



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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**DRA3R Series**



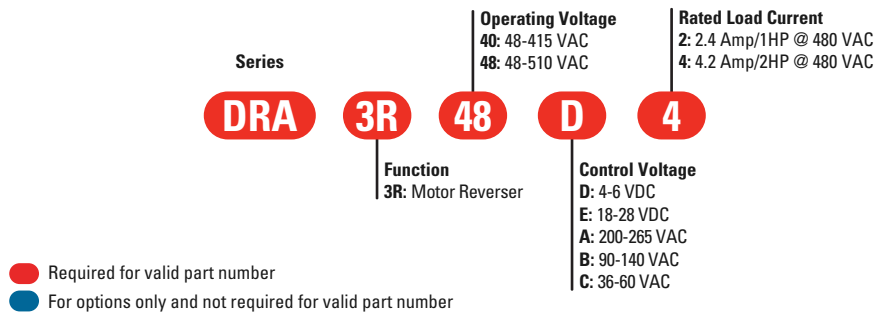
- Three Phase Motor Reversing Contactor
- Ratings of 2.4 & 4.2 Amps
- Load voltage range of 48-510 VAC, 3-Phase
- Fits standard 35mm DIN-RAIL
- LED input status indicator, Forward (green), Reverse (yellow)
- AC or DC control
- cUL Recognized, IEC Rated, CE, CCC & RoHS Compliant, Horsepower Rated
- Built in Overvoltage Protection



**PRODUCT SELECTION**

Control Voltage	2.4A	4.2A
4-6 VDC Control	DRA3R48D2, DRA3R40D2	DRA3R48D4, DRA3R40D4
18-28 VDC Control	DRA3R48E2, DRA3R40E2	DRA3R48E4, DRA3R40E4
36-60 VAC Control	DRA3R48C2, DRA3R40C2	DRA3R48C4, DRA3R40C4
90-140 VAC Control	DRA3R48B2, DRA3R40B2	DRA3R48B4, DRA3R40B4
200-265 VAC Control	DRA3R48A2, DRA3R40A2	DRA3R48A4, DRA3R40A4

**AVAILABLE OPTIONS**



**OUTPUT SPECIFICATIONS AC Output <sup>(1)</sup>**

Description	DRA3R40xx	DRA3R48xx
Operating Voltage (47-63Hz) [Vrms]	48-415	48-510
Rated Operating Voltage [Vrms] (3, 4)	400	480
Transient Overvoltage [Vpk]	1200	1600
Maximum Off-State Leakage Current @ Rated Voltage [mArms]	3.0	3.5
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec]	500	500
Maximum On-State Voltage Drop @ Rated Current [Vrms]	1.15 per channel	1.15 per channel

**OUTPUT SPECIFICATIONS AC Output <sup>(1)</sup>**

Description	DRA3R4xx2	DRA3R4xx4
Minimum Load Current [Arms]	0.15	0.15
Maximum Resistive Load Current (UL508, AC51) [Arms] (2)	2.4/2.4	4.2/3.5
Maximum Motor Load Current (UL508, AC53) [Arms] (2)	2.1/2.1	3.4/3.4
Maximum Surge Current (50/60 Hz, 1 cycle) [Apk]	285/300	285/300
Maximum I <sup>2</sup> t for Fusing (50/60 HZ, 1/2 cycle) [A <sup>2</sup> sec]	410/375	410/375
HP/IEC 60947 Rating @ 240VAC, 40°C [HP/KW]	1/2 / 0.37	1.0 / 0.75
HP/IEC 60947 Rating @ 400VAC, 40°C [HP/KW]	1.0 / 0.75	1.5 / 1.1
HP/IEC 60947 Rating @ 480VAC, 40°C [HP/KW]	1.0 / 0.75	2.0 / 1.5
Minimum Power Factor (with Maximum Load)	0.5	0.5
Min/Max stranded/solid wire [AWG]	24/10	24/10
Min/Max stranded/solid wire [AWG]	24/10	24/10
Load Terminal Screw Torque Range:	12.0 in lb (1.36 Nm)	12.0 in lb (1.36 Nm)

**INPUT SPECIFICATIONS <sup>(1)</sup>**

Description	DRA3R4xDx	DRA3R4xEx	DRA3R4xCx	DRA3R4xBx	DRA3R4xAx
Control Voltage Range	4-6 VDC	18-28 VDC	36-60 VAC	90-140 VAC	200-265 VAC
Rated Input Control Voltage	5 VDC	24 VDC	48 VAC	120 VAC	230 VAC
Minimum Turn-On Voltage	4 VDC	18 VDC	36 VAC	90 VAC	200 VAC
Minimum Turn-Off Voltage	2 VDC	4 VDC	10 VAC	20 VAC	60 VAC
Minimum Input Current [mA]	15	15	6	5	5.5
Maximum Input Current [mA]	30	20	10	8	7.7
Nominal Input Impedance [ohms]	100	1.2 K	4.8 K	16.4 K	36 K
Maximum Turn-On Time [msec]	120	120	130	130	130
Maximum Turn-Off Time [msec]	10	10	20	20	20
Min/Max stranded/solid wire [AWG]	24/12	24/12	24/12	24/12	24/12
Min/Max stranded/solid wire [IEC mm <sup>2</sup> ]	0.5-2.5	0.5-2.5	0.5-2.5	0.5-2.5	0.5-2.5
Control Terminal Screw Torque Range:	4.3 in lb (0.485 Nm)	4.3 in lb (0.485 Nm)	4.3 in lb (0.485 Nm)	4.3 in lb (0.485 Nm)	4.3 in lb (0.485 Nm)

**GENERAL SPECIFICATIONS <sup>(1)</sup>**

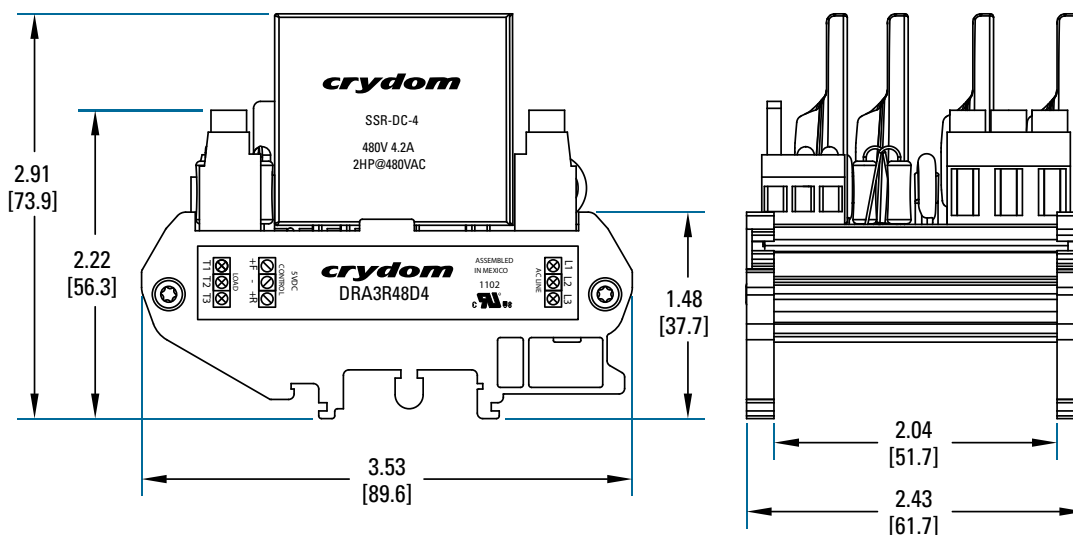
Description	Parameters
Maximum Capacitance, Input/Output	20 pF
Dielectric Strength, Input/Output (50/60Hz)	4000Vrms
Minimum Insulation Resistance (@ 500 V DC)	10 <sup>9</sup> Ohms
Maximum Capacitance, Input/Output	20 pF
Ambient Operating Temperature Range	-20°C to 60°C
Ambient Storage Temperature Range	-30°C to 85°C
LED Status Indicator for Control Input	Forward: Green / Reverse: Yellow
Weight (typical)	6.5 oz. (185g)
Housing Material (bottom cover)	PVC Class V0 (UL94)
Housing Material (end pieces)	Polyamide Class V0 (UL94)

**GENERAL NOTES**

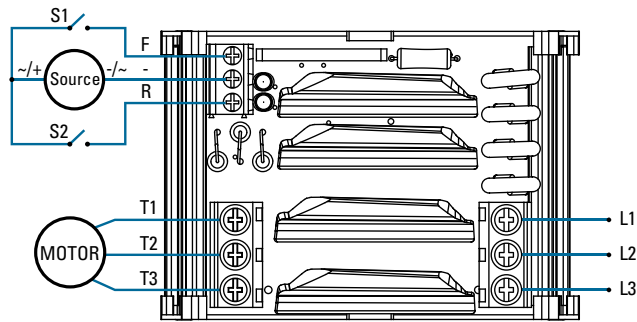
- (1) All parameters at 25°C unless otherwise specified.
- (2) Mounted in the Vertical position (Din Rail in horizontal position).
- (3) Internal overvoltage protection will activate between 600-750Vpk for DRA3R40xx
- (4) Internal overvoltage protection will activate between 750-900Vpk for DRA3R48xx

**MECHANICAL SPECIFICATIONS**

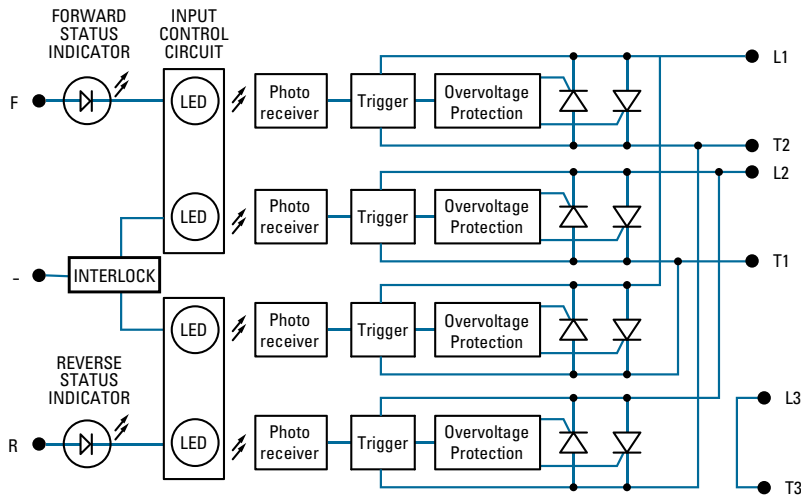
Tolerances: ± 0.02 in / 0.5 mm - All dimensions are in: inches [millimeters]



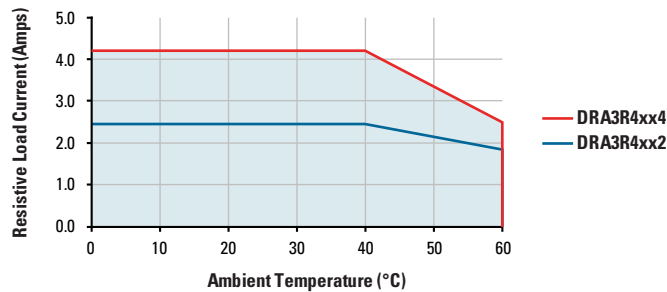
**WIRING DIAGRAM**



**BLOCK DIAGRAM**



**THERMAL DERATE INFORMATION**



**AGENCY APPROVALS**

**Agency Approvals**






Rev. 071614

**⚠ DANGER / PELIGRO / DANGER /GEFAHR / PERICOLO / 危險**

<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'energie de cet appareil avant de travailler dessus de cet appareil</li> <li>• Vérifier tous connections, et remettre tous couverts en olace avant de mettre sous</li> </ul> <p><b>De non-suivi de ces instructions provoquera la mort ou des lésions sérieuses sérieuses.</b></p>	<p><b>GEFAHR EINES ELEKTRISCHE N 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 dem Drehen auf Energie alle Anschlüsse überprüfen und alle Abdeckungen ersetzen.</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 che fornisce questa apparecchiatura prima di lavorare a questa apparecchiatura</li> <li>• Verificare tutti i collegamenti e sostituire tutte le coperture prima dell'accensione</li> </ul> <p><b>L'omissione di queste istruzioni provocherà la morte o lesioni serie</b></p>	<p><b>存在电击、爆炸或电弧闪烁危险</b></p> <ul style="list-style-type: none"> <li>• 在操作此设备之前请先关闭电源。</li> </ul> <p><b>若不遵守这些说明,可能会导致严重的人身伤害甚至死亡。</b></p>
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**⚠ WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / 警告**

<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. Laisser 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 SOBRECALENTAMIENTO 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>材料损坏和高温外壳的危险性</b></p> <ul style="list-style-type: none"> <li>• 产品的一侧面板可能很热, 在其冷却前请不要触碰。</li> <li>• 遵照正确的安装说明, 包括扭矩值。</li> <li>• 请勿让液体及其他异物进入本产品。</li> </ul> <p><b>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。</b></p>

**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

