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 575V ac.

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.
WIRING

AC SUPPLY

LOAD

COMMAND SIGNAL CONNECTIONS

DIMENSIONS

Dimensions in inches

10 to 40 AMP

70 AMP

SPECIFICATIONS

Control Mode | Single-phase, zero-cross distributive control of the load power.
Command Signal | 4 to 20 Milliamp. Input impedance, at 20 mA, equivalent to 350 ohms. 7 Volt max voltage drop.
Control Range | 0 to 100% of line voltage.
Linearity | Load power is linear with respect to the command signal.
Zero and Span | User adjustable 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%, -50%, 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 not required. Class T fuses are recommended to protect controller and load.

CONTROL CONCEPTS

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.

ABOUT US

Control Concepts, Inc. has the expertise to meet your specific industrial power control needs with a full range of standard and custom SCR power controllers and signal conditioners. All Control Concepts products are covered by a limited two year warranty.

Call us for more information and assistance.

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