



Series A48, Series D48

12-90Amp • 480 V ac • AC Output

- Zero Voltage and Random Turn-On Switching
- Panel Mount
- 800V Transient Capability
- Internal Snubber

Featuring state-of-the-art Surface Mount Technology, these SPST-NO relays deliver proven reliability in the most demanding applications. Output consists of an SCR AC switch and is available in zero-cross, random turn-on (phase controllable) and versions with either AC or DC input (coil) control. Manufactured in Crydom's ISO 9001 Certified facility for optimum product performance and reliability.

| MODEL NUMBERS | AC CONTROL | A4812 | A4825 | A4850 | A4875 | A4890 |
|---|------------|--|--------|--------|--------|--------|
| | DC CONTROL | D4812 | D4825 | D4850 | D4875 | D4890 |
| OUTPUT SPECIFICATIONS ① | | | | | | |
| Operating Voltage (47-63 Hz) [Vrms] | | 80-530 | 80-530 | 80-530 | 80-530 | 80-530 |
| Max. Load Current ③ [Arms] | | 12 | 25 | 50 | 75 | 90 |
| Min. Load Current [mArms] | | 40 | 40 | 40 | 40 | 40 |
| Transient Overvoltage [Vpk] | | 800 | 800 | 800 | 800 | 800 |
| Max. Surge Current, (16.6ms) [Apk] | | 140 | 250 | 625 | 1000 | 1200 |
| Max. On-State Voltage Drop @ Rated Current [Vpk] | | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 |
| Thermal Resistance Junction to Case (R _{θJC}) [°C/W] | | 1.48 | 1.02 | 0.63 | 0.31 | 0.28 |
| Maximum I ² t for Fusing, (8.3 msec.) [A ² sec] | | 81 | 260 | 1620 | 4150 | 6000 |
| Max. Off-State Leakage Current @ Rated Voltage [mArms] | | 10 | 10 | 10 | 10 | 10 |
| Min. Off-State dv/dt @ Max. Rated Voltage [V/μsec] ② | | 500 | 500 | 500 | 500 | 500 |
| Max. Turn-On Time ④ | | 1/2 Cycle (DC Input), 10.0 msec (AC Input) | | | | |
| Max. Turn-Off Time | | 1/2 Cycle (DC Input), 40.0 msec (AC Input) | | | | |
| Power Factor (Min.) with Max. Load | | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |

| INPUT SPECIFICATIONS ① | DC CONTROL (D PREFIX) | AC CONTROL (A PREFIX) |
|-------------------------|--------------------------|--------------------------------|
| | Control Voltage Range | 3-32 Vdc |
| Max. Reverse Voltage | -32 Vdc | — |
| Max. Turn-On Voltage | 3.0 Vdc | 90 Vrms |
| Min. Turn-Off Voltage | 1.0 Vdc | 10 Vrms |
| Nominal Input Impedance | See Note ⑤ | 60K Ohms |
| Typical Input Current | 2.0 mA ⑤ | 2mA @ 120 Vrms, 4mA @ 240 Vrms |

GENERAL NOTES

© 2001 CRYDOM CORP. Specifications subject to change without notice.

- 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 Heat sinking required, for derating curves see page 2.
- ④ Turn-on time for random turn-on versions is 0.02 msec (DC Control Models).
- ⑤ Input circuitry incorporates active current limiter.



National Plastic Heater Sensor & Control Co.

phone: 416.491.8436 toll free: 1.877.674.9744 fax: 416.491.2433
 Toronto, Ontario Canada e-mail: sales@nphheaters.com website www.nphheaters.com



Series A48, Series D48

12-90Amp • 480 V ac• AC Output

GENERAL SPECIFICATIONS

| | | |
|--|---------------------------|---------------------|
| Dielectric Strength | 50/60Hz Input/Output/Base | 4000 Vrms |
| Insulation Resistance (Min.) @ 500 Vdc | | 10 ⁹ Ohm |
| Max. Capacitance Input/Output | | 8 pF |
| Ambient Operating Temperature Range | | -40 to 80° C |
| Ambient Storage Temperature Range | | -40 to 125° C |

MECHANICAL SPECIFICATIONS

| | |
|-------------------|---|
| Weight: (typical) | 3.0 oz. (86.5g) |
| Encapsulation: | Thermally Conductive Epoxy |
| Terminals: | Screws and Saddle Clamps Furnished, Unmounted |

AVAILABLE OPTIONS

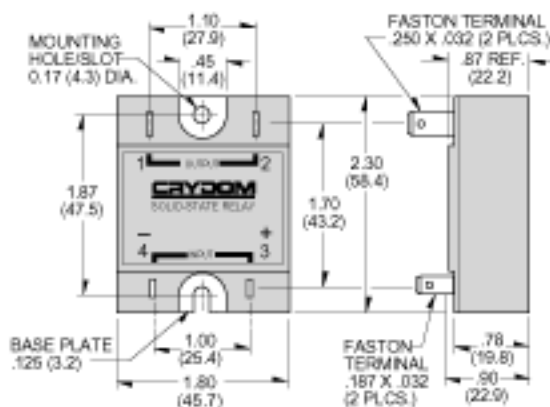
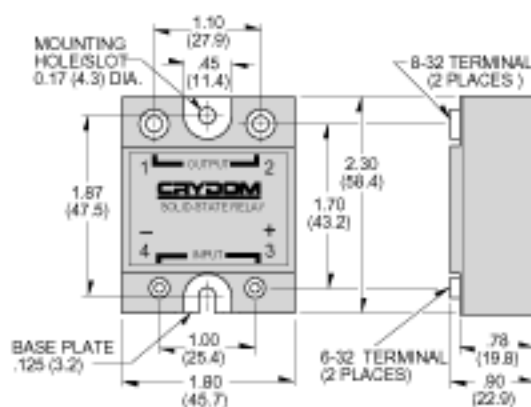
- 10 Random Turn-On (AC & DC Control)
Phase Controllable (DC Control)
Example: **D4890-10**

- F Faston Terminals (Up to 25 Amp Models)
Example: **D4850F**

Screw Torque Requirements:
6-32 Screws - 10 in. lbs.,
8-32 and 10-32 Screws - 20in. lbs.
(Screws dry without grease.)

Fastons:
Single pair (up to 25A)
Double pair* (up to 50A).
*Caution: User must connect to both pairs

Crydom Heat Sinks offer excellent thermal management and are perfectly matched to the load current ratings of Crydom panel mount relays. Request Crydom's Heat Sink specification sheet for all the details.



All dimensions are in inches (millimeters)



National Plastic Heater Sensor & Control Co.

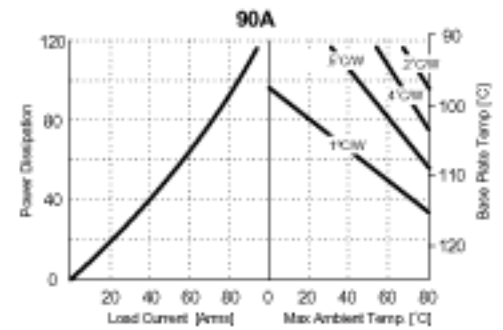
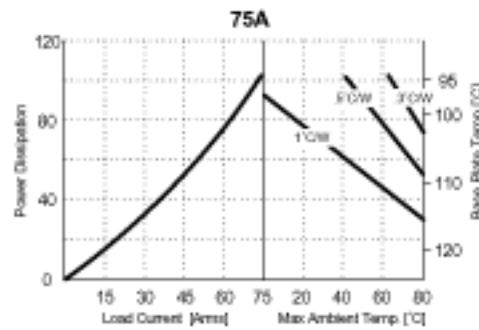
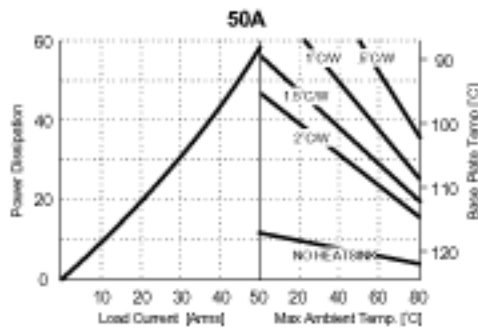
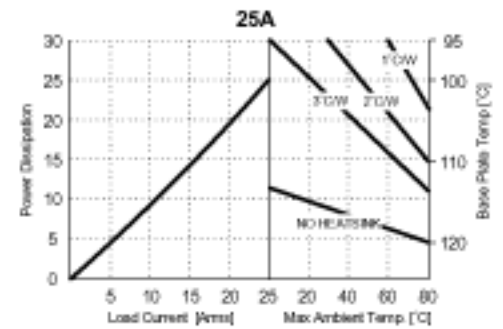
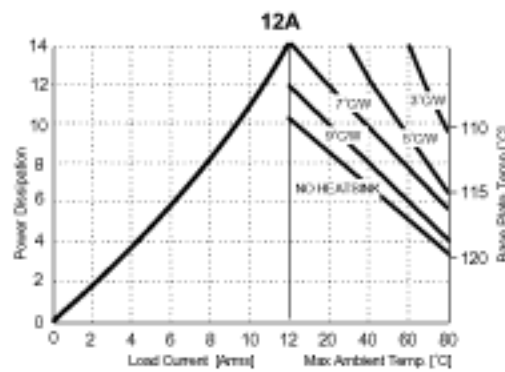
phone: 416.491.8436 toll free: 1.877.674.9744 fax: 416.491.2433
Toronto, Ontario Canada e-mail: sales@nphheaters.com website www.nphheaters.com

Series A48, Series D48

12-90Amp • 480 V ac • AC Output

CRYDOM
Control over power

CURRENT DERATING CURVES



© 2001 CRYDOM CORP. Specifications subject to change without notice.



National Plastic Heater Sensor & Control Co.

phone: 416.491.8436 toll free: 1.877.674.9744 fax: 416.491.2433
Toronto, Ontario Canada e-mail: sales@nphheaters.com website www.nphheaters.com