Solid State Relays - DIN Rail Mount: CMR

Features

SCR output • 35-65Amp • 240/480/660 Vrms • AC/DC Control • AC Switching • Integrated heatsink • LED status indicator • Box clamp terminals.

	INPUT SPECIFICATIONS	OUTPUT SPECIFICATIONS			
Product	**Control Voltage Range**	**Load Current**	**Switching Voltage Type**	**Turn On**	**Load Voltage Range**
CMRD2435	3-32 Volts DC	0.15-35 Amps RMS	AC	Zero cross	24-280 Volts RMS
CMRD2435-10	3-32 Volts DC	0.15-35 Amps RMS	AC	Random	24-280 Volts RMS
CMRD2445	3-32 Volts DC	0.15-45 Amps RMS	AC	Zero cross	24-280 Volts RMS
CMRD2445-10	3-32 Volts DC	0.15-45 Amps RMS	AC	Random	24-280 Volts RMS
CMRD2455	3-32 Volts DC	0.25-55 Amps RMS	AC	Zero cross	24-280 Volts RMS
CMRD2455-10	3-32 Volts DC	0.25-55 Amps RMS	AC	Random	24-280 Volts RMS
CMRD2465	3-32 Volts DC	0.25-65 Amps RMS	AC	Zero cross	24-280 Volts RMS

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CMRA2435-10	90-140 Volts RMS	0.15-35 Amps RMS	AC	Random	24-280 Volts RMS
CMRA2435E	18-36 Volts RMS	0.15-35 Amps RMS	AC	Zero cross	24-280 Volts RMS
CMRA2435E-10	18-36 Volts RMS	0.15-35 Amps RMS	AC	Random	24-280 Volts RMS
CMRA2445	90-140 Volts RMS	0.15-45 Amps RMS	AC	Zero cross	24-280 Volts RMS
CMRA2445-10	90-140 Volts RMS	0.15-45 Amps RMS	AC	Random	24-280 Volts RMS
CMRA2445E	18-36 Volts RMS	0.15-45 Amps RMS	AC	Zero cross	24-280 Volts RMS
CMRA2445E-10	18-36 Volts RMS	0.15-45 Amps RMS	AC	Random	24-280 Volts RMS
CMRA2455	90-140 Volts RMS	0.25-55 Amps RMS	AC	Zero cross	24-280 Volts RMS
CMRA2455-10	90-140 Volts RMS	0.25-55 Amps RMS	AC	Random	24-280 Volts RMS
CMRA2455E	18-36 Volts RMS	0.25-55 Amps RMS	AC	Zero cross	24-280 Volts RMS
CMRA2455E-10	18-36 Volts RMS	0.25-55 Amps RMS	AC	Random	24-280 Volts RMS
CMRA2465	90-140 Volts RMS	0.25-65 Amps RMS	AC	Zero cross	24-280 Volts RMS
CMRA2465-10	90-140 Volts RMS	0.25-65 Amps RMS	AC	Random	24-280 Volts RMS
CMRA2465E	18-36 Volts RMS	0.25-65 Amps RMS	AC	Zero cross	24-280 Volts RMS
CMRA2465E-10	18-36 Volts RMS	0.25-65 Amps RMS	AC	Random	24-280 Volts RMS
CMRA4835	90-140 Volts RMS	0.15-35 Amps RMS	AC	Zero cross	48-530 Volts RMS
CMRA4835-10	90-140 Volts RMS	0.15-35 Amps RMS	AC	Random	48-530 Volts RMS
CMRA4835E	18-36 Volts RMS	0.15-35 Amps RMS	AC	Zero cross	48-530 Volts RMS

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CMRD2465-10	3-32 Volts DC	0.25-65 Amps RMS	AC	Random	24-280 Volts RMS
CMRD4835	4-32 Volts DC	0.15-35 Amps RMS	AC	Zero cross	48-530 Volts RMS
CMRD4835-10	4-32 Volts DC	0.15-35 Amps RMS	AC	Random	48-530 Volts RMS
CMRD4845	4-32 Volts DC	0.15-45 Amps RMS	AC	Zero cross	48-530 Volts RMS
CMRD4845-10	4-32 Volts DC	0.15-45 Amps RMS	AC	Random	48-530 Volts RMS
CMRD4855	4-32 Volts DC	0.25-55 Amps RMS	AC	Zero cross	48-530 Volts RMS
CMRD4855-10	4-32 Volts DC	0.25-55 Amps RMS	AC	Random	48-530 Volts RMS
CMRD4865	4-32 Volts DC	0.25-65 Amps RMS	AC	Zero cross	48-530 Volts RMS
CMRD4865-10	4-32 Volts DC	0.25-65 Amps RMS	AC	Random	48-530 Volts RMS
CMRD6035	4-32 Volts DC	0.15-35 Amps RMS	AC	Zero cross	48-660 Volts RMS
CMRD6035-10	4-32 Volts DC	0.15-35 Amps RMS	AC	Random	48-660 Volts RMS
CMRD6045	4-32 Volts DC	0.15-45 Amps RMS	AC	Zero cross	48-660 Volts RMS
CMRD6045-10	4-32 Volts DC	0.15-45 Amps RMS	AC	Random	48-660 Volts RMS
CMRD6055	4-32 Volts DC	0.25-55 Amps RMS	AC	Zero cross	48-660 Volts RMS
CMRD6055-10	4-32 Volts DC	0.25-55 Amps RMS	AC	Random	48-660 Volts RMS
CMRD6065	4-32 Volts DC	0.25-65 Amps RMS	AC	Zero cross	48-660 Volts RMS
CMRD6065-10	4-32 Volts DC	0.25-65 Amps RMS	AC	Random	48-660 Volts RMS
CMRA2435	90-140 Volts RMS	0.15-35 Amps RMS	AC	Zero cross	24-280 Volts RMS

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CMRA4835E-10	18-36 Volts RMS	0.15-35 Amps RMS	AC	Random	48-530 Volts RMS
CMRA4845	90-140 Volts RMS	0.15-45 Amps RMS	AC	Zero cross	48-530 Volts RMS
CMRA4845-10	90-140 Volts RMS	0.15-45 Amps RMS	AC	Random	48-530 Volts RMS
CMRA4845E	18-36 Volts RMS	0.15-45 Amps RMS	AC	Zero cross	48-530 Volts RMS
CMRA4845E-10	18-36 Volts RMS	0.15-45 Amps RMS	AC	Random	48-530 Volts RMS
CMRA4855	90-140 Volts RMS	0.25-55 Amps RMS	AC	Zero cross	48-530 Volts RMS
CMRA4855-10	90-140 Volts RMS	0.25-55 Amps RMS	AC	Random	48-530 Volts RMS
CMRA4855E	18-36 Volts RMS	0.25-55 Amps RMS	AC	Zero cross	48-530 Volts RMS
CMRA4855E-10	18-36 Volts RMS	0.25-55 Amps RMS	AC	Random	48-530 Volts RMS
CMRA4865	90-140 Volts RMS	0.25-65 Amps RMS	AC	Zero cross	48-530 Volts RMS
CMRA4865-10	90-140 Volts RMS	0.25-65 Amps RMS	AC	Random	48-530 Volts RMS
CMRA4865E	18-36 Volts RMS	0.25-65 Amps RMS	AC	Zero cross	48-530 Volts RMS
CMRA4865E-10	18-36 Volts RMS	0.25-65 Amps RMS	AC	Random	48-530 Volts RMS
CMRA6035	90-140 Volts RMS	0.15-35 Amps RMS	AC	Zero cross	48-660 Volts RMS
CMRA6035-10	90-140 Volts RMS	0.15-35 Amps RMS	AC	Random	48-660 Volts RMS
CMRA6035E	18-36 Volts RMS	0.15-35 Amps RMS	AC	Zero cross	48-660 Volts RMS
CMRA6035E-10	18-36 Volts RMS	0.15-35 Amps RMS	AC	Random	48-660 Volts RMS
CMRA6045	90-140 Volts RMS	0.15-45 Amps RMS	AC	Zero cross	48-660 Volts RMS

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crydom™ Series CMRD/CMRA24

35-65Amp • 240 Vac - AC OUTPUT

- **Zero Voltage and Random Turn-On Switching**
- **DIN Rail & Panel Mount**
- **Status Indicating LED**
- **DC or AC Control**
- **Integrated Overvoltage Protection by Automatic Self Turn-On (Suffix P)**

Featuring state-of-the-art Surface Mount Technology, these SPST-NO relays deliver proven reliability in the most demanding applications. Output consists of an SCR AC switch and is available in zero-cross or random turn-on versions.
Manufactured in Crydom's ISO 9001 Certified facility for optimum product performance and reliability.

MODEL NUMBERS	CMRD2435 CMRA2435	CMRD2445 CMRA2445	CMRD2455 CMRA2455	CMRD2465 CMRA2465
OUTPUT SPECIFICATIONS ①				
Operating Voltage (47-63 Hz) [Vrms]	24-280	24-280	24-280	24-280
Max. Load Current @ 25°C Ambient Temperature [Arms]	35	45	55	65
Min. Load Current, [Arms]	0.15	0.15	0.25	0.25
Transient Overvoltage [Vpk]	600	600	600	600
Max. Surge Current, (16.6ms) [Apk]	250	625	1000	1200
Max. On-State Voltage Drop @ Rated Current [Vpk]	1.6	1.6	1.6	1.6
Thermal Resistance Junction to Case ($R_{\theta JC}$) [°C/W]	1.02	0.63	0.31	0.28
Maximum I^2t for Fusing, (8.3 msec.) [A^2 sec]	260	1620	4150	6000
Max. Off-State Leakage Current @ Rated Voltage [mArms]	10	10	10	10
Min. Off-State dv/dt @ Max. Rated Voltage [V/µsec] ②	500	500	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	0.5

INPUT SPECIFICATIONS ①	DC CONTROL	AC CONTROL
Control Voltage Range	3-32 Vdc	90-140 Vrms
Max. Reverse Voltage	32 Vdc	—
Max. Turn-On Voltage	3.0 Vdc	90 Vrms
Min. Turn-Off Voltage	1.0 Vdc	10 Vrms
Max. Input Current	30.0mA ④	—
Typical Input Current	17mA @ 5 Vdc	15mA @ 120 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 incorporates active current limiter.

GENERAL SPECIFICATIONS	
Dielectric Strength 50/60Hz Input/Output/Base	4000 Vrms
Insulation Resistance (Min.) @ 500 Vdc	10^9 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)	16.8 oz. (476g)
Encapsulation:	Thermally Conductive Epoxy
Terminals:	Cage Type
Maximum Wire Size- Output: AWG 8 (3.8mm) Input: AWG12 (2.5mm)	
Recommended Terminal Screw Torque Range:	Output: 10-15 in lb (1.1-1.7 Nm) Input: 5-6 in lb (0.6-0.7 Nm)

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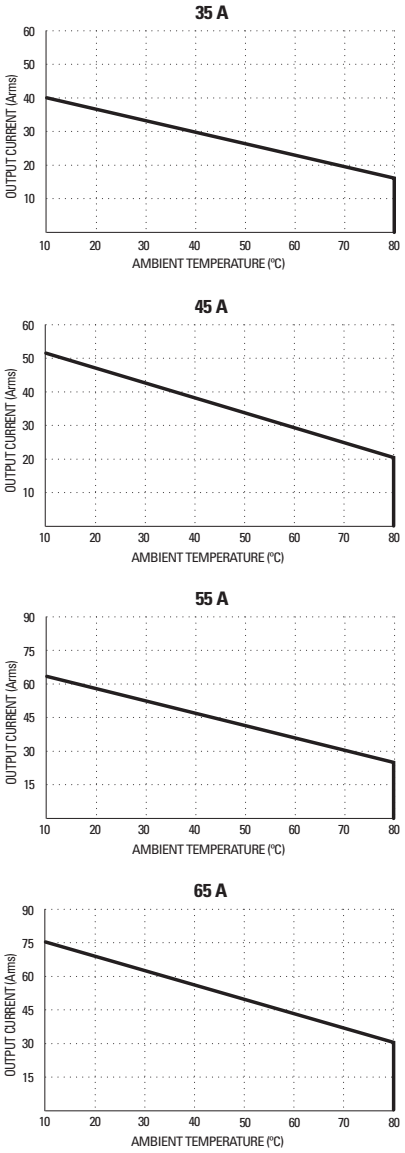
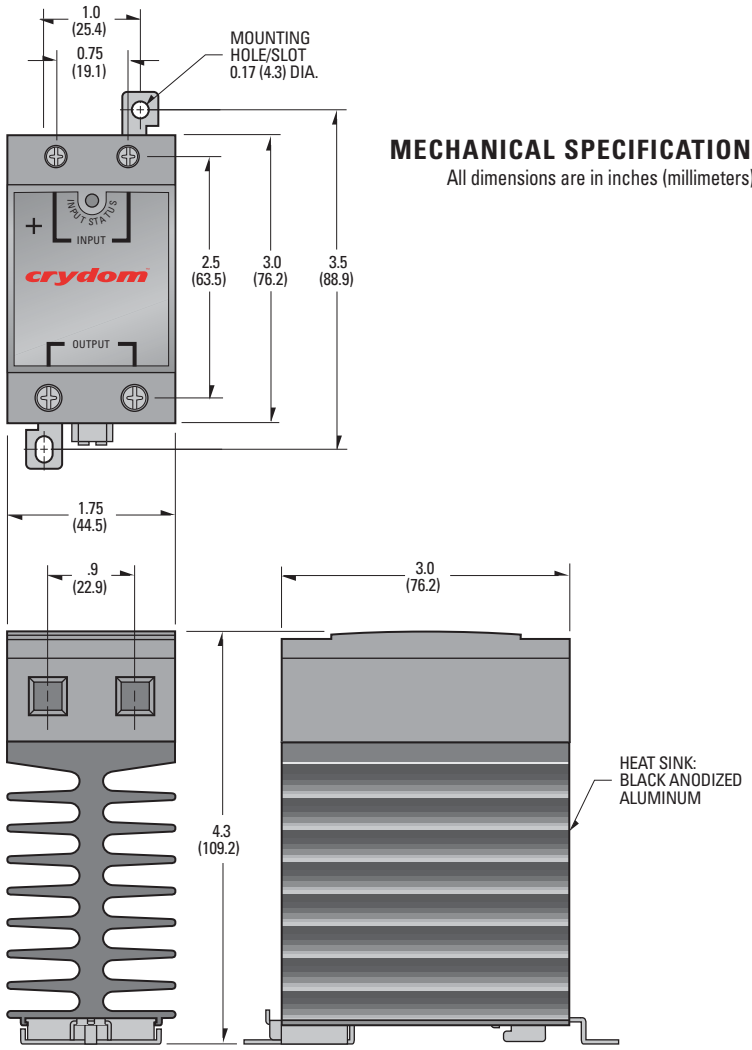
CURRENT DERATING CURVES





MECHANICAL SPECIFICATIONS

All dimensions are in inches (millimeters)

AVAILABLE OPTIONS

-10 Random Turn-On, Phase Controllable
Example: **CMRD2435-10**

E 24 Vac Input (18-36 Vac)
Example: **CMRA2435E**

P Internal Overvoltage Protection
Relay Will Self Trigger Between
450-600 Vpk. Not Suitable For Capacitive Loads.
Example: **CMRD2435P**

APPROVALS

UL E116950
CSA LR81689
VDE 126921 UG

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crydom™ Series CMRD/CMRA48

35-65Amp • 480 Vac - AC OUTPUT

- **Zero Voltage and Random Turn-On Switching**
- **DIN Rail & Panel Mount**
- **Status Indicating LED**
- **DC or AC Control**
- **Integrated Overvoltage Protection by Automatic Self Turn-On (Suffix P)**

Featuring state-of-the-art Surface Mount Technology, these SPST-NO relays deliver proven reliability in the most demanding applications. Output consists of an SCR AC switch and is available in zero-cross or random turn-on versions.

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

MODEL NUMBERS	CMRD4835 CMRA4835	CMRD4845 CMRA4845	CMRD4855 CMRA4855	CMRD4865 CMRA4865
OUTPUT SPECIFICATIONS ①				
Operating Voltage (47-63 Hz) [Vrms]	48-530	48-530	48-530	48-530
Max. Load Current @ 25°C Ambient Temperature [Arms]	35	45	55	65
Min. Load Current, [Arms]	0.15	0.15	0.25	0.25
Transient Overvoltage [Vpk]	1200	1200	1200	1200
Max. Surge Current, (16.6ms) [Apk]	250	625	1000	1200
Max. On-State Voltage Drop @ Rated Current [Vpk]	1.7	1.7	1.7	1.7
Thermal Resistance Junction to Case ($R_{\theta JC}$) [° C/W]	1.02	0.63	0.31	0.28
Maximum I^2t for Fusing, (8.3 msec.) [A^2sec]	260	1620	4150	6000
Max. Off-State Leakage Current @ Rated Voltage [mArms]	10	10	10	10
Min. Off-State dv/dt @ Max. Rated Voltage [V/µsec] ②	500	500	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	0 .5

INPUT SPECIFICATIONS ①	DC CONTROL	AC CONTROL
Control Voltage Range	4-32 Vdc	90-140 Vrms
Max. Reverse Voltage	32 Vdc	—
Max. Turn-On Voltage	4.0 Vdc	90 Vrms
Min. Turn-Off Voltage	1.0 Vdc	10 Vrms
Max. Input Current	30.0mA ④	—
Typical Input Current	14mA @ 5 Vdc	15mA @ 120 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 incorporates active current limiter.

GENERAL SPECIFICATIONS	
Dielectric Strength 50/60Hz Input/Output/Base	4000 Vrms
Insulation Resistance (Min.) @ 500 Vdc	10^9 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)	16.8 oz. (476g)
Encapsulation:	Thermally Conductive Epoxy
Terminals:	Cage Type
Maximum Wire Size- Output: AWG 8 (3.8mm) Input: AWG12 (2.5mm)	
Recommended Terminal Screw Torque Range:	Output: 10-15 in lb (1.1-1.7 Nm) Input: 5-6 in lb (0.6-0.7 Nm)

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CURRENT DERATING CURVES

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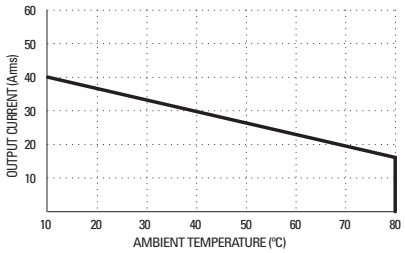

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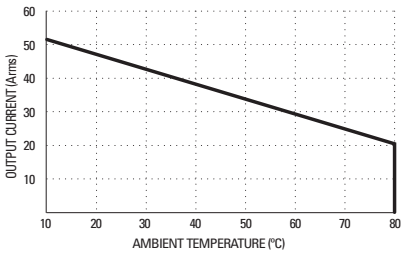

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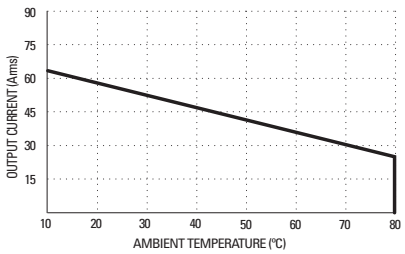

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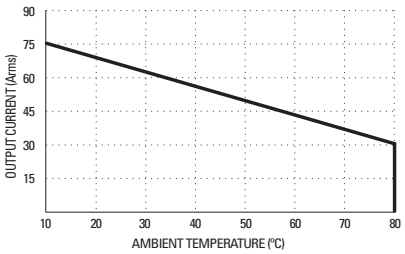

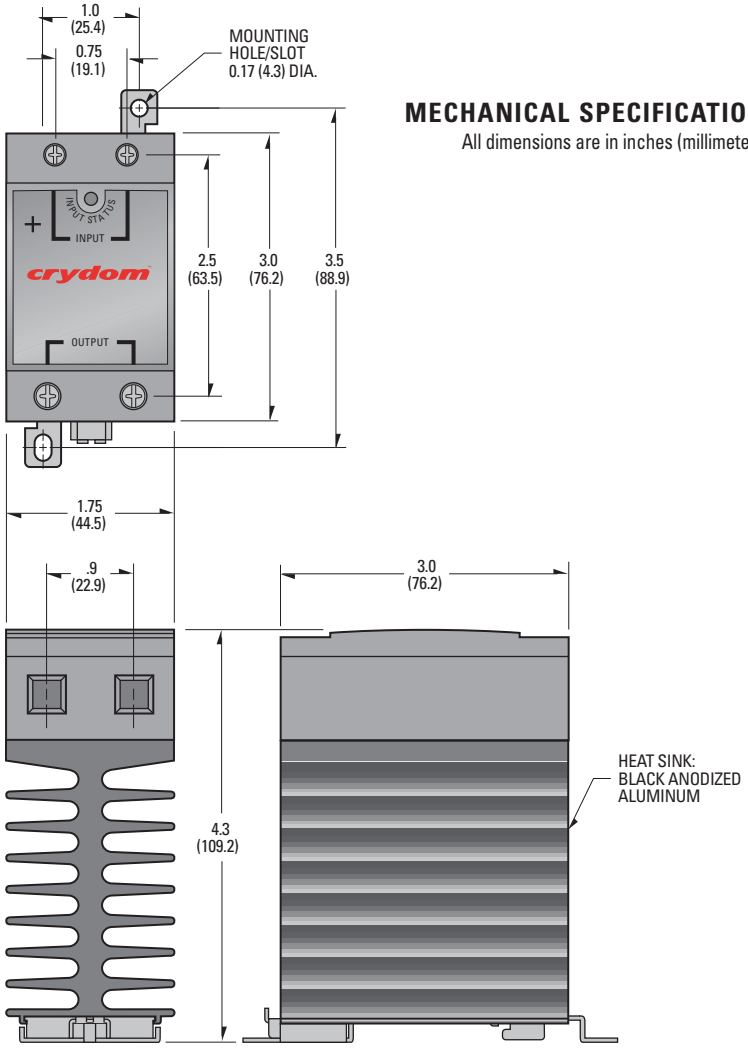

MECHANICAL SPECIFICATIONS

All dimensions are in inches (millimeters)

AVAILABLE OPTIONS

-10 Random Turn-On, Phase Controllable
Example: **CMRD4835-10**

E 24 Vac Input (18-36 Vac)
Example: **CMRA4835E**

P Internal Overvoltage Protection.
Relay Will Self Trigger Between
900-1200Vpk. Not suitable For Capacitive Loads.
Example: **CMRD4835P**

APPROVALS

UL E116950
CSA LR81689
VDE 126921 UG

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crydom™ Series CMRD/CMRA60

35-65Amp • 600 Vac - AC OUTPUT

- **Zero Voltage and Random Turn-On Switching**
- **DIN Rail & Panel Mount**
- **Status Indicating LED**
- **DC or AC Control**
- **Integrated Overvoltage Protection by Automatic Self Turn-On (Suffix P)**

Featuring state-of-the-art Surface Mount Technology, these SPST-NO relays deliver proven reliability in the most demanding applications. Output consists of an SCR AC switch and is available in zero-cross or random turn-on versions.

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

MODEL NUMBERS	CMRD6035 CMRA6035	CMRD6045 CMRA6045	CMRD6055 CMRA6055	CMRD6065 CMRA6065
OUTPUT SPECIFICATIONS ①				
Nominal LIne Voltage (±10%) [Vrms]	600	600	600	600
Operating Voltage (47-63 Hz) [Vrms]	48-660	48-660	48-660	48-660
Max. Load Current @ 25°C Ambient Temperature [Arms]	35	45	55	65
Min. Load Current, [Arms]	0.15	0.15	0.25	0.25
Transient Overvoltage [Vpk]	1200	1200	1200	1200
Max. Surge Current, (16.6ms) [Apk]	250	625	1000	1200
Max. On-State Voltage Drop @ Rated Current [Vpk]	1.7	1.7	1.7	1.7
Thermal Resistance Junction to Case ($R_{\theta JC}$) [°C/W]	1.02	0.63	0.31	0.28
Maximum I^2t for Fusing, (8.3 msec.) [A^2sec]	260	1620	4150	6000
Max. Off-State Leakage Current @ Rated Voltage [mArms]	1.0	1.0	1.0	1.0
Min. Off-State dv/dt @ Max. Rated Voltage [V/µsec] ②	500	500	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	0.5

INPUT SPECIFICATIONS ①	DC CONTROL	AC CONTROL
Control Voltage Range	4-32 Vdc	90-140 Vrms
Max. Reverse Voltage	32 Vdc	—
Max. Turn-On Voltage	4.0 Vdc	90 Vrms
Min. Turn-Off Voltage	1.0 Vdc	10 Vrms
Max. Input Current	30.0mA ④	—
Typical Input Current	14mA @ 5 Vdc	15mA @ 120 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 incorporates active current limiter.

GENERAL SPECIFICATIONS

Dielectric Strength 50/60Hz Input/Output/Base	4000 Vrms
Insulation Resistance (Min.) @ 500 Vdc	10^9 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)	16.8 oz. (476g)
Encapsulation:	Thermally Conductive Epoxy
Terminals:	Cage Type
Maximum Wire Size- Output: AWG 8 (3.8mm) Input: AWG12 (2.5mm)	
Recommended Terminal Screw Torque Range:	Output: 10-15 in lb (1.1-1.7 Nm) Input: 5-6 in lb (0.6-0.7 Nm)

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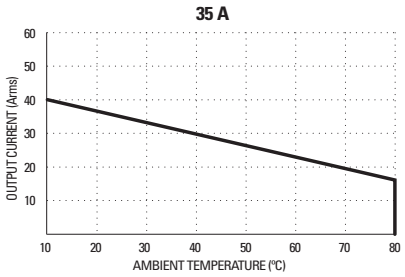
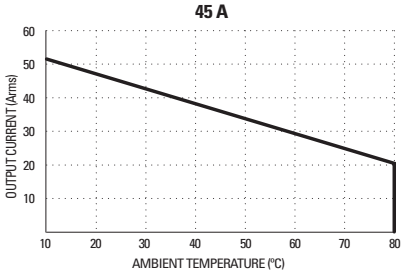
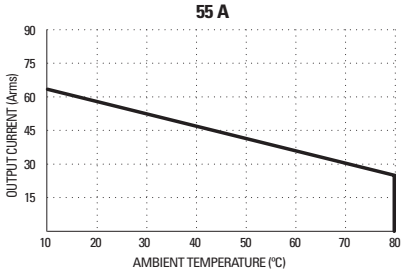
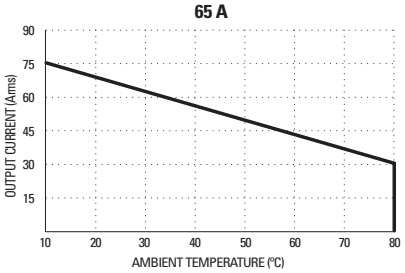
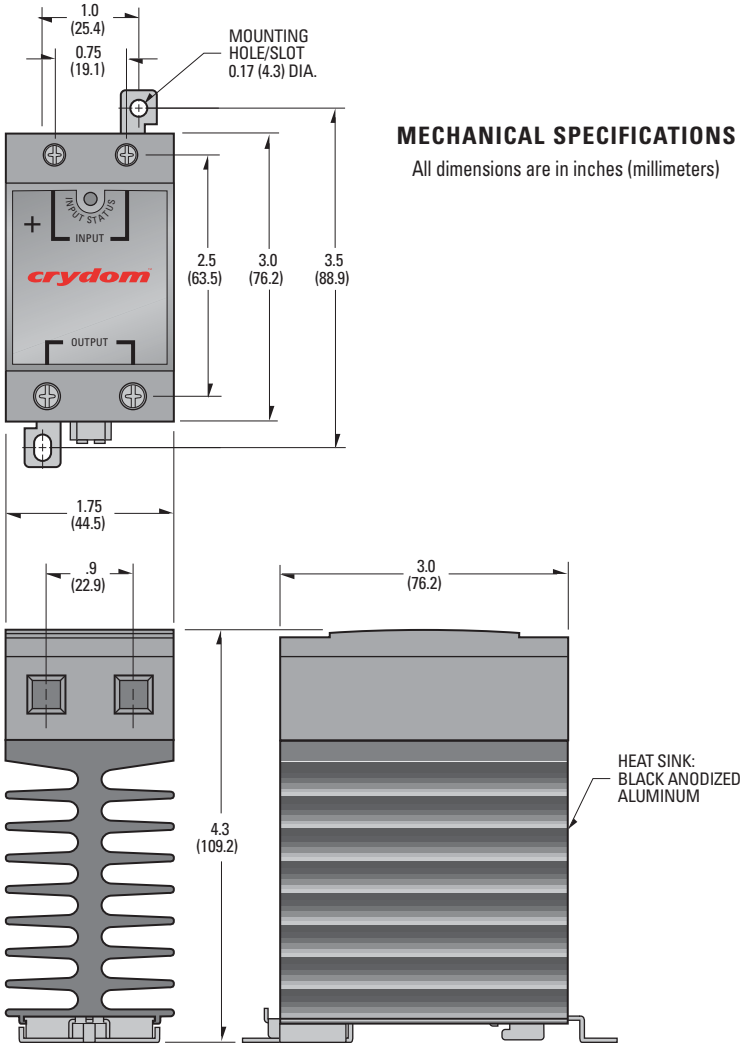
CURRENT DERATING CURVES











MECHANICAL SPECIFICATIONS

All dimensions are in inches (millimeters)

AVAILABLE OPTIONS

-10 Random Turn-On, Phase Controllable
Example: **CMRD6035-10**

E 24 Vac Input (18-36 Vac)
Example: **CMRA6035E**

P Internal Overvoltage Protection.
Relay Will Self Trigger Between
900-1200Vpk. Not Suitable For Capacitive Loads.
Example: **CMRD6035P**

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APPROVALS

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