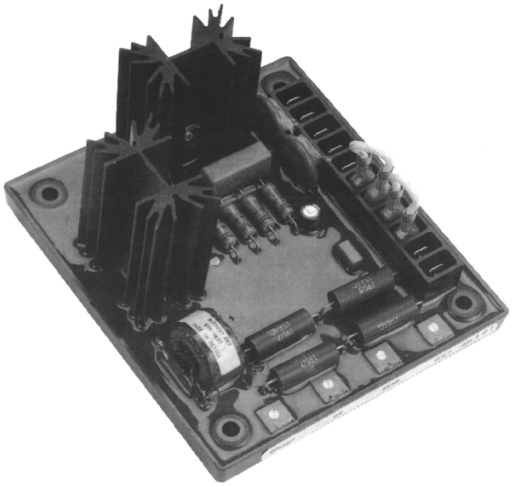


# AVC63-7
# VOLTAGE REGULATOR

Using enhanced technology, the AVC63-7 half wave voltage regulator is designed for use on 50/60 Hz brushless generators. This encapsulated regulator is small in size, ruggedly constructed, and incorporates solid state technology with frequency compensation, automatic voltage build-up, and parallel droop as standard.

## FEATURES

- Integrated circuitry for compact size, simplicity, high reliability.
- Extremely rugged.
- Exciter field current 7A continuous, 11.5A forcing.
- Regulation accuracy better than ± .25% no load to full load.
- Fast response.
- Frequency compensation.
- Overexcitation shutdown.
- Built-in parallel droop compensation.
- EMI suppression.
- Available from stock.
- CSA certified.
- Qualified to the requirements of:
  - IEEE C37.90.1 for Surge Withstand Capability.
  - ASTM B117-73, Method 711-1C, for Salt Fog.

## ADDITIONAL INFORMATION

### INSTRUCTION MANUAL

Request Publication 9302800990




Basler Electric

ROUTE 143, BOX 269 HIGHLAND, ILLINOIS U.S.A. 62249 PHONE 618-654-2341 FAX 618-654-2351

## DESCRIPTION

The AVC63-7 model of voltage regulator maintains generator line voltage on brushless generators from 100kW to over 500kW in size. The voltage regulator senses generator average voltage to maintain a precise regulation band within ±.25 percent. This is accomplished by converting a 240 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.

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.

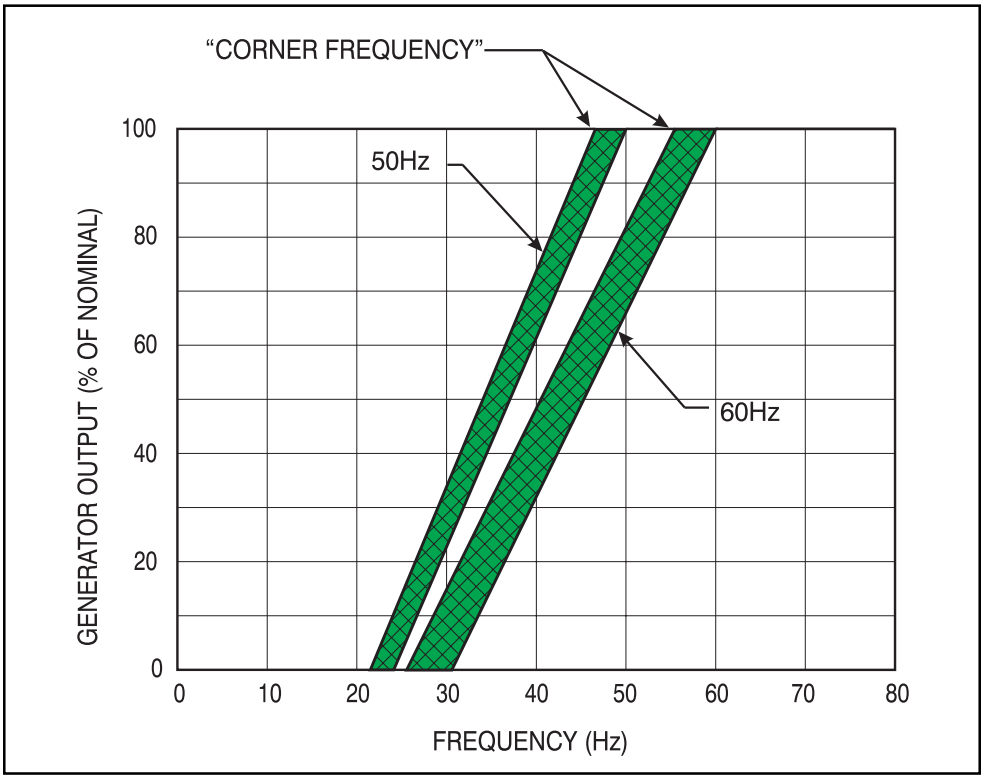



**Figure 1 - Frequency Compensation Characteristic**

## SPECIFICATIONS

| DC OUTPUT | | | | EXCITER FIELD RESISTANCE | | POWER INPUT | | SENSING INPUT | |
|---|---|---|---|---|---|---|---|---|---|
| MAX. CONT. | | MAX. FORCING 10 SEC. (120 Vac INPUT) | | MIN. OHMS @ 25°C | MAX. OHMS | SINGLE PHASE VOLTAGE RANGE | BURDEN | VOLTAGE ADJUST RANGE | BURDEN |
| AMP | VOLT | AMP | VOLT | | | | | | |
| 7 | 63 | 11.5 | 105 | 9.0 | 100 | 190-277Vac ±10% | 900VA | 190-240Vac ±10% | <5VA |

## SPECIFICATIONS (continued)

**DC OUTPUT POWER:** 7 Adc at 63 Vdc maximum continuous, 11.5 Adc at 105 Vdc ten second forcing. (Forcing with 240 Vac nominal input).

**EXCITER FIELD DC RESISTANCE:** 9.0 ohms minimum; 100 ohms maximum.

**AC POWER INPUT:** Operating range: 190-277 Vac single phase, 50/60 Hz ±10%. Burden 900VA.

**SENSING INPUT:** 190-240 Vac single phase, 50/60Hz ±10%. Burden <5VA.

**VOLTAGE ADJUST RANGE:** 170-264 Vac.

**REGULATION ACCURACY:** Better than ±.25% no load to full load.

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

**EMI SUPPRESSION:** Internal electromagnetic interference filtering.

**PARALLEL COMPENSATION:** 5A input from a current transformer with 10VA burden @ 0.8PF.

**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:** 35 Watts maximum.

**OPERATING TEMPERATURE:** -40°C (-13°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 15 Gs in each of three mutually perpendicular axes.

**WEIGHT:** 10 oz. (0.28 kg) Net.

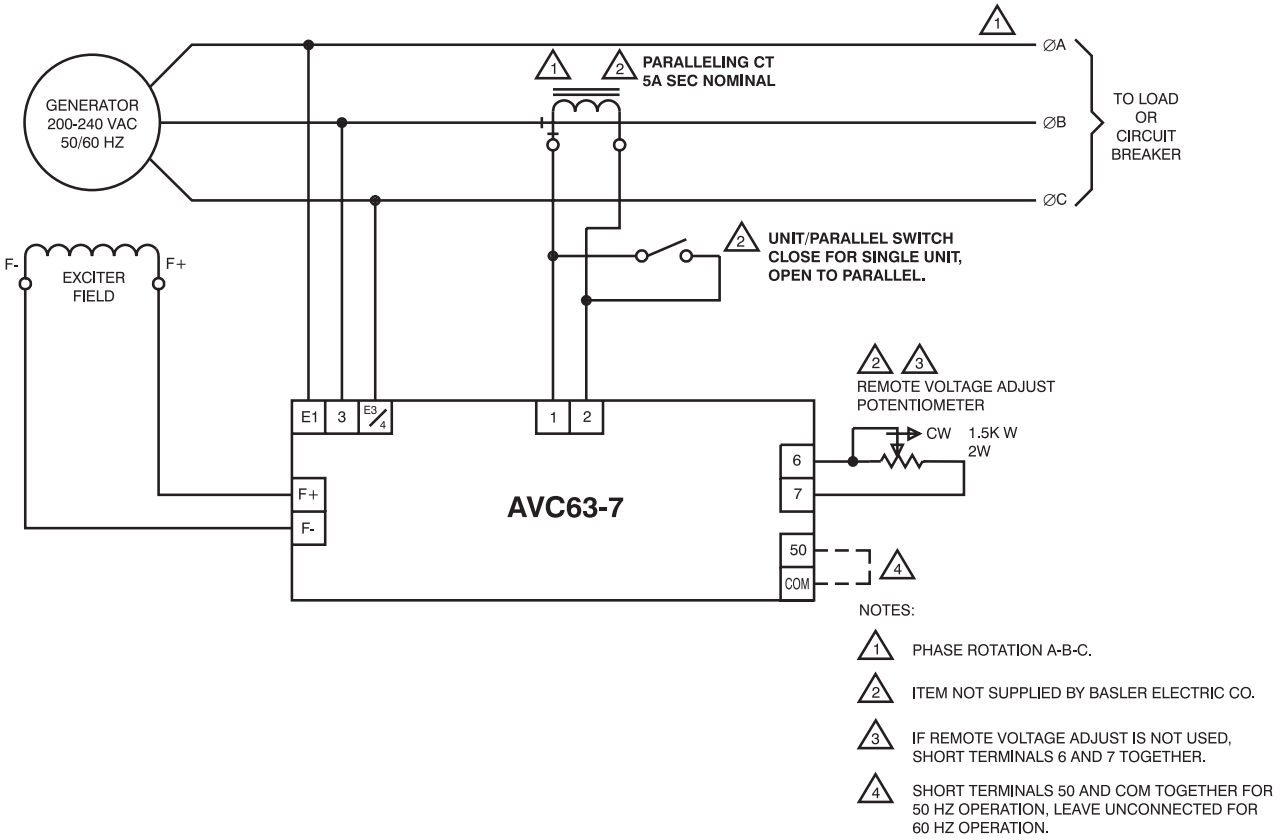
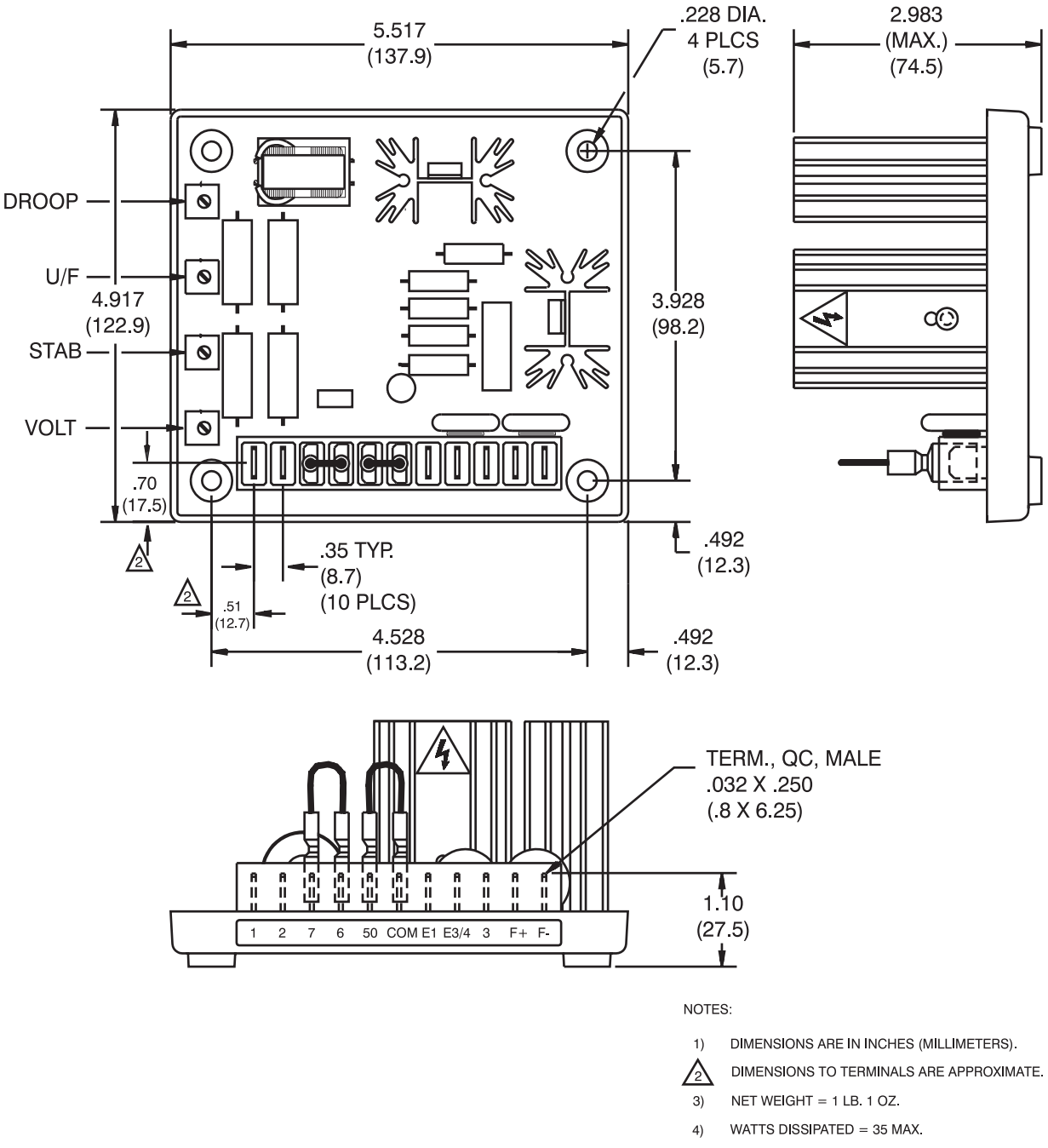



**Figure 2 - Typical Interconnection Diagram**




NOTES:

1) DIMENSIONS ARE IN INCHES (MILLIMETERS).
2) DIMENSIONS TO TERMINALS ARE APPROXIMATE.
3) NET WEIGHT = 1 LB. 1 OZ.
4) WATTS DISSIPATED = 35 MAX.

**Figure 3 - Outline Drawing**

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