

## CMR SERIES | 480 VAC

DIN RAIL MOUNT SOLID STATE RELAYS



### Features

- Ratings from 35A to 65A @ 530 VAC
- 45mm (width) package
- SCR output for heavy industrial loads
- LED input status indicator
- AC or DC control
- Zero-crossing (resistive loads)

### PRODUCT SELECTION

| Control Voltage | 35A      | 45A      | 55A      | 65A      |
|-----------------|----------|----------|----------|----------|
| 4-32 VDC        | CMRD4835 | CMRD4845 | CMRD4855 | CMRD4865 |
| 90-140 VAC      |          | CMRA4845 |          | CMRA4865 |

### SPECIFICATIONS

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

| Description                                                             | 35A     | 45A       | 55A       | 65A       |
|-------------------------------------------------------------------------|---------|-----------|-----------|-----------|
| Operating Voltage (47-63Hz) [Vrms]                                      | 48-530  | 48-530    | 48-530    | 48-530    |
| Transient Overvoltage [Vpk]                                             | 1200    | 1200      | 1200      | 1200      |
| Maximum Off-State Leakage Current @ Rated Voltage [mA <sub>rms</sub> ]  | 10      | 10        | 10        | 10        |
| Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec] <sup>(2)</sup> | 500     | 500       | 500       | 500       |
| Maximum Load Current [A <sub>rms</sub> ]                                | 35      | 45        | 55        | 65        |
| Minimum Load Current [A <sub>rms</sub> ]                                | 0.15    | 0.15      | 0.25      | 0.25      |
| Maximum Surge Current (50/60Hz, 1 Cycle) [A <sub>pk</sub> ]             | 239/250 | 597/625   | 954/1000  | 1145/1200 |
| Maximum On-State Voltage Drop @ Rated Current [V <sub>pk</sub> ]        | 1.7     | 1.7       | 1.7       | 1.7       |
| Thermal Resistance Junction to Case (R <sub>jc</sub> ) [°C/W]           | 1.02    | 0.63      | 0.31      | 0.28      |
| Maximum I <sup>2</sup> t for Fusing (8.3 msec) [A <sup>2</sup> sec]     | 285/259 | 1779/1621 | 4555/4150 | 4555/4150 |
| Minimum Power Factor (with Maximum Load)                                | 0.5     | 0.5       | 0.5       | 0.5       |

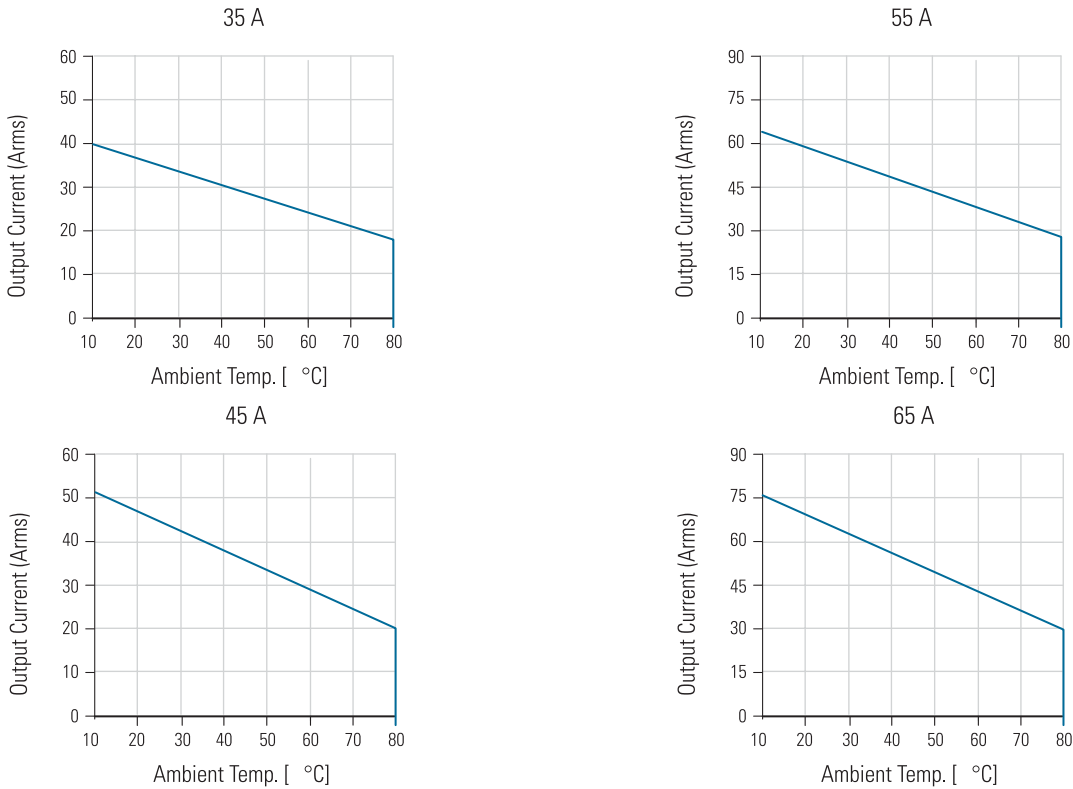
Input <sup>(1)</sup>

| Description                          | CMRD48xx      | CMRA48xx         |
|--------------------------------------|---------------|------------------|
| Control Voltage Range                | 4-32 VDC      | 90-140 Vrms      |
| Minimum Turn-On Voltage              | 4.0 VDC       | 90 Vrms          |
| Maximum Turn-Off Voltage             | 1.0 VDC       | 10 Vrms          |
| Maximum Reverse Voltage              | 32 VDC        | -                |
| Maximum Input Current                | 30 mA         | -                |
| Typical Input Current <sup>(4)</sup> | 14 mA @ 5 VDC | 15 mA @ 120 Vrms |
| Maximum Turn-On Time [msec]          | 1/2 Cycle     | 10               |
| Maximum Turn-Off Time [msec]         | 1/2 Cycle     | 40               |

General <sup>(1)</sup>

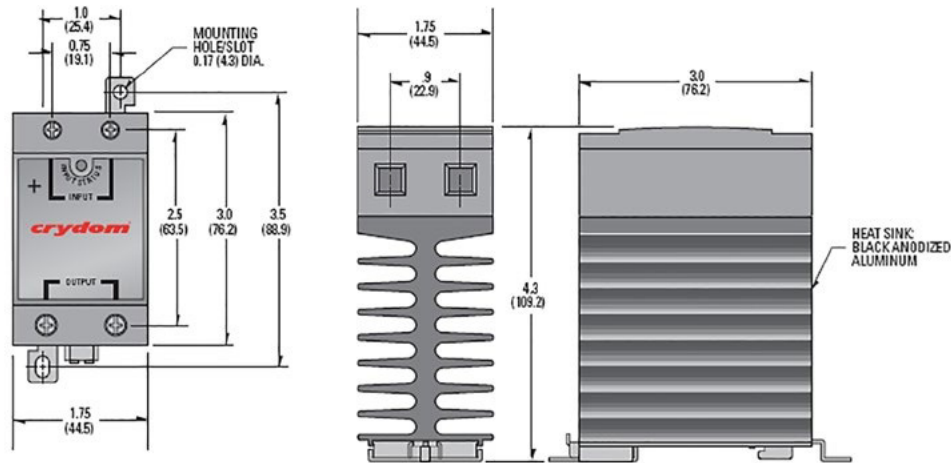
| Description                                 | Parameters                                                    |
|---------------------------------------------|---------------------------------------------------------------|
| Dielectric Strength, Input/Output (50/60Hz) | 4000 Vrms                                                     |
| 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)                            | 16.8 oz. (476g)                                               |
| Encapsulation                               | Thermally Conductive Epoxy                                    |
| Terminals                                   | Cage Type                                                     |
| Maximum Wire Size                           | Output: AWG 8 (4.8mm) 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



# MECHANICAL SPECIFICATIONS

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



# AVAILABLE OPTIONS

Example : CMRD4845P

|                        |     |   |    |    |   |
|------------------------|-----|---|----|----|---|
| Series                 | CMR | D | 48 | 45 | P |
| Control Voltage        |     |   |    |    |   |
| D: 3-32 VDC            |     |   |    |    |   |
| A: 90-140 VAC          |     |   |    |    |   |
| Operating Voltage      |     |   |    |    |   |
| 48: 48-530 VAC         |     |   |    |    |   |
| Operational Current    |     |   |    |    |   |
| 35: 35 Amps            |     |   |    |    |   |
| 45: 45 Amps            |     |   |    |    |   |
| 55: 55 Amps            |     |   |    |    |   |
| 65: 65 Amps            |     |   |    |    |   |
| Overvoltage Protection |     |   |    |    |   |
| Blank: Not Included    |     |   |    |    |   |
| P: Included            |     |   |    |    |   |

Required for valid part number  
For options only and not required for valid part number

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) Input circuitry for DC control version 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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