

- **SCR Output**
- **LED Status Indicator**
- **Protective Cover Available**  
(Part No. KS300)
- **Panel Mount**
- **Integrated Overvoltage Protection by Automatic Self Turn-On (Suffix P)**

Three-phase solid state relays switch up to 530 Vrms directly to loads such as motors, transformers, heating elements, etc. Available with either AC or DC input (coil) control in zero-voltage or random turn-on switching versions.

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

MODEL NUMBERS	D53TP25D	D53TP50D	A53TP25D	A53TP50D
<b>OUTPUT SPECIFICATIONS ①</b>				
Operating Voltage (47-63 Hz) [Vrms]	48-530	48-530	48-530	48-530
Load Current Range③ [Arms]	.05-25	.05-50	.05-25	.05-50
Transient Overvoltage [Vpk]	1200	1200	1200	1200
Max. Surge Current, (16.6ms) [Apk]	250	625	250	625
Max. On-State Voltage Drop @ Rated Current [Vpk]	1.6	1.6	1.6	1.6
Thermal Resistance Junction to Case (R <sub>θJC</sub> ) [°C/W]	1.02	.63	1.02	.63
Maximum I <sup>2</sup> t for Fusing, (8.3 msec.) [A <sup>2</sup> sec]	260	1620	260	1620
Max. Off-State Leakage Current @ Rated Voltage [mArms]	10	10	10	10
Min. Off-State dv/dt @ Max. Rated Voltage [V/μsec]②	500	500	500	500
Max. Turn-On Time ④	1/2 Cycle	1/2 Cycle	10.0 msec	10.0 msec
Max. Turn-Off Time	1/2 Cycle	1/2 Cycle	40.0 msec	40.0 msec
Power Factor (Min.) with Max. Load	0.5	0.5	0.5	0.5

## INPUT SPECIFICATIONS ①

## DC CONTROL

## AC CONTROL

Control Voltage Range	3-32 Vdc	90-280 Vrms (60Hz)
Max. Turn-On Voltage	3.0 Vdc	90 Vrms
Min. Turn-Off Voltage	1.0 Vdc	10 Vrms
Nominal Input Impedance	450 Ohms	54.8k Ohms
Typical Input Current	10mA @ 5 Vdc	2.2mA @ 120 Vrms, 4.4mA @ 240 Vrms

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## GENERAL NOTES

- ① All parameters at 25°C and per section 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 versions is 0.02 msec (DC Control Models).

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

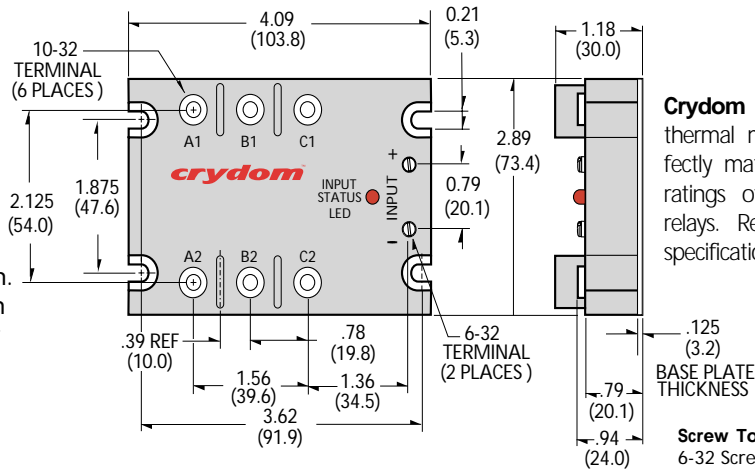
Dielectric Strength 50/60Hz Input/Output/Base	4000 Vrms
Insulation Resistance (Min.) @ 500 Vdc	10 <sup>9</sup> Ohm
Max. Capacitance Input/Output	8 pF
Ambient Operating Temperature Range	-40 to 80°C
Ambient Storage Temperature Range	-40 to 125°C

### MECHANICAL SPECIFICATIONS

Weight: (typical)	10.3 oz. (315g)
Encapsulation:	Thermally Conductive Epoxy
Terminals:	Screws and Saddle Clamps Furnished

### AVAILABLE OPTIONS

- 10** Non-Zero Cross, Instantaneous Turn-On  
Example: **D53TP50D-10**
- DP** 2 Controlled, 1 Linked (A1-A2)  
Example: **D53DP50D**
- P** Internal Overvoltage Protection. Relay Will Self Trigger Between 900-1200 Vpk. Not Suitable For Capacitive Loads.  
Example: **D53TP50DP**
- H** Heat Transfer Pad (Attached)  
Example: **D53TP50DH**

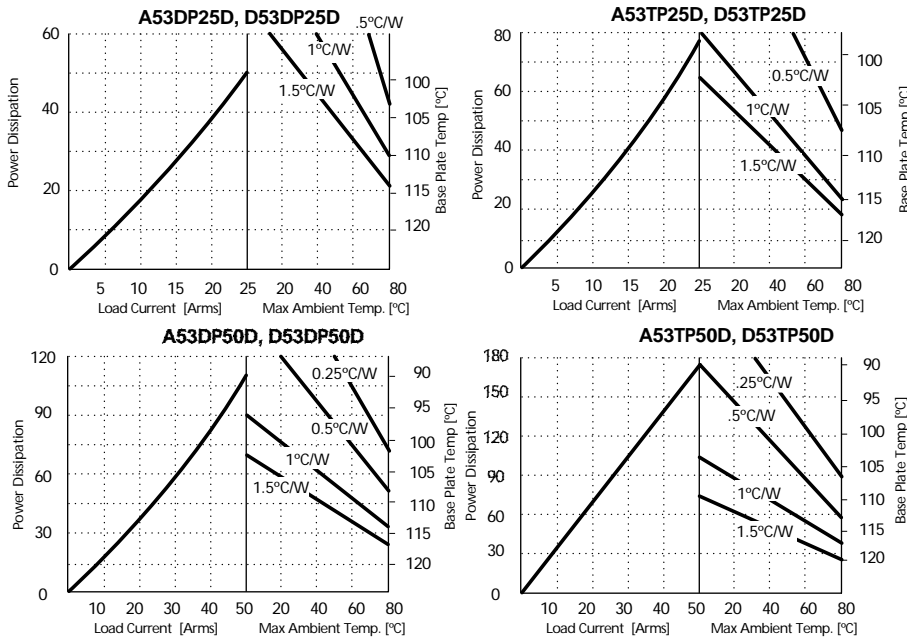


**Crydom Heat Sinks** offer excellent thermal management and are perfectly matched to the load current ratings of Crydom panel mount relays. Request Crydom's Heat Sink specification sheet for all the details.

**Screw Torque Requirements:**  
6-32 Screws - 10 in. lbs.,  
8-32 and 10-32 Screws - 20in. lbs.  
(Screws dry without grease.)

All dimensions are in inches (millimeters)

### CURRENT DERATING CURVES



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### APPROVALS

UL E116950  
CSA LR81689  
VDE 5941 UG



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SERIES53TP  
Rev. 111003  
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