

# 280 VOLT DUAL SOLID STATE RELAYS



- ▶ 40 amp dual AC output relays
- ▶ Output voltage from 24 to 280 Vac
- ▶ Direct bond copper substrate
- ▶ Back to back dual SCR output
- ▶ 4000 Vac optical isolation
- ▶ Zero crossing or random turn on
- ▶ UL/cUL Recognized, CE Compliant



## Output Specifications

|   |           |           |
|---|-----------|-----------|
| Voltage range (Vrms)  | 24-280Vac |           |
| Peak Voltage (Vpk, t = 1 min.)                              | 550       |           |
| Off-state leakage mArms                                     | 0.1       |           |
| (@ max. line voltage & Ta = 25°C)                           |           |           |
| Output Current (Mounted on proper heat sink, see deratings) | 25        | 40        |
| Minimum Current (mArms)                                     | 100       | 100       |
| 1 cycle surge current 50-60 Hz (Apk, Ta = 25°C)             | 275-300   | 710-750   |
| 1 second surge current 50/60 Hz (Apk, Ta = 25°C)            | 85        | 150       |
| Forward voltage drop (Vpk @ Imax, Ta = 25°C)                | 1.4       | 1.3       |
| i <sup>2</sup> T (50-60Hz, ½ cycle)                         | 380-370   | 2520-2320 |
| Rjb (thermal res. Junction to baseplate, °C/W)              | 0.6       | 0.4       |
| Static off-state dv/dt (Vµs, Ta = 25°C)                     | 500       | 500       |

## Input Specifications

|                                   |          |          |
|-----------------------------------|----------|----------|
| Input voltage                     | 4-15Vdc  | 17-32Vdc |
| Drop out voltage                  | 1Vdc     | 1Vdc     |
| Min. input current (for on-state) | 7.5mA    | 13mA     |
| Maximum input current             | 34mA     | 24mA     |
| Input Resistance (Ohms)           | 500      | 1500     |
| Turn-on time*                     | 8.33msec | 8.33msec |
| Turn-off time                     | 8.33msec | 8.33msec |

\* Random SSR's turn on in less than 100µs

## General Characteristics

|                                  |                              |
|----------------------------------|------------------------------|
| Operating Temperature (°C)       | -40 to + 80                  |
| Storage Temperature (°C)         | -40 to + 100                 |
| Input to output isolation        | 4000Vrms                     |
| Input/output to ground isolation | 2500Vrms                     |
| Input to output capacitance      | 8pF (typical)                |
| Operating Frequency              | 47 to 63 Hz                  |
| Housing Material                 | UL 94V0 (self extinguishing) |

## Standards of Compliance

CE Compliant with the LVD 73/23/EEC  
 UL / cUL Recognized per UL 508 and CSA C22.2 no. 14-M91

See next page thermal curves.

## Part Numbers 1/4" Quick Connect

### Zero Crossing Output

| Rating | Output    | Input    | Part Number |
|--------|-----------|----------|-------------|
| 25 Amp | 24-280Vac | 4-15Vdc  | 84140000    |
| 25 Amp | 24-280Vac | 17-32Vdc | 84140010    |
| 40 Amp | 24-280Vac | 4-15Vdc  | 84140200    |
| 40 Amp | 24-280Vac | 17-32Vdc | 84140210    |

### Random Fire Output

| Rating | Output    | Input    | Part Number |
|--------|-----------|----------|-------------|
| 25 Amp | 24-280Vac | 4-15Vdc  | 84140100    |
| 25 Amp | 24-280Vac | 17-32Vdc | 84140110    |
| 40 Amp | 24-280Vac | 4-15Vdc  | 84140300    |
| 40 Amp | 24-280Vac | 17-32Vdc | 84140310    |

## Part Numbers Locking Connector

### Zero Crossing Output

| Rating | Output    | Input    | Part Number |
|--------|-----------|----------|-------------|
| 25 Amp | 24-280Vac | 4-15Vdc  | 84140800    |
| 25 Amp | 24-280Vac | 17-32Vdc | 84140810    |
| 40 Amp | 24-280Vac | 4-15Vdc  | 84140900    |
| 40 Amp | 24-280Vac | 17-32Vdc | 84140910    |

### Random Fire Output

| Rating | Output    | Input    | Part Number |
|--------|-----------|----------|-------------|
| 25 Amp | 24-280Vac | 4-15Vdc  | 84140801    |
| 25 Amp | 24-280Vac | 17-32Vdc | 84140811    |
| 40 Amp | 24-280Vac | 4-15Vdc  | 84140901    |
| 40 Amp | 24-280Vac | 17-32Vdc | 84140911    |

Mating Connector: Molex # 14-56-2042

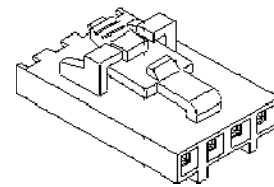
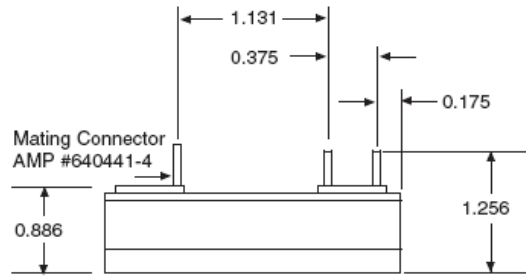
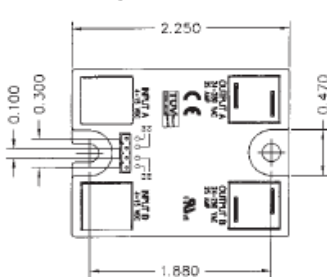
## Part Numbers Screw Terminals

### Zero Crossing Output

| Rating | Output    | Input    | Part Number |
|--------|-----------|----------|-------------|
| 25 Amp | 24-280Vac | 4-15Vdc  | 84140003    |
| 25 Amp | 24-280Vac | 17-32Vdc | 84140013    |
| 40 Amp | 24-280Vac | 4-15Vdc  | 84140203    |
| 40 Amp | 24-280Vac | 17-32Vdc | 84140213    |

### Random Fire Output

| Rating | Output    | Input    | Part Number |
|--------|-----------|----------|-------------|
| 25 Amp | 24-280Vac | 4-15Vdc  | 84140103    |
| 25 Amp | 24-280Vac | 17-32Vdc | 84140113    |
| 40 Amp | 24-280Vac | 4-15Vdc  | 84140303    |
| 40 Amp | 24-280Vac | 17-32Vdc | 84140313    |



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

# 660 VOLT DUAL SOLID STATE RELAYS



- ▶ 40 amp dual AC output relays
- ▶ Output voltage from 48 to 660 Vac
- ▶ Direct bond copper substrate
- ▶ Back to back dual SCR output
- ▶ 4000 Vac optical isolation
- ▶ Zero crossing or random turn on
- ▶ UL/cUL Recognized, CE Compliant



## Output Specifications

|   |           |           |
|---|-----------|-----------|
| Voltage range (Vrms)  | 48-660Vac |           |
| Peak Voltage (Vpk, t = 1 min.)                              | 1000      |           |
| Off-state leakage mArms                                     | 0.25      |           |
| (@ max. line voltage & Ta = 25°C)                           |           |           |
| Output Current (Mounted on proper heat sink, see deratings) | 25        | 40        |
| Minimum Current (mArms)                                     | 100       | 100       |
| 1 cycle surge current 50-60 Hz (Apk, Ta = 25°C)             | 275-300   | 710-750   |
| 1 second surge current 50/60 Hz (Apk, Ta = 25°C)            | 85        | 150       |
| Forward voltage drop (Vpk @ Imax, Ta = 25°C)                | 1.4       | 1.3       |
| I <sup>2</sup> T (50-60Hz, ½ cycle)                         | 380-370   | 2520-2320 |
| Rjb (thermal res. Junction to baseplate, °C/W)              | 0.6       | 0.4       |
| Static off-state dv/dt (Vµs, Ta = 25°C)                     | 500       | 500       |

## Input Specifications

|                                   |          |          |
|-----------------------------------|----------|----------|
| Input voltage                     | 4-15Vdc  | 17-32Vdc |
| Drop out voltage                  | 1Vdc     | 1Vdc     |
| Min. input current (for on-state) | 7.5mA    | 13mA     |
| Maximum input current             | 34mA     | 24mA     |
| Input Resistance (Ohms)           | 500      | 1500     |
| Turn-on time*                     | 8.33msec | 8.33msec |
| Turn-off time                     | 8.33msec | 8.33msec |

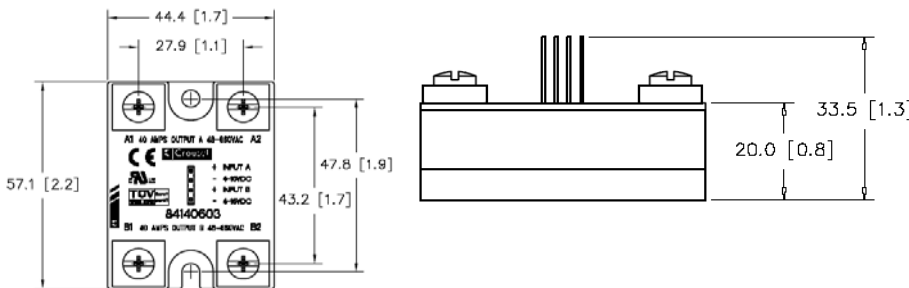
\* Random SSR's turn on in less than 100µs

## General Characteristics

|                                  |                              |
|----------------------------------|------------------------------|
| Operating Temperature (°C)       | -40 to + 80                  |
| Storage Temperature (°C)         | -40 to + 100                 |
| Input to output isolation        | 4000Vrms                     |
| Input/output to ground isolation | 2500Vrms                     |
| Input to output capacitance      | 8pF (typical)                |
| Operating Frequency              | 47 to 63 Hz                  |
| Housing Material                 | UL 94V0 (self extinguishing) |

## Standards of Compliance

CE Compliant with the LVD 73/23/EEC  
 UL / cUL Recognized per UL 508 and CSA C22.2 no. 14-M91

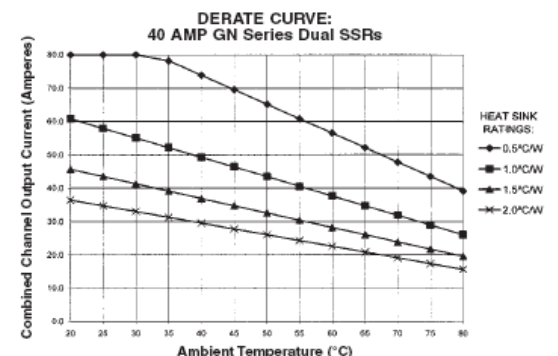
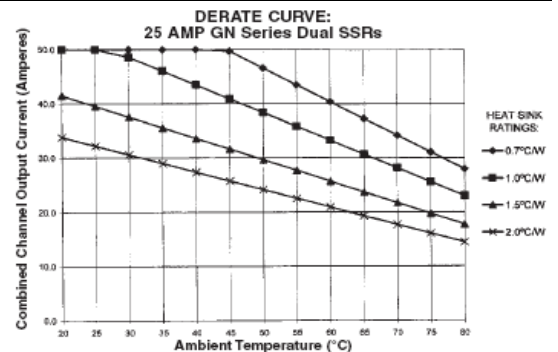


## Part Numbers 1/4" Quick Connect

| QC, Standard Input Pins | Zero Crossing Output |           |          |             |
|-------------------------|----------------------|-----------|----------|-------------|
|                         | Rating               | Output    | Input    | Part Number |
| QC, Standard Input Pins | 25 Amp               | 48-660Vac | 4-15Vdc  | 84140500    |
|                         | 25 Amp               | 48-660Vac | 17-32Vdc | 84140510    |
|                         | 40 Amp               | 48-660Vac | 4-15Vdc  | 84140600    |
|                         | 40 Amp               | 48-660Vac | 17-32Vdc | 84140610    |
| Random Fire Output      |                      |           |          |             |
| QC, Standard Input Pins | 25 Amp               | 48-660Vac | 4-15Vdc  | 84140501    |
|                         | 25 Amp               | 48-660Vac | 17-32Vdc | 84140511    |
|                         | 40 Amp               | 48-660Vac | 4-15Vdc  | 84140601    |
|                         | 40 Amp               | 48-660Vac | 17-32Vdc | 84140611    |

## Part Numbers Screw Terminals

| Standard Input Pins | Zero Crossing Output |           |          |             |
|---------------------|----------------------|-----------|----------|-------------|
|                     | Rating               | Output    | Input    | Part Number |
| Standard Input Pins | 25 Amp               | 48-660Vac | 4-15Vdc  | 84140503    |
|                     | 25 Amp               | 48-660Vac | 17-32Vdc | 84140513    |
|                     | 40 Amp               | 48-660Vac | 4-15Vdc  | 84140603    |
|                     | 40 Amp               | 48-660Vac | 17-32Vdc | 84140613    |
| Random Fire Output  |                      |           |          |             |
| Standard Input Pins | 25 Amp               | 48-660Vac | 4-15Vdc  | 84140530    |
|                     | 25 Amp               | 48-660Vac | 17-32Vdc | 84140531    |
|                     | 40 Amp               | 48-660Vac | 4-15Vdc  | 84140630    |
|                     | 40 Amp               | 48-660Vac | 17-32Vdc | 84140631    |



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