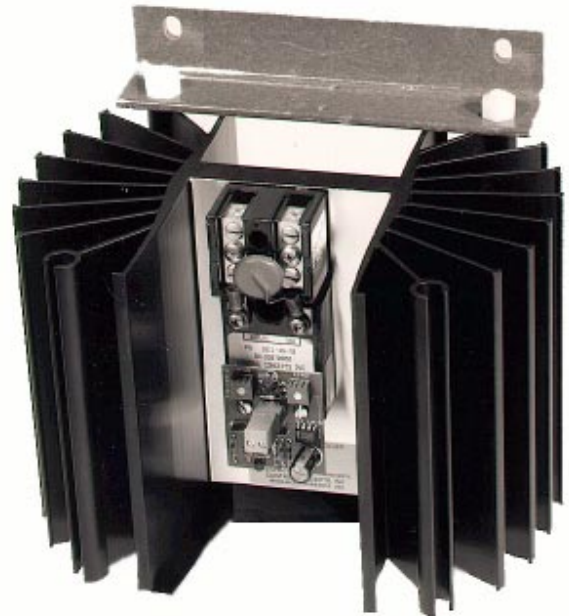


## Single-Phase Zero-Cross SCR Power Controller

### Features

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- **Fast Cycling Distributive Zero-Cross Control**
- **Diagnostic LED**
- **Circuit Board Powered from 4/20mA Command Signal**
- **Compact Size**
- **Increased Heater Life**
- **Isolated Heatsink and Command Signal**



### Description

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The model 1020 is a single-phase, zero-cross SCR power controller that controls the electrical power applied to a single phase load by fast cycling, distributive zero-cross operation of a pair of SCRs. The power applied to the load is linear with respect to the 4/20mA command signal. The model 1020 is available with current ratings from 10 to 70 amps and voltage ratings from 120 to 575Vac.

The model 1020 is a compact and economical power control solution for industrial applications that require high reliability and long life. The circuit card is powered from the 4/20mA command signal, eliminating the need of a control transformer. The fast solid state switching of the model 1020 provides superior performance over relays, contactors and other slow 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.

### Applications

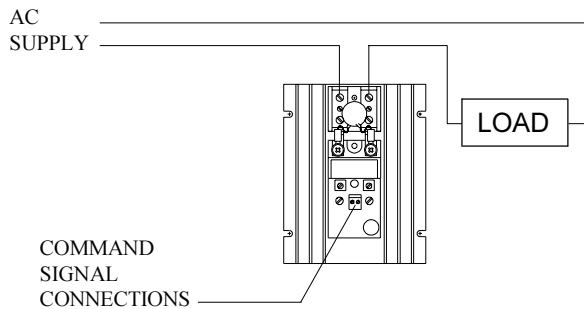
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- **Electric Ovens, Furnaces, and Kilns**
- **Environmental Chambers**
- **Contactors Replacement**
- **Resistance Heating**
- **Platen Heaters**
- **Extruders**



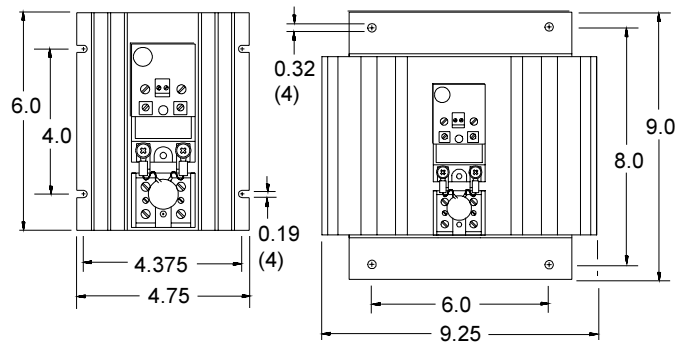
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## Wiring



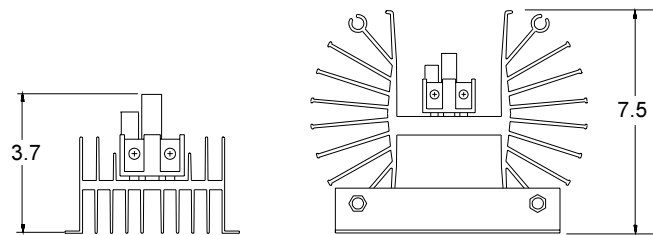
## Dimensions

(inches)



## Specifications

<b>Control Mode</b>	Single-phase, zero-cross distributive control of the load power.
<b>Command Signal</b>	4 to 20 Milliamp. Input impedance, at 20 mA, equivalent to 350 ohms. 7 Volt max voltage drop.
<b>Control Range</b>	0 to 100% of line voltage.
<b>Linearity</b>	Load power is linear with respect to the command signal.
<b>Zero and Span</b>	User adjustable over a range of 20% of span. Factory preset.
<b>Isolation</b>	Dielectric strength, input/output and load voltage/heatsink: 2500V(RMS)
<b>Mounting</b>	Panel mount. Heatsink fins vertical.
<b>Line Voltage</b>	120, 240, 480, and 575 Vac +10%, -50%, 50/60 Hz. Other voltages available.
<b>Line/Load Connections</b>	Compression lugs accept #2 to #14 Copper or #2 to #8 Aluminum.
<b>Load Current</b>	Models available with current ratings of 10, 20, 30, 40 or 70 Amps.
<b>dv/dt and Transient Voltage</b>	200 volts/microsecond minimum. Uses a dv/dt snubber and a metal oxide varistor (MOV).
<b>Cooling</b>	Convection.
<b>Weight</b>	10A thru 40A, 2 pounds; 70A, 6 pounds.
<b>Temperature</b>	Operating: 0 to +55 C (+32 to +131 F) Storage: -40 to +80 C (-40 to +176 F)
<b>Heat Dissipation</b>	1.5 Watts per amp of controlled current.
<b>Fusing</b>	Special semiconductor fuses are not required. Class T fuses are recommended to protect controller and load.



10 to 40 AMP

70 AMP

## Ordering Information

1020 Single Phase, Zero Cross SCR Power Controller.

Voltage Rating: 12=120V, 24=240V, 48=480V, 57=575V. Other Voltages Available.

Current Rating: 10, 20, 30, 40, or 70 Amps.

Command Signal: 4/20mA. Other commands available.

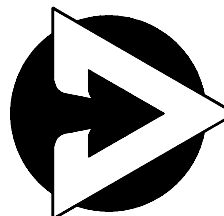
1020 — 48 — 40 — 4/20mA

## 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. The 1600-PM6-01 "6-PAK"<sup>™</sup> provides six 70 Amp 1020 SCR 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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Part No. 5000090-1009-01.94 / Model 1020