

## 53TP Series

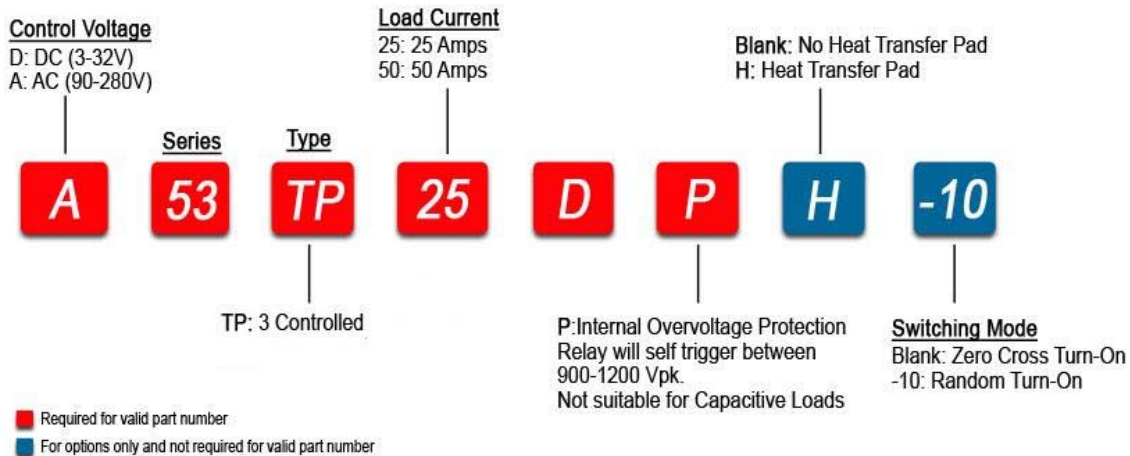


- Three-phase solid-state relay; Ratings 25A, 50A per phase @ 48-530 VAC
- 2 package styles IP00 or IP20 (See IP20 spec sheet for more information)
- SCR output for heavy industrial loads
- AC or DC control
- Zero-crossing (resistive loads) or random-fire (inductive loads) output
- LED input status indicator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

### PRODUCT SELECTION

Control Voltage	25A IP00	50A IP00
3-32 VDC	D53TP25DP	D53TP50DP
90-280 VAC	A53TP25DP	A53TP50DP

### AVAILABLE OPTIONS



### OUTPUT SPECIFICATIONS (1)

Description	25 A	50 A
Operating Voltage (47-63Hz) [Vrms]	48-530	48-530
Transient Overvoltage [Vpk]	1200	1200
Maximum Off-State Leakage Current @ Rated Voltage [mArms]	10	10
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec] (2)	500	500
Maximum Load Current (3) [Arms]	25	50
Minimum Load Current [Arms]	0.05	0.05
Maximum Surge Current (16.6ms) [Apk]	250	625
Maximum On-State Voltage Drop @ Rated Current [Vpk]	1.6	1.6
Thermal Resistance Junction to Case [Rjc] [°C/W]	1.02	0.63
Maximum I <sup>2</sup> t for Fusing (8.3 msec) [A <sup>2</sup> sec]	260	1620
Minimum Power Factor (with Maximum Load)	0.5	0.5

## INPUT SPECIFICATIONS (1)

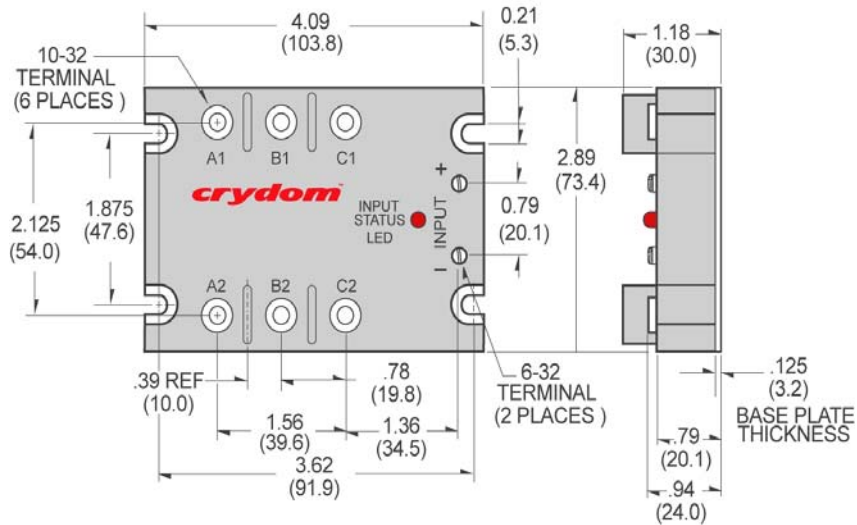
Description	D53TPxxDP	A53TPxxDP
Control Voltage Range	3-32 VDC	90-280 VAC
Minimum Turn-On Voltage	3.0 VDC	90 Vrms
Minimum Turn-Off Voltage	1.0 VDC	10 Vrms
Typical Input Current	10 mA @ 5 VDC	2.2 mA @ 120 Vrms, 4.4 mA @ 240 Vrms
Nominal Input Impedance	450 Ohm	54.8 k Ohm
Maximum Turn-On Time [msec] (4)	1/2 Cycle	10
Maximum Turn-Off Time [msec]	1/2 Cycle	40

## GENERAL SPECIFICATIONS

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)	4000 Vrms
Minimum Insulation Resistance (@ 500 V DC)	10 <sup>9</sup> 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	Screws and Saddle Clamps Furnished, Unmounted
Recommended Terminal Screw Torque Range:	6-32 Screws - 10 in lbs. 8-32 and 10-32 Screws -20 in. lbs. Screws dry without grase)

- 1) All parameters at 25°C unless otherwise specified.
- 2) Off-State dv/dt test method per EIA/NARM standard RS-443, paragraph 13.1.1.1
- 3) Heat sinking required, see page 3 for derating curves.
- 4) Turn-on time for Random turn-on versions is 0.02 msec (DC Control Models)

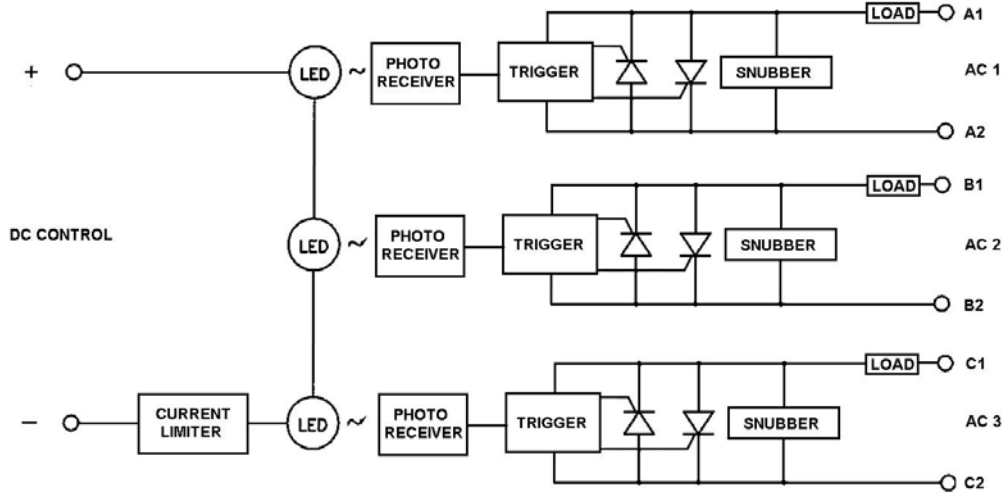
## MECHANICAL SPECIFICATIONS



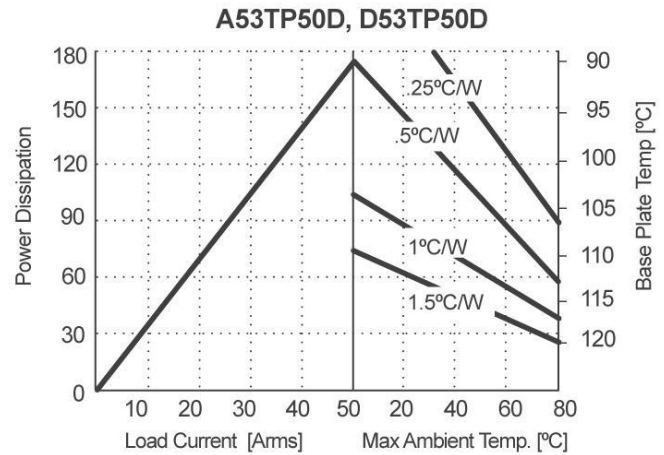
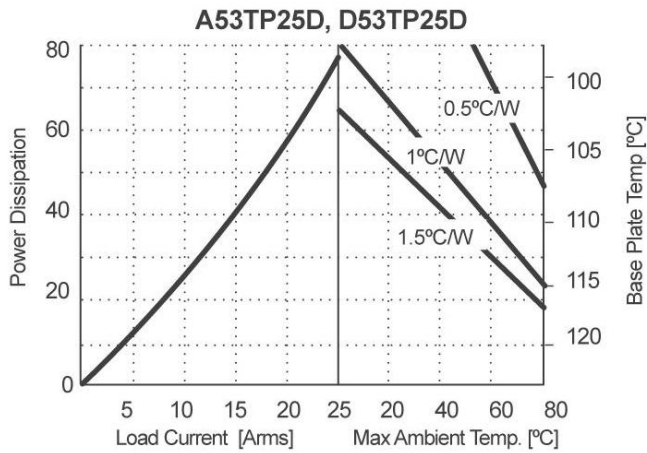
All dimensions are in inches (millimeters)

**WIRING DIAGRAM**

BLOCK AND WIRING DIAGRAM



**THERMAL DERATE INFORMATION**



**AGENCY APPROVALS**

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

