

Single-Phase Zero-Cross SCR Power Controller

Features

- Fast Cycling Distributive Zero-Cross Control
- Line Voltage Compensation
- Increased Heater Life
- Compact Size
- Diagnostic LED
- Isolated Heatsink and Command Signal

Description

The model 1031 is a single-phase, zero-cross SCR power controller that controls the electrical power applied to a single phase load by a distributive control technique in which the time frame varies as a function of on and off cycles. The power applied to the load is linear with respect to the command signal. The model 1031 uses potentiometer or a 1/5V command control. The model 1031 is available with current ratings from 10 to 70 amps and voltage ratings from 120 to 575Vac.

The model 1031 is a compact and economical power control solution for industrial applications that require high reliability and long life. The fast solid state switching of the model 1031 provides superior performance over relays, contactors and other slower cycling controllers by reducing temperature variations associated with the longer ON/OFF cycles of those devices. The result is a more precise control of the heating process and extended heater life. Zero-cross control generates minimal RFI noise, virtually eliminating the possibility of interference with other electronic equipment. Line voltage compensation greatly reduces load power variations that result from line voltage changes. This feature provides a more constant load power independent of line voltage variations.



Applications

- Electric Ovens, Furnaces, and Kilns
- Environmental Chambers
- Contactor Replacement
- Resistance Heating
- Platen Heaters
- Extruders

Approvals

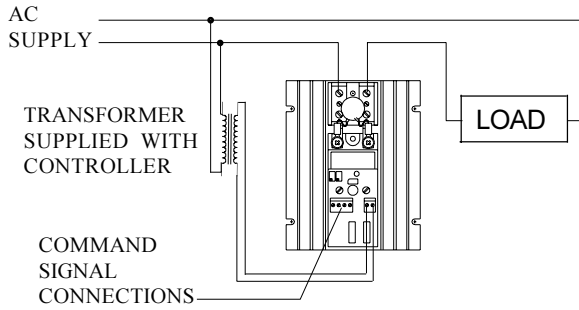


LISTED 3L32
INDUSTRIAL
CONTROL
EQUIPMENT



CERTIFIED
BY UL TO
CANADIAN
NATIONAL
STANDARDS

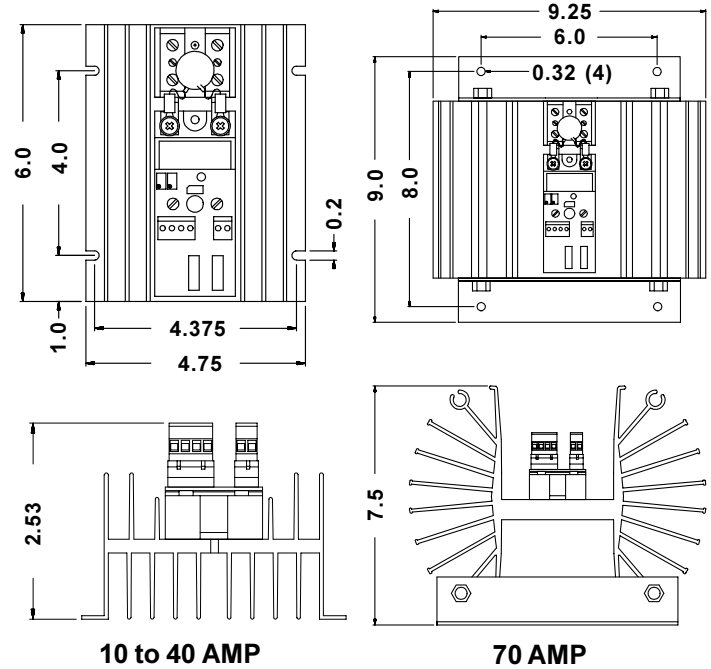
Wiring



Specifications

Control Mode	Single-phase, zero-cross distributive control of the load power.
Command Signal	0/5Vdc 100K input impedance 1-20K Pot. 100K input impedance
Control Range	0 to 99% of line voltage.
Linearity	Load power is linear with respect to the command signal.
Zero and Span	User adjustable, multi-turn pots, over a range of +/- 20% of span. Factory preset.
Isolation	Dielectric strength, input/output and load voltage/heatsink: 2500V(RMS)
Mounting	Panel mount. Heatsink fins vertical.
Line Voltage	120, 240, 480, and 575 Vac +10%, -15%, 50/60 Hz. Other voltages available.
Line/Load Connections	Compression lugs accept #2 to #14 Copper or #2 to #8 Aluminum.
Load Current	Models available with current ratings of 10, 20, 30, 40 or 70 Amps.
dv/dt and Transient Voltage	200 volts/microsecond minimum. Uses a dv/dt snubber and a metal oxide varistor (MOV).
Cooling	Convection.
Weight	10A thru 40A, 2 pounds; 70A, 6 pounds.
Temperature	Operating: 0 to +55°C (+32 to +131°F) Storage: -40 to +80°C (-40 to +176°F)
Heat Dissipation	1.5 Watts per amp of controlled current.
Fusing	Special semiconductor fuses are not required. Class T fuses are recommended to protect controller and load.

Dimensions



Ordering Information

1031 - (XX) - (xx) - (XXXX)

(XX) = Voltage: 12 = 120 Vac
 24 = 240 Vac
 48 = 480 Vac
 57 = 575 Vac

Substitute the two digit number for the (XX)

(xx) = Current: 10 or 20 or 30
 or 40 or 70 Amps

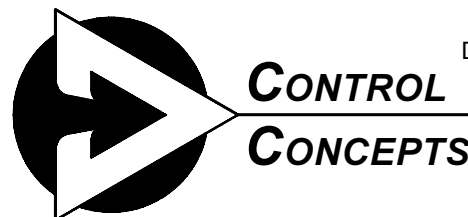
Substitute the two digit number for the (xx)

(XXXX) = Command Signal:
 Pot(potentiometer)
 or 1/5 Vdc

Substitute Pot or 1/5 Vdc for the (XXXX)

Complementary Products

Control Concepts, Inc., with a full range of standard and custom SCR power controllers and signal conditioners, has the expertise to meet your specific industrial power control needs. Model 1600-PM6-01 "6•PAK"[™] delivers up to six 70 Amp single phase controllers in 14.5 x 7.5 inches of panel space. All of Control Concepts products are covered by a full two year warranty. Call us for answers, and delivery schedules that work.



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