

THYRISTOR POWER CONVERTERS



THREE PHASE — 120 to 600 VOLTS TWO QUADRANT

The REFLEX® SERIES 2250 POWER CONVERTERS are three phase AC to DC and AC to AC phase-angle controlled thyristor converters for DC motor drives, AC motor starters, power supplies and similar applications.

A six-thyristor configuration with digital based firing provides for current flow during the positive and negative halves of the AC supply. This is "two quadrant" operation and permits use for slip recovery of a wound rotor motor or for operation of a DC motor in a regenerative mode.

A built-in Current Regulator provides torque control of a DC motor or current limited starting of an AC motor. It can be used as the inner current loop of a speed or position regulated device, or as an open or closed loop power supply.

Digital techniques provide balanced firing signals independent of phase rotation. Output is nearly linear to permit use of linear analysis and optimize performance. Six isolated outputs provide hard firing with high noise immunity to the thyristors. No adjustments or synchronizing transformers are required.

A modular, field-proven mounting arrangement provides reliable connection to printed circuit boards, but allows easy removal without disturbing permanent wiring. Access to terminals and comprehensive Technical Manual makes engineering and field service easy. Thyristors and thyristor modules can be replaced without special tools.

When used with the companion SERIES 200 SOLID STATE CONTROL MODULES, virtually any Application Modification is available for precise control of Speed, Torque, Position, Tension and many other process variables (see Bulletin SB-200).

STANDARD FEATURES

- HIGH PERFORMANCE, ADVANCED CIRCUIT DESIGN
- SIX THYRISTOR BRIDGE
- dv/dt PROTECTION
- FAN FAILURE PROTECTION
- DIGITAL DESIGN, NEEDS NO ADJUSTMENTS OR SYNCHRONIZING TRANSFORMERS
- INSENSITIVE TO PHASE ROTATION
- INNER CURRENT LOOP REGULATOR
- REGULATED REFERENCE VOLTAGE
- TWO QUADRANT OPERATION
- EASILY REPLACED CIRCUIT BOARDS AND THYRISTOR MODULES
- CONSERVATIVELY RATED FOR RELIABILITY
- ELECTRICAL ISOLATION BETWEEN POWER AND CONTROL CIRCUITS
- THREE YEAR WARRANTY ON PRINTED CIRCUITS

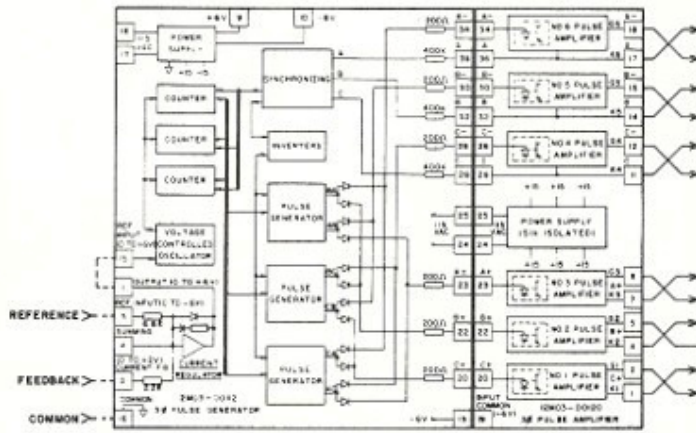
SPECIFICATIONS

- ALTITUDE: to 3300 feet above sea level (unless derated)
- TEMPERATURE: 0° to 40°C (32° to 104°F) (50°C in cabinet)
- AC INPUT: Three phase, 50/60 HZ nominal
CONTROL: 120 volts \pm 10%
POWER: 120 to 480 volts standard (to 600 volts optional)
- DC OUTPUT: Voltage: to 130% of AC Input Nominal
Current: 500, 850 or 1300 amperes
- AC OUTPUT: Voltage: to 100% of AC Input Nominal
Current: 400, 700 or 1100 amperes
- HIGHER RATINGS: Consult Factory
- SERVICE FACTOR: 115% continuous duty; 250% one minute; 300% thirty seconds; 450% five seconds
Repeated operation above 115% may require derating
- EFFICIENCY: 98-99% of full rated output depending on size and voltage



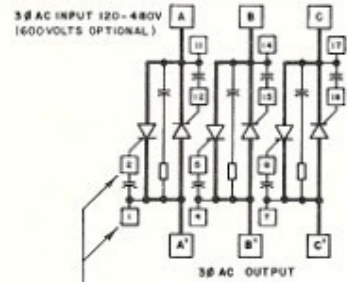
SERIES 2250 POWER CONVERTERS

SIMPLIFIED SCHEMATIC DIAGRAM



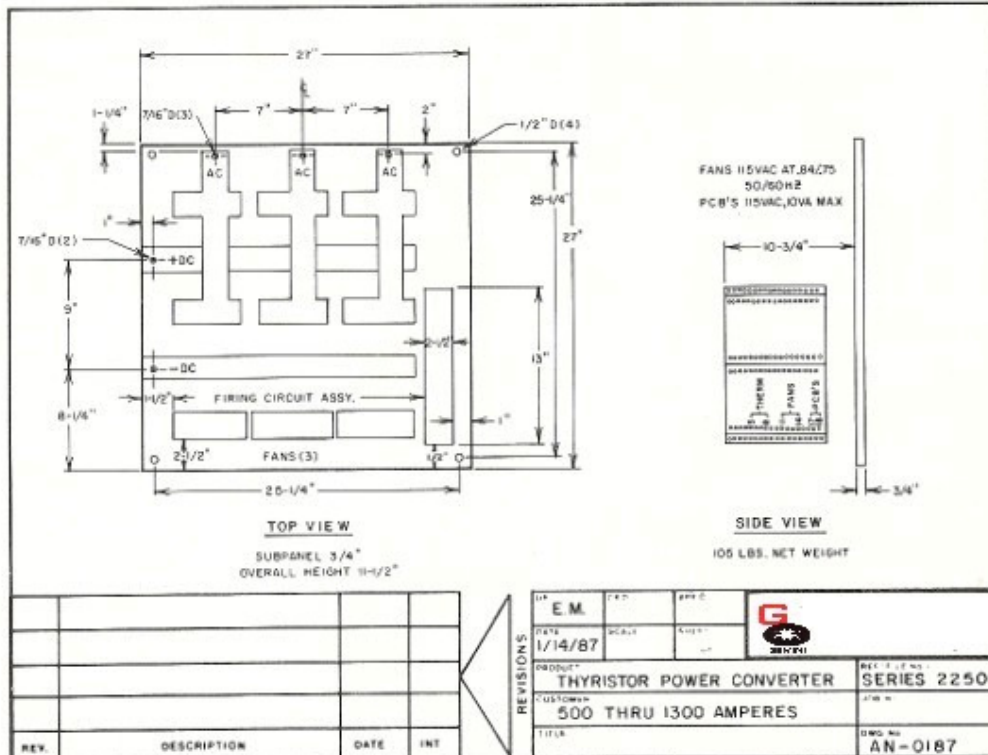
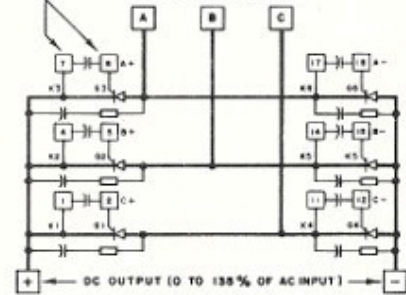
* R-C Line Filters Required but not included

AC-AC CONFIGURATION



CONNECTIONS TO PULSE AMPLIFIER IZMOS-00120

AC-DC CONFIGURATION *



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