

**CRYDOM***Control over power*

# Series CS

**10-90Amp • 120/240 Vac • AC OUTPUT**

- **Low Leakage**
- **SCR Output**
- **Panel Mount**
- **Zero Voltage Switching**

The Series CS has an SCR AC switch output featuring low off-state leakage (1mA, snubberless), zero-voltage switching and a broadened operating range (24-280Vac). This wide range permits optimum performance at both 120Vac and 240Vac line voltages.

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

MODEL NUMBERS	CSD2410 CSE2410	CSD2425 CSE2425	CSD2450 CSE2450	CSD2475 CSE2475	CSD2490 CSE2490
<b>OUTPUT SPECIFICATIONS<sup>①</sup></b>					
Operating Voltage (47-63 Hz) [Vrms]	24-280	24-280	24-280	24-280	24-280
Load Current Range <sup>③</sup> [Arms]	0.15-10	0.15-25	0.15-50	0.25-75	0.25-90
Transient Overvoltage [Vpk]	600	600	600	600	600
Max. Surge Current, (16.6ms) [Apk]	120	250	625	1000	1200
Max. On-State Voltage Drop @ Rated Current [Vpk]	1.6	1.6	1.6	1.6	1.6
Thermal Resistance Junction to Case (R <sub>θJC</sub> ) [°C/W]	1.48	1.02	0.63	0.31	0.28
Maximum I <sup>2</sup> t for Fusing, (8.3 msec.) [A <sup>2</sup> sec]	60	260	1620	4150	6000
Max. Off-State Leakage Current @ Rated Voltage [mA]	1.0	1.0	1.0	1.0	1.0
Min. Off-State dv/dt @ Max. Rated Voltage [V/μsec] <sup>②</sup>	500	500	500	500	500
Max. Turn-On Time	1/2 Cycle	1/2 Cycle	1/2 Cycle	1/2 Cycle	1/2 Cycle
Max. Turn-Off Time	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 (CSD PREFIX)	DC CONTROL (CSE PREFIX)
Control Voltage Range	3.5-15 Vdc	15-32 Vdc
Max. Turn-On Voltage	3.5 Vdc	15.0 Vdc
Min. Turn-Off Voltage	1.0 Vdc	1.0 Vdc
Nominal Input Impedence	300 Ohm	2k Ohm
Typical Input Current	15 mA @ 5 Vdc	7mA @ 15 V

**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.

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

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10-90Amp • 120/240 Vac • AC OUTPUT



## GENERAL SPECIFICATIONS

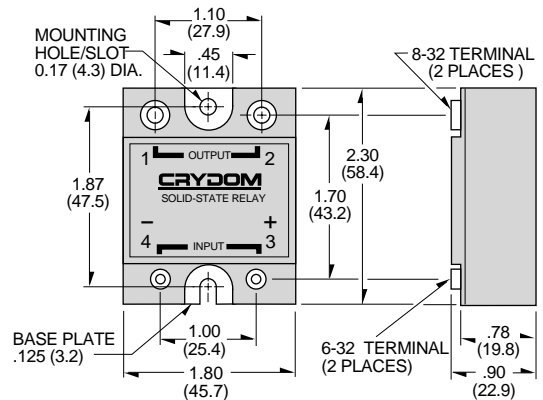
Dielectric Strength 50/60Hz , Input/Output/Base	4000 Vrms
Insulation Resistance (Min.) @ 500 Vdc	10 <sup>9</sup> Ohm
Max. Capacitance Input/Output	10 pF
Ambient Operating Temperature Range	-40 to 80°C
Ambient Storage Temperature Range	-40 to 125°C

## MECHANICAL SPECIFICATIONS

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

## AVAILABLE OPTIONS

- F** Faston Terminals (Up to 50A Models)  
Example: **CSD2425F**
- G** Input Status LED.  
Agencies Approval Pending  
Example: **CSD2425G**  
**Note:** Control Voltage Range 5-15Vdc for CSD Models.
- P** Internal Overvoltage Protection.  
Relay Will Self Trigger Between 450-600 Vpk. Not Suitable For Capacitive Loads.  
Agencies Approval Pending.  
Example: **CSD2425P**
- 10** Random Turn-On (AC & DC Control)  
Phase Controllable (DC Control)  
Example: **CSD2425-10**

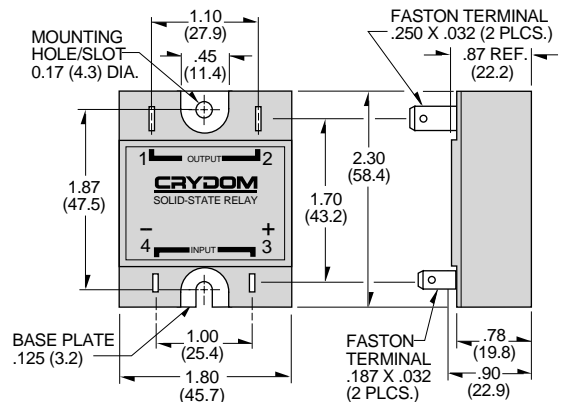


### Screw Torque Requirements:

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)

## APPROVALS

UL E116949  
CSA LR81689  
VDE 10143 UG



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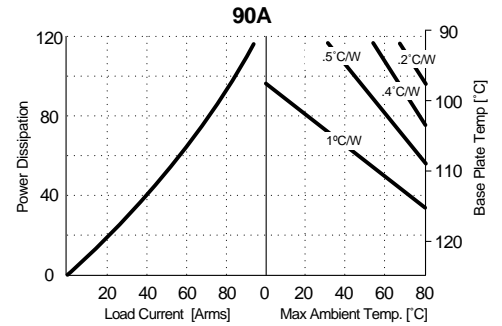
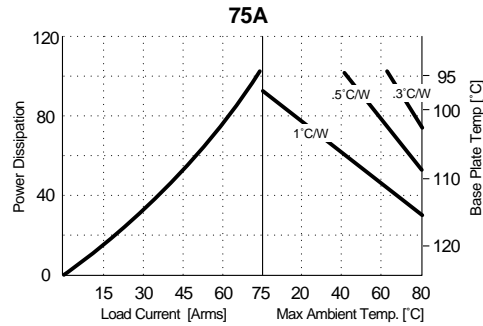
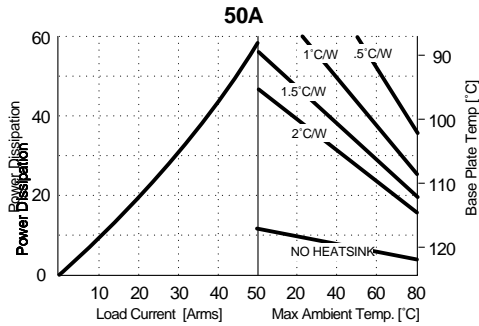
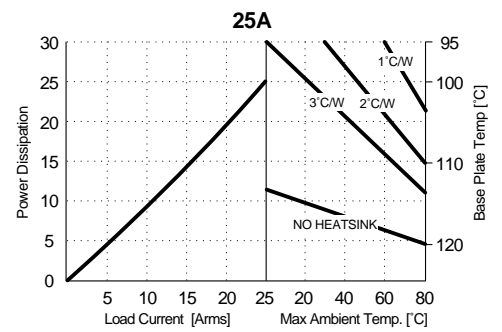
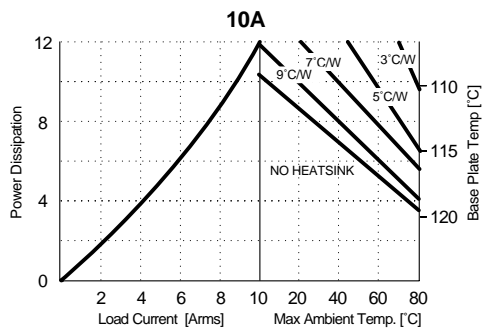
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## CURRENT DERATING CURVES



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