

# MODEL SHPF1 SERIES

## Power Controls

Single-Phase Phase-Fired Models  
Rated 15 - 120 Amperes

The **SHPF1 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 two 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 SHPF1 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's (green) brilliance is proportional to the output voltage. The blown fuse indicator (yellow) lights if the fuse is cleared. (60-120A)

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



## MODEL SHPF1

- Electrically Isolated Heat Sinks
- 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
- Silkscreen Printed Circuit Boards
- UL,cUL Listed, CE Compliant
- 5 year "No Hassle" warranty

## Applications:

Primarily used to control dynamic resistive or transformer coupled loads.

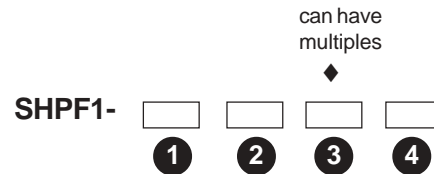
- High temperature furnaces
- Large ovens, kilns & heaters
- IR Heating
- Vibratory Feeders

# SPECIFICATIONS:

<b>Control Method:</b>	Zero-firing of back-to-back SCRs	<b>Isolation:</b>	2500 volts rms from power circuit to command signal and to ground
<b>Voltage Rating:</b>	120, 240, 400, 480, 575 Vac, 50/60 Hz,	<b>Adjustments:</b>	Zero and span, multi-turn
<b>Current Ratings:</b>	15, 30, 40, 60, 70, 90, 120 Amperes	<b>Ambient Temperature:</b>	Operating: 0° to 50° C Storage: -10° to 70° C
<b>Command Signal:</b>	Most standard process signals	<b>Relative Humidity:</b>	0 to 95% (non-condensing)
		<b>Weights:</b>	15-60A                      6 lbs. 70-120A                    18 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.



Specifications subject to change without notice

## 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

15 Amps	<input type="text" value="15"/>
30 Amps	<input type="text" value="30"/>
40 Amps	<input type="text" value="40"/>
60 Amps	<input type="text" value="60"/>
70 Amps	<input type="text" value="70"/>
90 Amps	<input type="text" value="90"/>
120 Amps	<input type="text" value="120"/>

## ③ OPTION TABLE <sup>Δ</sup>

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 Req/OC	<input type="text" value="CR"/>
Over Current Trip	<input type="text" value="OC"/>
True Power Reg/CL	<input type="text" value="PR"/>
*Phase Zero Adapter	<input type="text" value="PZA"/>

Thermostat included above 70A  
Specify N.O. or N.C.  
\*Not UL approved

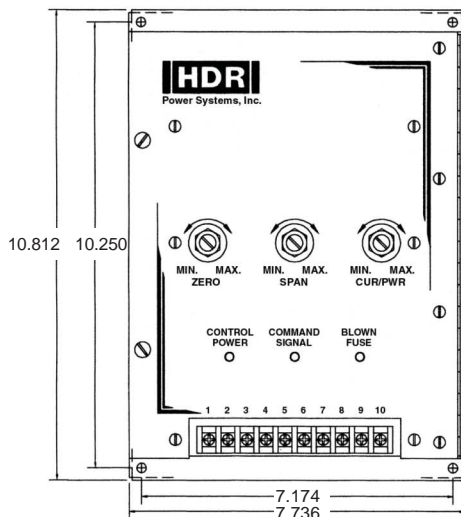
## ④ COMMAND SIGNAL TABLE

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="06-99"/>

\*Requires external potentiometer (5k)

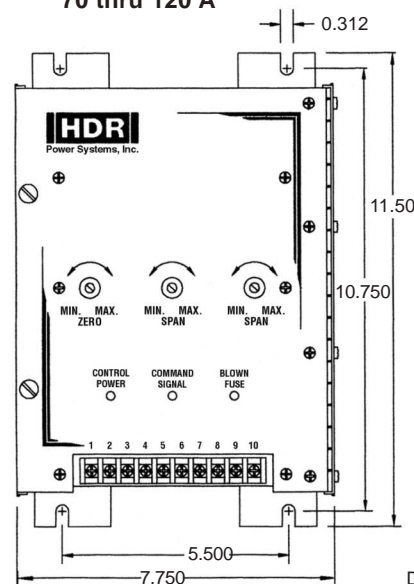
# DIMENSIONS:

15 thru 60 A



Depth 6.279

70 thru 120 A



Depth 11.187