

- SCR Output
- 10A, 20A & 30A Models
- Ground Terminal Included
- Zero Voltage and Random Turn-On Switching
- Low Leakage
- Integral Heatsink (22.5 mm)
- DIN Rail & Panel Mount
- Status Indicating LED
- DC or AC Control
- Integrated Overvoltage Protection by Automatic Self Turn-On (Suffix P Option)

The Series CKR Solid State Relays utilize Crydom's proprietary thermal management technology providing a compact and efficient design. Built-in DIN Rail attachment, easy-to-use Box Clamp type terminals and integral heat sinking complete the package. This compact new design offers up to 30Arms in ambient temperatures of 25° C.

Manufactured in Crydom's ISO 9001 Certified facility for optimum product performance and reliability.

| MODEL NUMBERS                                                         | CKRD4810<br>CKRA4810                           | CKRD4820<br>CKRA4820 | CKRD4830<br>CKRA4830 |
|-----------------------------------------------------------------------|------------------------------------------------|----------------------|----------------------|
| <b>OUTPUT SPECIFICATIONS</b> ①                                        |                                                |                      |                      |
| Operating Voltage (47-63 Hz) [Vrms]                                   | 48-530                                         | 48-530               | 48-530               |
| Max. Load Current @ 25°C Ambient Temperature [Arms]                   | 10                                             | 20                   | 30                   |
| Min. Load Current, [Arms]                                             | 0.15                                           | 0.15                 | 0.15                 |
| Transient Overvoltage [Vpk]                                           | 1200                                           | 1200                 | 1200                 |
| Max. Surge Current, (16.6ms) [Apk]                                    | 120                                            | 250                  | 625                  |
| Max. 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                  | 1620                 |
| Max. Off-State Leakage Current @ Rated Voltage [mArms]                | 10                                             | 10                   | 10                   |
| Min. Off-State dv/dt @ Max. Rated Voltage [V/μsec] ②                  | 200                                            | 500                  | 500                  |
| Max. Turn-On Time ③                                                   | 1/2 Cycle (DC Control), 10.0 msec (AC Control) |                      |                      |
| Max. Turn-Off Time                                                    | 1/2 Cycle (DC Control), 40.0 msec (AC Control) |                      |                      |
| Power Factor (Min.) with Max. Load                                    | 0.5                                            | 0.5                  | 0.5                  |

| INPUT SPECIFICATIONS    | DC CONTROL                  | AC CONTROL<br>Standard         | AC CONTROL<br>(E Suffix) |
|-------------------------|-----------------------------|--------------------------------|--------------------------|
| Control Voltage Range   | 4.5-32 Vdc                  | 90-280 Vrms                    | 18-36 Vrms               |
| Max. Turn-On Voltage    | 4.5 Vdc                     | 90 Vrms                        | 18 Vrms                  |
| Min. Turn-Off Voltage   | 1.0 Vdc                     | 10 Vrms                        | 4.0 Vrms                 |
| Typical Input Current ④ | 15mA @ 12 Vdc, 20mA @ 24Vdc | 2mA @ 120 Vrms, 4 mA @ 240Vrms | 10mA @ 24 Vrms           |

## GENERAL NOTES

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- 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 random turn-on versions is 0.02msec.  
 ④ Input circuitry for DC control version incorporates active current limiter.

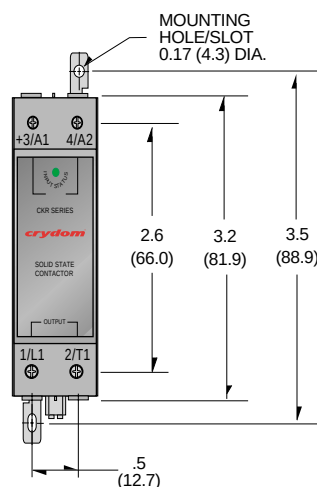
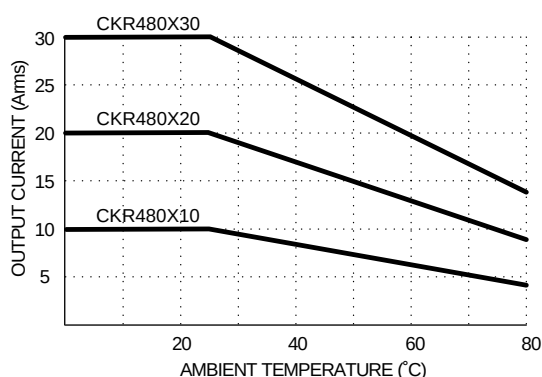
## GENERAL SPECIFICATIONS

|                                        |                           |                     |
|----------------------------------------|---------------------------|---------------------|
| Dielectric Strength                    | 50/60Hz Input/Output/Base | 4000 Vrms           |
| Insulation Resistance (Min.) @ 500 Vdc |                           | 10 <sup>9</sup> Ohm |
| Max. Capacitance Input/Output          |                           | 8 pF                |
| Ambient Operating Temperature Range    |                           | -40 to 80°C         |
| Ambient Storage Temperature Range      |                           | -40 to 125°C        |
| Status Indicating Display              |                           | Green LED           |

## MECHANICAL SPECIFICATIONS

|                                         |                            |
|-----------------------------------------|----------------------------|
| 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 (0.6-0.7Nm)  |
| Min. Side by Side Spacing               | 0.8 inch (20mm)            |

## CURRENT DERATING CURVES

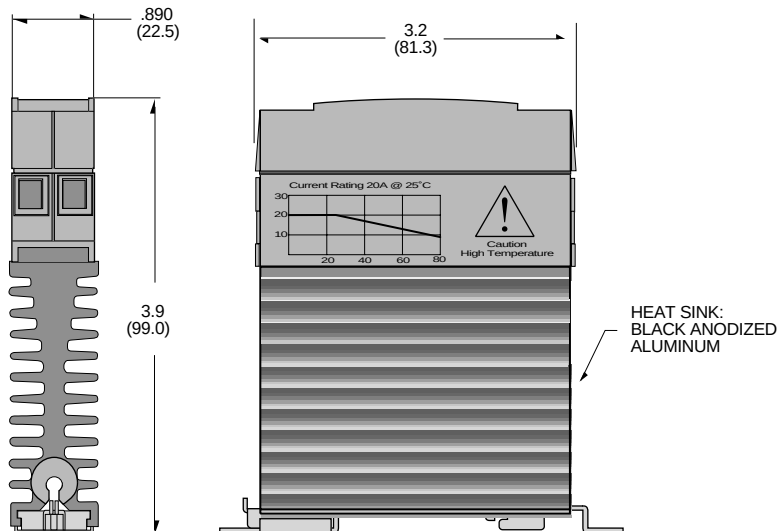


## MECHANICAL SPECIFICATIONS

All dimensions are in inches (millimeters)

## AVAILABLE OPTIONS

- E** 24 Vac Input (18-36 Vac)  
Example: **CKRA4810E**
- P** Internal Overvoltage Protection.  
Relay Will Self Trigger Between 900-1200 Vpk.  
Not Suitable For Capacitive Loads.  
Example: **CKRD4810P** (AC & DC Control)
- 10** Random Turn-On (AC & DC Control)  
Phase Controllable (DC Control)  
Example: **CKRD4810-10**



## APPROVALS

UL E116950  
CSA LR81689  
VDE 129156ÜG **CE**

CKR480  
Rev. 111803  
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