



## CMA/CMD SERIES | 600 VAC

PANEL MOUNT SOLID STATE RELAYS



### Features

- Ratings from 50A to 90A @ 48-660 VAC
- SCR output for heavy industrial loads
- DC control
- LED input status indicator
- Zero crossing (resistive loads) output
- IP20 touch-safe housing
- Standard box-clamp connections

### PRODUCT SELECTION

Control Voltage	50 A	90 A
4-32 VDC	CMD6050	CMD6090

### SPECIFICATIONS

#### Output <sup>(1)</sup>

Description	50 A	90 A
Operating Voltage (47-63Hz) [Vrms]	48-660	48-660
Transient Overvoltage [Vpk]	1200	1200
Maximum Off-State Leakage Current @ Rated Voltage [mA]	1.0	1.0
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec] <sup>(2)</sup>	500	500
Maximum Load Current [Arms] <sup>(3)</sup>	50	90
Minimum Load Current [Arms]	0.15	0.25
Maximum Surge Current (50/60Hz, 1 Cycle) [Apk]	597/625	1145/1200
Maximum On-State Voltage Drop @ Rated Current [Vpk]	1.6	1.6
Thermal Resistance Junction to Case (Rjc) [°C/W]	0.63	0.28
Maximum I <sup>2</sup> t for Fusing (50/60Hz, 1/2 cycle) [A <sup>2</sup> sec]	1779/1621	6560/5976
Minimum Power Factor (with Maximum Load)	0.5	0.5

## Input <sup>(1)</sup>

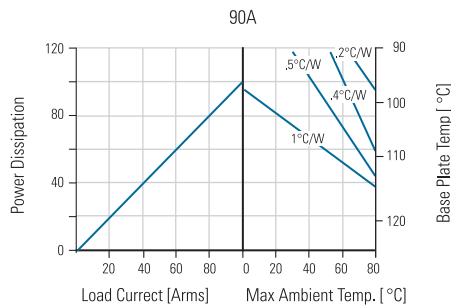
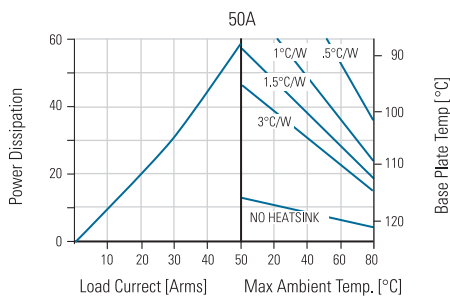
Description	CMD
Control Voltage Range	3-32 VDC
Maximum Reverse Voltage	32 VDC
Maximum Turn-On Voltage	3.0 VDC
Minimum Turn-On Voltage	1.0 VDC
Typical Input Current @ max turn-on voltage	30 mA <sup>(4)</sup>
Nominal Input Impedance [Ohms]	17 mA @ 5 VDC
Maximum Turn-On Time [msec]	1/2 Cycle
Maximum Turn-Off Time [msec]	1/2 Cycle

## General

Description	Parameters
Dielectric Strength, Input/Output (50/60Hz)	4000 Vrms
Minimum Insulation Resistance (@ 500 VDC)	10 <sup>9</sup> Ohms
Maximum Capacitance, Input/Output	8 pF
Ambient Operating Temperature Range	-40 to 80 °C
Ambient Storage Temperature Range	-40 to 125 °C
Status Indicator Display	Green LED
Weight (typical)	3.0 oz (86.5 g)
Encapsulation	Thermally Conductive Epoxy
Terminals	Cage Type
Maximum Wire Size-Output:	AWG 8 (3.8mm)
Maximum Wire Size-Input:	AWG 12 (2.5mm)
Recommended Terminal Screw Torque Range:	Output: 10-15 lb-in (1.1-1.7 Nm)
	Input: 5-6 lb-in (0.6-0.7 Nm)

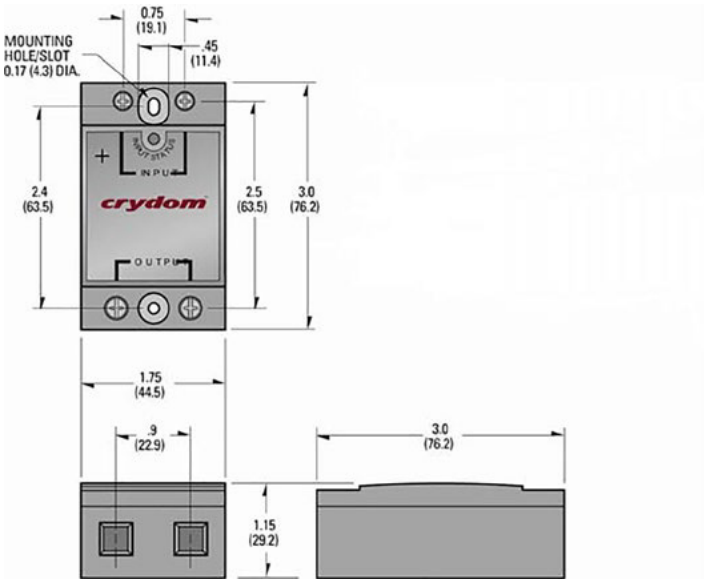
## THERMAL DERATE INFORMATION

### Current Derating Curves



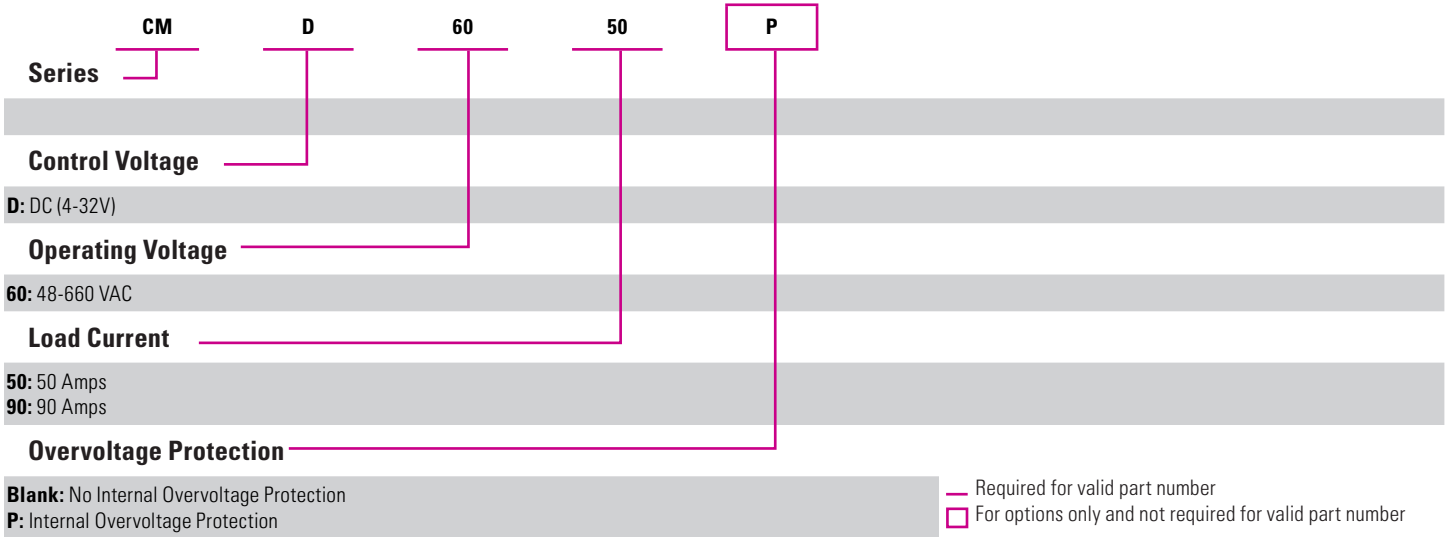
# MECHANICAL SPECIFICATIONS

\*Tolerances: ±0.02 in / 0.5 mm  
 All dimensions are in: inches [millimeters]



# AVAILABLE OPTIONS

Example : CMD6050P



NOTE: Not all combinations are available.  
 Consult factory for information on the availability of a specific part number.

## 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) HEAT SINKING REQUIRED, FOR DERATING curves see page 2.
- (4) Input circuitry incorporates active current limiter.

## AGENCY APPROVALS & CERTIFICATIONS

Designed in accordance with the requirements of IEC 62314



## WARNINGS



### RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE

- The product's side panels may be hot, allow the product to cool before touching
- Follow proper mounting instructions including torque values
- Do not allow liquids or foreign objects to enter this product

**Failure to follow these instructions can result in serious injury, or equipment damage.**



### HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

- Disconnect all power before installing or working with this equipment
- Verify all connections and replace all covers before turning on power

**Failure to follow these instructions will result in death or serious injury.**

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