

## DRA4D Series

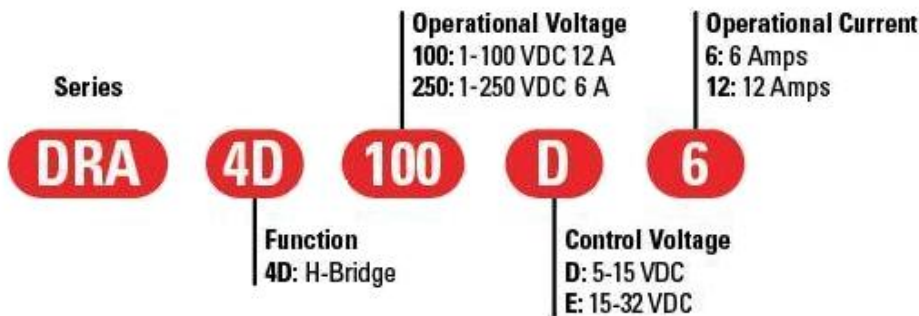


- DC Motor Reversing Contactor
- Ratings of 6 & 12 Amps
- Load voltage ratings of 1-100VDC and 1-250VDC
- Fits standard 35mm DIN-RAIL
- LED input status indicator. Green (Forward), Yellow (Reverse)
- DC control
- cUL Recognized, IEC Rated, CE & RoHS Compliant
- Horsepower Rated

### PRODUCT SELECTION

Description	12A	6A
5-15 VDC Control	DRA4D100D12	DRA4D250D6
15-32 VDC Control	DRA4D100E12	DRA4D250E6

### AVAILABLE OPTIONS



### OUTPUT SPECIFICATIONS (1)

Description	DRA4D100x12	DRA4D250x6
Operating Voltage [VDC]	1-100 (3)	1-250 (2)
Maximum Load Current [Adc] (4)	12	6 (5)
Minimum Load Current [mAdc]	1.0	1.0
Maximum Off-State Leakage Current @ Rated Voltage [uA]	1.0	20
Maximum On-State Voltage Drop @ Rated Current [Vpk]	0.1	0.1
Maximum Surge Current (10ms) [Apk]	110	91
On-State resistance at rated current ( $R_{DSOn}$ ) [Ohms]	0.011	0.45
Thermal Resistance Junction to Case ( $R_{jc}$ ) [°C/W]	0.48	0.45
Min/Max stranded/solid wire [AWG]	24/10	24/10
Min/Max stranded/solid wire [IEC mm²]	0.5-4.0	0.5-4.0
HP Rating per UL508 @ 40°C	1/4, 4 FLA @ 90 VDC	1/4, 2 FLA @ 180 VDC
IEC 60947-4-1 Ratings DC-1	12 FLA @ 90 VDC, 1KW	6.0 FLA @ 180 VDC, 1KW
IEC 60947-4-1 Ratings DC-3	4.0 FLA @ 90 VDC, 360W	2.0 FLA @ 180 VDC, 360W

## INPUT SPECIFICATIONS (1)

Description	DRA4DxxxD	DRA4DxxxE
Control Voltage Range	5.0-15 VDC	15-32 VDC
Minimum Turn-On Voltage	5.0 VDC	15 VDC
Minimum Turn-Off Voltage	2.5 VDC	2.9 VDC
Minimum Input Current [mA]	16	20.5
Maximum Input Current [mA]	24.5	22
Nominal Input Impedance	See Note 6	See Note 6
Maximum Turn-On Time [msec]	22	22
Maximum Turn-Off Time [msec]	0.264	0.33
Min/Max stranded/solid wire	24/12	24/12
Min/Max stranded/solid wire [IEC mm²]	0.5-2.5	0.5-2.5

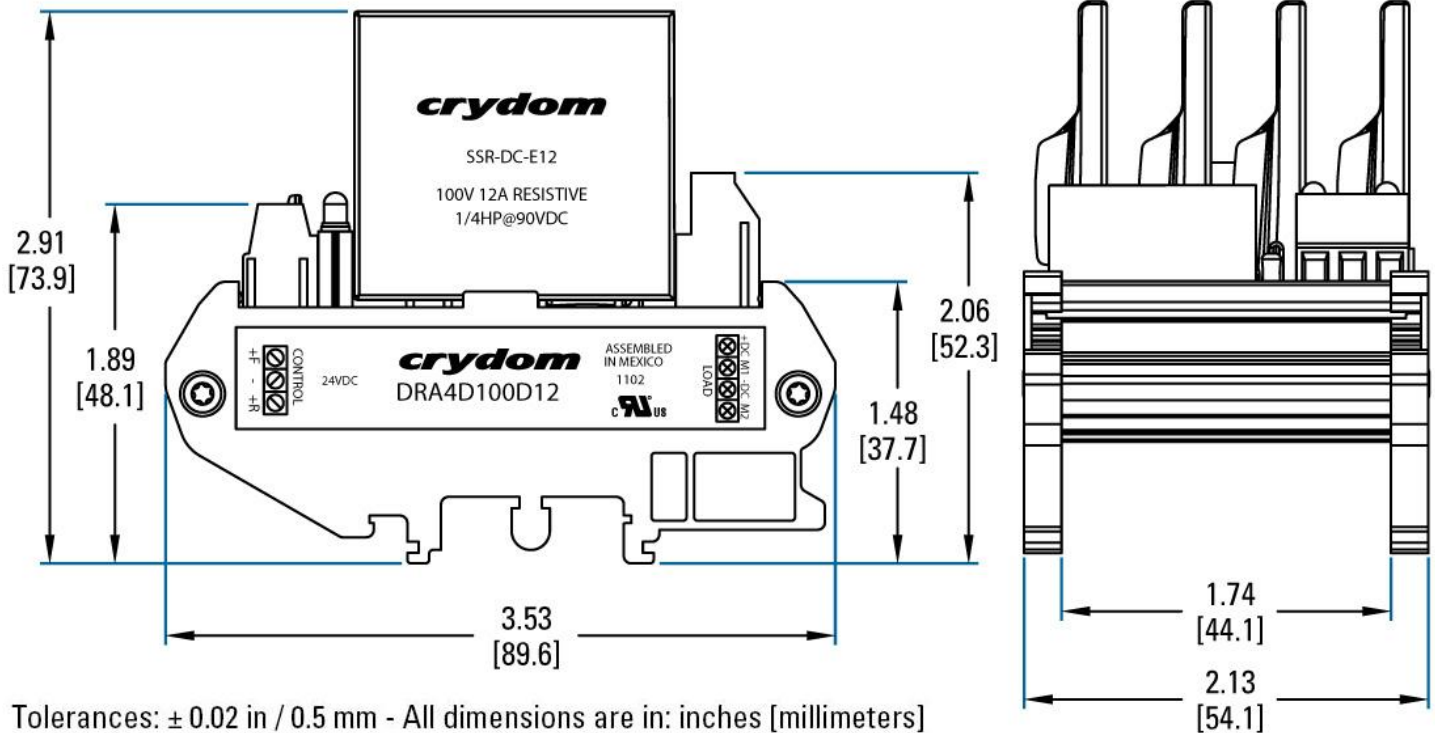
## GENERAL SPECIFICATIONS

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)	2500Vrms
Minimum Insulation Resistance (@ 500 V DC)	10 <sup>9</sup> Ohms
Maximum Capacitance, Input/Output	35 pF @ 1KHz
Ambient Operating Temperature Range	-30°C to 60°C
Ambient Storage Temperature Range	-30°C to 85°C
Recommended Terminal Screw Torque:	4.0 in lb (0.45 Nm)

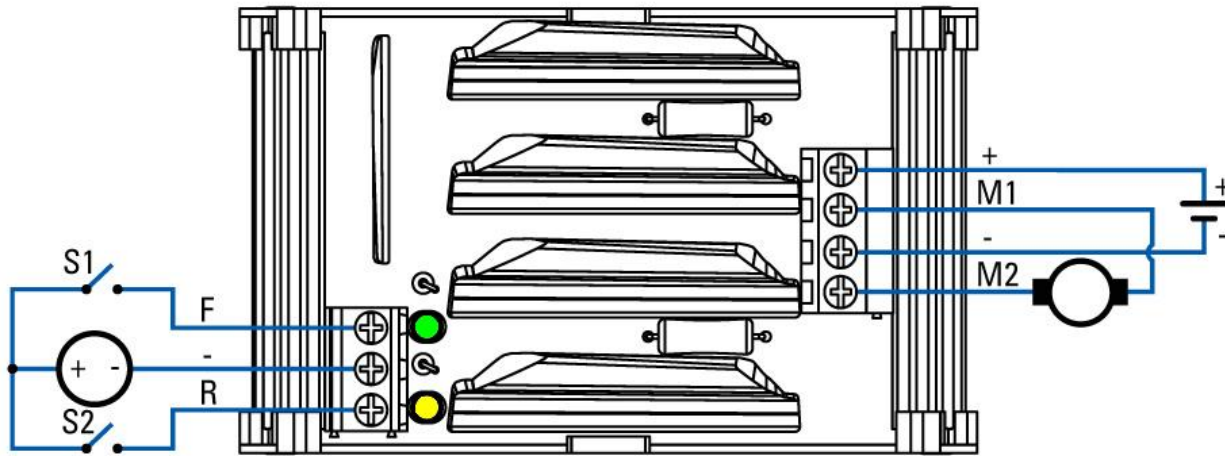
## GENERAL NOTES

- 1) All parameters at 25°C unless otherwise specified.
- 2) UL maximum rated voltage is 180VDC
- 3) UL maximum rated voltage is 90VDC.
- 4) At 40°C and mounted in vertical position
- 5) At 40°C single unit, multiple units need spacing of 45mm.  
No spacing maximum current is 5.5A
- 6) Input circuitry incorporates active current limiter.

## MECHANICAL SPECIFICATIONS

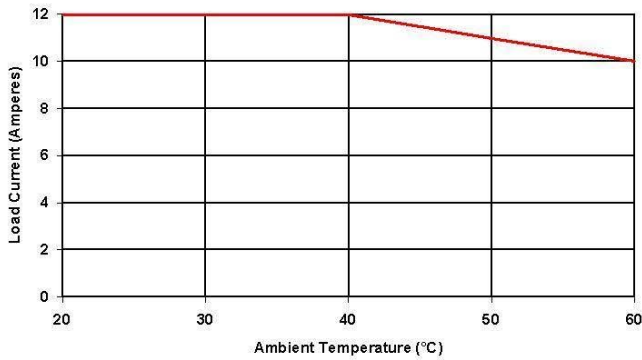


## WIRING DIAGRAM



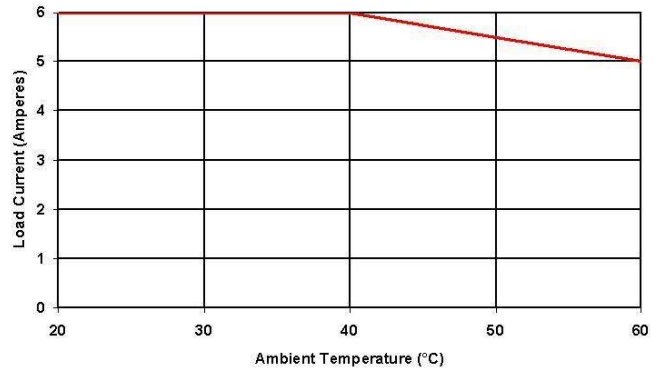
## THERMAL DERATE INFORMATION

DRA4D100x12



Rating based on single or multiple relays and no space between units.

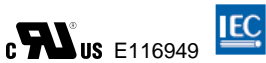
DRA4D250D6




Rating based on single relay or multiple relays with 45mm gap between units. For no spacing between relays, maximum current @ 40°C is 5.5A


## AGENCY APPROVALS

Designed in accordance with the requirements of IEC 62314  
 IEC 61000-4-2 : Electrostatic Discharge – Level 3  
 IEC 61000-4-4 : Electrically Fast Transients – Level 2 (Criteria A)  
 IEC 61000-4-5 : Electrical Surges - Level 2 (Criteria A)



Rev 111011

 <b>DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / PERIGO</b>					
<p><b>HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH.</b></p> <ul style="list-style-type: none"> <li>• Disconnect all power before installing or working with this equipment.</li> <li>• Verify all connections and replace all covers before turning on power.</li> </ul> <p><b>Failure to follow these instructions will result in death or serious injury.</b></p>	<p><b>RIESGO DE DESCARGA ELECTRICA O EXPLOSION.</b></p> <ul style="list-style-type: none"> <li>• Desconectar todos los suministros de energia a este equipo antes de trabajar con este equipo.</li> <li>• Verificar todas las conexiones y colocar todas las tapas antes de energizar el equipo.</li> </ul> <p><b>El incumplimiento de estas instrucciones puede provocar la muerte o lesiones serias.</b></p>	<p><b>RISQUE DE DESCARGE ELECTRIQUE OU EXPLOSION</b></p> <ul style="list-style-type: none"> <li>• Eteindre toutes les sources d'énergie de cet appareil avant de travailler dessus de cet appareil</li> <li>• Vérifier tous connections, et remettre tous couverts en place avant de mettre sous</li> </ul> <p><b>De non-suivi de ces instructions provoquera la mort ou des lésions sérieuses.</b></p>	<p><b>GEFAHR EINES ELEKTRISCHEN SCHLAGES ODER EINER EXPLOSION.</b></p> <ul style="list-style-type: none"> <li>• Stellen Sie jeglichen Strom ab, der dieses Gerät versorgt, bevor Sie an dem Gerät Arbeiten durchführen</li> <li>• Vor der Inbetriebnahme alle Anschlüsse überprüfen und alle Gehäuseteile montieren.</li> </ul> <p><b>Unterlassung dieser Anweisungen können zum Tode oder zu schweren Verletzungen führen.</b></p>	<p><b>RISCHIO DI SCOSSA ELETTRICA O DELL'ESPLOSIONE.</b></p> <ul style="list-style-type: none"> <li>• Spenga tutta l'alimentazione e che fornisce questa apparecchiatura prima del lavorare a questa apparecchiatura</li> <li>• Verificare tutti i collegamenti e sostituire tutte le coperture prima della rotazione sull'alimentazione</li> </ul> <p><b>L'omissione di seguire queste istruzioni provocherà la morte o di lesioni serie</b></p>	<p><b>RISCO DE DESCARGA ELÉTRICA OU EXPLOÇÃO</b></p> <ul style="list-style-type: none"> <li>• Desconectar o equipamento de toda a energia antes de instalar ou trabalhar com este equipamento</li> <li>• Verificar todas as conexões e recolocar todas as tampas antes de religar o equipamento</li> </ul> <p><b>O não cumprimento destas instruções pode levar à morte ou lesões sérias.</b></p>

 <b>WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / AVISO</b>		
<p><b>RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE</b></p> <ul style="list-style-type: none"> <li>• The product's side panels may be hot, allow the product to cool before touching.</li> <li>• Follow proper mounting instructions including torque values.</li> <li>• Do not allow liquids or foreign objects to enter this product.</li> </ul> <p><b>Failure to follow these instructions can result in serious injury, or equipment damage.</b></p>	<p><b>RISQUE DE DOMMAGE MATERIEL ET DE SURCHAUFFE DU BOITIER</b></p> <ul style="list-style-type: none"> <li>• Les panneaux latéraux du produit peuvent être chauds. Laissez le produit refroidir avant de le toucher.</li> <li>• Respecter les consignes de montage, et notamment les couples de serrage.</li> <li>• Ne pas laisser pénétrer de liquide ni de corps étrangers à l'intérieur du produit.</li> </ul> <p><b>Le non-respect de cette directive peut entraîner, des lésions corporelles graves ou des dommages matériels.</b></p>	<p><b>GEFAHR VON MATERIALSCHÄDEN UND GEHÄUSEERHITZUNG</b></p> <ul style="list-style-type: none"> <li>• Die Seitenwände können heiß sein. Lassen Sie das Produkt abkühlen, bevor Sie es berühren.</li> <li>• Beachten Sie die Montageanweisungen,</li> <li>• Führen Sie keine Flüssigkeiten oder Fremdkörper in das Produkt ein.</li> </ul> <p><b>Die Nichtbeachtung dieser Anweisung kann Körperverletzung oder Materialschäden zur Folge haben.</b></p>
<p><b>RIESGO DE DAÑOS MATERIALES Y DE SOBRECIENTAMIENTO DE LA UNIDAD</b></p> <ul style="list-style-type: none"> <li>• Los paneles laterales del producto pueden estar calientes. Esperar que el producto se enfríe antes de tocarlo.</li> <li>• Respetar las instrucciones de montaje, y en particular los pares de apretado.</li> <li>• No dejar que penetren líquidos o cuerpos extraños en el producto.</li> </ul> <p><b>Si no se respetan estas precauciones pueden producirse graves lesiones, daños materiales.</b></p>	<p><b>RISCHIO DI DANNI MATERIALI E D'INVOLUCRO CALDO</b></p> <ul style="list-style-type: none"> <li>• I pannelli laterali dell'apparecchio possono scottare; lasciar quindi raffreddare il prodotto prima di toccarlo.</li> <li>• Seguire le istruzioni di montaggio corrette.</li> <li>• Non far entrare liquidi o oggetti estranei in questo apparecchio.</li> </ul> <p><b>La mancata osservanza di questa precauzione può causare gravi rischi per l'incolumità personale o danni alle apparecchiature.</b></p>	<p><b>RISCO DE DANO MATERIAL E DE AQUECIMENTO</b></p> <ul style="list-style-type: none"> <li>• Os painéis laterais do produto podem estar quentes; dê tempo ao produto para arrefecer antes de lhe tocar.</li> <li>• Siga devidamente as instruções de montagem.</li> <li>• Não permita a entrada de líquidos e de objectos estranhos no produto.</li> </ul> <p><b>A não observância destas precauções pode provocar a morte, ferimentos graves ou danos materiais.</b></p>