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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.

Product	INPUT SPECIFICATIONS	OUTPUT SPECIFICATIONS			
	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

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

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

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	90-140 Volts RMS	0.15-45 Amps RMS	AC	Random	48-530 Volts RMS

- 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) [A _{pk}]	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 _{qJC}) [°C/W]	1.02	0.63	0.31	0.28
Maximum I ² t 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.) w/ 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 SPECIFICATIONS

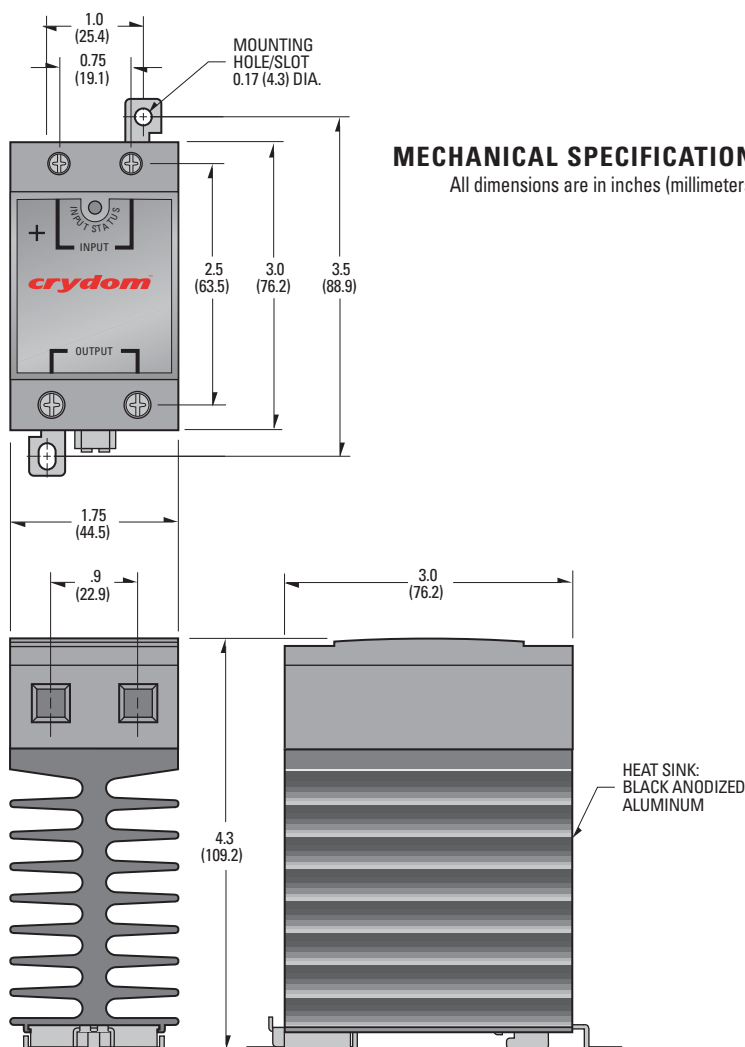
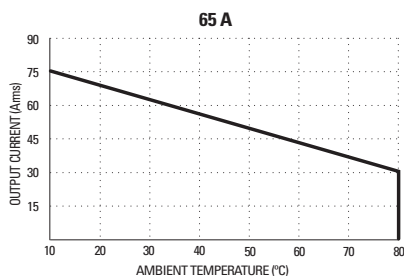
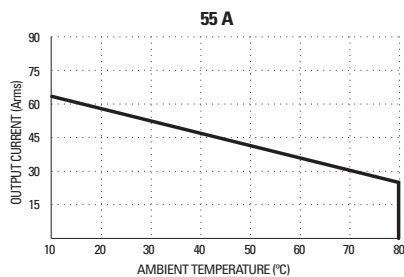
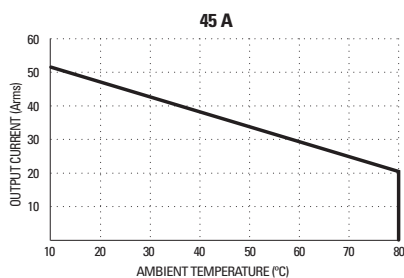
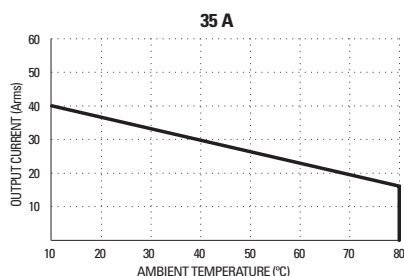
Dielectric Strength 50/60Hz Input/Output/Base	4000 Vrms
Insulation Resistance (Min.) @ 500 Vdc	10 ⁹ Ohm
Max. Capacitance Input/Output	8 pF
Ambient Operating Temperature Range	-40 to 80°C
Ambient Storage Temperature Range	-40 to 125°C
Status Indicating Display	Green LED

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



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



- 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 _{qJC}) [° C/W]	1.02	0.63	0.31	0.28
Maximum I ² t 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	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

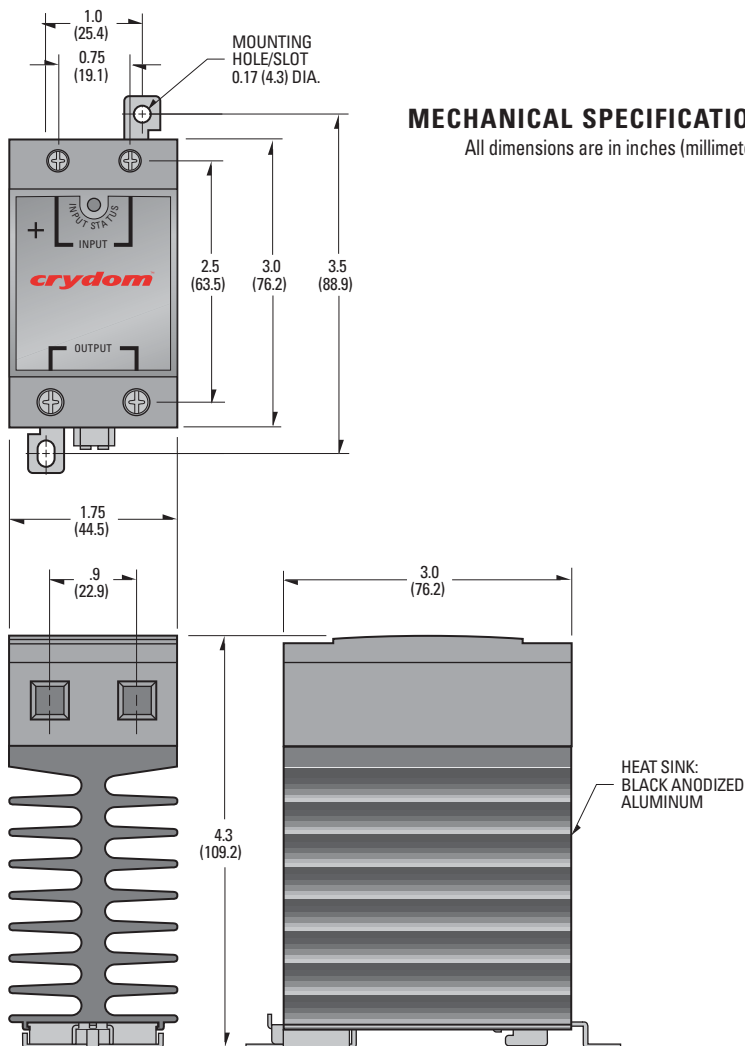
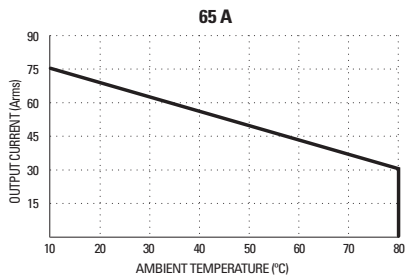
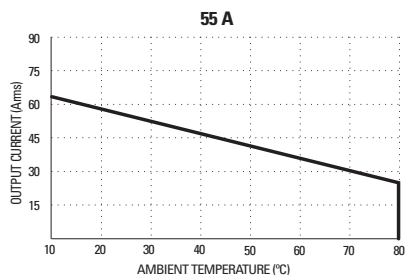
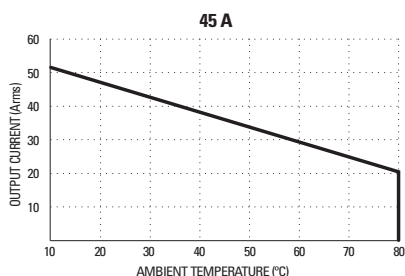
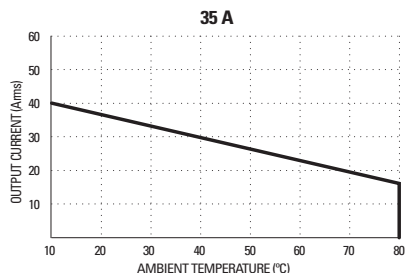
Weight: (typical)	16.8 oz. (476g)
Encapsulation:	Thermally Conductive Epoxy
Terminals:	Cage Type
Maximum Wire Size- Output: AWG 8 (3.8mm) Input: AWG12 (2.5mm)	
Recommended Terminal Screw Torque Range:	
Output: 10-15 in lb (1.1-1.7 Nm)	
Input: 5-6 in lb (0.6-0.7 Nm)	

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crydomTM Series **CMRD/CMRA48**

35-65Amp • 480 Vac - AC OUTPUT

CURRENT DERATING CURVES



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



- 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 ($\pm 10\%$) [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_{qJC}) [°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]	1.0	1.0	1.0	1.0
Min. Off-State dv/dt @ Max. Rated Voltage [V/ μ sec] 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

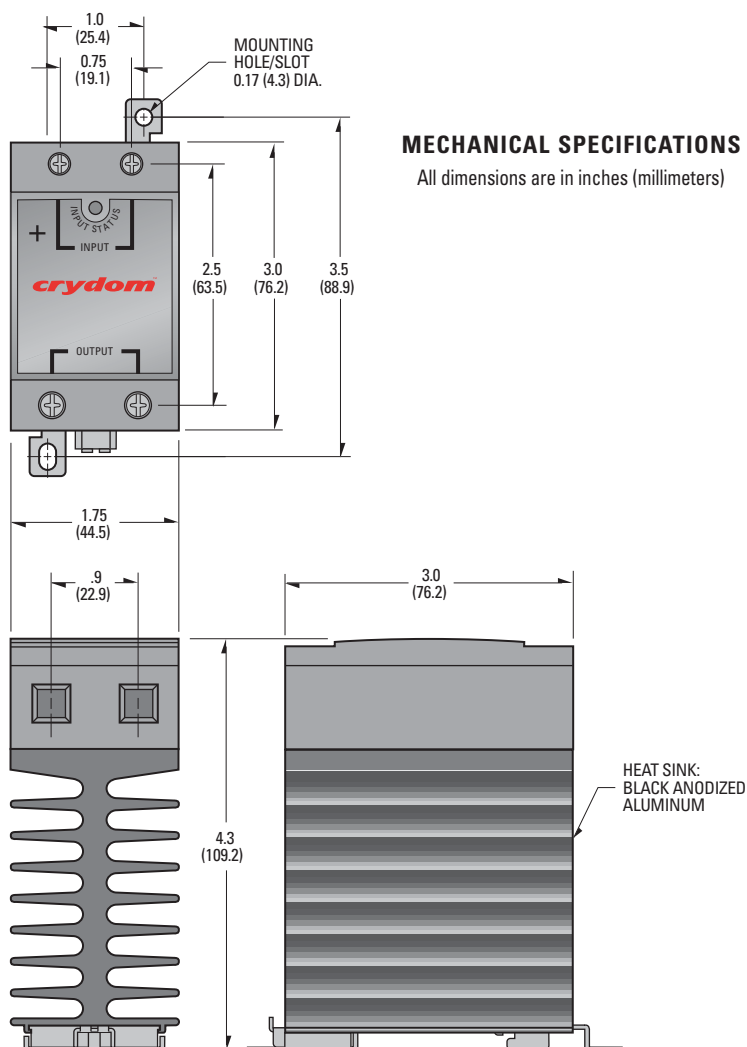
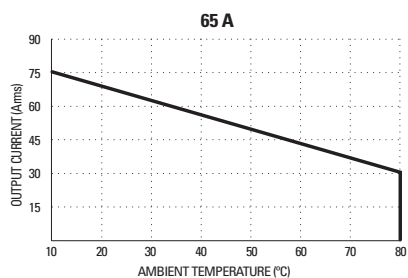
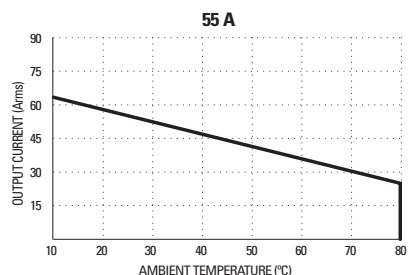
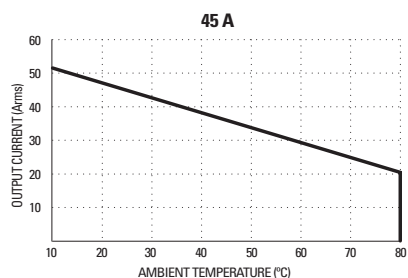
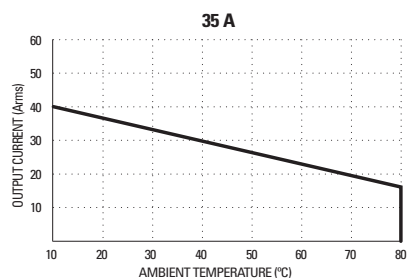
MECHANICAL SPECIFICATIONS

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)	

crydomTM Series CMRD/CMRA60

35-65Amp • 600 Vac - AC OUTPUT

CURRENT DERATING CURVES



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**

APPROVALS

UL E116950
CSA LR81689
VDE 126921

