

# Series 1 - 110/125A

120/240, 480 Vac • AC Output

## CRYDOM

Control over power

- Zero Voltage and Random Turn-On Switching
- Panel Mount
- 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 9002 Certified facility for optimum product performance and reliability.

MODEL NUMBERS	AC CONTROL DC CONTROL	A24110 D24110	A24125 D24125	HA48110 HD48110	HA48125 HD48125
<b>OUTPUT SPECIFICATIONS ①</b>					
Operating Voltage (47-63 Hz) [Vrms]		24-280	24-280	48-530	48-530
Max. Load Current ③ [Arms]		110	125	110	125
Min. Load Current, [mArms]		150	150	150	150
Transient Overvoltage [Vpk]		600	600	1200	1200
Max. Surge Current, (16.6ms) [Apk]		1500	1750	1500	1750
Max. On-State Voltage Drop @Rated Current [Vpk]		1.7	1.7	1.7	1.7
Thermal Resistance Junction to Case (R <sub>θJC</sub> ) [°C/W]		.25	.22	.25	.22
Maximum I <sup>2</sup> t for Fusing, (8.3 msec.) [A <sup>2</sup> sec]		9,340	12,700	9,340	12,700
Max. Off-State Leakage Current @Rated Voltage [mArms]		10	10	10	10
Min. Off-State dv/dt @Max. Rated Voltage [V/μsec]②		500	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	0.5

INPUT SPECIFICATIONS ①	DC CONTROL (D PREFIX)	AC CONTROL (A PREFIX)	AC CONTROL (E SUFFIX)
Control Voltage Range	3-32 Vdc	90-280 Vrms (60Hz)	18-36 Vrms
Max. Reverse Voltage	-32 Vdc	—	—
Max. Turn-On Voltage	3.0 Vdc	90 Vrms	18 Vrms
Min. Turn-Off Voltage	1.0 Vdc	10 Vrms	4.0 Vrms
Nominal Input Impedance	1500 Ohms (120/240V Models) ⑤	60K Ohms	9.0K Ohms
Typical Input Current	3.4mA @5 Vdc, 20mA @28Vdc⑤	2mA @120 Vrms, 4mA @240 Vrms	3mA @24 Vrms

### 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 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 for 480V models incorporates active current limiter with 2mA typical input current..

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 6SJ

GERMANY: (49) (0)6874 182580 • fax (49)(0)6874 182585 Crydom GmbH,

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### GENERAL SPECIFICATIONS

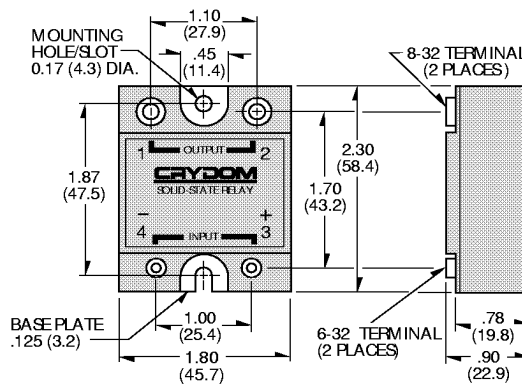
Dielectric Strength 50/60Hz Input/Output/Base	4000 Vrms
Insulation Resistance (Min.) @500 Vdc	10 <sup>9</sup> Ohm
Max. Capacitance Input/Output	8 pF
Ambient Operating Temperature Range	-40 to 80°C
Ambient Storage Temperature Range	-40 to 125°C

### MECHANICAL SPECIFICATIONS

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

### AVAILABLE OPTIONS

- E** 24 Vac Input (18-36 Vac)  
Example: **A24110E**
- 10** Random Turn-On (AC & DC Control)  
Phase Controllable (DC Control)  
Example: **D24110-10**

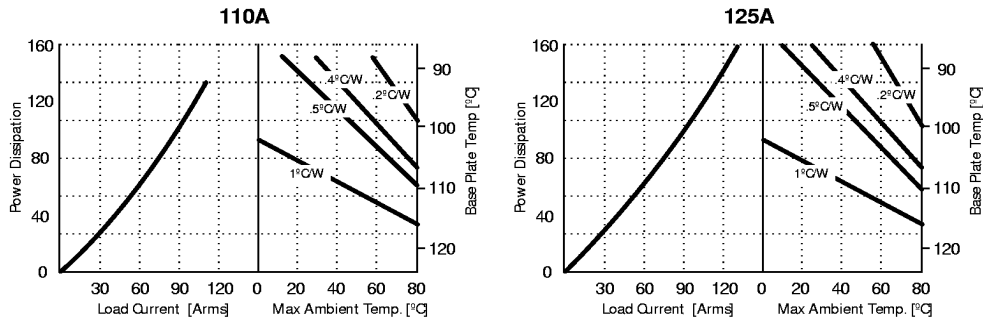


**Screw Torque Requirements:**  
6-32 Screws - 10 in./lbs.,  
8-32 and 10-32 Screws - 20in./lbs.  
(Screws dry without grease.)

All dimensions are in inches (millimeters)

**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.

### CURRENT DERATING CURVES



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APPROVALS  
UL E116950



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