

## DRA3P Series

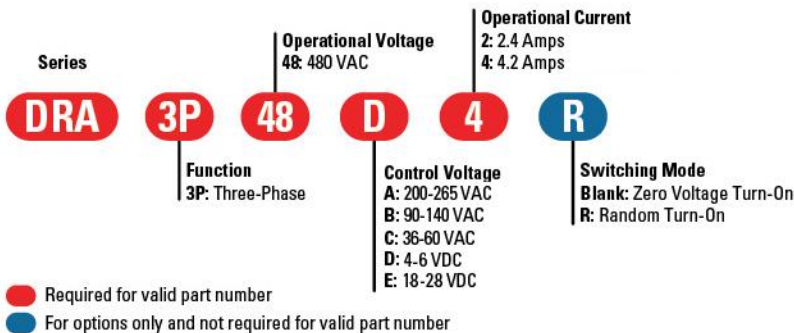


- 2.4 & 4.2 Amp rated Solid State Contactor
- Load voltage range of 48-510VAC, 3-Phase
- Fits standard 35mm DIN-RAIL
- LED input status indicator
- AC or DC control
- Zero-crossing (resistive loads) or random turn-on (inductive loads) output
- cUL Recognized, IEC Rated, CE & RoHS Compliant, Horsepower Rated
- Built in Overvoltage Protection

## PRODUCT SELECTION

Description	2.4A	4.2A
4-6 VDC Control	DRA3P48D2	DRA3P48D4
18-28 VDC Control	DRA3P48E2	DRA3P48E4
36-60 VAC Control	DRA3P48C2	DRA3P48C4
90-140 VAC Control	DRA3P48B2	DRA3P48B4
200-265 VAC Control	DRA3P48A2	DRA3P48A4

## AVAILABLE OPTIONS



## OUTPUT SPECIFICATIONS AC Output (1)

Description	2.4 A	4.2 A
Operating Voltage (47-63Hz) [Vrms]	48-510	48-510
Transient Overvoltage [Vpk] (2)	1200	1200
Maximum Resistive Load Current UL/AC51 [Arms] (3)	2.4/2.4	4.2/2.4
Maximum Motor Load Current UL/AC53 [Arms] (3)	2.1/2.1 (4)	3.4/2.1
Minimum Load Current [Arms]	0.15	0.15
Maximum Off-State Leakage Current @ Rated Voltage [mArms]	1.0	1.0
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec] (5)	500	500
Maximum On-State Voltage Drop @ Rated Current [Vpk]	1.3 per Channel	1.3 per Channel
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 @ 240V, 40°C [HP/KW]	0.5/0.37 (6)	0.75/0.37
HP/IEC 60947 Rating @ 380V, 40°C [HP/KW]	1.0/0.75 (7)	1.5/0.75
HP/IEC 60947 Rating @ 480V, 40°C [HP/KW]	1.0/0.75 (8)	2.0/0.75
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 [IEC mm <sup>2</sup> ]	0.5-4.0	0.5-4.0
Load Terminal Screw Torque Range:	12.0 in lb (1.36 Nm)	12.0 in lb (1.36 Nm)

### INPUT SPECIFICATIONS (1)

Description	DRA3P48Dx	DRA3P48Ex	DRA3P48Cx	DRA3P48Bx	DRA3P48Ax
Control Voltage Range	4-6 VDC	18-28 VDC	36-60 VAC	90-140 VAC	200-265 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	100 VAC
Minimum Input Current [mA]	17	15	7.5	5	4.5
Maximum Input Current [mA]	35	25	13.5	8	5.7
Nominal Input Impedance [Ohms]	120	1.2K	4.2K	16K	46K
Maximum Turn-On Time (9)	1/2 Cycle	1/2 Cycle	20 ms	20 ms	20 ms
Maximum Turn-Off Time	1/2 Cycle	1/2 Cycle	30 ms	30 ms	30 ms
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)

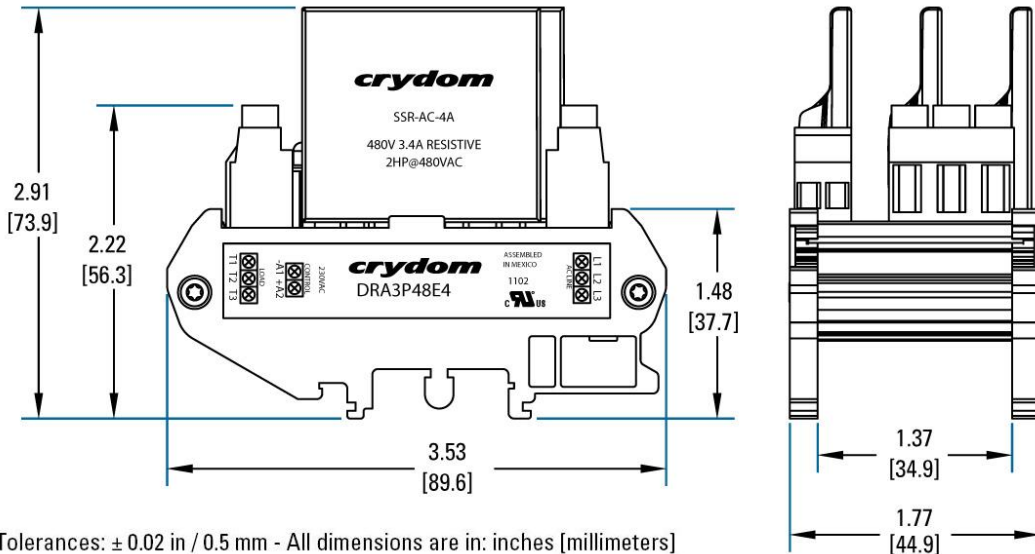
### GENERAL SPECIFICATIONS (1)

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)	3750Vrms
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	-40°C to 85°C
Weight (typical)	4.75 oz. (135g)
Housing Material (bottom cover)	PVC Class V0 (UL94)
Housing Material (end pieces)	Polyamide Class V0 (UL94)

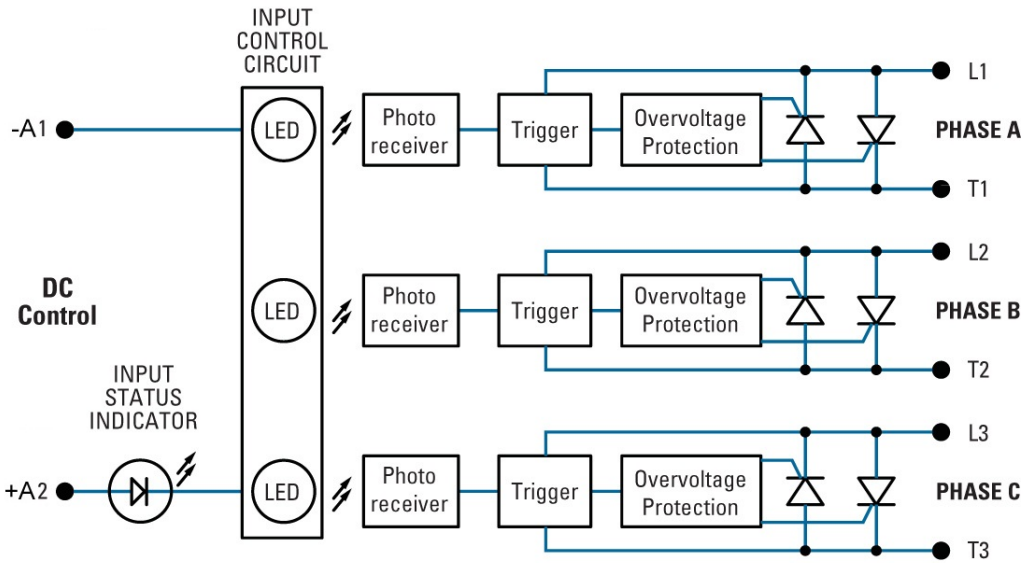
### GENERAL NOTES

- 1) Relay will self trigger between 900-1200V. Not Suitable for capacitive loads.
- 2) All parameters at 25°C unless otherwise specified.
- 3) Mounted in the Vertical position
- 4) For AC control AC53 maximum current is 1.6A
- 5) Off-State dv/dt test method per EIA/NARM standard RS-443, paragraph 13.11.1
- 6) For AC control, rating is ½HP/0.25KW
- 7) For AC control, rating is 1HP/0.37KW
- 8) For AC control, rating is 1HP/0.55KW
- 9) Turn-on time for DC control random turn-on versions is 0.1 msec.

### MECHANICAL SPECIFICATIONS

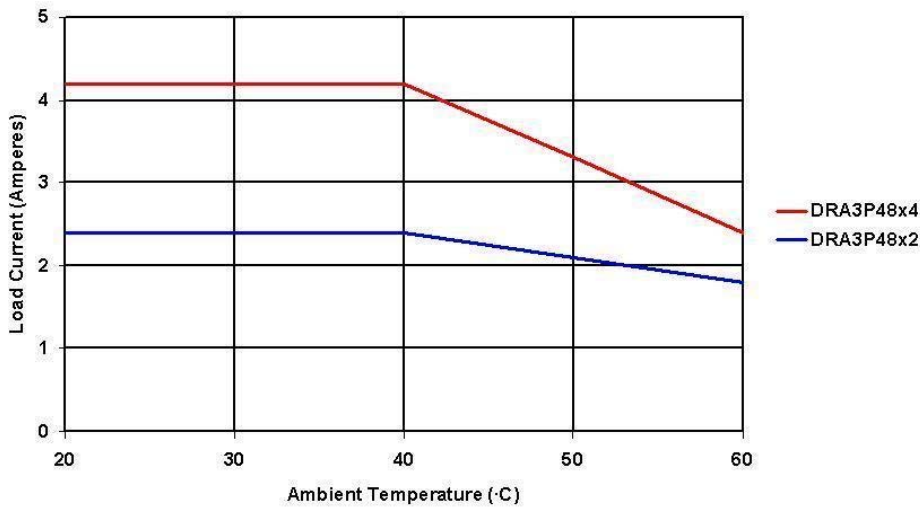


**WIRING DIAGRAM**



**THERMAL DERATE INFORMATION**

**DRA3P48 Derating Curve**




Ratings based on single or multiple relays and no spacing between units except AC control which is 3.4A. For 4.2A rating 45mm spacing must be used.

**AGENCY APPROVALS**



Rev 090512

 <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 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 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'alimentazion 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. 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 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>



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	0	0	0	0	0
Solder	X	0	0	0	0	0

此附件所标示的包括电子信息产品污染图标的环境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	0	0	0	0	0
焊接点	X	0	0	0	0	0