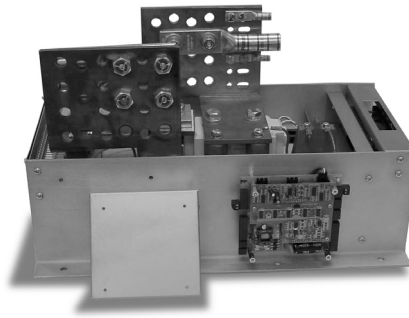




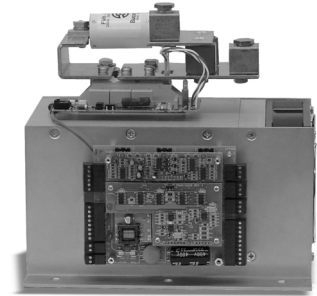
MaxPac I

Single Phase SCR Power Pak

- 120-575 Vac @ 100-1200 Amp
- Zero Cross-Over Firing
- Isolated Control Circuit
 - On/Off Control Inputs: 120 Vac, 240 Vac, 5-32 Vdc Dry Contact Closure
 - Proportional (DOT firing) Inputs: 4-20 mA, 0-5 Vdc, 1-5 Vdc, 0-10 Vdc
- Remote Manual Adjust, Remote Auto Manual Switch
- Flexible I/O Power Wiring
- Shorted SCR Detection (option)
- Easy Customer Interface
- Remote Shutdown
- Electronically Protected with Temperature Warning and Shutdown System
- Compact Size and Construction
- Touch-Safe (option on 100 to 650 Amp models)
- dv/dt Transient Voltage Protection
- MOV Protection
- Single or Three Cycle Resolution (Jumper selectable)



Touch Safe
*Shown without cover



Open Design

Description

The MaxPac Series is specifically designed for the OEM market. The plug-in options, flexible I/O power wiring, space saving footprint, optional lug kits, I²t fusing and universal approvals make it an excellent candidate for your product.

The Chromalox Model MaxPac I Single Phase Solid State SCR Power Controller is a highly versatile power pak with optional plug-in proportional Firing and Shorted SCR Detection Boards. Firing modes include: "ON/OFF Power Control" (Contactor) and "Proportional Power Control" (Zero Voltage Switching, DOT fire).

Chromalox's exclusive DOT (Demand Oriented Transfer) firing switches the fewest number of cycles to provide the most precise zero crossover control. At 50% output the unit's output alternates between one electrical cycle on and one cycle off. At 51% the output continues with one cycle on / one cycle off and gradually integrates one extra "on" cycle for the additional one percent. With the exception of phase angle firing, DOT firing is the most precise method of SCR control. DOT firing is preferred in many applications because phase angle firing creates unwanted RFI. DOT is excellent for applications where consistent heater/process temperature control is critical.

Mechanical Features

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

Electrical Features

- SCRs PIV 1200V Minimum (1400 Volts on 575 Volt model)
- Isolated Semiconductor Power Blocks are used on all Current Ratings up to 650 Amps

Safety Features

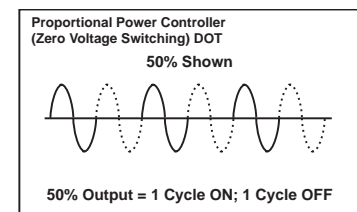
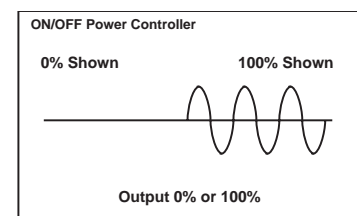
Personnel Safety

- Ground Potential Heat Sink up to 650 Amps
- SCR to Heat Sink Isolation up to 650 Amps
- Touch-Safe Option

Equipment/Process Safety

- Input to Output Isolation
- dv/dt Transient Voltage Protection
- Optional I²t Fusing
- Remote Shutdown
- Optional Shorted SCR Detection
- MOV

Wave Form Cycle Rate



Applications

- Resistive Heaters
- Electric Ovens
- Furnaces
- Kilns
- Environmental Chambers

MaxPac I

Single Phase SCR Power Pak (cont'd.)

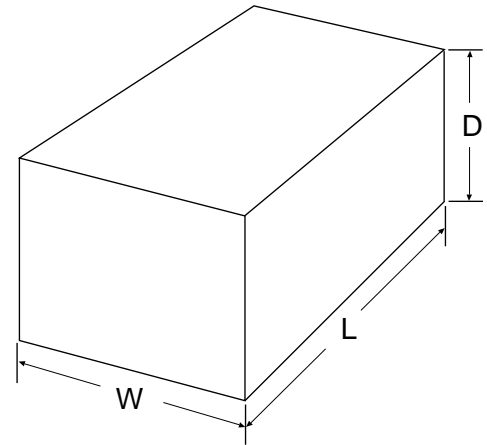
Mounting Dimensions

MaxPac I Open

| | Width | Length | Depth |
|------|-------|--------|-------|
| Amps | W | L | D |
| 100 | 7.75 | 9.75 | 10 |
| 150 | 7.75 | 9.75 | 10 |
| 200 | 7.75 | 9.75 | 10 |
| 300 | 7.75 | 9.75 | 10 |
| 400 | 9.5 | 14.75 | 11 |
| 550 | 11 | 17.75 | 11 |
| 650 | 11 | 17.75 | 11 |
| 800 | 12 | 20 | 15 |
| 1000 | 12 | 20 | 15 |
| 1200 | 12 | 20 | 15 |

MaxPac I Closed

| | Width | Length | Depth |
|------|-------|--------|-------|
| Amps | W | L | D |
| 100 | 9.5 | 14.75 | 11.8 |
| 150 | 9.5 | 14.75 | 11.8 |
| 200 | 9. | 14.75 | 11.8 |
| 300 | 9.5 | 14.75 | 11.8 |
| 400 | 9.5 | 14.75 | 11.8 |
| 550 | 11 | 17.75 | 11.8 |
| 650 | 11 | 17.75 | 11.8 |



Ordering Information

Complete the model number using the matrix provided.

| Model | SCR Power Pack | |
|----------------|-----------------------------|---|
| MXPC I | Single Phase SCR Power Pack | |
| | Code | Control Configuration |
| | 1 | On/Off Standard (Accepts: 120Vac, 240Vac, 5-32Vdc, Dry Contact Closure) |
| | 2 | On/Off Control with Shorted SCR Detection |
| | 3 | Proportional Control, DOT Firing (Accepts: 4-20 mA, 1-5 Vdc, 0-5 Vdc, 0-10 Vdc) |
| | 4 | Proportional Control, DOT Firing with Shorted SCR Detection |
| | Code | Current at 50°C (122°F) |
| | 01 | 100 Amp Open Design |
| | 02 | 100 Amp Touch Safe Design |
| | 03 | 150 Amp OpenDesign |
| | 04 | 150 Amp Touch Safe Design |
| | 05 | 200 Amp OpenDesign |
| | 06 | 200 Amp Touch Safe Design |
| | 07 | 300 Amp OpenDesign |
| | 08 | 300 Amp Touch Safe Design |
| | 09 | 400 Amp OpenDesign |
| | 10 | 400 Amp Touch Safe Design |
| | 11 | 550 Amp OpenDesign |
| | 12 | 550 Amp Touch Safe Design |
| | 13 | 650 Amp OpenDesign |
| | 14 | 650 Amp Touch Safe Design |
| | 15 | 800 Amp OpenDesign |
| | 16 | 1000 Amp OpenDesign |
| | 17 | 1200 Amp OpenDesign |
| MXPC I- | 2 | 03 (Continued on next page) |

MaxPac I

Single Phase SCR Power Pak (cont'd.)

Ordering Information (cont'd.)

Complete the model number using the matrix provided.

| | | | | | | |
|---------------|---|----------|-----------|------------|----------|-----------------------------|
| Model | SCR Power Pack | | | | | |
| MXPC 1 | Single Phase SCR Power Pack | | | | | |
| Code | Line Voltage | | | | | |
| 1 | 120 Vac - 480 Vac | | | | | |
| 2 | 575 Vac | | | | | |
| Code | Instrument Power | | | | | |
| 1 | 120 Vac 50/60 Hz | | | | | |
| 2 | 230 Vac 50/60 HZ | | | | | |
| Code | Compression Lug Kits (Open Design up to 300 Amps) For Other Ranges See Crimp Lug Chart | | | | | |
| L0 | None | | | | | |
| L1 | 100-150 Amp PAK (#2 - 4/0)/connection | | | | | |
| L2 | 200-300 Amp PAK 1(1/0-500mcm)/connection | | | | | |
| Code | Fusing Option (1) <i>For < 500 Vac Applications, Select One</i> | | | | | |
| F00 | None | | | | | |
| F01 | 100-150 Amp PAK (200 Amp Fuse) | | | | | |
| F02 | 200 Amp PAK (250 Amp Fuse) | | | | | |
| F03 | 300 Amp PAK (400 Amp Fuse) | | | | | |
| F04 | 400 Amp PAK (500 Amp Fuse) | | | | | |
| F05 | 550 Amp PAK (700 Amp Fuse) | | | | | |
| F06 | 650 Amp PAK (800 Amp Fuse) | | | | | |
| F07 | 800 Amp PAK (1000 Amp Fuse) | | | | | |
| F08 | 1000 Amp PAK (1200 Amp Fuses) | | | | | |
| F09 | 1200 Amp PAK (Two 1000 Amp Fuses) | | | | | |
| | <i>For 575 Vac Applications, Select One (2)</i> | | | | | |
| F10 | 100 Amp PAK (125 Amp Fuse) | | | | | |
| F11 | 150 Amp PAK (175 Amp Fuse) | | | | | |
| F12 | 200 Amp PAK (250 Amp Fuse) | | | | | |
| F13 | 300 Amp PAK (400 Amp Fuse) | | | | | |
| F14 | 400 Amp PAK (500 Amp Fuse) | | | | | |
| F15 | 550 Amp PAK (700 Amp Fuse) | | | | | |
| F16 | 650 Amp PAK (800 Amp Fuse) | | | | | |
| F17 | 800 Amp PAK (1000 Amp Fuse) | | | | | |
| F18 | 1000 Amp PAK (1200 Amp Fuse) | | | | | |
| F19 | 1200 Amp PAK (Two 1000 Amp Fuses) | | | | | |
| | Remote Manual Adjust/Auto Manual Switch | | | | | |
| 0 | None | | | | | |
| 1 | Pot with 0 - 100% dial and Local/Remote Switch(2) Single Turn 1K Ω Potentiometer | | | | | |
| (cont'd.) | 1 | 1 | L1 | F01 | 1 | Typical Model Number |

1) SCR Fusing is for semiconductor protection only, not wire protection.

2) Supplied Loose for Customer Mounting.

Note:

Storage Temperature 14°F to 158°F (-10°C to 70°C).
CE application requires filters.

Chromalox Part Numbers

0005-60056 - Line filter, single phase, 440VAC
0005-60057 - Line filter, 120-230VAC

| Crimp Lug Chart | | |
|-----------------|-------------|---------------------|
| Chromalox # | Panduit # | Conductor Size |
| 0135-10002 | LCD8-14A-L | #8 AWG |
| 0135-10003 | LCD6-14A-L | #6 AWG or #6 Weld |
| 0135-10004 | LCD4-14A-L | #4 AWG or #4 Weld |
| 0135-10005 | LCD2-56B-Q | #2 AWG |
| 0135-10006 | LCD1-56C-E | #1 AWG or #2 Weld |
| 0135-10007 | LCD1/0-12-X | #1/0 AWG or #1 Weld |
| 0135-10008 | LCD2/0-12-X | #2/0 AWG or #2/ |
| 0135-10009 | LCD3/0-12-X | #8 AWG |
| 0135-10010 | LCD4/0-12-X | #8 AWG |
| 0135-10011 | LCD250-12-X | #8 AWG |
| 0135-10012 | LCD300-12-X | #8 AWG |
| 0135-10013 | LCD350-12-6 | #8 AWG |
| 0135-10014 | LCD400-12-6 | #8 AWG |
| 0135-10015 | LCD500-12-6 | #8 AWG |