



# Series PF, PowerFin™

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

- 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 9002 Certified facility for optimum product performance and reliability.

| MODEL NUMBERS                                                         | AC CONTROL (120Vac)<br>(24Vac)                 | PF240A25<br>PFE240A25 |                       |                       |
|-----------------------------------------------------------------------|------------------------------------------------|-----------------------|-----------------------|-----------------------|
|                                                                       | DC CONTROL (5Vdc)<br>(24Vdc)                   | PF240D25<br>PFE240D25 | PF380D25<br>PFE380D25 | PF480D25<br>PFE480D25 |
| <b>OUTPUT SPECIFICATIONS ①</b>                                        |                                                |                       |                       |                       |
| Operating Voltage (47-63 Hz) [Vrms]                                   | 12-280                                         |                       | 48-530                | 48-660                |
| Load Current Range [Arms]                                             | Forced Air.06-25 ③<br>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 ①                  | DC CONTROL      |                      |                                     | AC CONTROL  |            |
|-----------------------------------------|-----------------|----------------------|-------------------------------------|-------------|------------|
|                                         | Nominal Voltage | 5Vdc                 | 24Vdc                               | 120Vac      | 24Vac      |
| MODEL NUMBERS                           |                 |                      |                                     |             |            |
|                                         | PF240D25        | PF380D25<br>PF480D25 | PFE240D25<br>PFE380D25<br>PFE480D25 | PF240A25    | PFE240A25  |
| 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    |

©1998 CRYDOM CORP, Specifications subject to change without notice.

## 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:

USA: (800) 8 CRYDOM • (800) 827-9366 • (619) 715-7200 • fax (619) 715-7280  
Crydom Corp, 9525 Chesapeake Drive, San Diego, CA 92123 • e-mail: sales@crydom.com  
WEB SITE: <http://www.crydom.com> FASTFAX Product Information: (888) 267-9191  
UK: (44)1202 812300 • fax (44)1202 812340 Crydom International Ltd., 85, Condor Close,  
Woolbridge Industrial Estate, Three-Legged Cross, Wimborne, Dorset, England BH21 6SU  
GERMANY: (49) (0)6874 182580 • fax (49)(0)6874 182585 Crydom GmbH,  
Gewerbegebiet Im Schachen, D-66687 Nunkirchen, Germany • e-mail: vertrieb@crydom.com





# Series PF, PowerFin™

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

## GENERAL SPECIFICATIONS

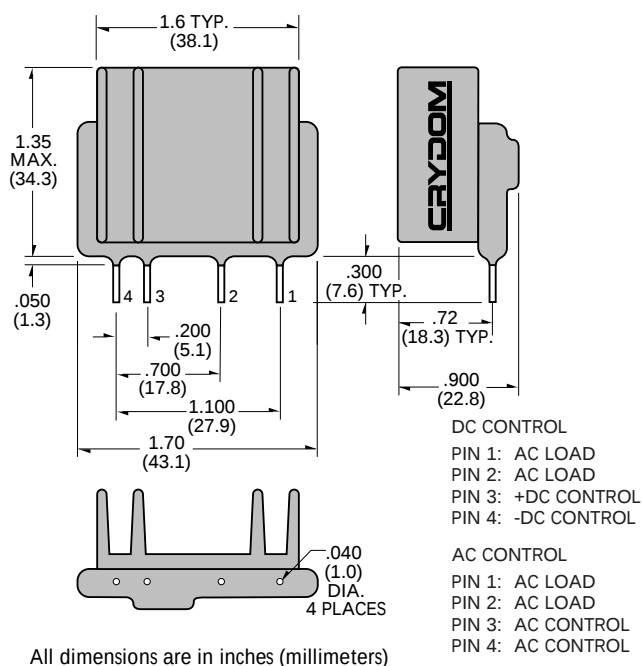
|                                          |                     |
|------------------------------------------|---------------------|
| Dielectric Strength 50/60Hz Input/Output | 4000 Vrms           |
| Insulation Resistance (Min.) @ 500 Vdc   | 10 <sup>9</sup> Ohm |
| Max. Capacitance Input/Output            | 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: **PF240A25R, PFE240D25R**



All dimensions are in inches (millimeters)

## CURRENT DERATING CURVES

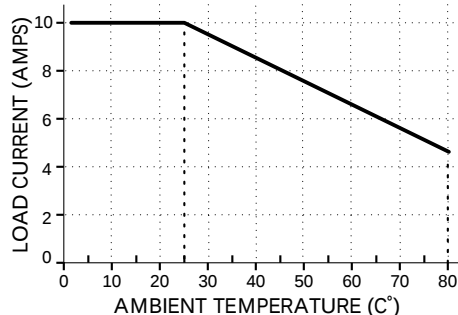


Fig.1 Convection Cooling

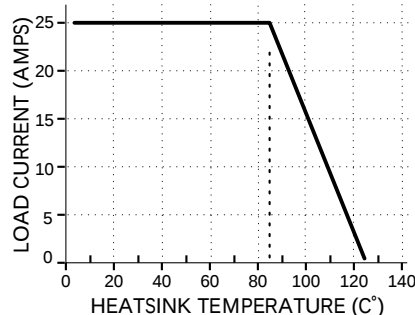


Fig.2 Forced Air Cooling

©1998 CRYDOM CORP, Specifications subject to change without notice.

## APPROVALS

UL E116950  
 VDE 70938 (DC Control Only)



For recommended applications and more information contact:

USA: (800) 8 CRYDOM • (800) 827-9366 • (619) 715-7200 • fax (619) 715-7280  
 Crydom Corp, 9525 Chesapeake Drive, San Diego, CA 92123 • e-mail: sales@crydom.com  
 WEB SITE: <http://www.crydom.com> FASTFAX Product Information: (888) 267-9191  
 UK: (44)1202 812300 • fax (44)1202 812340 Crydom International Ltd., 85, Condor Close,  
 Woolsbridge Industrial Estate, Three-Legged Cross, Wimborne, Dorset, England BH21 6SU  
 GERMANY: (49) (0)6874 182580 • fax (49) (0)6874 182585 Crydom GmbH,  
 Gewerbegebiet Im Schachen, D-66687 Nunkirchen, Germany • e-mail: vertrieb@crydom.com

