



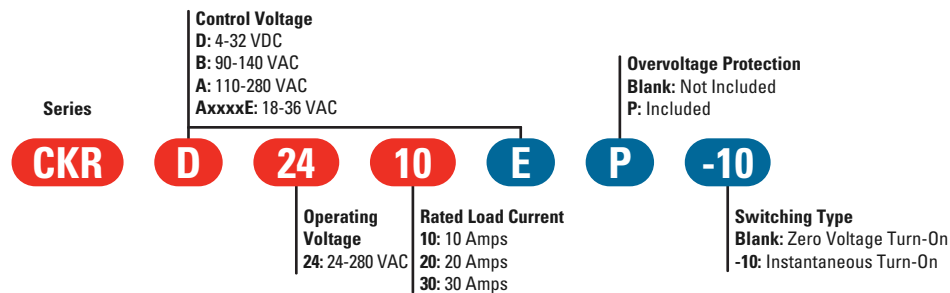
## CKR24 Series

- Rating from 10 A to 30 A @ 280 VAC
- Slim 22.5mm (width) package
- SCR output for heavy industrial loads
- LED input status indicator
- AC or DC control
- Zero Voltage (resistive loads) or Instantaneous (inductive loads) turn-on output

### PRODUCT SELECTION

Control Voltage	10 A	20 A	30 A
4-32 VDC Control	CKRD2410	CKRD2420	CKRD2430
110-280 VAC Control	CKRA2410	CKRA2420	CKRA2430
90-140 VAC Control	CKRB2410	CKRB2420	CKRB2430
18-36 VAC Control	CKRA2410E	CKRA2420E	CKRA2430E

### AVAILABLE OPTIONS



- Required for valid part number
- For options only and not required for valid part number

### OUTPUT SPECIFICATIONS (1)

Description	10 A	20 A	30 A
Operating Voltage (47-63Hz) [Vrms]	24-280	24-280	24-280
Transient Overvoltage [Vpk]	600	600	600
Maximum Off-State Leakage Current @ Rated Voltage [mArms]	10	10	10
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec] (2)	500	500	500
Maximum Load Current [Arms]	10	20	30
Minimum Load Current [Arms]	0.15	0.15	0.15
Maximum Surge Current (16.6ms) [Apk]	120	250	1200
Maximum On-State Voltage Drop @ Rated Current [Vpk]	1.6	1.6	1.6
Maximum I <sup>2</sup> t for Fusing (8.3 msec) [A <sup>2</sup> sec]	60	260	6000
Minimum Power Factor (with Maximum Load)	0.5	0.5	0.5

## INPUT SPECIFICATIONS (1)

Description	CKRD24xx	CKRA24xx	CKRB24xx	CKRA24xxE
Control Voltage Range	4.0-32 VDC	110-280 Vrms	90-140 Vrms	18-36 Vrms
Minimum Turn-On Voltage	4.0 VDC	110 Vrms	90 Vrms	18 Vrms
Must Turn-Off Voltage	1.0 VDC	10 Vrms	10 Vrms	4.0 Vrms
Typical Input Current (4)	8-12 mA	5 mA @ 240 Vrms	5 mA @ 120 Vrms	10 mA @ 24 Vrms
Maximum Turn-On Time [msec] (3)	1/2 Cycle	10	10	10
Maximum Turn-Off Time [msec]	1/2 Cycle	40	40	40

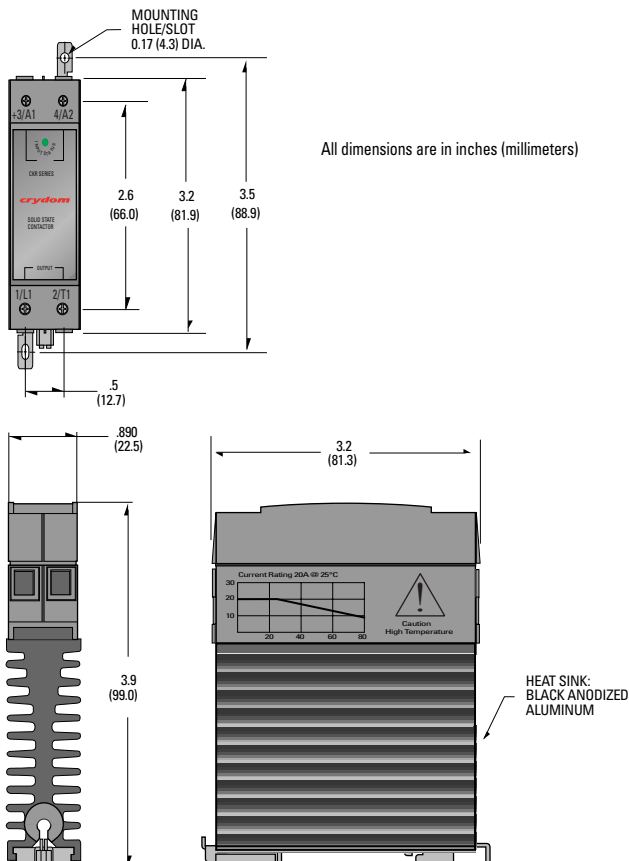
## GENERAL SPECIFICATIONS

Description	Parameters
Dielectric Strength, Input/Output/Base (50/60Hz)	4000 Vrms
Minimum Insulation Resistance (@ 500 V DC)	10 <sup>9</sup> Ohms
Maximum Capacitance, Input/Output	8 pF
Ambient Operating Temperature Range	-40°C to 80°C
Ambient Storage Temperature Range	-40°C to 125°C
Status Indicator Display	Green LED
Weight (typical)	10 oz. (280g)
Encapsulation	Thermally Conductive Epoxy
Terminals	Box Clamp Type
Maximum Wire Size	AWG # 10 (3mm)
Recommended Terminal Screw Torque Range	5.0-6.0 in-lb (0.6-0.7 Nm)
Min. Side by Side Spacing	0.8 inch (20mm)

## GENERAL NOTES

- 1) All parameters at 25°C unless otherwise specified.
- 2) Off-State dv/dt test method per EIA/NARM standard RS-443, paragraph 13.11.1
- 3) Turn-on time for DC control instantaneous turn-on versions is 0.02 msec
- 4) Input circuitry for DC control version incorporates active current limiter.

## MECHANICAL SPECIFICATIONS



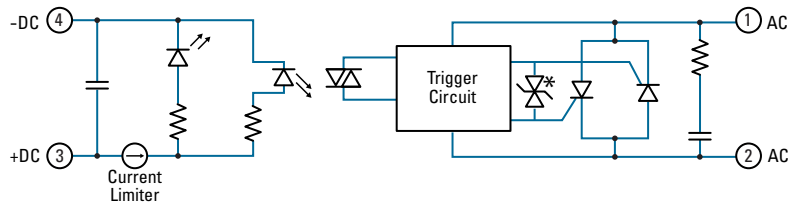
### EQUIVALENT CIRCUIT BLOCK DIAGRAM

AC control



\* With Option "P" suffix

DC control



### THERMAL DERATE INFORMATION



### AGENCY APPROVALS

#### Agency Approvals

Designed in accordance with the requirements of IEC 62314



E116950



LR81689



129156



Rev. 031116

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

<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 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 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>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>