



- 1200V Blocking
- Low Leakage
- SCR Output
- Panel Mount
- Zero and Random Voltage Switching
- Integrated Fingerproof Cover
- User Friendly, Universal Connectors
- EMC Compliant Design

The Series CW48 has an SCR AC switch output featuring low off-state leakage (1mA, snubberless), zero and random voltage switching and a broadened operating range (48-660Vac). This wide range permits optimum performance at voltages from 240 Vac to 600 Vac line voltages. Manufactured in Crydom's ISO 9001 Certified facility for optimum product performance and reliability.

MODEL NUMBERS	CWD4810 CWA4810	CWD4825 CWA4825	CWD4850 CWA4850	CWD4890 CWA4890	CWD48125 CWA48125
<b>OUTPUT SPECIFICATIONS</b> <sup>①</sup>					
Operating Voltage (47-63 Hz) [Vrms]	48-660	48-660	48-660	48-660	48-660
Load Current Range <sup>③</sup> [Arms]	0.15-10	0.15-25	0.15-50	0.25-90	0.25-125
Transient Overvoltage [Vpk]	1200	1200	1200	1200	1200
Max. Surge Current (16.6ms) [Apk]	400	600	850	1350	2000
Max. Surge Current (20ms) [Apk]	380	570	810	1290	1900
Max. On-State Voltage Drop @ Rated Current [Vpk]	1.3	1.3	1.3	1.3	1.25
Thermal Resistance Junction to Case (R <sub>θJC</sub> ) [°C/W]	0.35	0.35	0.2	0.14	0.13
Maximum I <sup>2</sup> t for Fusing, (8.3 ms) [A <sup>2</sup> s]	660	1500	3000	7560	16600
Maximum I <sup>2</sup> t for Fusing, (10 ms) [A <sup>2</sup> s]	720	1620	3280	8320	18000
Max. Off-State Leakage Current @ Rated Voltage [mA] <sup>⑥</sup>	1.0	1.0	1.0	1.0	1.0
Min. Off-State dV/dt @ Max. Rated Voltage [V/μs] <sup>②</sup>	500	500	500	500	500
Max. Turn-On Time <sup>④⑤</sup>	1/2 Cycle	1/2 Cycle	1/2 Cycle	1/2 Cycle	1/2 Cycle
Max. Turn-Off Time <sup>⑤</sup>	1/2 Cycle	1/2 Cycle	1/2 Cycle	1/2 Cycle	1/2 Cycle
Power Factor (Min.) with Max. Load	0.5	0.5	0.5	0.5	0.5

INPUT SPECIFICATIONS <sup>①</sup>	DC Control	AC Control	AC Control
		24 Vac nominal E - suffix	120/240Vac nominal Std. (no suffix)
Control Voltage Range	4-32 Vdc	18-36 Vrms	90-280 Vrms
Max. Turn-On Voltage	4 Vdc	18 Vrms	90 Vrms
Min. Turn-Off Voltage	1.0 Vdc	2 Vrms	10 Vrms
Nominal Input Impedance	See note 7	1 k ohm	21.5 k ohms
Typical Input Current	10 mA @ 12 Vdc	24mA@24Vrms	6 mA @ 120 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/ARM 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 version is 0.02 msec.
- ⑤ Turn-on and turn-off time for AC input models is 50ms.
- ⑥ 10mA for models with snubber.
- ⑦ Input circuit incorporates active current limiter.



## National Plastic Heater Sensor & Control Co.

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Toronto, Ontario Canada e-mail: sales@nphheaters.com website www.nphheaters.com

### 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	Screw Type, Finger Proof Output: 8-32, Combo Drive Input: 6-32, Combo Drive
Max. Torque	Output: 20 in lb (2.2Nm) Input: 10 in lb (1.1Nm)
Max. Wire Size	Output: 2 x AWG 8 (3.8mm) Input: 2 x AWG 12 (2.5mm)

### Available Options

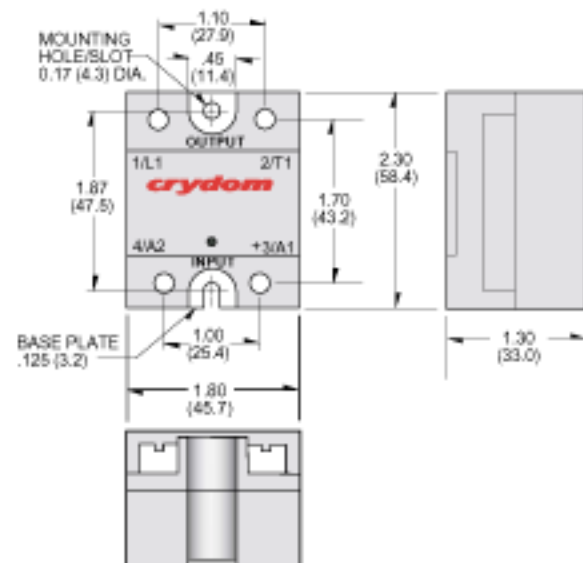
- 10** Random Turn-On.  
Example: **CWD4825-10**
- E** 24 Vac Input (18-36 Vac)  
Example: **CWA4825E**
- P** Internal Overvoltage Protection.  
Relay Will Self Trigger Between  
900-1200 Vpk. Not Suitable For Capacitive Loads.  
Example: **CWD4825P**
- S** Internal Snubber Example: **CWD4825S**

**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.

### EMC Compatibility

- Input: EN61000-4-2, Level 3 ESD
- EN61000-4-4, Level 3 Burst
- Output: EN61000-4-2, Level 4 ESD
- Level 3 ESD (with P option)
- EN61000-4-4, Level 4 Burst
- Level 3 Burst (with P option)
- EN61000-4-5, Level 4 Surge

### MECHANICAL OUTLINE



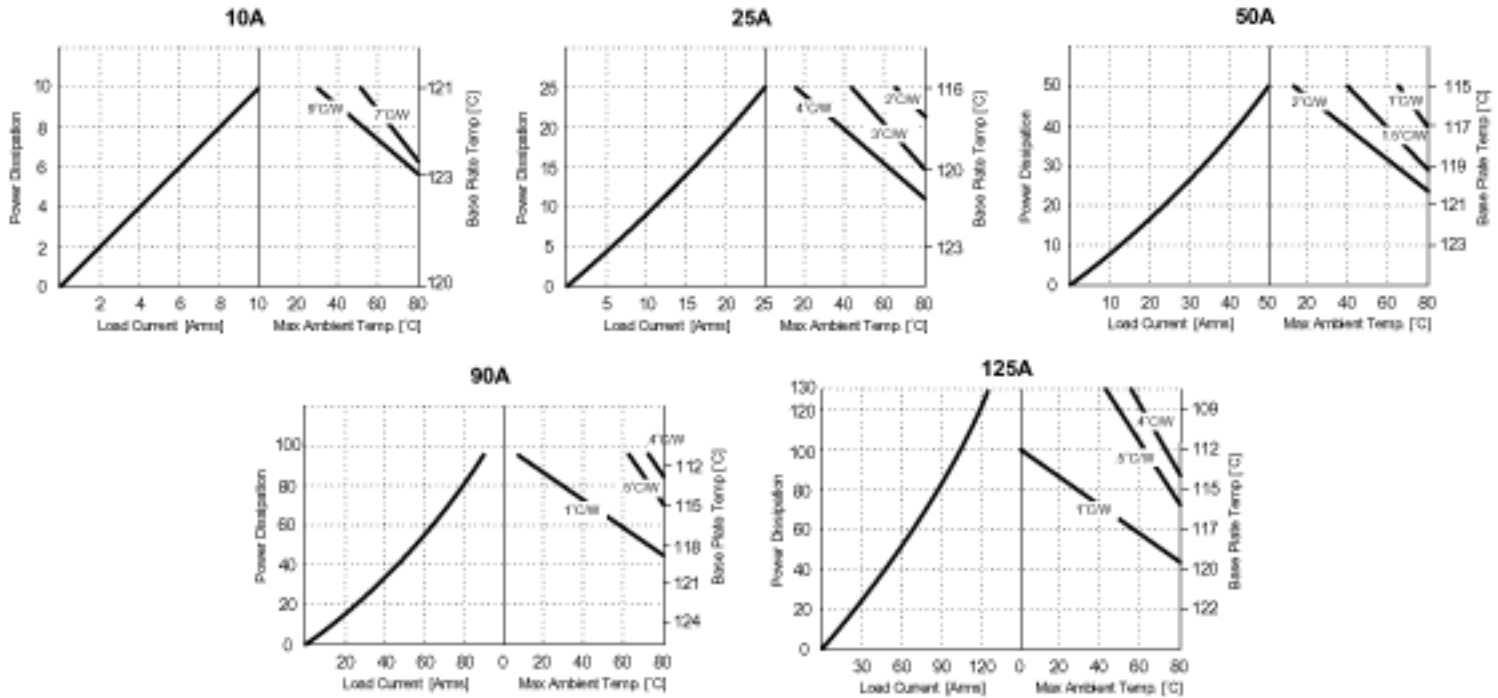
All dimensions are in inches (millimeters)



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## CURRENT DERATING CURVES



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