

Solid State Relays - Panel Mount: H12D



Features

- SCR output • 25-90Amp • 48-530 Vrms • AC Switching • DC control only
- 1200 Vpk reverse voltage capability.

Product	INPUT SPECIFICATIONS		OUTPUT SPECIFICATIONS		
	Control Voltage Range	Load Current	Switching Voltage Type	Turn On	Load Voltage Range
H12D4825	4-32 Volts DC	0.15-25 Amps RMS	AC	Zero cross	48-530 Volts RMS
H12D4825-10	4-32 Volts DC	0.15-25 Amps RMS	AC	Random	48-530 Volts RMS
H12D4850	4-32 Volts DC	0.15-50 Amps RMS	AC	Zero cross	48-530 Volts RMS
H12D4850-10	4-32 Volts DC	0.15-50 Amps RMS	AC	Random	48-530 Volts RMS
H12D4875	4-32 Volts DC	0.15-75 Amps RMS	AC	Zero cross	48-530 Volts RMS
H12D4875-10	4-32 Volts DC	0.15-75 Amps RMS	AC	Random	48-530 Volts RMS
H12D4890	4-32 Volts DC	0.15-90 Amps RMS	AC	Zero cross	48-530 Volts RMS

- 1200 Volt Blocking
- Panel Mount
- Up to 530 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 and are available with either AC or DC input (coil) control.

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

MODEL NUMBERS	H12D4825	H12D4850	H12D4875	H12D4890	H12D48125 ^⑥
OUTPUT SPECIFICATIONS ^①					
Operating Voltage (47-63 Hz) [Vrms]	48-530	48-530	48-530	48-530	48-530
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) [A _{pk}]	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 _{JC}) [°C/W]	1.02	.63	.31	.28	.22
Maximum I ² t for Fusing, (8.3 msec.) [A ² sec]	260	1620	4150	6000	12700
Max. Off-State Leakage Current @ Rated Voltage [mArms]	10	10	10	10	10
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	4-32Vdc
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 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:	Screws and Saddle Clamps Furnished, Unmounted

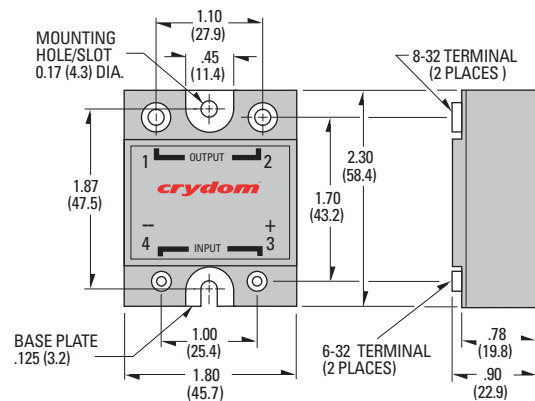
Available Options

- F** Faston Terminals.
(Up to 50 Amp Models)
Example: **H12D4850F**
- G** Input Status LED.
Agencies Approval Pending
Example: **H12D4850G**
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: **H12D4850P**
- 10** Random Turn-On.
Example: **H12D4850-10**
- H** Heat Transfer Pad (Attached)
Example: **H12D4850H**

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

Example: **H12D4850FPG-10**

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.

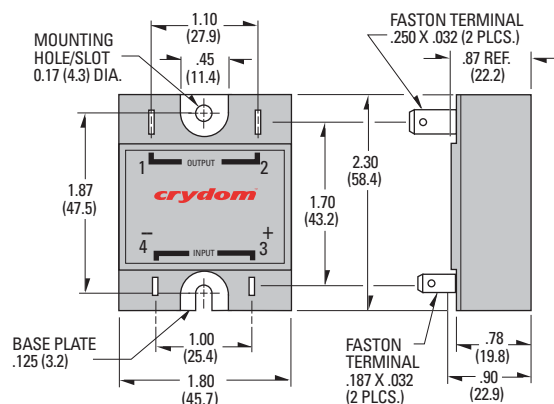


Screw Torque Requirements:

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)

APPROVALS

UL E116949
CSA LR81689
VDE 10143 UG



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