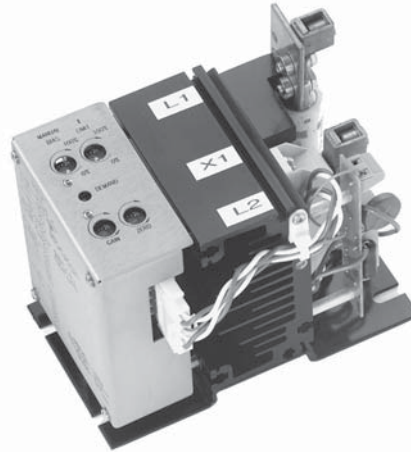


Controls

MiniMax 1P

Single Phase SCR Power Pak



- 120-600 Vac @ 30-75 Amp
- Phase Angle Firing
- Isolated Control Circuit Inputs:
 - 0-5mA, 0-20mA,
 - 0-50mA, 1-5mA
 - 4-20mA, 10-50mA
 - 0-5Vdc, 0-10Vdc
- Flexible I/O Power Wiring
- Optional Current Limit
- Easy Customer Interface
- Remote Shutdown
- Soft Start
- Line Voltage Compensation
- Compact Size and Construction
- dv/dt Transient Voltage Protection
- MOV Protection

Applications

- Resistive Heaters
- Electric Ovens
- Furnaces
- Kilns

Description

The MiniMax Series is specifically designed for the OEM market. The current limit, soft start option, flexible I/O power wiring, space saving footprint, I²t fusing with UL and cUL approvals make it an excellent candidate for your product.

The Chromalox Model MiniMax 1P utilizes Phase Angle firing to modulate power to an inductive or resistive load. Phase Angle control has the advantage of proportioning every cycle thereby providing very fine resolution of power. Fast responding loads in which the resistance changes as a function of temperature are excellent candidates for Phase Angle control. The MiniMax Soft Start feature assures that the load power is gradually increased from zero to the value set by the command signal in the event of a power interruption. In addition to the Soft Start feature, optional Current Limit is used to protect the load, fuses, SCR controller, and the total system from large surge currents that could occur at startup. Chromalox MiniMax offers separate and adjustable Zero, Gain, Manual Bias, and Current Limit potentiometers for ease of calibration. Screw type plug-in connectors for input signals, remote shutdown, and optional Remote Manual Bias are standard for easy customer interface.

Mechanical Features

- LED Indication of Firing
- Customer Control Connections are made on a Plug-In Screw Type Terminal Block
- Optional Remote Manual Adjust
- Heatsink Mounted Temperature Thermostat NC
- Built-In Power Distribution

Electrical Features

- SCRs PIV 1500V Minimum (1400 Volts on 600 Volt model)
- Isolated Semiconductor Power Blocks are used on all Current Ratings
- Optional I²t Fusing

Safety Features

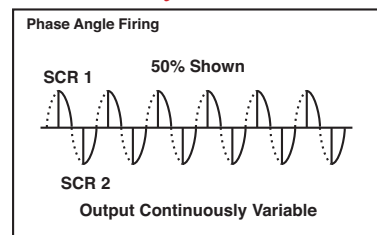
Personnel Safety

- Ground Potential Heat Sink
- SCR to Heat Sink Isolation

Equipment/Process Safety

- Input to Output Isolation
- dv/dt Transient Voltage Protection
- I²t Fusing for SCR Protection
- Remote Shutdown
- MOV
- Current Limit
- Soft Start

Wave Form Cycle Rate



Controls

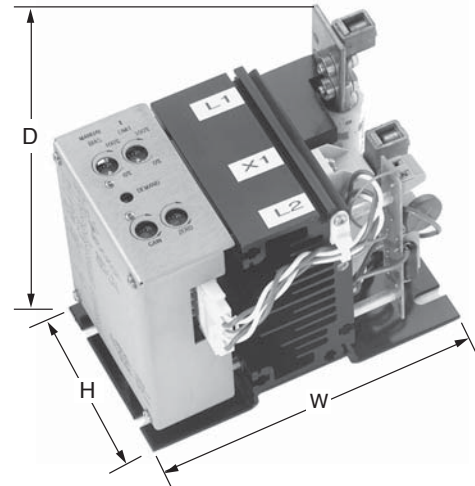
MiniMax 1P

Single Phase
SCR Power Pak
(cont'd.)

Mounting Dimensions

MiniMax 1P Open

Amps	Height H	Width W	Depth D
30	5	7.5	6
50	5	7.5	6.5
75	5	9.5	7.5



Ordering Information

Complete the model number using the matrix provided.

Model	1P Power Pack
Mmax 1P	Single Phase SCR Power Controller Complete with Lugs and I ² T Fusing ^{1, 2}
Code	Control Configuration
1	Phase Angle Control (Accepts: 1-5/0-5mA, 4-20/0-20mA, 10-50/0-50mA)
2	Phase Angle Control with Current Limit
Code	Current at 50°C (122°F) Ambient
01	30 Amp
02	50 Amp
03	75 Amp
Code	Voltage
1	120 Vac
2	208 Vac
3	240 Vac
4	277 Vac
5	480 Vac
6	575/600 Vac ²
Code	Remote Manual Adjust/Auto Manual Switch³
0	None
1	Pot with 0-100% dial and local/Remote Switch, Single Turn 1K ohm Potentiometer
Mmax 1P - 2 01 1 1	Typical Model Number

SCR COMPONENTS

- 1) SCR fusing is for semiconductor protection only, not wire protection.
- 2) Fuses are supplied loose for 575/600 Vac applications.
- 3) Potentiometer supplied loose for customer mounting.

Note:

Storage temperature 14°F to 158°F (-10°C to 70°C).
SCR units calibrated for 4-20mA input.