crydom™

CW24

10-125Amp - 120/240 Vac - AC OUTPUT

- **600V 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**

Crydom's CW24 line of solid state relays offer an SCR AC switch output featuring low off-state leakage (1mA, snubberless), zero and random voltage switching and a broadened operating range (24-280Vac). This wide range permits optimum perfomance at both 120Vac and 240Vac line voltages.

Manufactured in Crydom's ISO 9001 Certified facility for optimum product performance and reliability.

MODEL NUMBERS	CWD2410 CWA2410	CWD2425 CWA2425	CWD2450 CWA2450	CWD2490 CWA2490	CWD24125 CWA24125
OUTPUT SPECIFICATIONS ①					
Operating Voltage (47-63 Hz) [Vrms]	24-280	24-280	24-280	24-280	24-280
Load Current Range ③ [Arms]	0.15-10	0.15-25	0.15-50	0.25-90	0.25-125
Transient Overvoltage [Vpk]	600	600	600	600	600
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 ($R_{\theta JC}$) [˚C/W]	0.35	0.35	0.2	0.14	0.13
Maximum I^2t for Fusing, (8.3 ms) [A^2s]	660	1500	3000	7560	16600
Maximum I^2t for Fusing, (10ms) [A^2s]	720	1620	3280	8320	18000
Max. Off-State Leakage Current @ Rated Voltage [mA] ⑥	1.0	1.0	1.0	1.0	1.0
Min. Off-State dv/dt @ Max. Rated Voltage [V/µs] ②	500	500	500	500	500
Max. Turn-On Time ④⑤	1/2 Cycle	1/2 Cycle	1/2 Cycle	1/2 Cycle	1/2 Cycle
Max. Turn-Off Time ⑤	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 ①	**DC Control**	**AC Control** 24 Vac nominal E - suffix	**AC Control** 120/240Vac nominal Std. (no suffix)
Control Voltage Range	3-32 Vdc	18-36 Vrms	90-280 Vrms
Max. Turn-On Voltage	3 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

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.

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
Crydom Corp, 2320 Paseo de las Americas, Ste. 201, San Diego, CA 92154
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	10^9 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	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: **CWD2425-10**

E 24 Vac Input (18-36 Vac)
Example: **CWA2425E**

P Internal Overvoltage Protection.
Relay Will Self Trigger Between
450-600 Vpk. Not Suitable For Capacitive Loads.
Example: **CWD2425P**

S Internal Snubber Example: **CWD2425S**

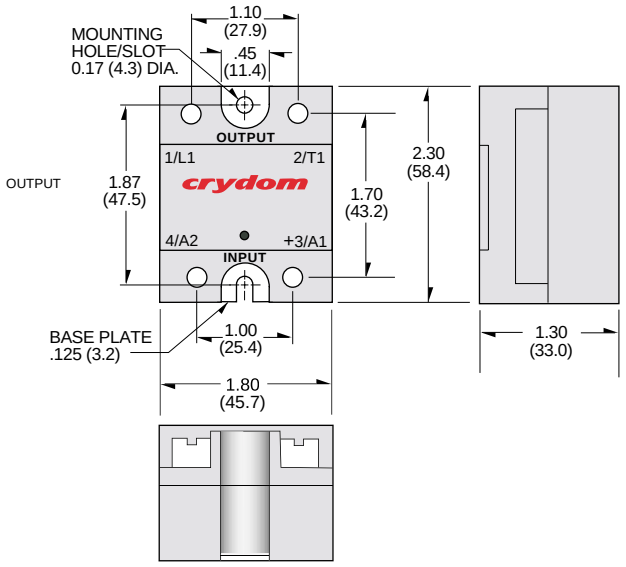
H Heat Transfer Pad (Attached)
Example: **CWD2425H**

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

CE

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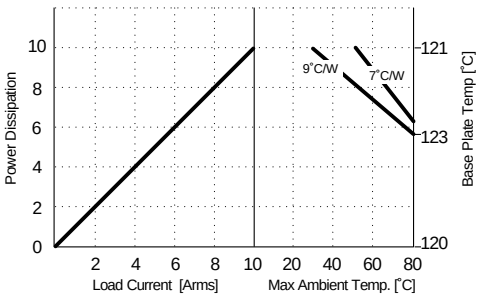
CURRENT DERATING CURVES

10A



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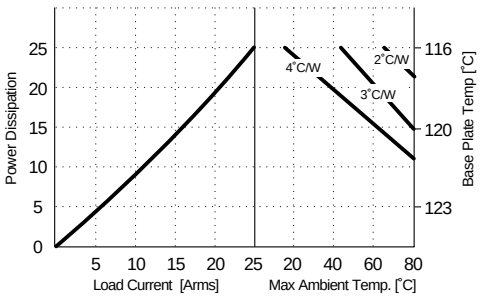

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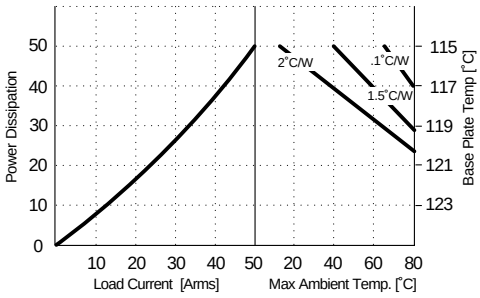

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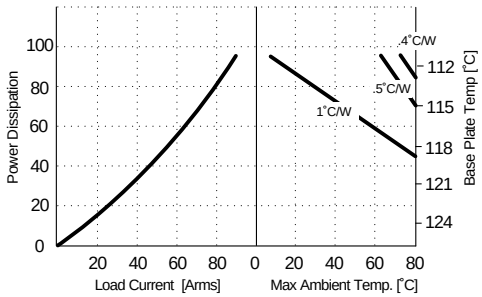

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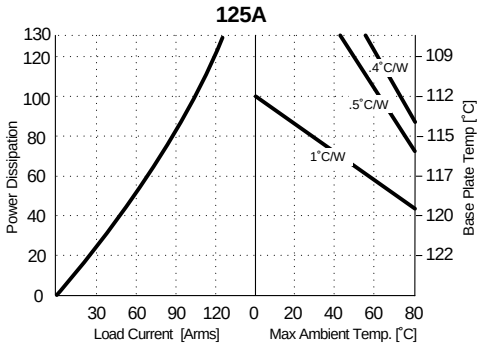

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