

DSD / DLD Series

- Time-delay solid-state relays
- Ratings from 10 A to 50 A @ 240 VAC
- External time adjustment
- DC control
- Zero-crossing (resistive loads) output
- Ideal for compressor applications
- CE Compliant to EN60950-1

PRODUCT SELECTION

Control Voltage	10 A	25 A	50 A
3.5-15 VDC Control	DSD2410	DSD2425	DSD2425
3.5-15 VDC Control	DLD2410	DLD2425	DLD2450

OUTPUT SPECIFICATIONS (voltage) (1)

Description	
Operating Voltage Range (47-63Hz) [Vrms]	48-280
Transient Overvoltage [Vpk]	600
Maximum Off-State Leakage Current @ Rated Voltage [mArms]	10
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/µsec] (2)	500

OUTPUT SPECIFICATIONS (current) (1)

Description	10 A	25 A	50 A
Maximum Load Current (3) [Arms]	10	25	50
Minimum Load Current (3) [Arms]	0.04	0.04	0.04
Maximum Surge Current (16.6ms) [Apk]	120	250	625
Maximum On-State Voltage Drop @ Rated Current [Vpk]	1.6	1.6	1.6
Thermal Resistance Junction to Case (Rjc) [°C/W]	1.48	1.02	0.63
Maximum I^2t for Fusing (8.3 msec) [A^2sec]	60	260	1620
Minimum Power Factor (with Maximum Load)	0.5	0.5	0.5

INPUT SPECIFICATIONS (1)

Description	DC Control
Control Voltage Range	3.5-15 VDC
Maximum Turn-On Voltage	3.5 VDC
Maximum Turn-Off Voltage	1.0 VDC
Typical Input Current	3.4 mA @ 5 Vdc, 11.4 mA @ 15 Vdc
Nominal Input Impedance	1500 Ohm
Maximum Turn-On Time [msec] (4)	Adlustable, See Table
Maximum Turn-Off Time [msec]	1/2 Cycle
Maximum Reset Time [µsec] (5)	100

TYPICAL TURN-ON DELAY

Resistor	Time DSD	Time DLD
0 (Short)	.10 sec	1.6 sec
10K	.19 sec	3.1 sec
100K	.94 sec	15 sec
470K	4.0 sec	64 sec
1.0M (4)	8.3 sec	133 sec

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GENERAL SPECIFICATIONS (1)

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)	4000 Vrms
Minimum Insulation Resistance (@ 500 VDC)	10^{10} Ohm
Ambient Operating Temperature Range	-30 to 80°C
Ambient StorageTemperature Range	-40 to 125°C
Weight (typical)	3.0 oz. (43g)
Encapsulation	Themally Conductive Epoxy
Terminals	Screws and saddle Clamps Furnished, Unmounted

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, see derating curves.
(4) Timing Resistor may be as high as 10M Ohm with performance dependent on resistor quality
(5) Before and after time-out.

WIRING DIAGRAM



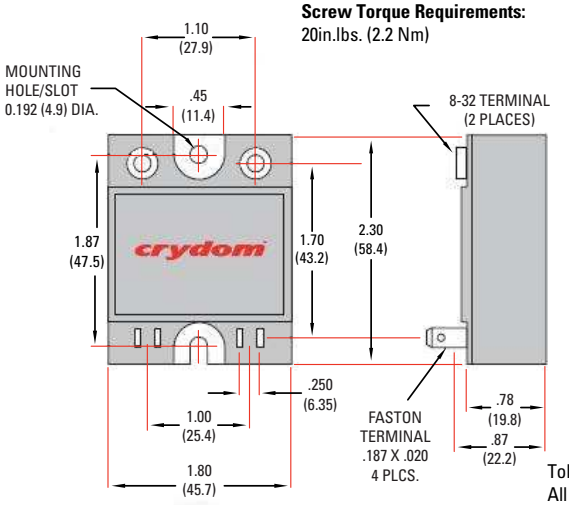
Notes:

1. Timing Range is adjusted by External Resistor as shown in wiring diagram.
2. Terminals 1 and 2 can be used interchangeably.

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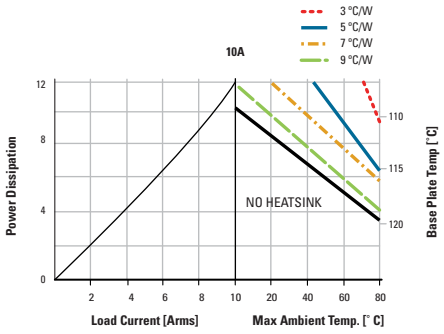
MECHANICAL SPECIFICATIONS

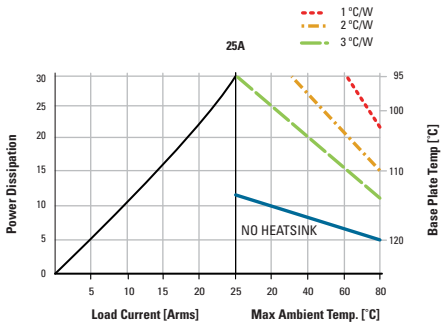
Screw Torque Requirements:
20in.lbs. (2.2 Nm)

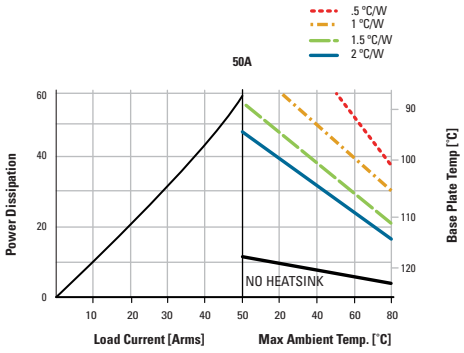


Tolerances: ±0.02 in / 0.5 mm
All dimensions are in: inches [millimeters]

THERMAL DERATE INFORMATION







AGENCY APPROVALS

Agency Approvals

EN60950 : Meets the requirements of sections1.5: 1,7: 2.9: 2.10.5.3: 4.2: 4.5: 4.7:

UL E116949

CE RoHS

Rev 042422
ECN# 499403

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⚠ DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / 危险

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH.	RIESGO DE DESCARGA ELECTRICA O EXPLOSION.	RISQUE DE DESCHARGE ELECTRIQUE OU EXPLOSION	GEFAHR EINES ELEKTRISCHE N SCHLAGES ODER EINER EXPLOSION.	RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE.	存在电击、爆炸或电弧闪烁危险
• Disconnect all power before installing or working with this equipment. • Verify all connections and replace all covers before turning on power. **Failure to follow these instructions will result in death or serious injury.**	• Desconectar todos los suministros de energia a este equipo antes de trabajar con este equipo. • Verificar todas las conexiones y colocar todas las tapas antes de energizer el equipo. **El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.**	• Eteindre toutes les sources d'énergie de cet appareil avant de travailler dessus de cet appareil • Vérifier tous connections, et remettre tous couverts en olace avant de mettre sous **De non-suivi de ces instructions provoquera la mort ou des lésions sérieuses sérieuses.**	• Stellen Sie jeglichen Strom ab, der dieses Gerät versorgt, bevor Sie an dem Gerät Arbeiten durchführen • Vor dem Drehen auf Energie alle Anschlüsse überprüfen und alle Abdeckungen ersetzen. **Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.**	• Spenga tutta l'alimentazione che fornisce questa apparecchiatura prima di lavorare a questa apparecchiatura • Verificare tutti i collegamenti e sostituire tutte le coperture prima dell'accensione **L'omissione di queste istruzioni provocherà la morte o lesioni serie**	• 在操作此设备之前请先关闭电源。 **若不遵守这些说明，可能会导致严重的人身伤害甚至死亡。**

⚠

RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE	RISQUE DE DOMMAGE MATERIEL ET DE SURCHAUFFE DU BOITIER	GEFAHR VON MATERIALSCHÄDEN UND GEHÄUSEERHITZUNG
• The product's side panels may be hot, allow the product to cool before touching. • Follow proper mounting instructions including torque values. • Do not allow liquids or foreign objects to enter this product. **Failure to follow these instructions can result in serious injury, or equipment damage.**	• Les panneaux latéraux du produit peuvent être chauds. Laisser le produit refroidir avant de le toucher. • Respecter les consignes de montage, et notamment les couples de serrage. • Ne pas laisser pénétrer de liquide ni de corps étrangers à l'intérieur du produit. **Le non-respect de cette directive peut entraîner, des lésions corporelles graves ou des dommages matériels.**	• Die Seitenwände können heiß sein. Lassen Sie das Produkt abkühlen, bevor Sie es berühren. • Beachten Sie die Montageanweisungen, • Führen Sie keine Flüssigkeiten oder Fremdkörper in das Produkt ein. **Die Nichtbeachtung dieser Anweisung kann Körperverletzung oder Materialschäden zur Folge haben.**
RIESGO DE DAÑOS MATERIALES Y DE SOBRECALENTAMIENTO DE LA UNIDAD	**RISCHIO DI DANNI MATERIALI E D'INVOLUCRO CALDO**	**材料损坏和高温外壳的危险性**
• Los paneles laterales del producto pueden estar calientes. Esperar que el producto se enfríe antes de tocarlo. • Respetar las instrucciones de montaje, y en particular los pares de apretado. • No dejar que penetren líquidos o cuerpos extraños en el producto. **Si no se respetan estas precauciones pueden producirse graves lesiones, daños materiales.**	• I pannelli laterali dell'apparecchio possono scottare; lasciar quindi raffreddare il prodotto prima di toccarlo. • Seguire le istruzioni di montaggio corrette. • Non far entrare liquidi o oggetti estranei in questo apparecchio. **La mancata osservanza di questa precauzione può causare gravi rischi per l'incolumità personale o danni alle apparecchiature.**	• 产品的一侧面板可能很热，在其冷却前请不要触碰。 • 遵照正确的安装说明，包括扭矩值。 • 请勿让液体及其他异物进入本产品。 **如不能正确执行这些操作说明，极有可能造成严重人体伤害或者设备的损坏。**

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ANNEX - ENVIROMENTAL INFORMATION

The environmental information disclosed in this annex including the EIP Pollution logo are in compliance with People's Republic of China Electronic Industry Standard SJ/T11364 – 2006, Marking for Control of Pollution Caused by Electronic Information Products.

Part Name	Toxic or hazardous Substance and Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr (VI))	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
Semiconductor die	X	O	O	O	O	O
Solder	X	O	O	O	O	O

附件 - 环保信息

此附件所标示的包括电子信息产品污染图标的环保信息符合中华人民共和国电子行业标准 SJ/T11364 - 2006, 电子信息产品污染控制标识要求。

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr (VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
半导体芯片	X	O	O	O	O	O
焊接点	X	O	O	O	O	O



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