

MODEL **PF1** SERIES POWER CONTROLS

Single-Phase Phase-Fired Models Rated 60 - 1200 Amperes

The **PF1 Series** are single-phase, phase-fired SCR Power Controls designed to deliver maximum power control with all the features normally found in much larger units. Utilizing only four frame sizes, these units are conservatively engineered for years of trouble-free service while providing the benefits of precise, reliable control for your electrical process.

The PF1 Series accepts all standard voltage and current command signals or a remote potentiometer input. The 4-20 mA command signal is optically isolated. Standard operating voltages are 120, 240, 400, 480 & 575 Vac, 50/60 Hz. Other voltages are available.

Multi-turn zero and span adjustments are provided for matching the SCR power control to the command signal. Control power, command signal and blown fuse indicators are provided as a means for trouble shooting. The control power indicator (red) indicates power has been applied to the unit. The command signal indicator's (green) brilliance is proportional to the input command signal. The blown fuse indicator (yellow) lights if the fuse is cleared.

HDR's proprietary extended gate drive circuitry ensures reliable SCR turn-on regardless of load type.

Applications:

Primarily used to control dynamic resistive or transformer coupled loads.

- High temperature furnaces
- Large ovens, kilns & heaters
- IR Heating
- Vibratory Feeders



A member of The Marmon Group of companies



Model **PF1**

- Electrically Isolated Heat Sink (60-225A)
- Conservative Thermal Design
- Compact Size
- Voltage Squared Linearity
- Line Voltage Compensation
- Transient Voltage Protection (RC & MOV)
- 1400 PIV SCRs
- Semiconductor (I^2t) Fuse
- Diagnostic Indicators
- Optically Isolated Input Command Signal (4-20 mA)
- Multi-Turn Zero & Span Adjustments
- Silkscreened Printed Circuit Boards
- UL, cUL Listed, CE Compliant
- 5 year "No Hassle" warranty
- Fan Cooled (90A and higher)



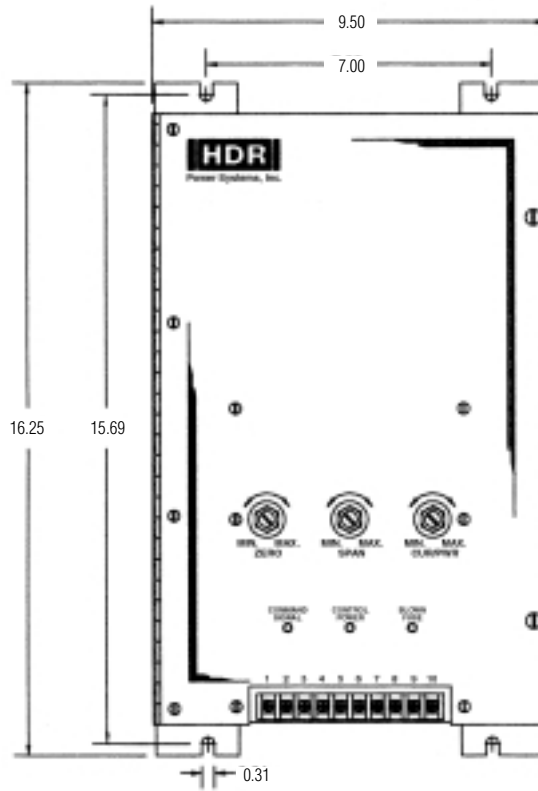
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Web Site: www.grpeters.com

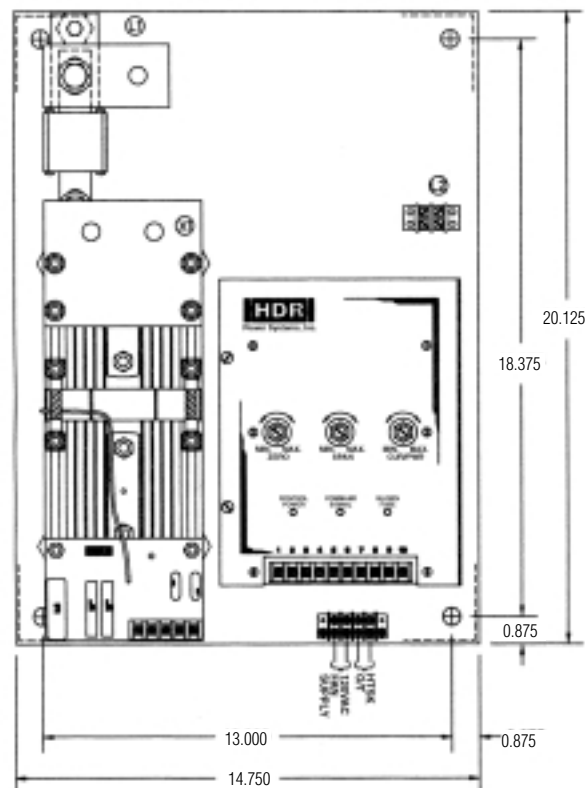
Model PF1 60-225A

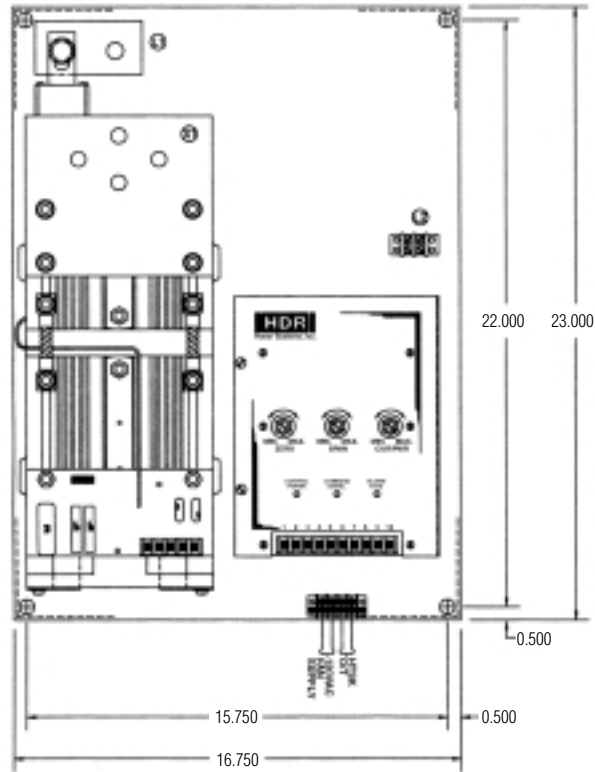
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Model PF1 350-500A

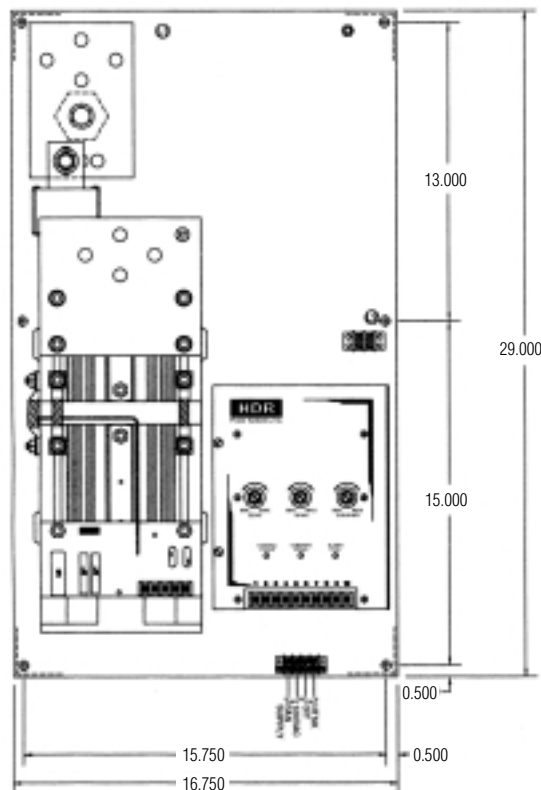
Depth: 8.500





Model PF1 650A

Depth: 11.50



Model PF1 800-1200A

Depth: 12.00

SPECIFICATIONS:

Control Method: Phase-firing of six back-to-back SCRs (3 leg control)

Voltage Rating: 120, 240, 400, 480, 575 Vac, 50/60 Hz

Current Ratings: 60, 90, 120, 180, 225, 350, 500, 650, 800, 1000, 1200 Amperes

Command Signal: Most standard process signals

Isolation: 2500 volts rms from power circuit to command signal and to ground

Adjustments: Zero and span, multi-turn

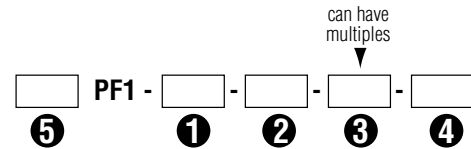
Ambient Temperature: Operating: 0° to 50°C
Storage: 10° to 70°C

Relative Humidity: 0 to 95% (non-condensing)

Weights: 60 - 225A 22 lbs.
350 - 500A 24 lbs.
650A 47 lbs.
800 - 1200A 71 lbs.

HOW TO ORDER:

Make one selection from each of the four tables below. Place the selections in the corresponding boxes to build your model number.



1 VOLTAGE TABLE*

120 Vac	<input type="text" value="120"/>
240 Vac	<input type="text" value="240"/>
400 Vac	<input type="text" value="400"/>
480 Vac	<input type="text" value="480"/>
575 Vac	<input type="text" value="575"/>

*Other voltages available

2 CURRENT TABLE

60 Arms	<input type="text" value="60"/>
90 Arms	<input type="text" value="90"/>
120 Arms	<input type="text" value="120"/>
180 Arms	<input type="text" value="180"/>
225 Arms	<input type="text" value="225"/>
350 Arms	<input type="text" value="350"/>
500 Arms	<input type="text" value="500"/>
650 Arms	<input type="text" value="650"/>
800 Arms	<input type="text" value="800"/>
1000 Arms	<input type="text" value="1000"/>
1200 Arms	<input type="text" value="1200"/>

3 OPTIONS TABLE^Δ

N.O. Thermostat	<input type="text" value="NO"/>
N.C. Thermostat	<input type="text" value="NC"/>
RMS Current Limit/OC	<input type="text" value="CL"/>
RMS Current Reg/OC	<input type="text" value="CR"/>
Over Current Trip	<input type="text" value="OC"/>
True Power Reg/CL	<input type="text" value="PR"/>
Lug Kit (greater than 225A)	<input type="text" value="LG"/>
▪ Volt/Curr/Pwr/Res Reg	<input type="text" value="VIPR"/>
▪ Phase Zero Adapter	<input type="text" value="PZA"/>

^ΔThermostat included above 60A
Specify N.O. or N.C.

▪ Not UL, cUL Listed

4 COMMAND SIGNAL TABLE

4-20 mA	<input type="text" value="01"/>
0-10 VDC	<input type="text" value="02"/>
0-5 VDC	<input type="text" value="03"/>
Auto/Man	<input type="text" value="04"/>
*Manual Pot Input	<input type="text" value="05"/>
Others	<input type="text" value="06 to 99"/>

*Requires external potentiometer (5k)

5 WATER COOLING

(Not UL, cUL, CE approved)

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