

# Series MCX

5Amp • 120/240, 380, 480 Vac • AC Output SIP

- SCR Output
- Ultra High Surge Rating
- Crydom's Patented Design

exceptional steady state current, plus ultra-high surge ratings. Models are available to switch up to 660 Vrms with AC or DC control, and either zero-cross or random turn-on ("R") switching versions. Pinout is compatible with Series 6 and OAC type I/O modules.

Crydom's family of SPST-NO relays achieves the highest power switching capability in a PC-mounted air-cooled package. Advanced features include

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



| MODEL NUMBERS   | AC CONTROL (120Vac)<br>(24Vac) | MCX240A5<br>MCXE240A5                          |                       |                       |
|---|--------------------------------|--|-----------------------|-----------------------|
|   | DC CONTROL (5Vdc)<br>(24Vdc)   | MCX240D5<br>MCXE240D5                          | MCX380D5<br>MCXE380D5 | MCX480D5<br>MCXE480D5 |
| <b>OUTPUT SPECIFICATIONS ①</b>  |                                |  |                       |                       |
| Operating Voltage (47-63 Hz) [Vrms]                                   |                                | 12-280   | 48-530                | 48-660                |
| Load Current Range [Arms]   |                                | .06-5  | .06-5                 | .06-5                 |
| Transient Overvoltage [Vpk]   |                                | 600  | 1200                  | 1200                  |
| Max. Surge Current, (16.6ms) [Apk]                                    |                                | 250  | 250                   | 250                   |
| Max. On-State Voltage Drop @ Rated Current [Vpk]                      |                                | 1.4  | 1.4                   | 1.4                   |
| Maximum I <sup>2</sup> t for Fusing, (8.3 msec.) [A <sup>2</sup> sec] |                                | 260  | 260                   | 260                   |
| Max. Off-State Leakage Current @ Rated Voltage [mArms]                |                                | 0.1  | 0.1                   | 0.1                   |
| Min. Off-State dv/dt @ Max. Rated Voltage [V/μsec] ②                  |                                | 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                   |

| INPUT SPECIFICATIONS ①                  | DC CONTROL      |                      |                                     | AC CONTROL  |            |
|---|-----------------|----------------------|-------------------------------------|-------------|------------|
|   | Nominal Voltage | 5Vdc                 | 5Vdc                                | 24Vdc       | 120Vac     |
| MODEL NUMBERS                           | MCX240D5        | MCX380D5<br>MCX480D5 | MCXE240D5<br>MCXE380D5<br>MCXE480D5 | MCX240A5    | MCXE240A5  |
| Control Voltage Range                   | 3-15 Vdc        | 4-15 Vdc             | 15-32 Vdc                           | 90-140 Vrms | 18-36 Vrms |
| Max. Turn-On Voltage                    | 3.0 Vdc         | 4.0 Vdc              | 15.0 Vdc                            | 90.0 Vrms   | 18.0 Vrms  |
| Min. Turn-Off Voltage                   | 1.0 Vdc         | 1.0 Vdc              | 1.0 Vdc                             | 10.0 Vrms   | 2.0 Vrms   |
| Nominal Input Impedance                 | 300 Ohm         | 240 Ohm              | 1500 Ohm                            | 14.1k Ohm   | 4.2k Ohm   |
| Typical Input Current @ Nominal Voltage | 15 mAdc         | 15 mAdc              | 15 mAdc                             | 10 mArms    | 5 mArms    |

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## 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 Random Turn-On versions 0.1msec (DC Control Models).





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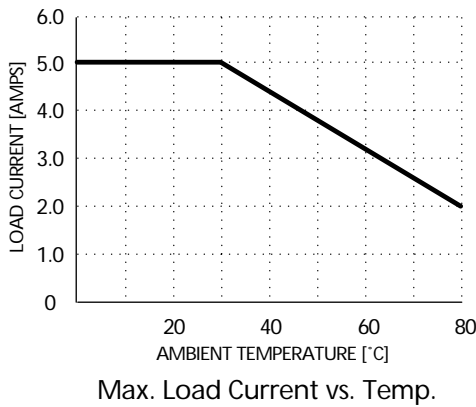
## GENERAL SPECIFICATIONS

|   |                     |
|---|---------------------|
| Dielectric Strength 50/60Hz Input/Output/Base | 4000 Vrms           |
| Insulation Resistance (Min.) @ 500 Vdc        | 10 <sup>9</sup> Ohm |
| Max. Capacitance Input/Output                 | 10 pF               |
| Ambient Operating Temperature Range           | -40 to 80°C         |
| Ambient Storage Temperature Range             | -40 to 125°C        |

## MECHANICAL SPECIFICATIONS

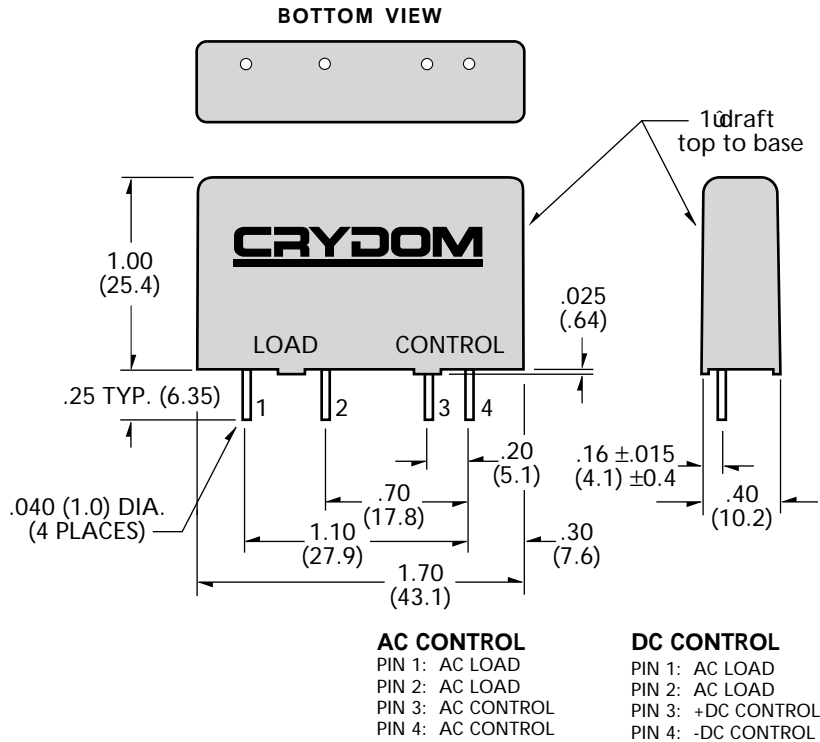
|                   |                            |
|-------------------|----------------------------|
| Weight: (typical) | 0.7 oz. (20g)              |
| Encapsulation:    | Thermally Conductive Epoxy |

### CURRENT DERATING CURVE



### AVAILABLE OPTIONS

- R Random Turn-On Switching  
Example: **MCX240D5 R, MCX240A5 R**



All dimensions are in inches (millimeters)

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### APPROVALS

UL E116949

