Motion Control

# DRA3P Series

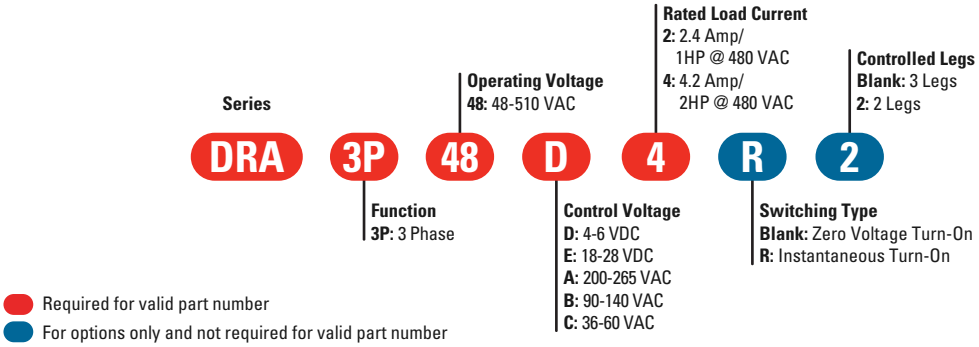
- 2.4 & 4.2 Amp rated Solid State Contactor
- Load voltage range of 48-510 VAC, 3-Phase
- Fits standard 35mm DIN-RAIL
- LED input status indicator
- AC or DC control
- Zero-crossing (resistive loads) or instantaneous turn-on (inductive loads) output
- cUL Recognized, IEC Rated, CE & RoHS Compliant, Horsepower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

Start / Stop

## PRODUCT SELECTION

| Control Voltage | 2.4 A | 4.2 A |
|---|---|---|
| 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 |
| Rated Operating Voltage (Vrms) | 480 | 480 |
| Transient Overvoltage [Vpk] (2) | 1200 | 1200 |
| Maximum Resistive Load Current UL/AC51 [Arms] (3, 8) | 2.4/2.4 | 4.2/2.4 |
| Maximum Motor Load Current UL/AC53 [Arms] (3, 4) | 2.1/2.1 | 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] | 500 | 500 |
| Maximum On-State Voltage Drop @ Rated Current [Vrms] | 1.15 per Channel | 1.15 per Channel |
| Maximum Surge Current (50/60 Hz, 1 cycle) [Apk] | 285/300 | 285/300 |
| Maximum $I^2t$ for Fusing (50/60 HZ, 1/2 cycle) [$A^2$ sec] | 410/375 | 410/375 |
| HP/IEC 60947 Rating @ 240V, 40°C [HP/KW] (5) | 0.5/0.37 | 0.75/0.37 |
| HP/IEC 60947 Rating @ 380V, 40°C [HP/KW] (6) | 1.0/0.75 | 1.5/0.75 |
| HP/IEC 60947 Rating @ 480V, 40°C [HP/KW] (7) | 1.0/0.75 | 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 $mm^2$] | 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) |



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## 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 |
| 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 | 2 VDC | 10 VAC | 20 VAC | 60 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 mm²] | 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)

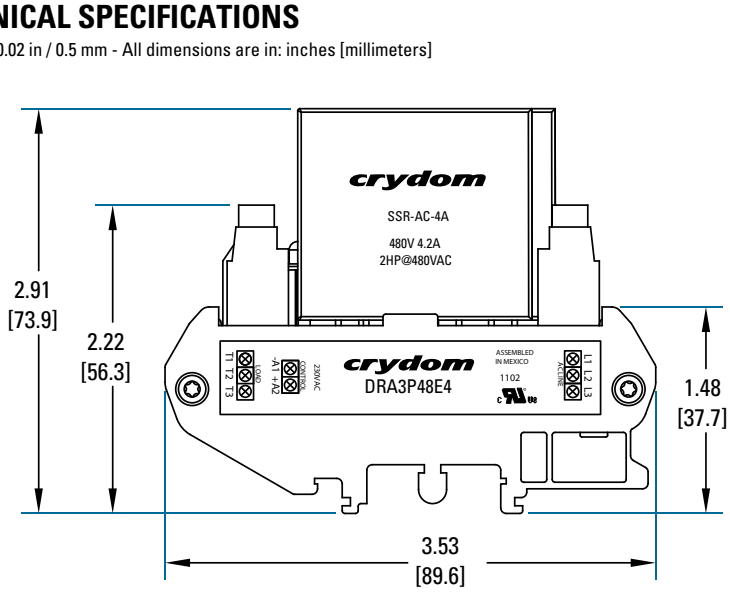
| Description | Parameters |
|---|---|
| Dielectric Strength, Input to Output (50/60Hz) | 3750Vrms |
| Minimum Insulation Resistance (@ 500 V DC) | $10^9$ Ohms |
| Maximum Capacitance, Input/Output | 20 pF |
| Ambient Operating Temperature Range | -10°C to 60°C |
| Ambient Storage Temperature Range | -10°C to 85°C |
| LED Status Indicator for Control Input | On: Green |
| Weight (typical) | 4.75 oz. (135g) |
| Housing Material (bottom cover) | PVC Class V0 (UL94) |
| Housing Material (end pieces) | Polyamide Class V0 (UL94) |

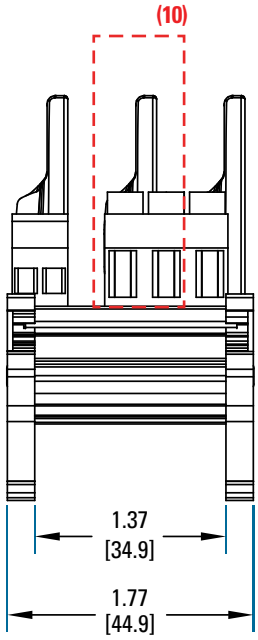
## GENERAL NOTES

(1) All parameters at 25°C unless otherwise specified.
(2) Relay will self trigger between 900-1200Vpk. Not Suitable for capacitive loads.
(3) For AC control AC53 maximum current is 1.6 A
(4) Mounted in the Vertical position (Din Rail in horizontal position).
(5) For AC control, rating is ½HP/0.25KW
(6) For AC control, rating is1HP/0.37KW
(7) For AC control, rating is 1HP/0.55KW
(8) Resistive Load Current rating for DRA3P48x4 (A,B & C suffix only) is 3.4 A
(9) Turn-on time for DC control instantaneous turn-on versions is 0.1 msec.
(10) Three Controlled legs versions only. Otherwise L2-T2 are connected internally.

## MECHANICAL SPECIFICATIONS

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





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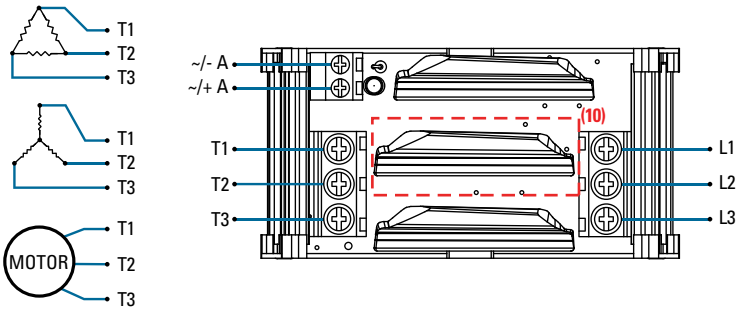
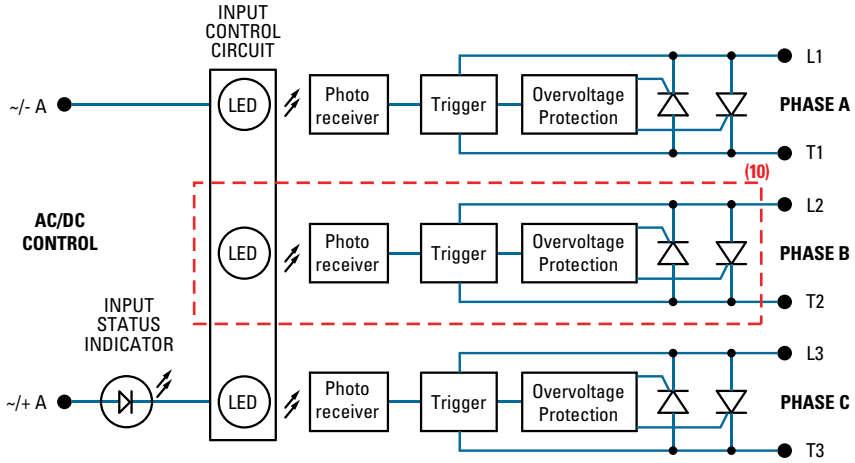
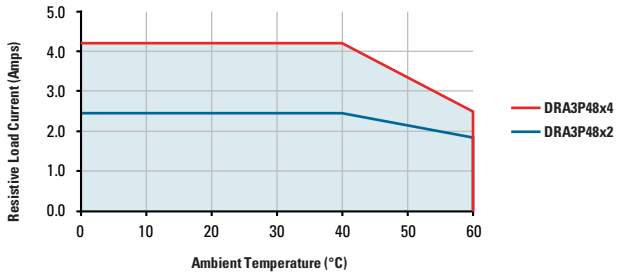
## WIRING DIAGRAM




## BLOCK DIAGRAM




## THERMAL DERATE INFORMATION




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

## AGENCY APPROVALS

| Agency Approvals |
| --- |
| c UL us E116949 CE RoHS |

Rev. 092618
ECN#20512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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.<br>• Verify all connections and replace all covers before turning on power.<br>**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.<br>• Verificar todas las conexiones y colocar todas las tapas antes de energizer el equipo.<br>**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<br>• Vérifier tous connections, et remettre tous couverts en olace avant de mettre sous<br>**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<br>• Vor dem Drehen auf Energie alle Anschlüsse überprüfen und alle Abdeckungen ersetzen.<br>**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<br>• Verificare tutti i collegamenti e sostituire tutte le coperture prima dell'accensione<br>**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。<br>**若不遵守这些说明，可能会导致严重的人身伤害甚至死亡。** |

## ⚠ WARNING / AVERTISSEMENT / WARNUNG /ADVERTENCIA / AVVERTENZA / 警告

| 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.<br>• Follow proper mounting instructions including torque values.<br>• Do not allow liquids or foreign objects to enter this product.<br>**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.<br>• Respecter les consignes de montage, et notamment les couples de serrage.<br>• Ne pas laisser pénétrer de liquide ni de corps étrangers à l'intérieur du produit.<br>**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.<br>• Beachten Sie die Montageanweisungen,<br>• Führen Sie keine Flüssigkeiten oder Fremdkörper in das Produkt ein.<br>**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.<br>• Respetar las instrucciones de montaje, y en particular los pares de apretado.<br>• No dejar que penetren líquidos o cuerpos extraños en el producto.<br>**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.<br>• Seguire le istruzioni di montaggio corrette.<br>• Non far entrare liquidi o oggetti estranei in questo apparecchio.<br>**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。<br>• 遵照正确的安装说明，包括扭矩值。<br>• 请勿让液体及其他异物进入本产品。<br>**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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Стандарт Электрон Связь

Мы молодая и активно развивающаяся компания в области поставок электронных компонентов. Мы поставляем электронные компоненты отечественного и импортного производства напрямую от производителей и с крупнейших складов мира.

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С нами вы становитесь еще успешнее!

**Наши контакты:**

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