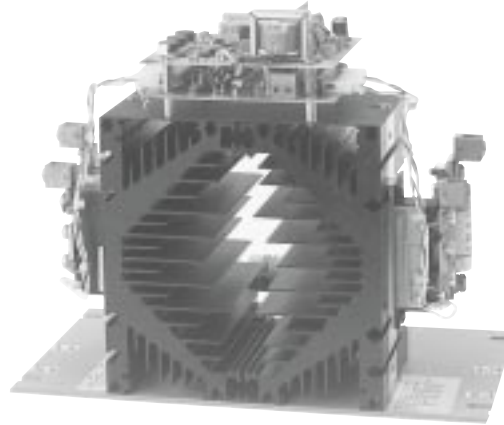


7820

Three Phase, 2-Leg SCR Power Pak

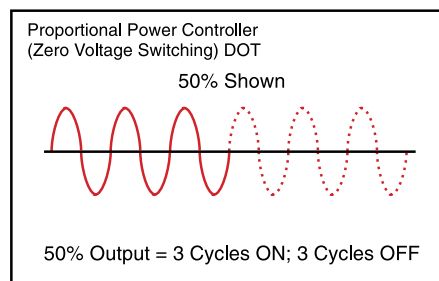
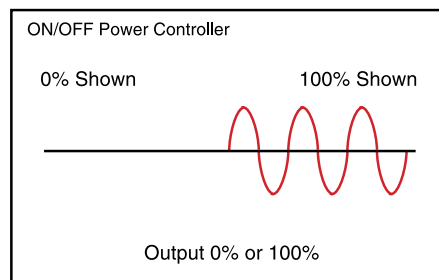


- ON/OFF Power Control
- Proportional Power Control
- 208-575 Vac @ 30-400 Amp
- Isolated Control Circuit
- Compact Size & Construction
- Interchangeable Modular (Plug-in) Firing Boards
- Emergency Shutdown
- Remote Potentiometer Input (0-100%)
- Shorted SCR Protection
- dV/dT Voltage Transient Protection

Description

The 7820 Three Phase (2-leg) Solid State SCR Power Controller is a highly versatile power pak with plug-in firing control boards, which can be changed in minutes from one firing technique to another. Firing techniques include ON/OFF Power Control (Contactor) and Proportional Power Control (Zero Voltage Switching, DOT fire). DOT Firing provides the finest resolution of output with the EMI and RFI immunity of a zero-crossover design. These units are available in 30-400 Amp with operating voltages of 208, 240, 480, and 575 Vac (50-60 Hz).

Wave Form Cycle Rate



Mechanical Features

- LED Indication of Firing.
- Electrical Control Connections made on a Plug-In Screw Type Terminal Block.
- Zero, Gain, Manual Bias and Optional Remote Manual Bias.
- Thermostat Protection with NC Contact Standard on Forced-Air Cooled Units and NO Contact Available on All Units.

Electrical Features

- Unit will Operate with 1 or 3 Phase loads and any Phase Sequence.
- Balanced or Severely Unbalanced Loads.
- Fusing Optional (for L1 and L3 or L1, L2 and L3).
- SCRs PIV 1200V Minimum.
- Isolated Semiconductor Power Blocks are used on all Current Ratings.
- Shorted SCR Detection (1A alarm output)

Safety Features

Personnel Safety

- Ground Potential Heat Sink
- SCR to Heat Sink Isolation (2500 Volt)

Equipment/Process Safety

- Input to Output Isolation (1500 Volt)
- Transient Overvoltage Protection
- I²T Fusing for SCR Protection
- Emergency Shutdown Input

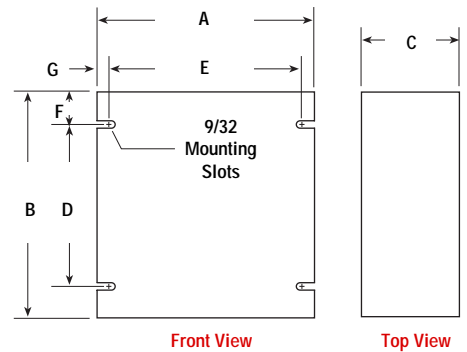
7820

Three Phase, 2-Leg SCR Power Pak (cont'd.)

Dimensions

| Amps | A | B | C | D | E | F | G |
|----------|------------|-------------|----------|-------------|-------------|-----------|------------|
| 30-50 | 9.5 (241) | 6.5 (165) | 8 (203) | 5 (127) | 8.87 (225) | .75 (19) | .31 (7.87) |
| 75 | 12 (305) | 6.5 (165) | 10 (254) | 5 (127) | 11.37 (289) | .75 (19) | .31 (7.87) |
| 100 | 13 (330) | 10.75 (273) | 10 (254) | 8.25 (210) | 12.37 (314) | 1.25 (32) | .31 (7.87) |
| 125-150 | 15.5 (394) | 10.75 (273) | 10 (254) | 8.25 (210) | 14.8 (378) | 1.25 (32) | .31 (7.87) |
| 175 | 15.5 (394) | 14.75 (375) | 10 (254) | 10.25 (260) | 14.8 (378) | 2.25 (57) | .31 (7.87) |
| 200 | 15.5 (394) | 15.5 (394) | 10 (254) | 11 (279) | 14.8 (378) | 2.25 (57) | .31 (7.87) |
| 250-300* | 15.5 (394) | 11 (279) | 10 (254) | 6.5 (165) | 14.8 (378) | 2.25 (57) | .31 (7.87) |
| 400* | 15.5 (394) | 15.5 (394) | 10 (254) | 11 (279) | 14.8 (378) | 2.25 (57) | .31 (7.87) |

500 Amps and above consult factory for dimensions



Front View

Top View

* Fan cooled. Allow fan clearance below mounting plate, 4" for 250-400 Amps and 6" on 500 Amps and above.

All Dimensions in Inches (mm)

Ordering Information

Complete the Model Number using the Matrix provided.

For more options, see SCR Component Options following the 7930 SCR in this catalog.

In Stock:

| Model | PCN |
|------------------|--------|
| 7820-301520-F301 | 307264 |
| 7820-302520-F302 | 307328 |
| 7820-303520-F303 | 307336 |
| 7820-304520-F304 | 307344 |
| 7820-305520-F305 | 307352 |
| 7820-306520-F306 | 307360 |
| 7820-308520-F308 | 307379 |
| 7820-310520-F310 | 307387 |
| 7820-311520-F311 | 307395 |

| Model | SCR Power Pak |
|--|---|
| 7820 | 3 Phase SCR Power Pak |
| Code | Output Firing Mode |
| 2 | ON/OFF Control |
| 3 | Proportional Control (DOT) |
| 6 | ON/OFF Control with Shorted SCR Detection |
| 7 | Proportional Control (DOT) with Shorted SCR Detection |
| Code | Current at 50°C (122°F) |
| 01 | 30 Amps |
| 02 | 50 Amps |
| 03 | 75 Amps |
| 04 | 100 Amps |
| 05 | 125 Amps |
| 06 | 150 Amps |
| 07 | 175 Amps |
| 08 | 200 Amps |
| 09 | 250 Amps (Fan Cooled) |
| 10 | 300 Amps (Fan Cooled) |
| 11 | 400 Amps (Fan Cooled) |
| X | Consult Factory for 500 Amps and above |
| Code | Voltage |
| 2 | 208 Vac |
| 3 | 240 Vac |
| 5 | 480 Vac |
| 6 | 575 Vac |
| Code | Input Signal |
| 16 | 0-5 mA into 1000 Ohms |
| 17 | 0-20 mA into 250 Ohms |
| 18 | 0-50 mA into 100 Ohms |
| 19 | 1-5 mA into 1000 Ohms |
| 20 | 4-20 mA into 250 Ohms |
| 21 | 10-50 mA into 100 Ohms |
| 22 | 0-5 Vdc into 1000 Ohms |
| 23 | 0-10 Vdc into 1000 Ohms |
| 24 | 120 Vac (ON/OFF Control only) |
| 25 | 240 Vac (ON/OFF Control only) |
| 26 | Contact Closures (ON/OFF Control only) |
| 27 | 3-32 Vdc (ON/OFF Control only) |
| X | Other (Consult Factory) |
| Options | |
| See Option Table at end of this section. | |

7820 - 3 04 2 20 Typical Model Number