

crydom

Panel Mount
DataSheet

53TP Series IP00

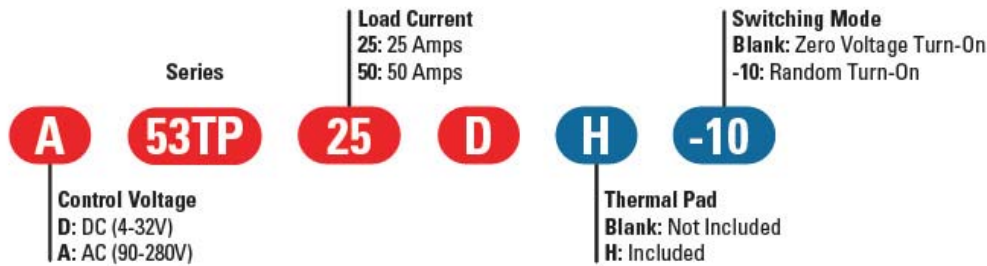


- Three-phase solid-state relay; Ratings 25A, 50A per phase @ 48-530 VAC
- 2 package styles IP00 or IP20 (See IP20 spec sheet for more information)
- SCR output for heavy industrial loads
- Transient protection built in
- AC or DC control
- Zero-crossing (resistive loads) or random-fire (inductive loads) output
- LED input status indicator
- UL Recognized, CE Compliant to EN60950-1

PRODUCT SELECTION

Control Voltage	25A	50A
90-280 VAC	A53TP25D	A53TP50D
4-32 VDC	D53TP25D	D53TP50D

AVAILABLE OPTIONS



- Required for valid part number
- For options only and not required for valid part number

OUTPUT SPECIFICATIONS (1)

Description	25 A	50 A
Operating Voltage (47-63Hz) [Vrms]	48-530	48-530
Transient Overvoltage [Vpk] (2)	1200	1200
Maximum Off-State Leakage Current @ Rated Voltage [mA _{rms}]	10	10
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec] (3)	500	500
Maximum Load Current [Arms] (4)	25	50
Minimum Load Current [Arms]	0.05	0.05
Maximum Surge Current 50-60 Hz (16.6ms) [A _{pk}]	239/250	597/625
Maximum On-State Voltage Drop @ Rated Current [Vpk]	1.6	1.6
Thermal Resistance Junction to Case (R _{jc}) [°C/W]	1.02	0.63
Maximum I ² t for Fusing 50-60 Hz (8.3 msec) [A ² sec]	285/260	1779/1620
Minimum Power Factor (with Maximum Load)	0.5	0.5



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INPUT SPECIFICATIONS (1)

Description	D53	A53
Control Voltage Range	4-32 VDC	90-280 Vrms
Minimum Turn-On Voltage	4.0 VDC	90 Vrms
Minimum Turn-Off Voltage	1.0 VDC	10 Vrms
Minimum Input Current (for on-state)	19 mA @ 4V	2.2 mA @ 120V
Maximum Input Current	25 mA @ 32V	10mA @ 240V
Nominal Input Impedance	Current Limiter	Current Limiter
Maximum Turn-On Time [msec] (5)	1/2 Cycle	50
Maximum Turn-Off Time [msec]	1/2 Cycle	50

GENERAL SPECIFICATIONS

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)	4000 Vrms
Minimum Insulation Resistance (@ 500 V DC)	10 ⁹ Ohm
Maximum Capacitance, Input/Output	8 pF
Ambient Operating Temperature Range	-40 to 80°C
Ambient Storage Temperature Range	-40 to 125 °C
Weight (typical)	10.3 oz (315g)
Encapsulation	Thermally conductive Epoxy
Terminals	Nickel plated Brass
Screws and Saddle clamps	Zinc plated Steel
Input Terminal Screw Torque Range:[in lbs/Nm]	8-10 / 0.9-1.1
Output Terminal Screw Torque Range:[in lbs/Nm]	15-20 / 1.7-2.2

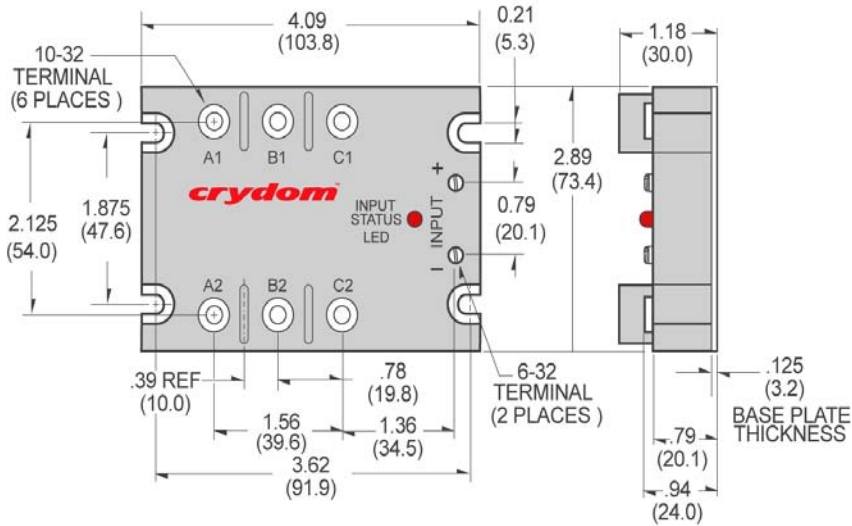
GENERAL NOTES

- 1) All parameters at 25°C unless otherwise specified.
- 2) Relay will self trigger between 900-1200 Vpk.
- 3) Off-State dv/dt test method per EIA/NARM standard RS-443, paragraph 13.11.1
- 4) Heat sinking required, see page 4 for derating curves.
- 5) Turn-on time for Random turn-on versions is 0.02 msec (DC Control Models)

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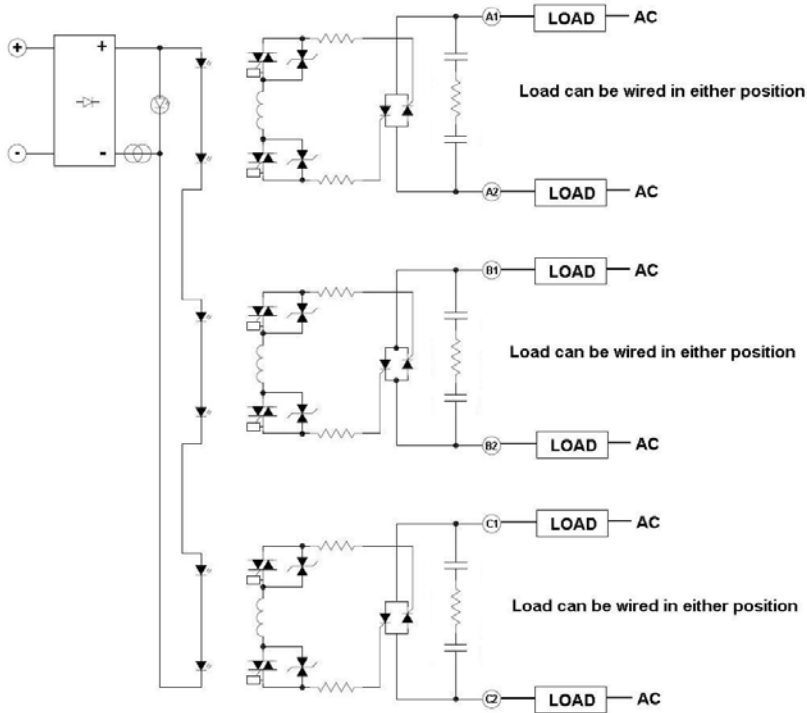
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MECHANICAL SPECIFICATIONS



All dimensions are in inches (millimeters)

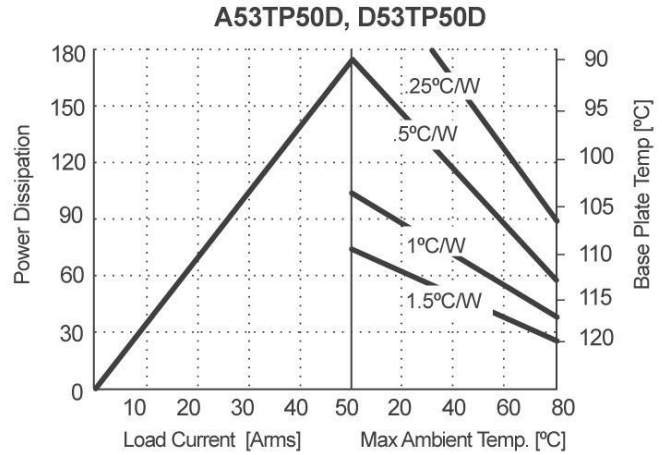
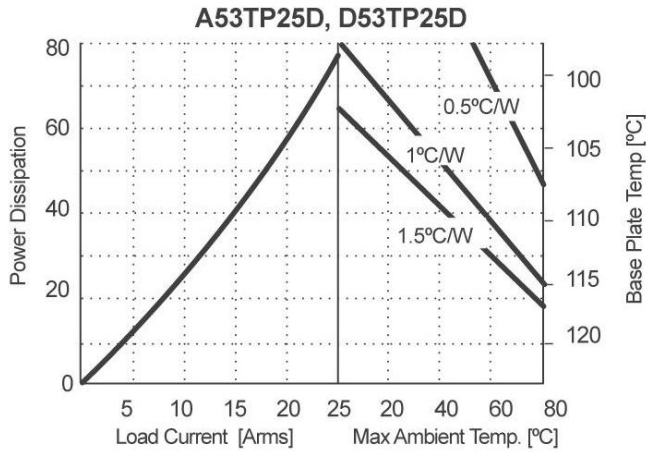
WIRING DIAGRAM





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THERMAL DERATE INFORMATION



AGENCY APPROVALS

Input :

EN61000-4-2, Level 3 ESD

EN61000-4-4, Level 3 Burst

Output :

EN61000-4-2, Level 4 ESD

EN61000-4-4, Level 4 Burst

EN61000-4-5, Level 4 Surge

EN60950 : Meets the requirements of sections 1.5: 1.7: 2.9: 2.10.5.3: 4.2: 4.5: 4.7:



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