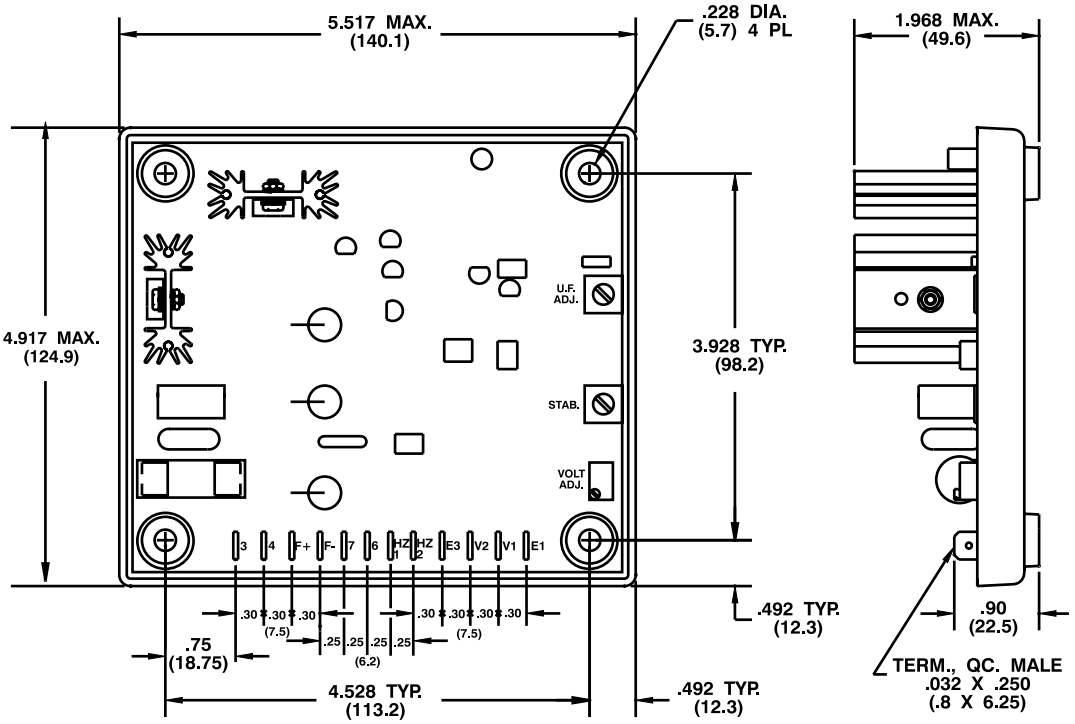

Figure 3 - Outline Drawing

NOTES:
1. Dimensions in parentheses are in millimeters.
2. All drawings and data subject to change without notice.

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