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 [A]

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] [B]	200	200	200
Maximum Load Current [Arms] [C]	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^2t for Fusing (50/60 Hz, 1/2 cycle) [A^2 sec]	36	36	72
Minimum Power Factor (with Maximum Load)	0.5	0.5	0.5

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DC Output [A]

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

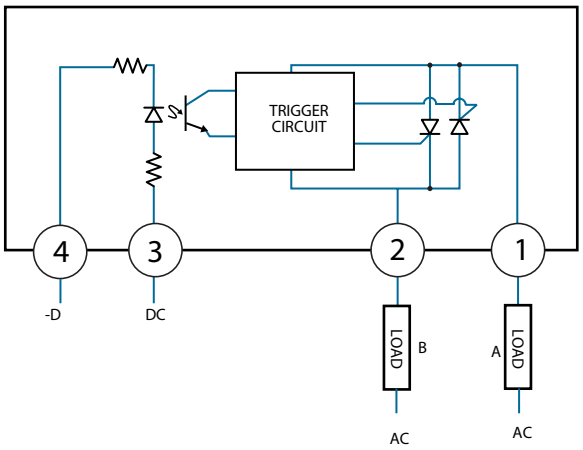
Input [A]

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 [0hm]	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

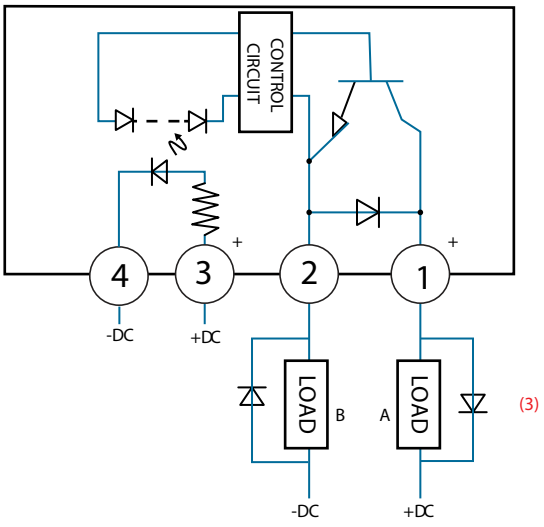
General [A]

Description	Parameters
Dielectric Strength, Input/Output (50/60 Hz)	4000 Vrms
Minimum Insulation Resistance (@ 500 V DC)	10^9 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



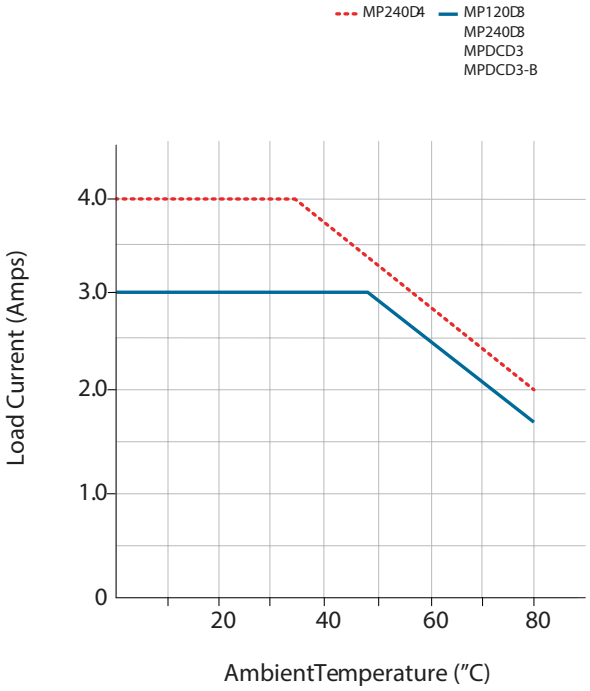
Load can be wired in location A or B



(3)

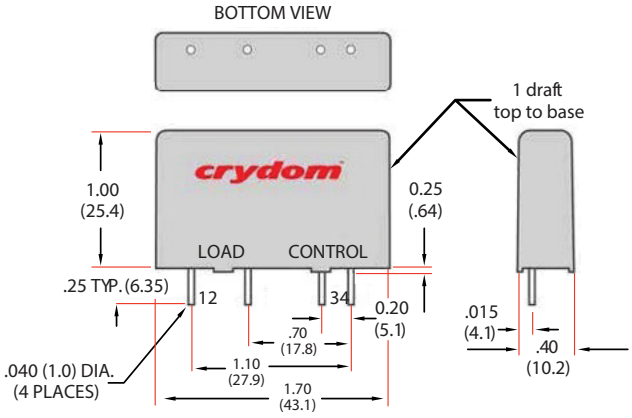
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THERMAL DERATE INFORMATION



MECHANICAL SPECIFICATIONS

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



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ORDERING OPTIONS

Example : MPDCD3-B

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

E116950 (120D3, 240D3, 240D4 and DCD3 only)

LR 81689 (120D3, 240D3 and 204D4 only)

(AC output only)

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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