

## CTR Series

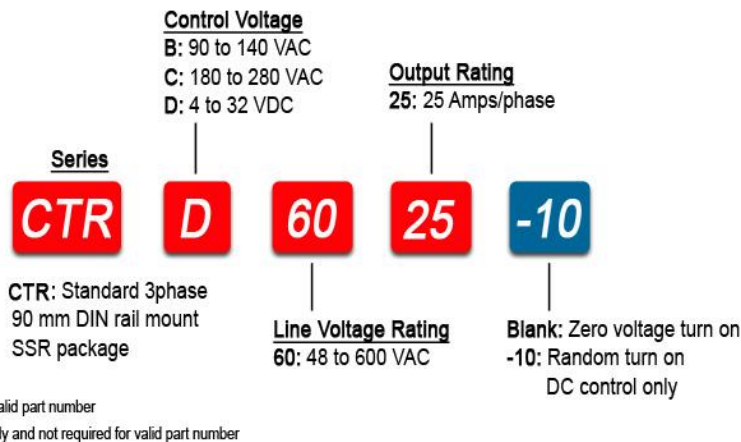


- Ratings 25A per phase @ 600 VAC
- DIN-RAIL or Panel Mount 90mm (width) package
- UL 508 Endurance Rating for Enhanced Reliability
- SCR output for heavy industrial loads
- Overvoltage Protection Built In (Internal TVS)
- LED input status indicator
- AC or DC control
- Zero-crossing (resistive loads) or random-fire (inductive loads) output
- UL Recognized, CE, RoHS and EMC Compliant

## PRODUCT SELECTION

Description	25 A
4-32 VDC Control	CTRD6025
90-140 VAC Control	CTRB6025
180-280 VAC Control	CTRC6025

## AVAILABLE OPTIONS



## OUTPUT SPECIFICATIONS (1)

Description	CTRD6025	CTRB6025	CTRC6025
Operating Voltage (47-63Hz) [VRMS]	48-600	48-600	48-600
Transient Overvoltage [Vpk]	1100	1100	1100
Maximum Load Current (2) [Arms]	25	25	25
Minimum Load Current [Arms]	0.1	0.1	0.1
Maximum Off-State Leakage Current @ Rated Voltage [mArms]	0.25	0.25	0.25
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/usec] (3)	500	500	500
Maximum On-State Voltage Drop @ Rated Current [Vpk]	1.35	1.35	1.35
Maximum Surge Current (50/60 Hz, 1 cycle) [Apk]	286/300	286/300	286/300
Maximum I <sup>2</sup> t for Fusing (50/60 HZ, 1/2 cycle) [A <sup>2</sup> sec]	410/374	410/374	410/374
UL/IEC 60947 Motor Control Rating @ 240V [HP/KW] (4)	1/0.74	1/0.74	1/0.74
UL/IEC 60947 Motor Control Rating @ 380V [HP/KW] (4)	2/1.48	2/1.48	2/1.48
UL/IEC 60947 Motor Control Rating @ 480V [HP/KW] (4)	3/2.22	3/2.22	3/2.22
Minimum Power Factor (with Maximum Load)	0.5	0.5	0.5
Min/Max stranded wire	16/8 AWG	16/8 AWG	16/8 AWG
Min/Max solid wire	16/10 AWG	16/10 AWG	16/10 AWG

### INPUT SPECIFICATIONS (1)

Description	CTRD6025	CTRB6025	CTRC6025
Control Voltage Range	4.0-32 VDC	90-140 Vrms	180-280 Vrms
Minimum Turn-On Voltage	4.0 VDC	90 Vrms	180 Vrms
Minimum Turn-Off Voltage	1.0 VDC	10 Vrms	10 Vrms
Minimum Input Current (5)	22 mA	15 mA	19 mA
Maximum Input Current (5)	28 mA	19 mA	24 mA
Maximum Turn-On Time [msec] (6)	1/2 Cycle	20	20
Maximum Turn-Off Time [msec]	1/2 Cycle	30	30
Min/Max stranded/solid wire	24/16 AWG	24/16 AWG	24/16 AWG

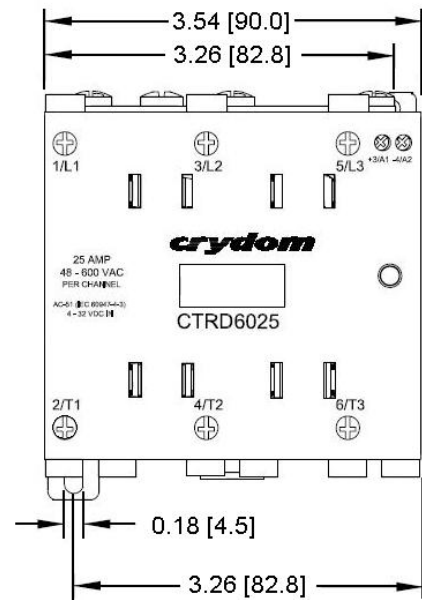
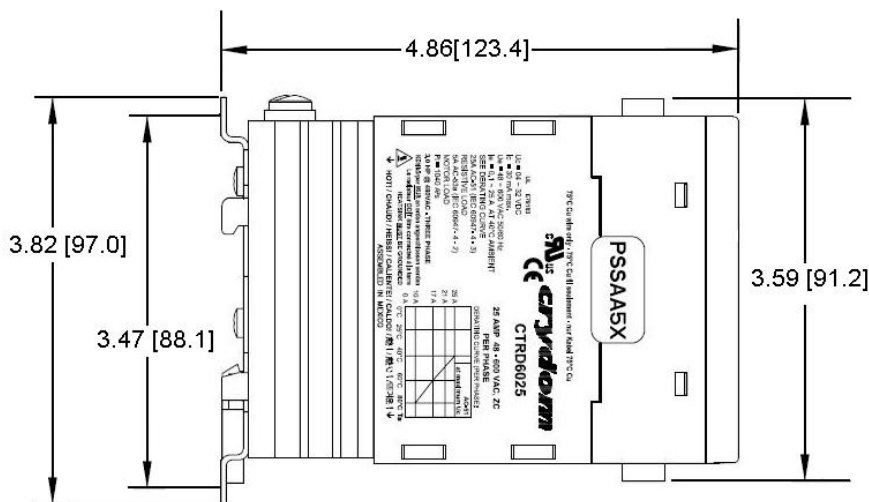
### GENERAL SPECIFICATIONS

Description	CTRD6025	CTRB6025	CTRC6025
Dielectric Strength, Input/Output/Base (50/60Hz)	4000Vrms	4000Vrms	4000Vrms
Minimum Insulation Resistance (@ 500 V DC)	10 <sup>9</sup> Ohms	10 <sup>9</sup> Ohms	10 <sup>9</sup> Ohms
Maximum Capacitance, Input/Output	8 pF	8 pF	8 pF
Ambient Operating Temperature Range (7)	-20°C to 80°C	-20°C to 80°C	-20°C to 60°C
Ambient Storage Temperature Range	-40°C to 100°C	-40°C to 100°C	-40°C to 100°C
Status Indicator Display	Green LED	Green LED	Green LED
Weight (typical)	21.2 oz. (600g)	21.2 oz. (600g)	21.2 oz. (600g)
Terminals	Box Clamp Type	Box Clamp Type	Box Clamp Type
Recommended Terminal Screw Torque Range:	5.0-6.0 in lb (0.6-0.7 Nm)	5.0-6.0 in lb (0.6-0.7 Nm)	5.0-6.0 in lb (0.6-0.7 Nm)
Min. Side by Side Spacing	0.8 inch (20mm)	0.8 inch (20mm)	0.8 inch (20mm)

### GENERAL NOTES

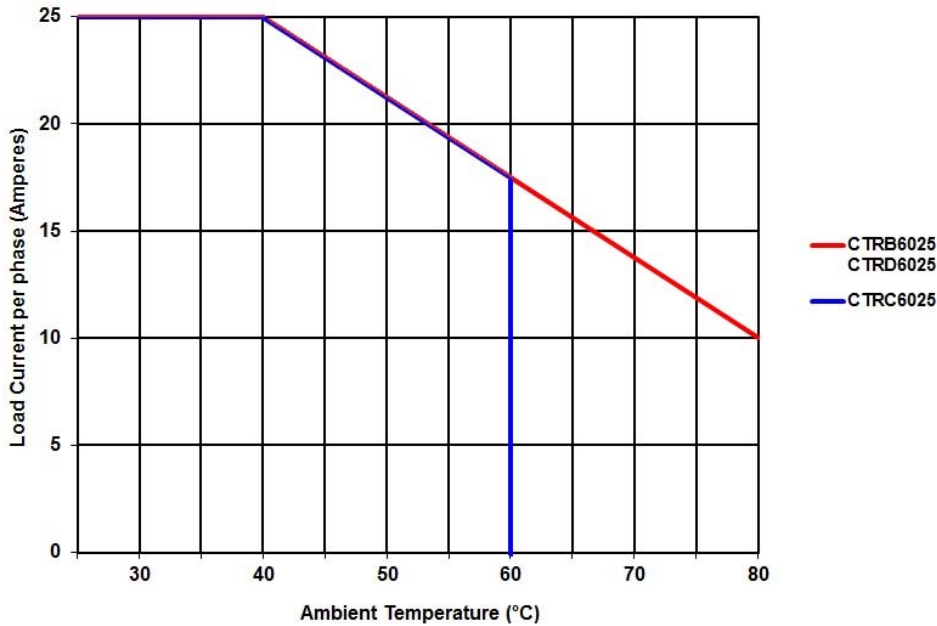
- 1) All parameters at 25°C unless otherwise specified.
- 2) See Derating Curves
- 3) Off-State dv/dt test method per EIA/NARM standard RS-443, paragraph 13.11.1
- 4) At 40°C Ambient temperature.
- 5) Turn-on time for DC control random turn-on versions is 0.02 msec
- 6) Input circuitry incorporates active current limiter.
- 7) For 180-280 VAC Control. Maximum Ambient operating temperature is 60°C

### MECHANICAL SPECIFICATIONS



**THERMAL DERATE INFORMATION**

**DERATING CURVE: CTR Series**



**AGENCY APPROVALS**


Designed in accordance with the requirements of IEC 62314




Rev. 082712

**EMC Compatibility**

- IEC 62314
- IEC 60068-2-6            35mm/10-55Hz
- IEC 60068-2-27        15G / 11ms
- IEC 61000-4-2 Level 3    Electrostatic Discharge
- IEC 61000-4-3 Level 3    Radiated Electromagnetic Noise
- IEC 61000-4-4 Level 3    Immunity to Electrically Fast Transients
- IEC 61000-4-5 Level 3    Immunity to Electrical Surges
- IEC 61000-4-6 Level 3    Conducted Electromagnetic Noise
- CISPR 11 Class A        Conducted and Radiated Noise for Industrial Environments
- Pollution Degree 2
- Overvoltage Category III

 <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 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>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>



**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	○	○	○	○	○
Solder	X	○	○	○	○	○

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	○	○	○	○	○
焊接点	X	○	○	○	○	○