



## DUAL GN SERIES

PANEL MOUNT



### Features

- 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



### SPECIFICATIONS

#### Product Selection

|                        | 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     |
| <b>Control Voltage</b> |                            |          |                            |          |                           |          |
| <b>4-15 VDC</b>        | 84140000                   | 84140200 | 84140500                   | 84140600 | 84140800                  | 84140900 |
| <b>17-32 VDC</b>       | 84140410                   | 84134210 | 84140510                   | 84140610 | 84140810                  | 84140910 |

#### Output Specifications <sup>(1)</sup>

| Description                                                                                | 280 VAC | 660 VAC |
|--------------------------------------------------------------------------------------------|---------|---------|
| <b>Operating Voltage [Vrms]</b>                                                            | 24-280  | 48-600  |
| <b>Transient Voltage(t=1 min.) [Vpk]</b>                                                   | 550     | 1000    |
| <b>Maximum Off-State Leakage Current @ Rated Voltage<br/>(@ max. line voltage) [mArms]</b> | 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>

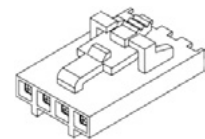
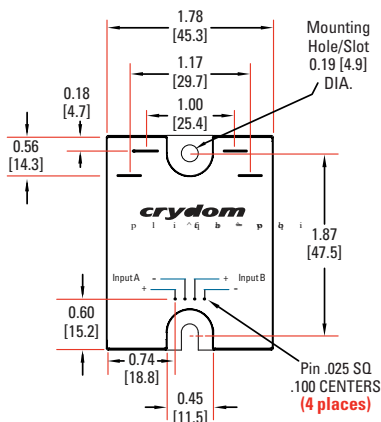
| Description                         | Parameters                    |
|-------------------------------------|-------------------------------|
| Ambient Operating Temperature Range | -40 to 80°C                   |
| Ambient Storage Temperature Range   | -40 to 100 °C                 |
| Input to Output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



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

Tolerance: ±0.02 in / 0.5 mm

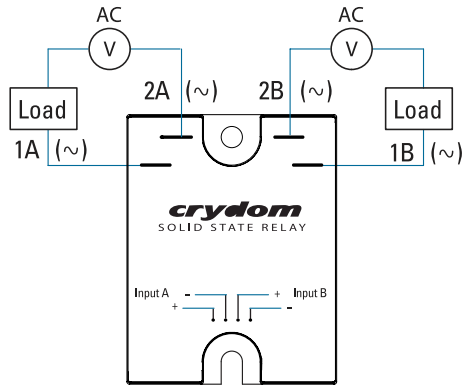
All dimensions are in: inches [millimeters]



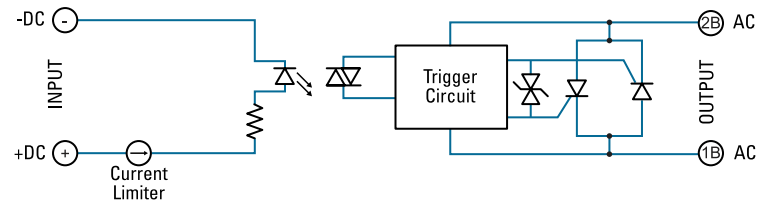
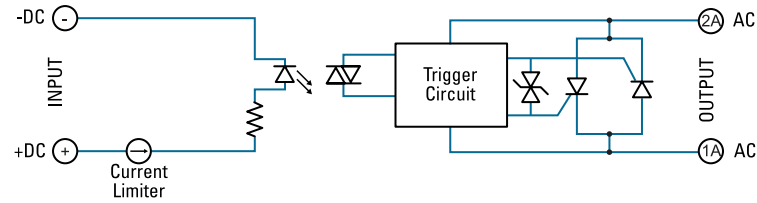
Mating Connector for 841408xxx and 841409xxx  
Molex # 50-57-9404 without pins  
Crimp Pins Molex # 16-02-0103



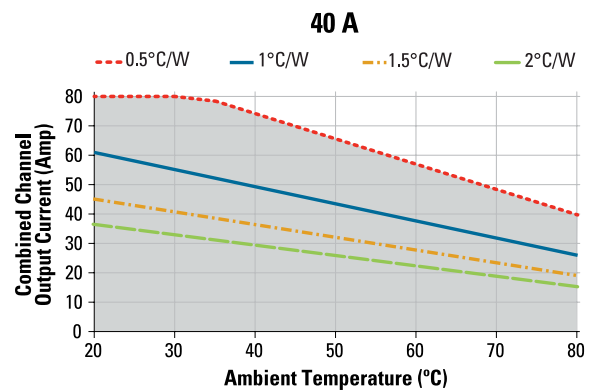
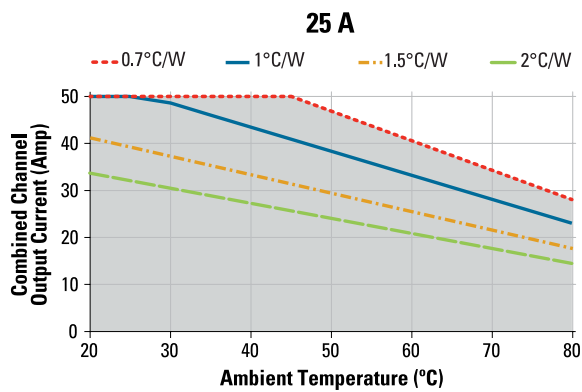
## WIRING DIAGRAM



## EQUIVALENT CIRCUIT BLOCK DIAGRAMS



## THERMAL DERATE INFORMATION





## ORDERING OPTIONS

Example : 84140010

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



## GENERAL NOTES

(1) All parameters at 25°C unless otherwise specified.

(2) Turn-on time for Instantaneous turn-on versions is 0.02 msec.

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



## AGENCY APPROVALS & CERTIFICATIONS



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



## WARNINGS



### RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE

- The product's side panels may be hot, allow the product to cool before touching
- Follow proper mounting instructions including torque values
- Do not allow liquids or foreign objects to enter this product

**Failure to follow these instructions can result in serious injury, or equipment damage.**



### HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

- Disconnect all power before installing or working with this equipment
- Verify all connections and replace all covers before turning on power

**Failure to follow these instructions will result in death or serious injury.**

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