

# Series SPF, PowerFin™

Up to 25Amp • 120/240, 380, 480 Vac • AC Output

# CRYDOM

Control over power

- **Ultra High Steady State Current Rating**
- **Low Leakage (Off-State)**
- **SCR Output**
- **AC or DC Control**
- **Crydom's Patented Design**

Crydom's PowerFin™ series delivers the highest ratings of any single in-line package (SIP). The integral heat sink design can operate at 25 amps RMS in forced air at 85°C case temp. With natural convection in free air, it rates 10 amps RMS at 25°C ambient.

Built-in advantages include Surface Mount Technology and SCR output. Manufactured in Crydom's ISO 9001 Certified facility for optimum product performance and reliability.

MODEL NUMBERS	AC CONTROL (120Vac) (24Vac)	SPF240A25 SPFE240A25		
	DC CONTROL (5Vdc) (24Vdc)	SPF240D25 SPFE240D25	SPF380D25 SPFE380D25	SPF480D25 SPFE480D25
<b>OUTPUT SPECIFICATIONS</b> ①				
Operating Voltage (47-63 Hz) [Vrms]		12-280	48-530	48-660
Load Current Range [Arms]			Forced Air .06-25 ③ Convection Air .06-10	
Transient Overvoltage [Vpk]		600	1200	1200
Max. Surge Current, (16.6ms) [Apk]		250	250	250
Max. On-State Voltage Drop @ Rated Current [Vpk]		1.6	1.6	1.6
Maximum I <sup>2</sup> t for Fusing, (8.3 msec.) [A <sup>2</sup> sec]		260	260	260
Max. Off-State Leakage Current @ Rated Voltage [mArms]		0.1	0.1	0.1
Min. Off-State dv/dt @ Max. Rated Voltage [V/μsec] ②		500	500	500
Max. Turn-On Time ④		1/2 Cycle (DC Control), 10.0 msec (AC Control)		
Max. Turn-Off Time		1/2 Cycle (DC Control), 40.0 msec (AC Control)		
Power Factor (Min.) with Max. Load		0.5	0.5	0.5

INPUT SPECIFICATIONS	DC CONTROL			AC CONTROL	
	Nominal Voltage	5Vdc	5Vdc	24Vdc	120Vac
MODEL NUMBERS	SPF240D25	SPF380D25 SPF480D25	SPFE240D25 SPFE380D25 SPFE480D25	SPF240A25	SPFE240A25
Control Voltage Range	3-15 Vdc	4-15 Vdc	15-32 Vdc	90-140 Vrms	18-36 Vrms
Max. Turn-On Voltage	3.0 Vdc	4.0 Vdc	15.0 Vdc	90.0 Vrms	18.0 Vrms
Min. Turn-Off Voltage	1.0 Vdc	1.0 Vdc	1.0 Vdc	10.0 Vrms	2.0 Vrms
Nominal Input Impedance	300 Ohm	240 Ohm	1500 Ohm	14.1k Ohm	4.2k Ohm
Typical Input Current @ Nominal Voltage	15 mAdc	15 mAdc	15 mAdc	10 mArms	5 mArms

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## GENERAL NOTES

- ① All parameters at 25°C unless otherwise specified.
- ② Off-State dv/dt test method per EIA/NARM standard RS-443, paragraph 13.11.1
- ③ Heatsink temperature 85°C Maximum.
- ④ Turn-On Time for Random Turn-On versions 0.1msec (DC Control Models).

For recommended applications and more information contact:  
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**Email:** sales@crydom.com **WEB SITE:** http://www.crydom.com  
**UK:** +44 (0)1202 365070 • **FAX** +44 (0)1202 365090 Crydom International Ltd., 7 Cobham Road, Ferndown Industrial Estate, Ferndown, Dorset BH21 7PE, **Email:** intsales@crydom.com.  
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## GENERAL SPECIFICATIONS

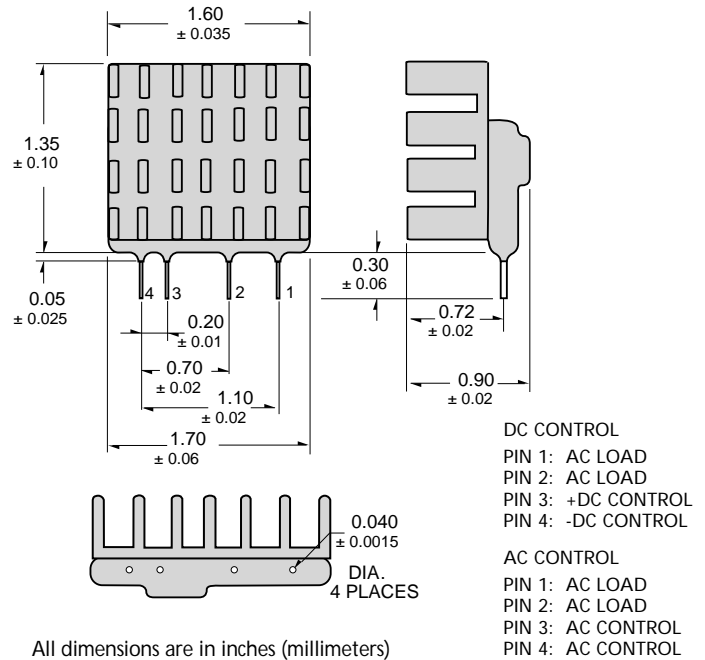
Dielectric Strength 50/60Hz Input/Output	4000 Vrms
Insulation Resistance (Min.) @ 500 Vdc	10 <sup>9</sup> Ohm
Max. Capacitance Input/Output	8 pF
Ambient Operating Temperature Range	-30 to 80°C
Ambient Storage Temperature Range	-30 to 125°C

## MECHANICAL SPECIFICATIONS

Weight: (typical)	.85 oz. (25g)
Encapsulation:	Thermally Conductive Epoxy

## AVAILABLE OPTIONS

- R Random Turn-On (AC & DC Control, 240V Only)
- Phase Controllable (DC Control, 240V Only)
- Example: **SPF240A25 R, SPFE240D25 R**



## CURRENT DERATING CURVES

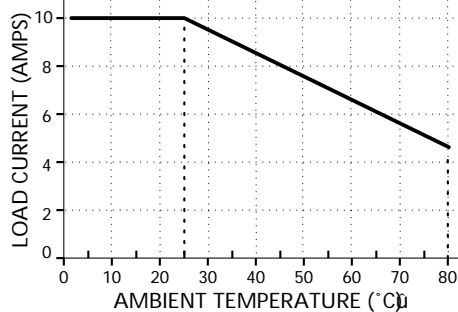


Fig.1 Convection Cooling

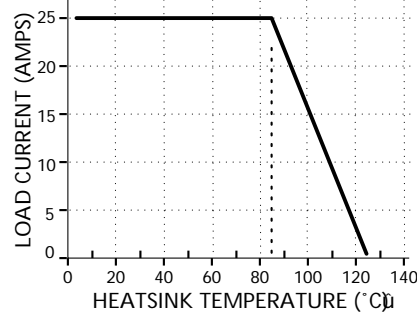


Fig.2 Forced Air Cooling

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