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Solid State Relays - PCB Mount: PF



Features

SCR output • 10 Amp with convection air • 25 Amp with forced air
 • 240/380/480 Vrms • AC Switching • SIP mount • Integrated heatsink.

Product	INPUT SPECIFICATIONS	OUTPUT SPECIFICATIONS			
	Control Voltage Range	Load Current	Switching Voltage Type	Turn On	Load Voltage Range
PF240A25	90-140 Volts RMS	0.06-25 Amps RMS	AC	Zero cross	12-280 Volts RMS
PF240A25R	90-140 Volts RMS	0.06-25 Amps RMS	AC	Random	12-280 Volts RMS
PF240D25	3-15 Volts DC	0.06-25 Amps RMS	AC	Zero cross	12-280 Volts RMS
PF240D25R	3-15 Volts DC	0.06-25 Amps RMS	AC	Random	12-280 Volts RMS
PF380D25	4-15 Volts DC	0.06-25 Amps RMS	AC	Zero cross	48-530 Volts RMS
PF380D25R	4-15 Volts DC	0.06-25 Amps RMS	AC	Random	48-530 Volts RMS
PF480D25	4-15 Volts DC	0.06-25 Amps RMS	AC	Zero cross	48-660 Volts RMS

PF480D25R	4-15 Volts DC	0.06-25 Amps RMS	AC	Random	48-660 Volts RMS
PFE240A25	18-36 Volts RMS	0.06-25 Amps RMS	AC	Zero cross	12-280 Volts RMS
PFE240A25R	18-36 Volts RMS	0.06-25 Amps RMS	AC	Random	12-280 Volts RMS
PFE240D25	15-32 Volts DC	0.06-25 Amps RMS	AC	Zero cross	12-280 Volts RMS
PFE240D25R	15-32 Volts DC	0.06-25 Amps RMS	AC	Random	12-280 Volts RMS
PFE380D25	15-32 Volts DC	0.06-25 Amps RMS	AC	Zero cross	48-530 Volts RMS
PFE380D25R	15-32 Volts DC	0.06-25 Amps RMS	AC	Random	48-530 Volts RMS
PFE480D25	15-32 Volts DC	0.06-25 Amps RMS	AC	Zero cross	48-660 Volts RMS
PFE480D25R	15-32 Volts DC	0.06-25 Amps RMS	AC	Random	48-660 Volts RMS

- 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)	PF240A25 PFE240A25		
	DC CONTROL	(5Vdc) (24Vdc)	PF240D25 PFE240D25	PF380D25 PFE380D25	PF480D25 PFE480D25
OUTPUT SPECIFICATIONS 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 ² t for Fusing, (8.3 msec.) [A ² 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

MODEL NUMBERS	DC CONTROL			AC CONTROL		
	Nominal Voltage	5Vdc	5Vdc	24Vdc	120Vac	24Vac
	PF240D25	PF380D25 PF480D25	PFE240D25 PFE380D25 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	2.1k Ohm
Typical Input Current @ Nominal Voltage	15 mAdc	15 mAdc	15 mAdc		10 mArms	10 mArms

GENERAL NOTES

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- 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).

GENERAL SPECIFICATIONS

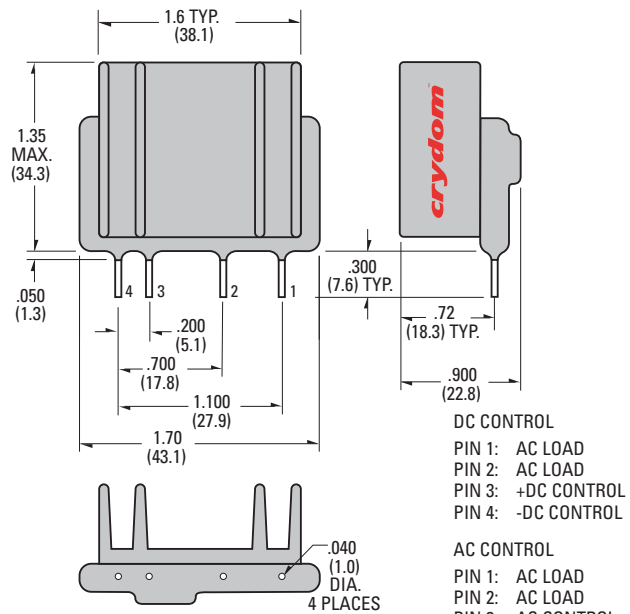
Dielectric Strength 50/60Hz Input/Output	4000 Vrms
Insulation Resistance (Min.) @ 500 Vdc	10 ⁹ Ohm
Max. Capacitance Input/Output	8 pF
Ambient Operating Temperature Range	-30 to 80°C
Ambient Storage Temperature Range	-30 to 125°C

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

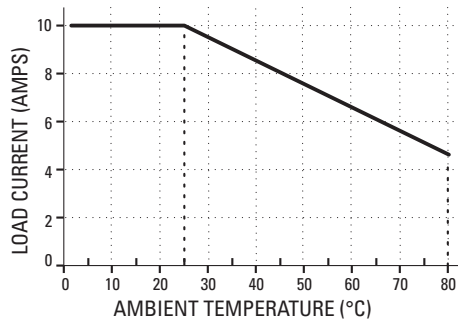


Fig.1 Convection Cooling

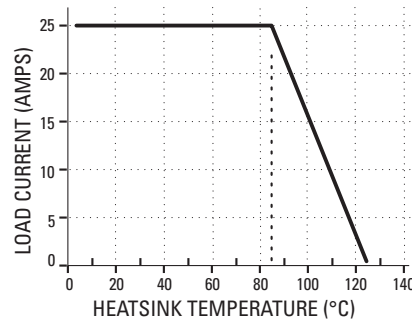


Fig.2 Forced Air Cooling

APPROVALS

UL E116950
 VDE 70938 (DC Control Only)



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