

### 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

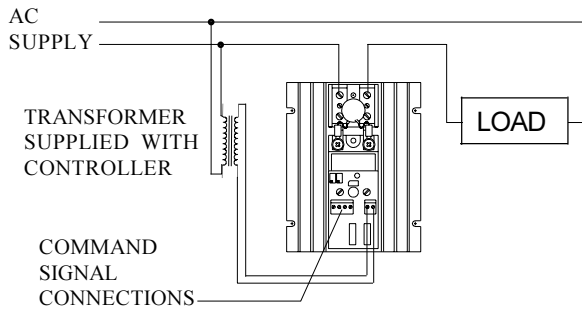


LISTED 3L32  
INDUSTRIAL  
CONTROL  
EQUIPMENT



CERTIFIED  
BY UL TO  
CANADIAN  
NATIONAL  
STANDARDS

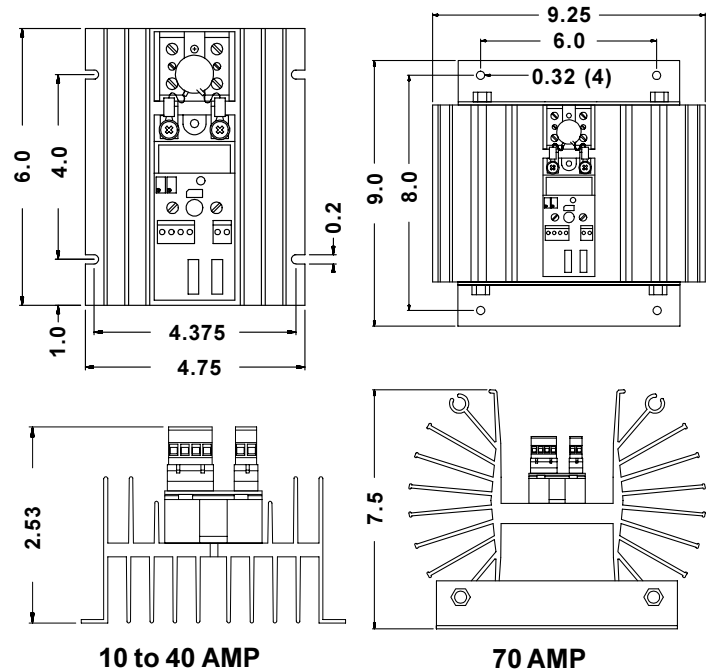
## Wiring



## 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"<sup>™</sup> 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.



**CONTROL  
CONCEPTS**

TEL: (952) 474-6200  
(800) 795-2799  
FAX: (952) 474-6070  
www.cciipower.com

18760 Lake Drive East  
Chanhassen, MN 55317, USA