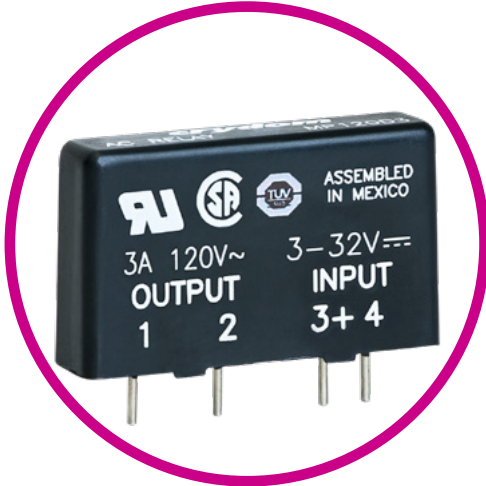




## MP SERIES

PCB MOUNT SOLID STATE RELAYS



### Features

- SIP SSR
- Ratings up to 4A @ 280 VAC or 3A @ 60 VDC
- TRIAC (AC) or Transistor (DC) output
- DC control
- Normally open (AC or DC) or normally closed output (DC only)
- CE complaint to EN60950-1

### PRODUCT SELECTION

Control Voltage	3A	3A	4A	3A
3-32 VDC	MP120D3	MP240D3	MP240D4	MPDCD3

### SPECIFICATIONS

#### AC Output <sup>(A)</sup>

Description	MP120D3	MP240D3	MP240D4
Operating Voltage (47-63 Hz) [Vrms]	12-140	24-280	24-280
Transient Overvoltage [Vpk]	400	600	600
Maximum Off-State Leakage Current @ Rated Voltage [mA]	5	5	5
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/μsec] <sup>(B)</sup>	200	200	200
Maximum Load Current [Arms] <sup>(C)</sup>	3	3	4
Minimum Load Current [Arms]	0.02	0.02	0.02
Maximum Surge Current (16.6ms) [Apk]	90	90	130
Maximum On-State Voltage Drop @ Rated Current [Vpk]	1.6	1.6	1.6
Maximum I <sup>2</sup> t for Fusing (50/60 Hz, 1/2 cycle) [A <sup>2</sup> sec]	36	36	72
Minimum Power Factor (with Maximum Load)	0.5	0.5	0.5

## DC Output <sup>(A)</sup>

Description	MPDCD3
Operating Voltage [Vdc]	3-60
Maximum Load Current [Adc]	3
Minimum Load Current [mA]	0.02
Maximum Surge Current for 1 second [Adc]	5
Maximum On-State Voltage Drop @ Rated Current [Vpk]	1.5
Maximum Off-State Leakage Current @ Rated Voltage [mA]	1.0

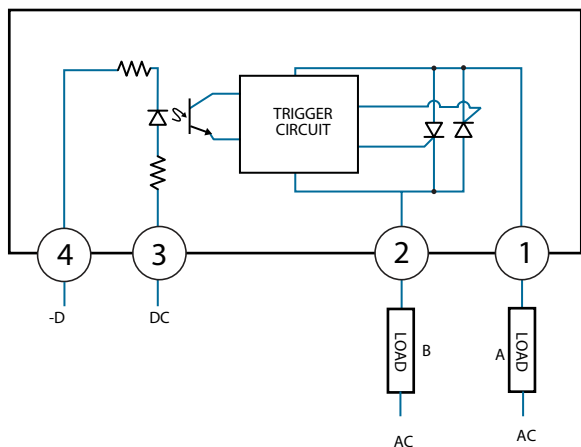
## Input <sup>(A)</sup>

Description	AC Output	DC Output	DC Output (-B)
Control Voltage Range [VDC]	3-32	3-32	3-32
Must Turn-On Voltage [VDC]	3.0	3.0	1.0
Must Turn-Off Voltage [VDC]	1.0	1.0	3.0
Typical Input Current @ 2 VDC [mA]	23	23	23
Nominal Input Impedance [Ohm]	1500	1500	1500
Maximum Turn-On Time [msec]	1/2 Cycle	0.1	0.1
Maximum Turn-Off Time [msec]	1/2 Cycle	0.1	0.1

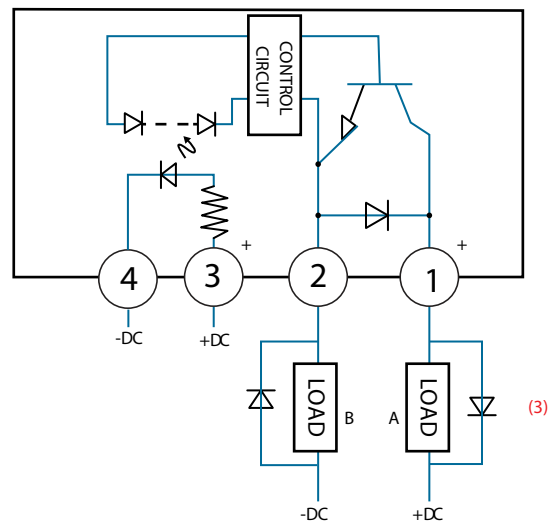
## General <sup>(A)</sup>

Description	Parameters
Dielectric Strength, Input/Output (50/60 Hz)	4000 Vrms
Minimum Insulation Resistance (@ 500 V DC)	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
Weight (typical)	0.7 oz (20 g)
Encapsulation	Thermally Conductive Epoxy
Enclosure and PCB	Meets the requirements of IEC60335-1

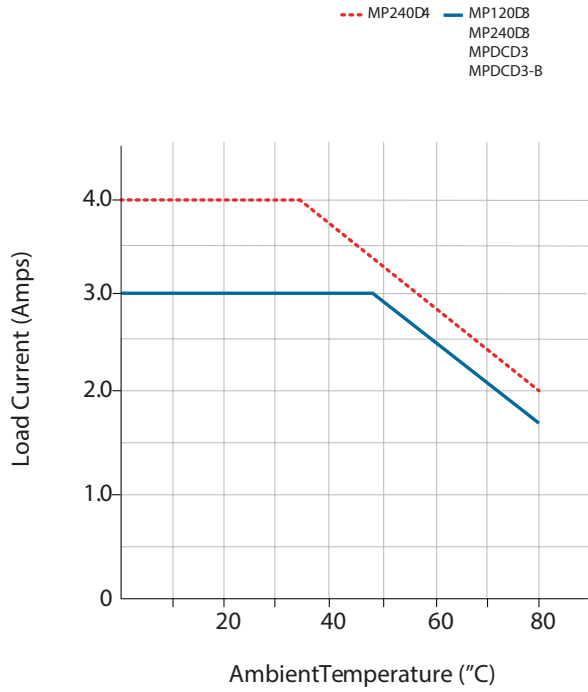
## EQUIVALENT CIRCUIT BLOCK DIAGRAMS/WIRING DIAGRAMS



Load can be wired in location A or B

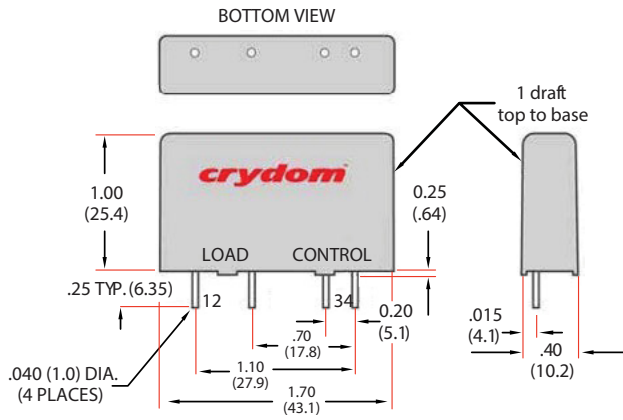


# THERMAL DERATE INFORMATION



# MECHANICAL SPECIFICATIONS

Tolerances:  $\pm 0.02$  in / 0.5 mm  
 All dimensions are in inches [millimeters]



## ORDERING OPTIONS

Example : MPDCD3-B

<b>Series</b>	MP	DC	D	3	-B
<b>MP</b>					
<b>Operating Voltage</b>					
<b>120:</b>	12-140 VAC				
<b>240:</b>	24-280 VAC				
<b>DC:</b>	3-60 VDC				
<b>Control Voltage</b>					
<b>D:</b>	3-32 VDC				
<b>Rated Load Current</b>					
<b>3:</b>	3 Amps				
<b>4:</b>	4 Amps				
<b>Output Function/Type</b>					
<b>Blank:</b>	Normally Open				
<b>-B:</b>	Normally Closed (DC only)				

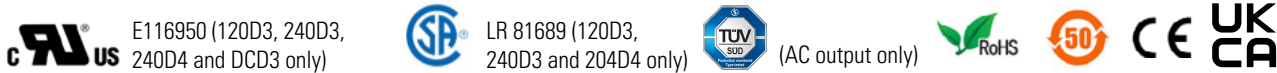
  Required for valid part number  
  For options only and not required for valid part number

## 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) Inductive loads should be diode suppressed

## 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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