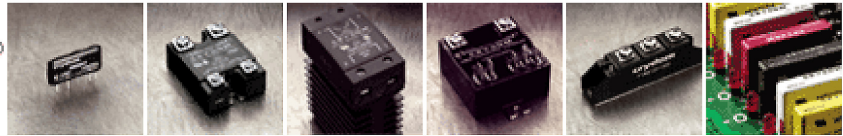




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## Solid State Relays - Panel Mount: H12WD



### Features

- SCR output • 50-90 Amp • 48-660 Vrms • AC Switching • DC control only
- Snubberless

Product	INPUT SPECIFICATIONS	OUTPUT SPECIFICATIONS			
	Control Voltage Range	Load Current	Switching Voltage Type	Turn On	Load Voltage Range
<a href="#">H12WD48125</a>	4-32 Volts DC	0.15-125 Amps RMS	AC	Zero cross	48-660 Volts RMS
<a href="#">H12WD48125-10</a>	4-32 Volts DC	0.15-125 Amps RMS	AC	Random	48-660 Volts RMS
<a href="#">H12WD4825</a>	4-32 Volts DC	0.15-25 Amps RMS	AC	Zero cross	48-660 Volts RMS
<a href="#">H12WD4825-10</a>	4-32 Volts DC	0.15-25 Amps RMS	AC	Random	48-660 Volts RMS
<a href="#">H12WD4850</a>	4-32 Volts DC	0.15-50 Amps RMS	AC	Zero cross	48-660 Volts RMS
<a href="#">H12WD4850-10</a>	4-32 Volts DC	0.15-50 Amps RMS	AC	Random	48-660 Volts RMS
<a href="#">H12WD4875</a>	4-32 Volts DC	0.15-75 Amps RMS	AC	Zero cross	48-660 Volts RMS

<b>H12WD4875-10</b>	4-32 Volts DC	0.15-75 Amps RMS	AC	Random	48-660 Volts RMS
<b>H12WD4890</b>	4-32 Volts DC	0.15-90 Amps RMS	AC	Zero cross	48-660 Volts RMS
<b>H12WD4890-10</b>	4-32 Volts DC	0.15-90 Amps RMS	AC	Random	48-660 Volts RMS

- 1200 Volt Blocking
- Panel Mount
- Up to 660 Vac
- Zero Voltage and Random Turn-On
- SCR Output
- Integrated Overvoltage Protection by Automatic Self Turn-On (Suffix P)

High voltage relays use IC driven circuits for switching loads up to 660 VAC. All models come with 1200 Volts blocking.  
 Type H12WD is a snubberless (reduced leakage current).  
 Manufactured in Crydom's ISO 9001 Certified facility for optimum product performance and reliability.

MODEL NUMBERS	H12WD4825	H12WD4850	H12WD4875	H12WD4890	H12WD48125 <sup>⑥</sup>
<b>OUTPUT SPECIFICATIONS</b> ①					
Operating Voltage (47-63 Hz) [Vrms]	48-660	48-660	48-660	48-660	48-660
Max. Load Current ③ [Arms]	25	50	75	90	125
Min. Load Current, [mArms]	150	150	150	150	150
Transient Overvoltage [Vpk]	1200	1200	1200	1200	1200
Max. Surge Current, (16.6ms) [Apk]	250	625	1000	1200	1750
Max. On-State Voltage Drop @ Rated Current [Vpk]	1.6	1.6	1.6	1.6	1.7
Thermal Resistance Junction to Case (R <sub>θJC</sub> ) [°C/W]	1.02	.63	.31	.28	.22
Maximum I <sup>2</sup> t for Fusing, (8.3 msec.) [A <sup>2</sup> sec]	260	1620	4150	6000	12700
Max. Off-State Leakage Current @ Rated Voltage [mArms]	1.0	1.0	1.0	1.0	1.0
Min. Off-State dv/dt @ Max. Rated Voltage [V/μsec] ②	500	500	500	500	500
Max. Turn-On Time ④	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 ①

Control Voltage Range	4-32 Vdc
Max. Turn-On Voltage	4.0 Vdc
Min. Turn-Off Voltage	1.0 Vdc
Nominal Input Impedance	See Note 5
Typical Input Current	15 mA @ 5 Vdc ⑤

## 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 DC control random turn-on versions is 0.02 msec.
- ⑤ Input circuitry incorporates active current limiter.
- ⑥ CE Compliant only.

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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

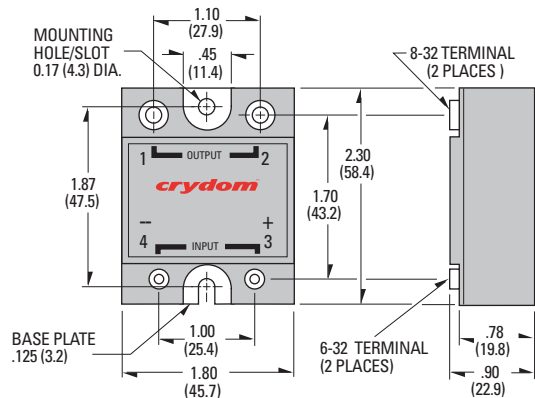
**Crydom Heat Sinks** offer excellent thermal management and are perfectly matched to the load current ratings of Crydom panel mount relays. Request Crydom's Heat Sink specification sheet for all the details.

#### Available Options

- F** Faston Terminals.  
(Up to 50 Amp Models)  
Example: **H12WD4850F**
- G** Input Status LED.  
Agencies Approval Pending  
Example: **H12WD4850G**  
**Note:** Control Voltage Range 5.5-32 Vdc
- P** Internal Overvoltage Protection.  
Relay Will Self Trigger Between 900-1200Vpk. Not Suitable For Capacitive Loads.  
Agencies Approval Pending.  
Example: **H12WD4850P**
- 10** Random Turn-On.  
Example: **H12WD4850-10**
- H** Heat Transfer Pad (Attached)  
Example: **H12WD4850H**

**Ordering System:** Combination of the suffixes should be made in the following order:  
**FPG-10.**

Example: **H12WD4850FPG-10**

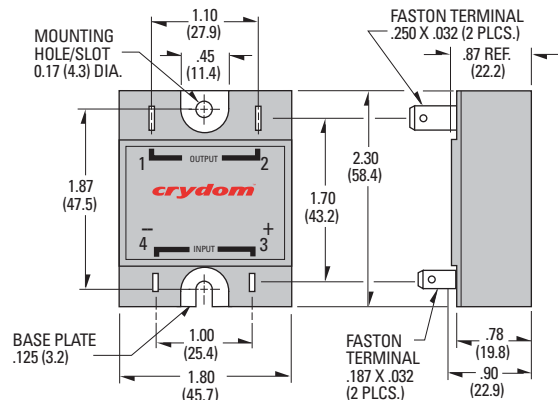


#### Screw Torque Requirements:

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



All dimensions are in inches (millimeters)

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#### APPROVALS

UL E116949  
CSA LR81689  
VDE 10143 UG

