

## Dual GN Series

- Current rating 25 and 40 Amps
- Output voltage 24-280 VAC and 48-660 VAC
- Direct bond copper substrate
- Back to back dual SCR output
- 4000 VAC optical isolation
- Zero Voltage and Instantaneous Turn-On
- UL/cUL Recognized, CE Compliant

### PRODUCT SELECTION

Control Voltage	1/4" Quick Connect 280 VAC		1/4" Quick Connect 660 VAC		Locking Connector 280 VAC	
	25 A	40 A	25 A	40 A	25 A	40 A
4-15 VDC	84140000	84140200	84140500	84140600	84140800	84140900
17-32 VDC	84140410	84134210	84140510	84140610	84140810	84140910

### AVAILABLE OPTIONS

Series	Rated Load Current	Control Voltage	Operating Voltage
<b>84140</b>	<b>0</b>	<b>1</b>	<b>0</b>
<b>1/4" Quick Connect 280 VAC</b>	0: 25 Amp/Zero Voltage Turn-On 1: 25 Amp/Instantaneous Turn-On 2: 40 Amp/Zero Voltage Turn-On 3: 40 Amp/Instantaneous Turn-On	0: 4-15 VDC 1: 17-32 VDC	0: 24-280 VAC
<b>1/4" Quick Connect 660 VAC</b>	5: 25 Amp 6: 40 Amp	0: 4-15 VDC 1: 17-32 VDC	0: 48-660 VAC/Zero Voltage Turn-On 1: 48-660 VAC/Instantaneous Turn-On
<b>Locking Connector 280 VAC</b>	8: 25 Amp 9: 40 Amp	0: 4-15 VDC 1: 17-32 VDC	0: 24-280 VAC/Zero Voltage Turn-On 1: 24-280 VAC/Instantaneous Turn-On

### OUTPUT SPECIFICATIONS <sup>(1)</sup>

Description	280 VAC	660 VAC
Operating Voltage [Vrms]	24-280	48-660
Transient Voltage(t=1 min.) [Vpk]	550	1000
Maximum Off-State Leakage Current @ Rated Voltage (@ max. line voltage) [mArms]	0.1	0.25

### OUTPUT SPECIFICATIONS <sup>(1)</sup>

Description	25 A	40 A
Maximum Load Current [Arms]	25	40
Minimum Load Current [mArms]	100	100
Maximum 1 Cycle Surge Current (50/60Hz) [Apk]	275/300	710/750
1 Second surge current (50/60 Hz @ Ta=25°C) [Apk]	85	150
Maximum On-State Voltage Drop @ Rated Current [Vpk]	1.4	1.3
Thermal Resistance Junction to Case (Rjc) [°C/W]	0.6	0.4
Maximum 1/2 Cycle I <sup>2</sup> t for Fusing (50/60Hz) [A <sup>2</sup> sec]	380/370	2520/2320
Maximum Off-State dv/dt @ Maximum Rated Voltage [V/μsec]	500	500

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

Description	84140x0x	84140x1x
Control Voltage Range [Vdc]	4-15	17-32
Minimum Turn-On Voltage [Vdc]	4	17
Must Turn-Off Voltage [Vdc]	1	1
Minimum Input Current (for on-state) [mA]	7.5	13
Maximum Input Current [mA]	34	24
Nominal Input Impedance [Ohms]	500	1500
Maximum Turn-On Time [msec] <sup>(2)</sup>		1/2 Cycle
Maximum Turn-Off Time [msec]		1/2 Cycle

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

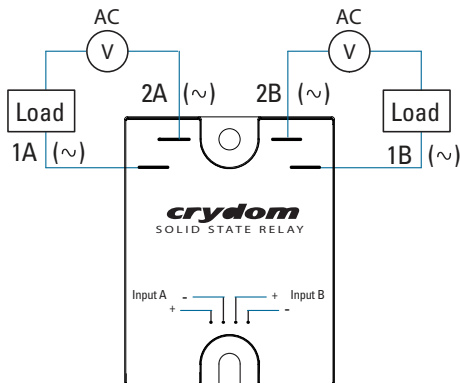
Description	Parameters
Ambient Operating Temperature Range	-40 to 80 °C
Ambient Storage Temperature Range	-40 to 100 °C
Input to Output Isolation	4000 Vrms
Input/Output to Ground Isolation	2500 Vrms
Input to Output Capacitance	8pF
Operation Frequency	47 to 63 Hz
Housing Material	UL94 V-0 (self extinguishing)
Weight (typical)	3.2 oz (91.5g)

**GENERAL NOTES**

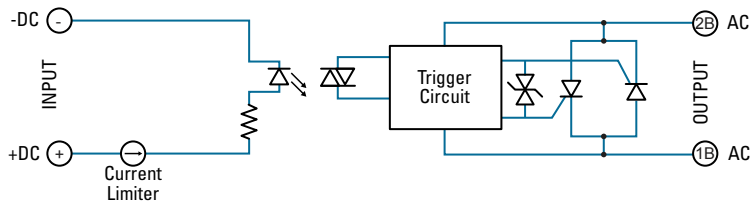
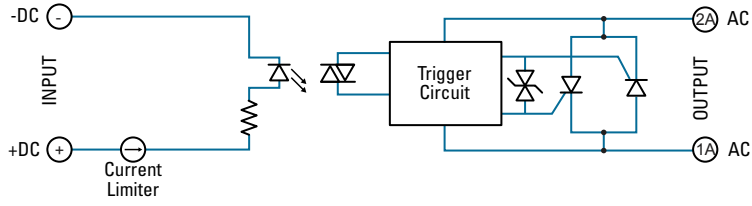
- <sup>(1)</sup> All parameters at 25°C unless otherwise specified.
- <sup>(2)</sup> Turn-on time for Instantaneous turn-on versions is 0.02 msec.

For additional information or specific questions, contact Crydom Technical Support.

**WIRING DIAGRAM**

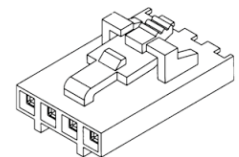
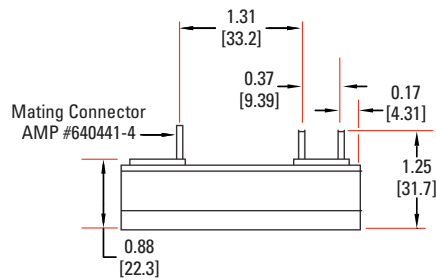
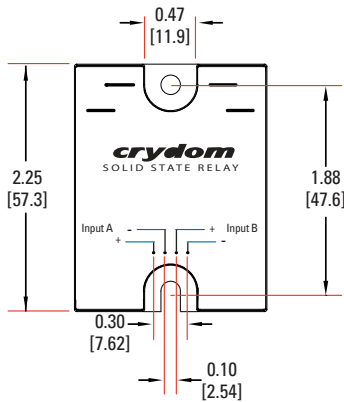


**EQUIVALENT CIRCUIT BLOCK DIAGRAMS**



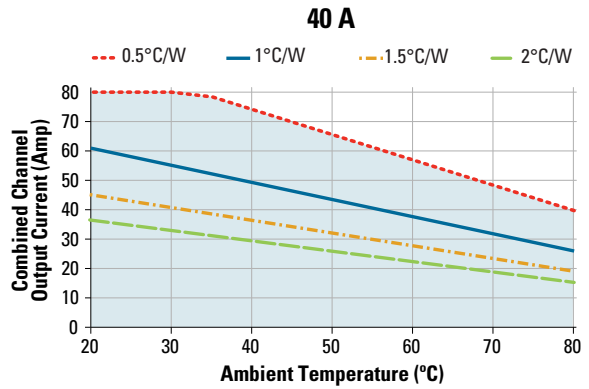
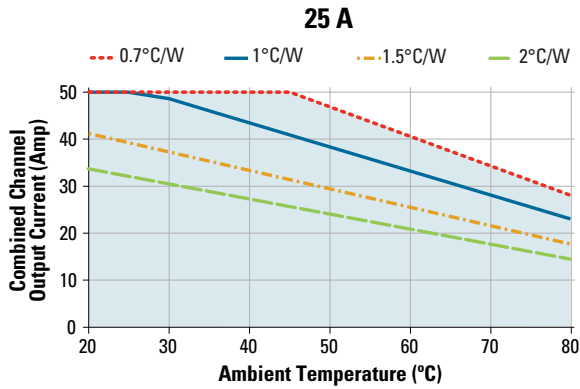
**MECHANICAL SPECIFICATIONS <sup>(1)</sup>**

Tolerances:  $\pm 0.02$  in / 0.5 mm  
All dimensions are in: inches [millimeters]



Mating Connector for 841408xxx and 841409xxx  
Molex # 50-57-9404 without pins  
Crimp Pins Molex # 16-02-0103

**THERMAL DERATE INFORMATION**



**AGENCY APPROVALS**

EN60950-1: Meets the requirements of sections 1.5: 1.7: 2.9: 2.10.5.3: 4.2: 4.5: 4.7:  
 Certified according to EN 62314:2006  
 IEC 61000-4-2 Electrostatic Discharge Level 3  
 IEC 61000-4-4 Electrically Fast Transients Level 3  
 IEC 61000-4-5 Electrical Surges Level 3



Rev. 092616

**⚠ 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 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>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

