



- 1200V Blocking
- Low Leakage
- SCR Output
- Zero and Random Voltage Switching
- LED Status Indicator
- Panel Mount
- Intergrated Removable 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	DC Control AC Control	CWD4810 CWA4810	CWD4825 CWA4825	CWD4850 CWA4850	CWD4890 CWA4890	CWD48125 CWA48125
<b>OUTPUT SPECIFICATIONS</b> <sup>①</sup>						
Operating Voltage (47-63 Hz) [Vrms] <sup>⑧</sup>		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 Impedence	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/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 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.
- ⑧ 48-530 Vrms for models with snubber.

**crydom™** ISO9001 certified

For recommended applications and more information contact:  
**USA: Sales Support** (877) 502-5500 **Tech Support** (877) 702-7700 **FAX** (619) 710-8540  
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**Email:** sales@crydom.com **WEB SITE:** http://www.crydom.com  
**UK:** +44 (0)1202 365070 **FAX** +44 (0)1202 365090 Crydom International Ltd., 7 Cobham Road, Ferndown Industrial Estate, Ferndown, Dorset BH21 7PE, **Email:** intsales@crydom.com.  
**GERMANY:** +49 (0)180 3000 506

### 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

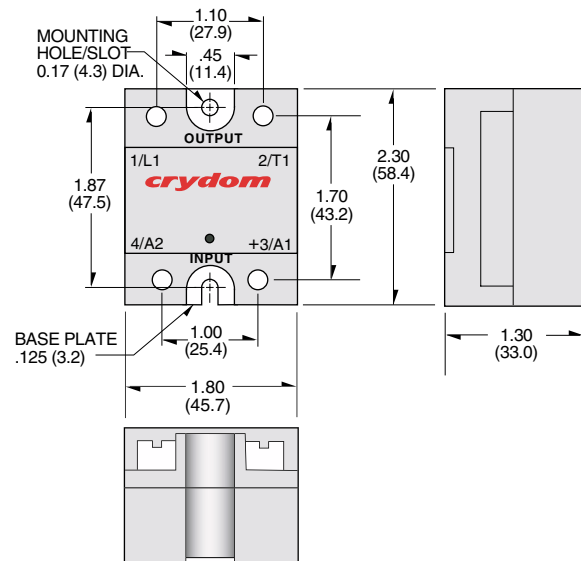
- 10** Random Turn-On.  
Example: **CWD4825-10**
- E** 24 Vac Input (18-36 Vac)  
Example: **CWA4825E**
- P** Internal Overvoltage Protection.  
Relay Will Self Trigger Between  
900-1200 Vpk. Not Suitable For Capacitive Loads.  
Example: **CWD4825P**
- S** Internal Snubber Example: **CWD4825S**
- H** Heat Trasfer Pad (Attached)  
Example: **CWD4825H**

**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 3 ESD
- Level 4 ESD (with P option)
- EN61000-4-4, Level 3 Burst
- Level 4 Burst (with P option)
- EN61000-4-5, Level 4 Surge

### MECHANICAL OUTLINE



All dimensions are in inches (millimeters)

### APPROVALS

UL E116949  
CSA 1405925  
VDE 40007242

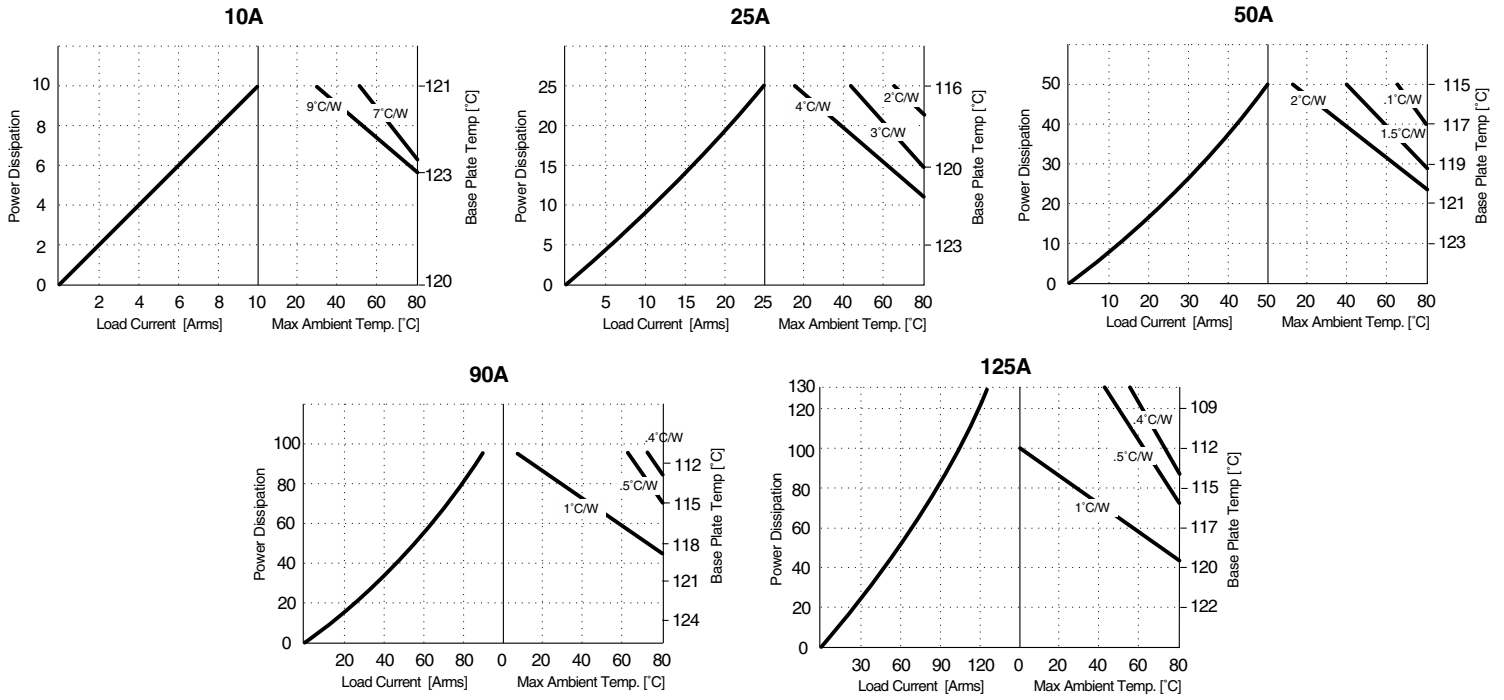


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### CURRENT DERATING CURVES



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## ANNEX – ENVIRONMENTAL INFORMATION:

The environmental information disclosed in this annex including the EIP Pollution logo are in compliance with People's Republic of China Electronic Industry Standard SJ/T11364 – 2006, Marking for Control of Pollution Caused by Electronic Information Products.

Part Name	Toxic or hazardous Substance and Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr (VI))	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
Semiconductor die	X	O	O	O	O	O
Solder	X	O	O	O	O	O

### 附件 - 环保信息:

此附件所标示的包括电子信息产品污染图标的环保信息符合中华人民共和国电子行业标准 **SJ/T11364 - 2006**, 电子信息产品污染控制标识要求

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr (VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
半导体芯片	X	O	O	O	O	O
焊接点	X	O	O	O	O	O

