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## Solid State Relays - DIN Rail Mount: CKR24



### Features

SCR output • 10-30Amp • 24-280 Vrms  
 • AC Switching • AC/DC control • 22.5 mm slim package • Integrated heatsink  
 • LED status indicator • Box clamp terminals.

Product	INPUT SPECIFICATIONS	OUTPUT SPECIFICATIONS			
	Control Voltage Range	Load Current	Switching Voltage Type	Turn On	Load Voltage Range
<b>CKRD2410</b>	4-32 Volts DC	0.15-10 Amps RMS	AC	Zero cross	24-280 Volts RMS
<b>CKRD2410-10</b>	4-32 Volts DC	0.15-10 Amps RMS	AC	Random	24-280 Volts RMS
<b>CKRD2420</b>	4-32 Volts DC	0.15-20 Amps RMS	AC	Zero cross	24-280 Volts RMS
<b>CKRD2420-10</b>	4-32 Volts DC	0.15-20 Amps RMS	AC	Random	24-280 Volts RMS
<b>CKRD2430</b>	4-32 Volts DC	0.15-30 Amps RMS	AC	Zero cross	24-280 Volts RMS
<b>CKRD2430-10</b>	4-32 Volts DC	0.15-30 Amps RMS	AC	Random	24-280 Volts RMS
<b>CKRA2410</b>	90-280 Volts RMS	0.15-10 Amps RMS	AC	Zero cross	24-280 Volts RMS

<b>CKRA2410-10</b>	90-280 Volts RMS	0.15-10 Amps RMS	AC	Random	24-280 Volts RMS
<b>CKRA2410E</b>	18-36 Volts RMS	0.15-10 Amps RMS	AC	Zero cross	24-280 Volts RMS
<b>CKRA2410E-10</b>	18-36 Volts RMS	0.15-10 Amps RMS	AC	Random	24-280 Volts RMS
<b>CKRA2420</b>	90-280 Volts RMS	0.15-20 Amps RMS	AC	Zero cross	24-280 Volts RMS
<b>CKRA2420-10</b>	90-280 Volts RMS	0.15-20 Amps RMS	AC	Random	24-280 Volts RMS
<b>CKRA2420E</b>	18-36 Volts RMS	0.15-20 Amps RMS	AC	Zero cross	24-280 Volts RMS
<b>CKRA2420E-10</b>	18-36 Volts RMS	0.15-20 Amps RMS	AC	Random	24-280 Volts RMS
<b>CKRA2430</b>	90-280 Volts RMS	0.15-30 Amps RMS	AC	Zero cross	24-280 Volts RMS
<b>CKRA2430-10</b>	90-280 Volts RMS	0.15-30 Amps RMS	AC	Random	24-280 Volts RMS
<b>CKRA2430E</b>	18-36 Volts RMS	0.15-30 Amps RMS	AC	Zero cross	24-280 Volts RMS
<b>CKRA2430E-10</b>	18-36 Volts RMS	0.15-30 Amps RMS	AC	Random	24-280 Volts RMS



- 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	CKRD2410 CKRA2410	CKRD2420 CKRA2420	CKRD2430 CKRA2430
<b>OUTPUT SPECIFICATIONS</b> ①			
Operating Voltage (47-63 Hz) [Vrms]	24-280	24-280	24-280
Max. Load Current @ 25°C Ambient Temperature [Arms]	10	20	30
Min. Load Current, [Arms]	0.15	0.15	0.15
Transient Overvoltage [Vpk]	600	600	600
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

<b>INPUT SPECIFICATIONS</b> ①	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 ④	8-12 mA	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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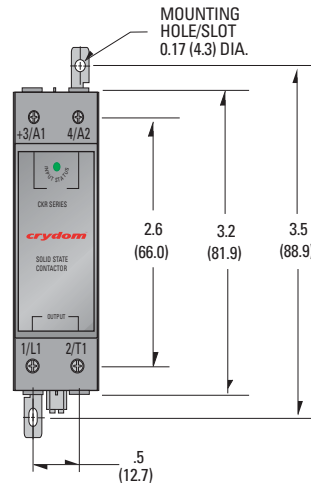
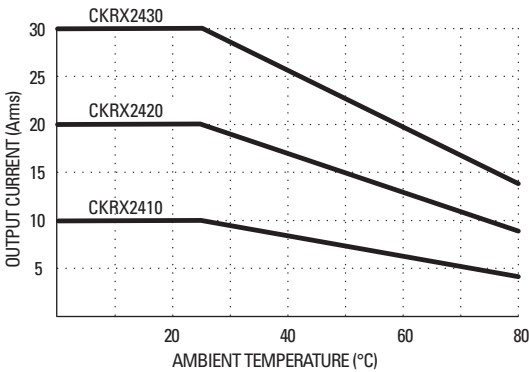
### GENERAL SPECIFICATIONS

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

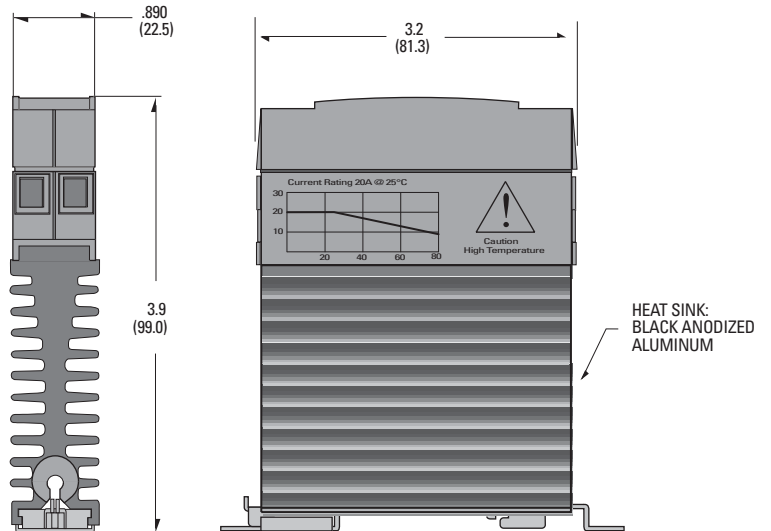


### MECHANICAL SPECIFICATIONS

All dimensions are in inches (millimeters)

### AVAILABLE OPTIONS

- E** 24 Vac Input (18-36 Vac)  
Example: CKRA2410E
- P** Internal Overvoltage Protection.  
Relay Will Self Trigger Between 450-600 Vpk.  
Not Suitable For Capacitive Loads.  
Example: CKRD2410P (AC & DC Control)
- 10** Random Turn-On (AC & DC Control)  
Phase Controllable (DC Control)  
Example: CKRD2410-10



### APPROVALS

UL E116950  
CSA LR81689  
VDE 129156ÜG



CKR240  
Rev. 100107

