



- 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 CKRA4810	CKRD4820 CKRA4820	CKRD4830 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 Standard	AC CONTROL (E Suffix)
Control Voltage Range	4.0-32 Vdc	90-280 Vrms	18-36 Vrms
Max. Turn-On Voltage	4.0 Vdc	90 Vrms	18 Vrms
Min. Turn-Off Voltage	1.0 Vdc	10 Vrms	4.0 Vrms
Typical Input Current Range ④	8-12mA	2mA @ 120 Vrms, 4 mA @ 240Vrms	10mA @ 24 Vrms

## GENERAL NOTES

- 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.

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**胜特力材料 886-3-5753170**  
**胜特力电子(上海) 86-21-54151736**  
**胜特力电子(深圳) 86-755-83298787**  
[Http://www.100y.com.tw](http://www.100y.com.tw)

## GENERAL SPECIFICATIONS

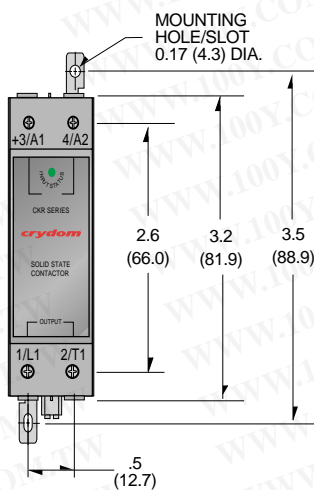
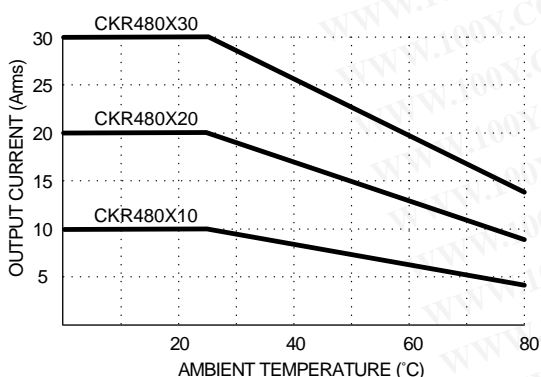
Dielectric Strength	50/60Hz Input/Output/Base	4000 Vrms
Insulation Resistance (Min.) @ 500 Vdc		10 <sup>9</sup> Ohm
Max. Capacitance Input/Output		8 pF
Ambient Operating Temperature Range		-40 to 80°C
Ambient Storage Temperature Range		-40 to 125°C
Status Indicating Display		Green LED

## 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)

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## CURRENT DERATING CURVES

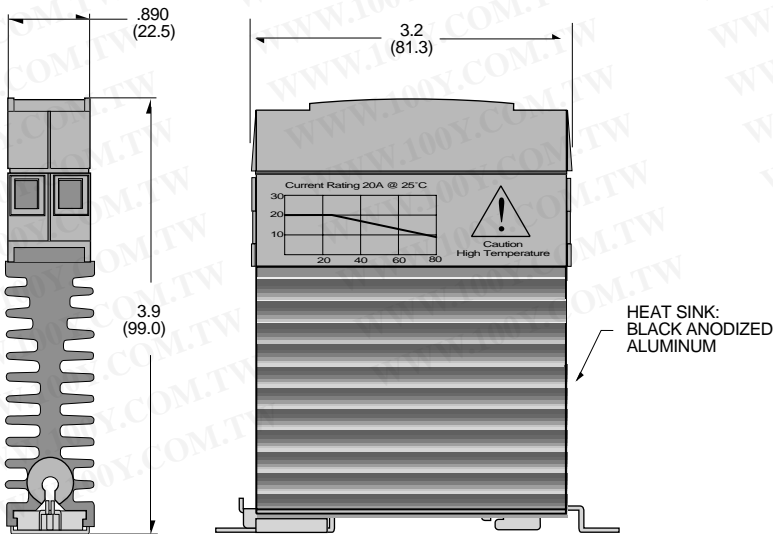


## MECHANICAL SPECIFICATIONS

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. 09122006  
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For recommended applications and more information contact:  
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 Crydom Corp, 2320 Paseo de las Americas, Ste. 201, San Diego, CA 92154  
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**CKR48 Series**



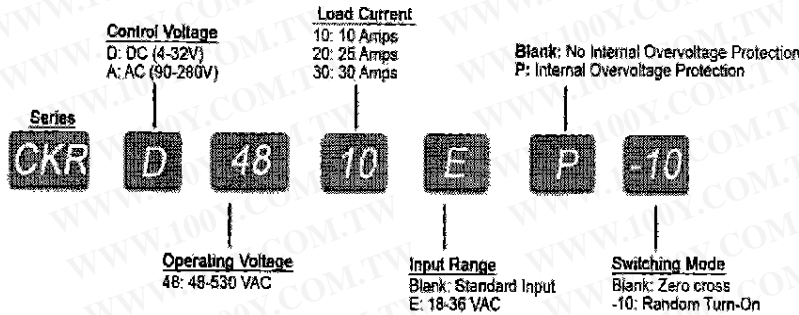
- ?Ratings from 10A to 30A @ 530 VAC
- ?Slim 22.5mm (width) package
- ?SCR output for heavy industrial loads
- ?LED input status indicator
- ?AC or DC control
- ?Zero-crossing (resistive loads) or random-fire (inductive loads) output

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**PRODUCT SELECTION**

Description	10 A	20 A	30 A
4-32 VDC Control	CKRD4810	CKRD4820	CKRD4830
90-280 VAC Control	CKRA4810	CKRA4820	CKRA4830
18-36 VAC Control	CKRA4810E	CKRA4820E	CKRA4830E

**AVAILABLE OPTIONS**



**OUTPUT SPECIFICATIONS (1)**

Description	10 A	20 A	30 A
Operating Voltage (47-63Hz) [Vrms]	48-530	48-530	48-530
Transient Overvoltage [Vpk]	1200	1200	1200
Maximum Off-State Leakage Current @ Rated Voltage [mA rms]	10	10	10
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/%sec] (2)	500	500	500
Maximum Load Current [A rms]	10	20	30
Minimum Load Current [A rms]	0.15	0.15	0.15
Maximum Surge Current (16.6ms) [A pk]	120	250	625
Maximum 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
Minimum Power Factor (with Maximum Load)	0.5	0.5	0.5



## DIN Rail Mount

### INPUT SPECIFICATIONS (1)

#### Description

Control Voltage Range	4.0-32 VDC	90-280 Vrms	18-36 Vrms
Maximum Turn-On Voltage	4.0 VDC	90 Vrms	18 Vrms
Minimum Turn-Off Voltage	1.0 VDC	10 Vrms	4.0 Vrms
Typical Input Current (4)	8-12 mA	2 mA @ 120 Vrms, 4 mA @ 240 Vrms	10 mA @ 24 Vrms
Maximum Turn-On Time [msec] (3)	1/2 Cycle	10	10
Maximum Turn-Off Time [msec]	1/2 Cycle	40	40

### GENERAL SPECIFICATIONS

#### Description

Dielectric Strength, Input/Output/Base (50/60Hz)	4000Vrms
Minimum Insulation Resistance (@ 500 V DC)	10 <sup>9</sup> Ohms
Maximum Capacitance, Input/Output	8 pF
Ambient Operating Temperature Range	-40℃ to 80℃
Ambient Storage Temperature Range	-40℃ to 125℃
Status Indicator Display	Green LED
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 (0.6-0.7 Nm)
Min. Side by Side Spacing	0.8 inch (20mm)

#### Parameters

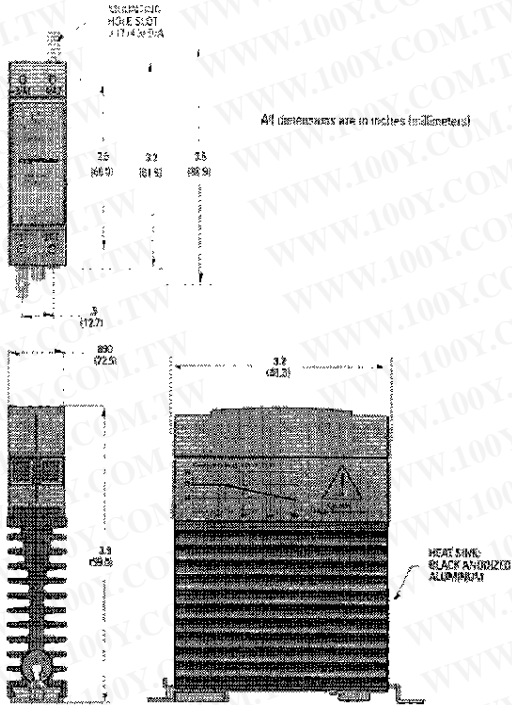
### GENERAL NOTES

- 1) All parameters at 25℃ 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 0.02 msec
- 4) Input circuitry for DC control version incorporates active current limiter.

**rydom**

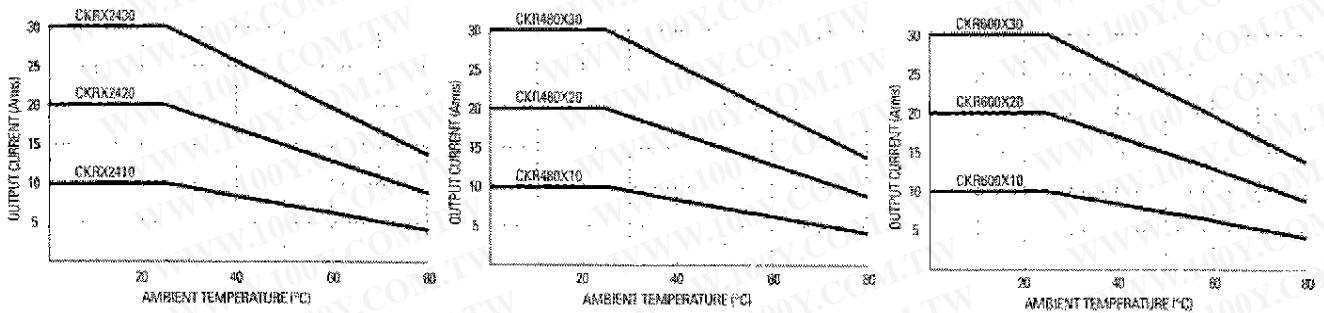
**DIN Rail Mount**

**MECHANICAL SPECIFICATIONS**



**THERMAL DERATE INFORMATION**

**CURRENT DERATING CURVES**



**AGENCY APPROVALS**

UL E116950  
 CSA LR81689  
 VDE 129156  
**CE**

Rev. 032409