

# DCPF1 SCR SERIES

## POWER CONTROLS

The DCPF1 SCR Series are single-phase, phase-fired SCR Power Controls designed to deliver DC Current with all of the features normally found in much larger units. Utilizing HDR field proven circuits, these units are conservatively engineered for years of trouble free service while providing the benefits of precise, reliable control of for your electronic process.

The DCPF1 SCR Series accepts all standard voltage and current command signals or remote potentiometer input. The 4-20 mA command signal is optically isolated. Standard operating voltages are 120, 240, 400, 480 & 575 Vac, 1 Phase, 50/60Hz. The DC output voltage is approximately 90% of the AC input voltage.

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 means for trouble shooting. The control power indicator (red) indicates power has been applied to the unit. The command signal indicators' (green) brilliance is proportional to the output voltage. The blown fuse indicators (3-yellow) light if a fuse is cleared.

### Applications:

Primarily used to control saturable core reactors. Other uses include.

- Vibratory feeders
- DC Resistive Loads

**15-180 Amperes**  
**Single-phase**  
**Phase-fired**



- 5 year "No Hassle" warranty
- Electrically Isolated Heatsink
- Compact Size
- Conservative Thermal Design
- Voltage Squared Linearity
- Line voltage compensation
- Transient voltage Protection (RC & MOV)
- 1400 PIV SCRs
- Semiconductor (I<sup>2</sup>T) Fuse
- Diagnostic Indicators
- Optically Isolated input Command Signal (4-20 mA)
- Multi-Turn Zero & Span Adjustments
- UL, cUL Listed, CE Compliant
- Fan Cooled (70 A and higher)



**100kA**  
**SCCR**



**ISO**  
**9001**  
QUALITY  
ASSURANCE

**AMETEK**<sup>®</sup>  
HDR POWER SYSTEMS

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Phone: 614-308-5500

Fax: 614-308-5506

[www.hdrpower.com](http://www.hdrpower.com)

## SPECIFICATIONS:

Control Method: Phase-firing of back-to-back SCRs  
 Voltage Rating: 120, 240, 400, 480, 575 Vac  
 Line Frequency: 50 / 60 Hz  
 Current Ratings: 15, 25, 40, 70, 90, 120, 180 Amperes  
 Command Signal: Most standard process signals  
 Adjustments: Zero and Span, multi-turn

Linearity: Output is linear within 2% of span over entire range of control

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

Overtemp Protection: Heatsink thermostat provided on 90 A and higher models

Ambient Temperature: Operating: 0 °C to 50 °C

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

## HOW TO ORDER:

Make a selection from each of the tables below. Place the selection in the corresponding boxes to build your model.

DCPF1 -  -  -  -

VOLTAGE*		CURRENT		OPTIONS		COMMAND	
120 Vac	<input type="text" value="120"/>	15 A	<input type="text" value="15"/>	N.O. Thermostat ◊	<input type="text" value="NO"/>	4-20 mA	<input type="text" value="01"/>
240 Vac	<input type="text" value="240"/>	25 A	<input type="text" value="25"/>	N.C. Thermostat ◊	<input type="text" value="NC"/>	0-10 Vdc	<input type="text" value="02"/>
400 Vac	<input type="text" value="400"/>	40 A	<input type="text" value="40"/>	RMS Current Limit/OC	<input type="text" value="CL"/>	0-5 Vdc	<input type="text" value="03"/>
480 Vac	<input type="text" value="480"/>	70 A	<input type="text" value="70"/>	RMS Current Reg/CL	<input type="text" value="CR"/>	Auto/Manual	<input type="text" value="04"/>
575 Vac	<input type="text" value="575"/>	90 A	<input type="text" value="90"/>	Over Current Trip	<input type="text" value="OC"/>	Manual Pot Input^	<input type="text" value="05"/>
		120 A	<input type="text" value="120"/>			Others	<input type="text" value="06-99"/>
		180 A	<input type="text" value="180"/>				

\* Other voltages available

Multiple options may be selected

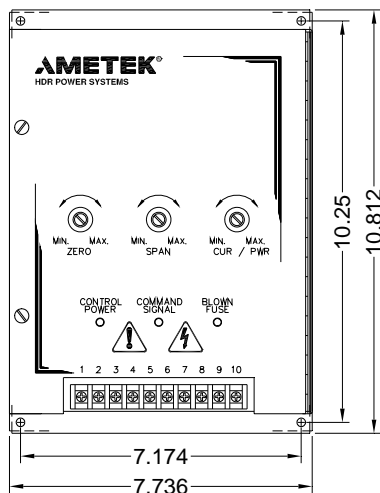
◊ Thermostat included above 40 A, specify N.O. or N.C.

^ Manual Pot requires external potentiometer (5 kΩ)

Consult Factory for other sizes

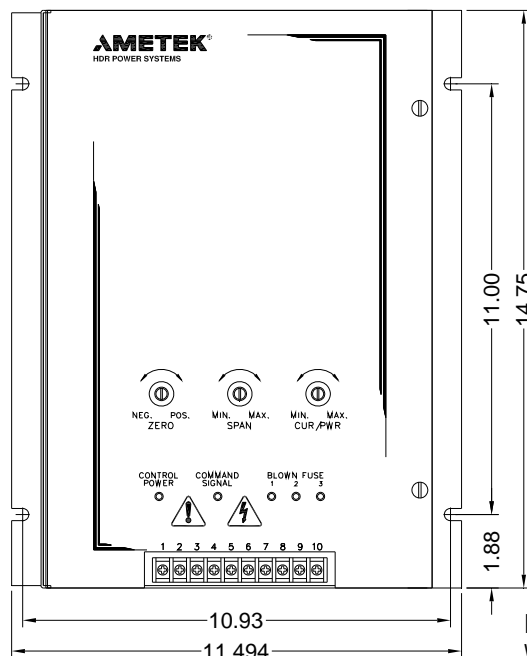
## OUTLINES:

### 15 thru 50 A



Depth: 6.28 in  
 Weight: 6 lbs

### 70 thru 180 A



Depth: 10.5 in  
 Weight: 33 lbs