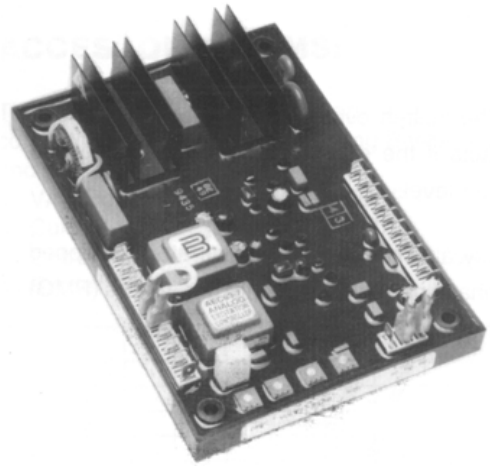


CLASS 200 EQUIPMENT
AEC SERIES
VOLTAGE REGULATORS

The AEC Series Voltage Regulators provide reliable, high performance voltage regulation for 50/60Hz brushless generators requiring 7A of excitation at 63Vdc. The AEC voltage regulator receives its power for precise voltage regulation from a PMG (Permanent Magnet Generator), self excitation from the generator line, or other AC sources.

FEATURES:

- Regulation accuracy better than ±1.0%
- Adjustable frequency compensation
- Parallel droop or cross current compensation
- Overexcitation alarm via a triac output
- Solid state voltage buildup
- Applicable for 50 or 60Hz systems
- Compatible with single phase PMG generator (50 to 400Hz power input range)
- CSA approval pending

Basler Electric
P. O. BOX 269 HIGHLAND, ILLINOIS 62249, U.S.A. PHONE 618-654-2341 FAX 618-654-2351

SWD-1
9-94

DESCRIPTION:

The AEC voltage regulator is completely solid state and uses state-of-the-art circuitry to provide high performance with a wide range of standard features. Voltage is internally or remotely adjustable. The AEC has a variable frequency compensated operating characteristic (See figure 2).

During start-up, the solid state voltage build-up circuit operates from generator output residual voltages as low as 6 Vac. The built-in overexcitation alarm closes the output contacts if the exciter field voltage exceeds a predetermined level.

The AEC may also be used with generators equipped with single-phase permanent magnet generators (PMG) for excitation power.

SPECIFICATIONS:

OUTPUT POWER:

AEC Model	Continuous Voltage*	Forcing Voltage*	Continuous Current	Forcing Current
AEC 63-7	63Vdc	103Vdc	7Adc	12Adc

*At 240Vac supply input voltage

EXCITER MINIMUM FIELD DC RESISTANCE:

AEC Model	Field Resistance (Minimum)
AEC 63-7	9.0 Ohms

POWER DISSIPATED: Less than 20 Watts.

AC INPUT POWER: Designed for 50/60Hz, self-excited, or 50-400Hz separately-excited (PMG) applications.

AEC Model	Rated Voltage	Burden
AEC 63-7	190 to 277Vac, single phase, ±10%, 50 to 400 Hz	1100VA

AC INPUT SENSING: Designed to regulate generator voltage at any frequency from 50 to 60Hz. Transformer isolated, 2-phase with respect to neutral, 480Vac line-to-line.

INPUT SENSING BURDEN: Less than 1.0VA per phase nominal.

TRIAC ALARM CONTACTS:

Voltage rating: 12-280Vac/Vdc (400V peak)
Current rating: 150mA, AC/DC (output latches on DC current)

PARALLELING COMPENSATION INPUT: 1Aac current input (internal), 5Aac current via external resistor assembly, P/N 9 2841 00 100.
0-10% droop @ 0 p.f.

REGULATION ACCURACY: ±1.0% from no-load to rated.

FREQUENCY COMPENSATION: Refer to Figure 2. Select from 50 or 60Hz.

VOLTAGE BUILD-UP: From 6 Vac minimum.

TRANSIENT RESPONSE TIME: 1.5 cycles @ 60Hz. Time constant jumpers and stability adjust provided to optimize response.

VOLTAGE ADJUST RANGE: External adjustment: ±10% of nominal. Internal adjustment minimum: see below.

Minimum Adjustment Range
380-480, Line-line ± 10% 220-277, Line-neutral ± 10%

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

OPERATING TEMPERATURE RANGE: -25°C (-13°F) to +60°C (+140°F).

SHOCK: Withstands 15 G's in each of three mutually perpendicular planes.

VIBRATION: Withstands the following:

Frequency	Force
5 - 29 Hz	1.5 G
29 - 52 Hz	0.036 inch double amplitude
52 - 500 Hz	5.0 G

WEIGHT: 2 lbs. (.9kg) net.

ACCESSORY ITEMS:

The AEC series voltage regulators are designed to be compatible with any of the following Basler accessories and equipment:

a. VAR/Power Factor Controller (SCP 250).
b. Current Boost System (CBS 212).
c. Current Transformers (CT2 through CT50).
d. Exciter Diode Monitor (EDM 200).
e. Minimum/Maximum Excitation Limiter (EL 200).
f. Auto-Synchronizer (BE1-25A).
g. Auto-Synchronizer (BE3-25A).
h. Line Drop Compensator (LDC 300).
i. Manual Voltage Control (MVC 300).
j. EMI filter to meet VDE0875 Level N.

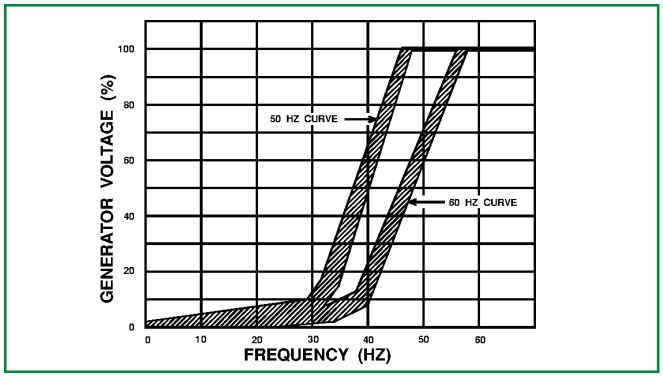


FIGURE 2 - 50/60 HZ FREQUENCY COMPENSATION

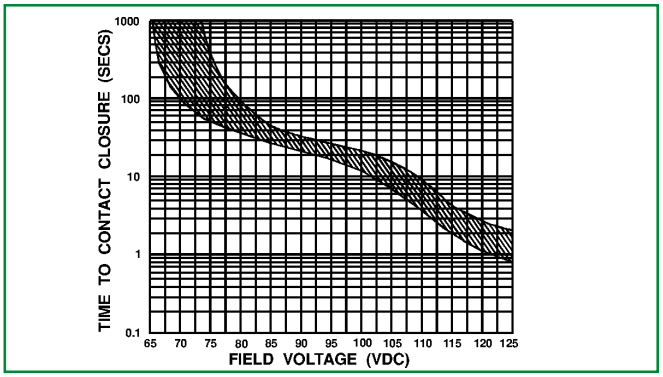
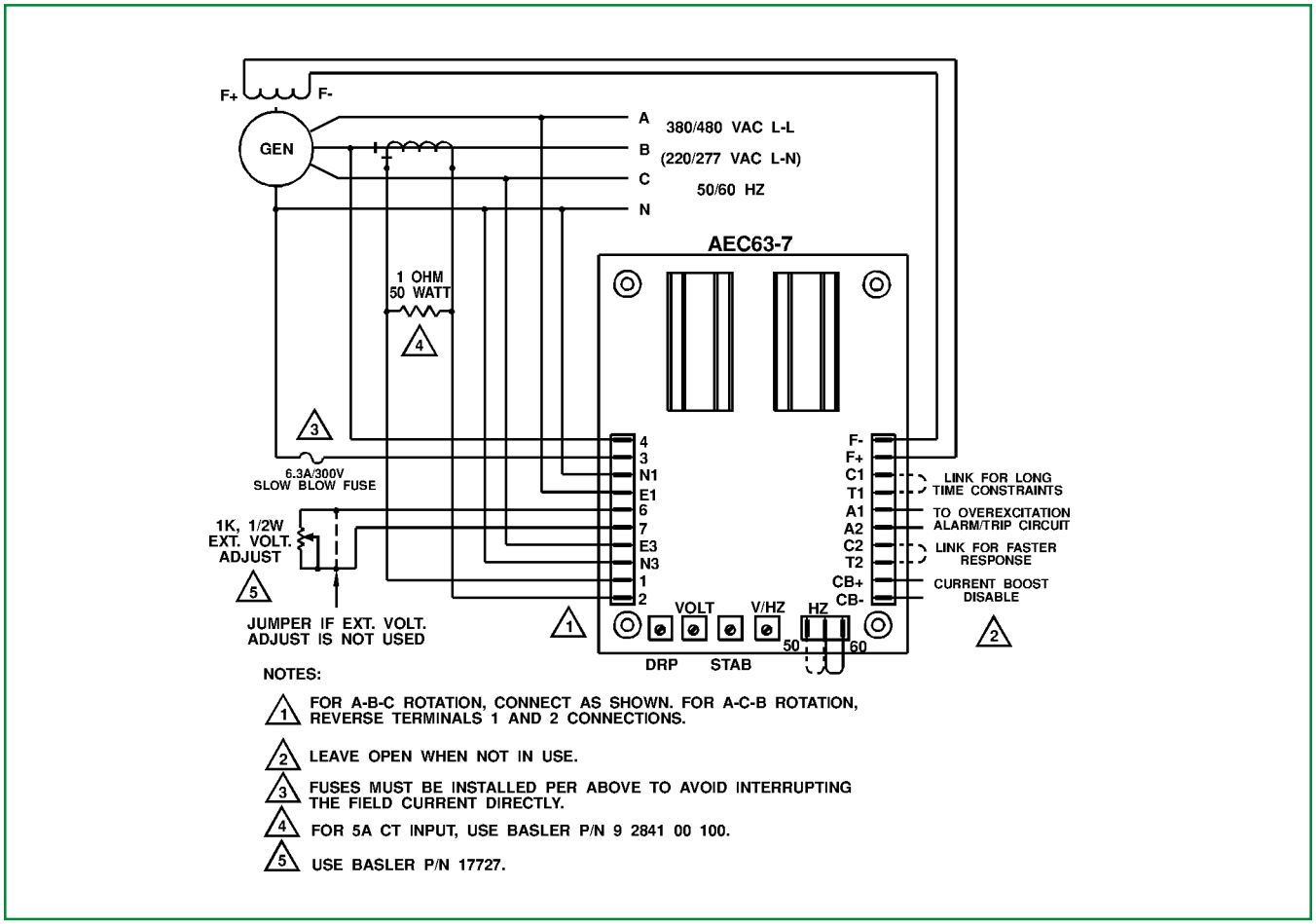


FIGURE 3 - OVEREXCITATION SHUTDOWN TIME DELAY



Typical AEC63-7 Interconnection, Two-Phase Sensing with Respect to Neutral, Shunt Excitation.

FIGURE 4 - TYPICAL INTERCONNECTION DIAGRAM

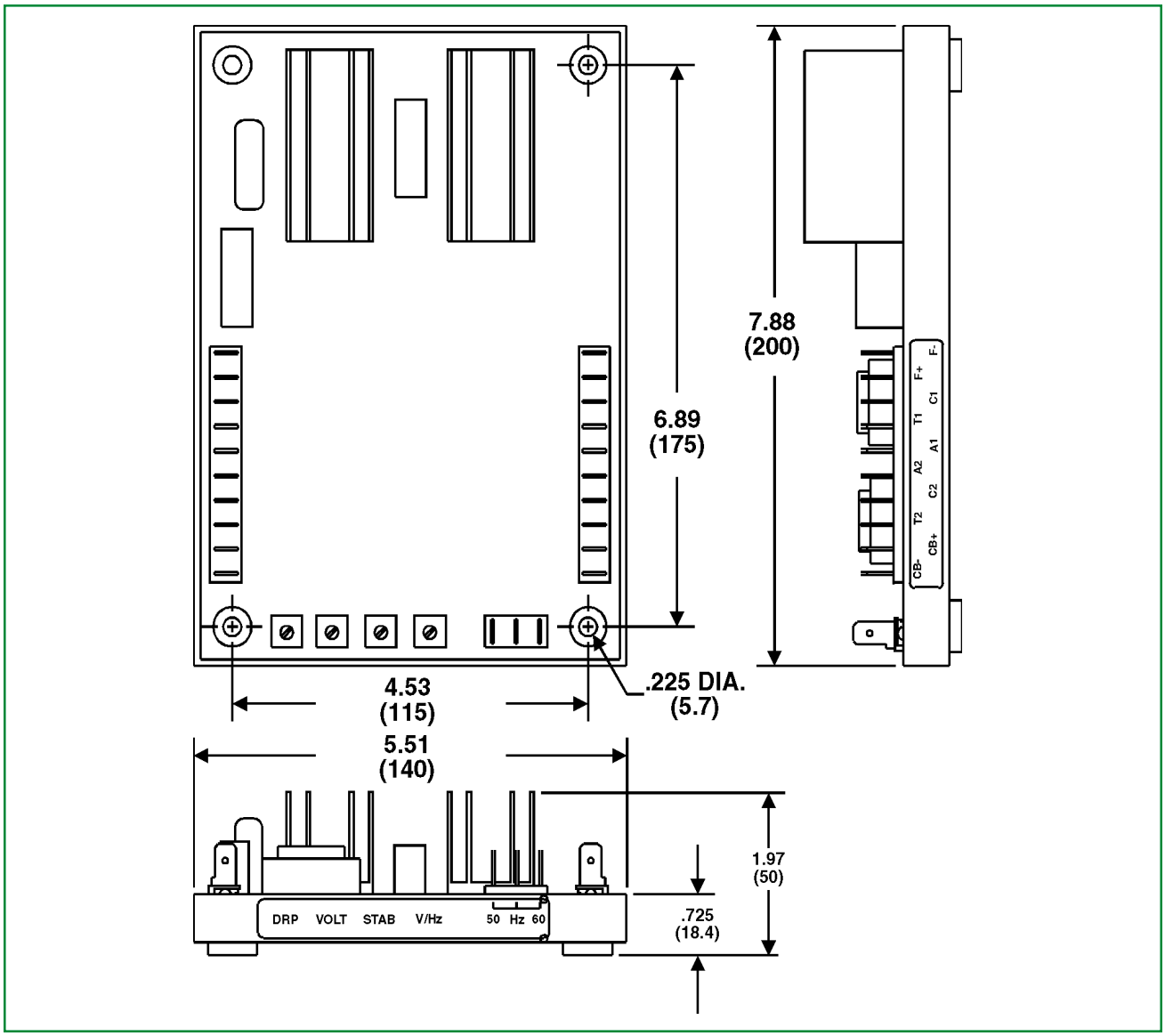


FIGURE 5 - DIMENSION DRAWING

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

Basler Electric

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

P.A.E. Les Pins, 67319 Wasselonne Cedex FRANCE
PHONE (33-3-88) 87-1010 FAX (33-3-88) 87-0808

http://www.basler.com, info@basler.com