



Control over power

# Series DSD, DLD

Time Delay Relay • 10-50 Amp

- DC Control, AC Output
- External Adjustment
- Industry Standard Package
- Zero Voltage Turn-On
- Panel Mount

These “on-operate” (pull-in) time-delay solid state relays are housed in a single industry standard package. AC output is controlled by a DC input and has an externally adjustable time delay. Choices include models with two time-delay ranges.

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

MODEL NUMBERS	DSD2410	DSD2425	DSD2450	DLD2410	DLD2425	DLD2450
<b>OUTPUT SPECIFICATIONS<sup>①</sup></b>						
Operating Voltage Range (47-63 Hz) [Vrms]	48-280	48-280	48-280	48-280	48-280	48-280
Load Current Range <sup>③</sup> [Arms]	.04-10	.04-25	.04-50	.04-10	.04-25	.04-50
Transient Overvoltage [Vpk]	600	600	600	600	600	600
Max. Surge Current, (16.6ms) [Apk]	120	250	625	120	250	625
Max. On-State Voltage Drop @ Rated Current [Vpk]	1.6	1.6	1.6	1.6	1.6	1.6
Thermal Resistance Junction to Case [R <sub>θJC</sub> ]	1.48	1.02	0.63	1.48	1.02	0.63
Maximum I <sup>2</sup> t for Fusing, (8.3 msec.) [A <sup>2</sup> sec]	60	260	1620	60	260	1620
Max. Off-State Leakage Current @ Rated Voltage [mArms]	10	10	10	10	10	10
Min. Off-State dv/dt @ Max. Rated Voltage [V/μsec] <sup>②</sup>	500	500	500	500	500	500
Max. Turn-On Time <sup>④</sup>	Adjustable, See Table					
Max. Turn-Off Time	1/2 cycle	1/2 cycle	1/2 cycle	1/2 cycle	1/2 cycle	1/2 cycle
Max. Reset Time [μsec] <sup>⑤</sup>	100	100	100	100	100	100
Power Factor (Min.) with Max. Load	0.5	0.5	0.5	0.5	0.5	0.5

## INPUT SPECIFICATIONS <sup>①</sup> DC CONTROL

Control Voltage Range	3.5-15Vdc
Max. Turn-On Voltage	3.5 Vdc
Min. Turn-Off Voltage	1.0 Vdc
Min. Input Impedance	1500 Ohms
Typical Input Current	3.4mA @ 5 Vdc, 11.4mA @ 15Vdc

## 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 Timing Resistor may be as high as 10M Ohm with performance dependent on resistor quality.
- ⑤ Before and after time-out.

## TYPICAL TURN-ON DELAY <sup>①</sup>

RESISTOR	TIME (DSD)	TIME (DLD)
0 (Short)	0.10 sec	1.6 sec
10K Ω	0.19 sec	3.1 sec
100KΩ	0.94 sec	15 sec
470KΩ	4.0 sec	64 sec
1.0MΩ <sup>④</sup>	8.3 sec	133 sec

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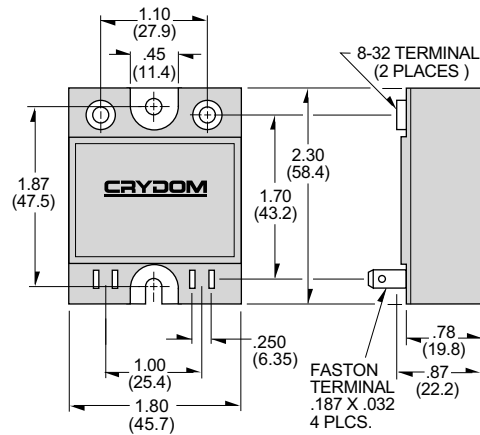
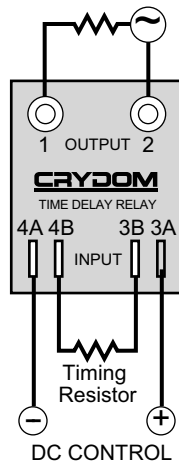
## GENERAL SPECIFICATIONS

Dielectric Strength, Input section/output/base	4000 Vrms
Insulation Resistance @ 500Vdc	10 <sup>10</sup>
Ambient Operating Temperature Range	-30 to 80°C
Ambient Storage Temperature Range	-40 to 125°C

## MECHANICAL SPECIFICATIONS

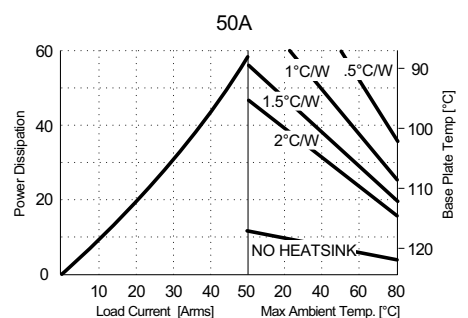
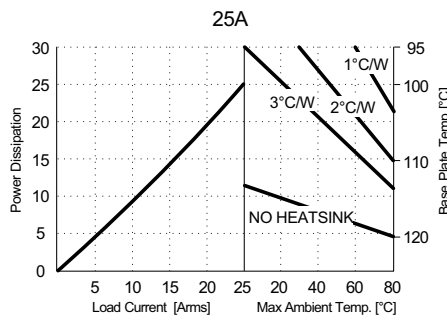
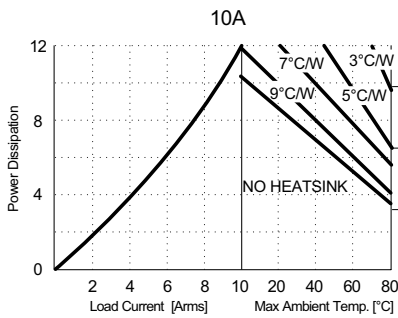
Weight: (typical)	3.0 oz. (43g)
Encapsulation:	Thermally Conductive Epoxy
Terminals:	Screws and Saddle Clamps Furnished, Unmounted

## WIRING DIAGRAM



All dimensions are in inches (millimeters)

## CURRENT DERATING CURVES



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APPROVALS  
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FastFax Document No. 201  
DSD,DLD.  
Rev.021302  
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