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, 3 Phase, 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) light if a fuse is cleared.

HDR’s Proprietary extended gate drive circuitry ensures reliable SCR turn-on regardless of the load type.

**Applications:**
Primarily used to control dynamic resistive or transformer coupled loads.

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

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**MODEL PF1**
- Electrically Isolated Heat Sinks (60-225A)
- Conservative Thermal Design
- Compact Size
- Voltage Squared Linearity
- Line Voltage Compensation
- Transient Voltage Protection (RC & MOV)
- 1400 PIV SCRs
- Semiconductor (I²t) Fuse
- Diagnostic Indicators
- Optically Isolated Input Command Signal (4-20 mA)
- Multi-Turn Zero & Span Adjustments
- Silkscreen Printed Circuit Boards
- UL, cUL Listed, CE Compliant
- 5 year “No Hassle” warranty
- Fan Cooled (90A and higher)
Model PF1 60-225A

Depth: 9.250

Model PF1 350-500A

Depth: 8.500
SPECIFICATIONS:

Control Method: Phase-firing of back-to-back SCR (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 tables shown. Place the selections in the corresponding boxes to build your model number.

1. VOLTAGE TABLE*
   - 120 Vac: 120
   - 240 Vac: 240
   - 400 Vac: 400
   - 480 Vac: 480
   - 575 Vac: 575

2. CURRENT TABLE
   - 60 Amps: 60
   - 90 Amps: 90
   - 120 Amps: 120
   - 180 Amps: 180
   - 225 Amps: 225
   - 350 Amps: 350
   - 500 Amps: 500
   - 650 Amps: 650
   - 800 Amps: 800
   - 1000 Amps: 1000
   - 1200 Amps: 1200

3. OPTION TABLE
   - N.O. Thermostat: NO
   - N.C. Thermostat: NC
   - RMS Current Limit/OC: CL
   - RMS Current Reg/OC: CR
   - Over Current Trip: OC
   - True Power Reg/CL: PR
   - Lug Kit (greater than 225A): LG
   - *Volt/Curr/Pwr/Res Reg: VIPR
   - *Phase Zero Adapter: PZA

4. COMMAND SIGNAL TABLE
   - 4-20 mA (Self Powered): 01
   - 0-10 VDC: 02
   - 0-5 VDC: 03
   - Auto/Man: 04
   - *Manual Pot Input: 05
   - Others: 06-99

5. WATER COOLING
   - (Not UL, cUL, CE approved)

Specifications subject to change without notice

*Thermostat included above 60A
Specify N.O. or N.C.

*Not UL, cUL Listed

*Requires external potentiometer (5k)