

SSRMP SERIES

POTTER & BRUMFIELD “MINI PUCK” SOLID STATE RELAY

TE Connectivity (TE's) Potter & Brumfield Solid-state relay (SSR) minipuck, SSRMP is a compact sized panel mountable type product series. It handles various load options ranging from 10Amp to 25Amp @ 240/480Vac.

FEATURES

- Standard “mini puck” package
- LED indicator
- Triac outputs
- 10A, 16A & 25A rms versions
- DC input version
- 240 & 480 Vac Line voltage
- 4000V rms isolation
- Quick connect style terminals
- Panel mountable

APPLICATIONS

- Industrial control
- Automation
- Robot
- Lighting
- HVAC
- Commercial appliances
- injection machine
- Packaging machine



APPROVALS

- UL : File E29244
- CE & UK CA : N84_00006



Users should thoroughly review the technical data before selecting a product part number. It is recommended that users also seek out the pertinent approvals files of the agencies/laboratories and review them to ensure the product meets the requirements for a given application.

POTTER & BRUMFIELD

“Mini Puck” Solid State Relay

ENGINEERING DATA

| | |
|-----------------------|--|
| Form | 1 Form A (SPST-NO) |
| Duty | Continuous |
| Isolation | 4000V _{rms} minimum, input - output |
| Temperature Range | |
| Storage | -30°C to +100°C |
| Operating Temperature | -30°C to + 80°C |
| Case Material | Plastic, UL rated 94V-1 |
| Case and Mounting | Refer to outline dimension |
| Termination | Refer to outline dimension |
| Approximate Weight | 0.65 oz. (18.3g). |

INPUT SPECIFICATIONS

| Parameter | Units | DC INPUT |
|--------------------------------------|-------|----------|
| Control Voltage Range VIN | VDC | 4 - 32 |
| Must Operate Voltage VIN(OP) (Min.) | VDC | 4 |
| Must release Voltage VIN(REL) (Min.) | VDC | 1 |
| Input Current (Max.) | mA | 1 - 20 |

OUTPUT SPECIFICATION (@ 25°C, UNLESS OTHERWISE SPECIFIED)

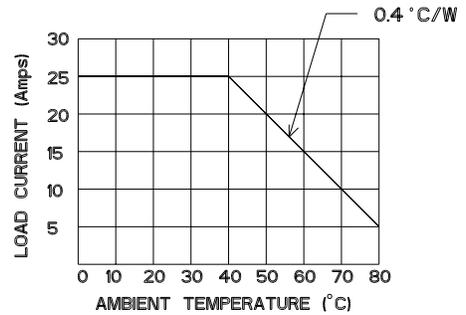
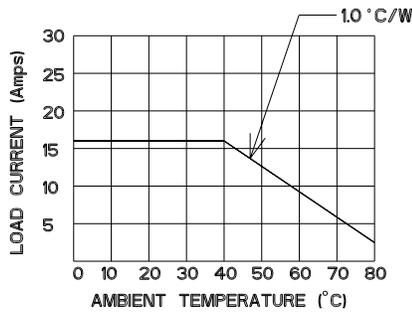
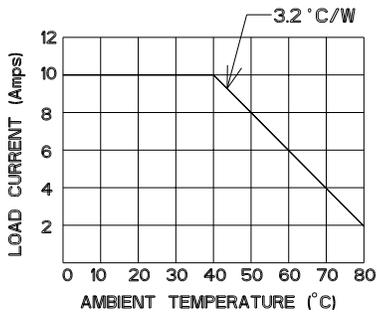
| Parameter | Nom. Line Voltage | Conditions | Units | 10A Models | 16A Models | 25A Models | |
|---|-------------------|-----------------------------|--------------------|-----------------------------------|--------------------------------|------------|--|
| Load Voltage Range V _L | 240 | | V _{rms} | 24-280 | | | |
| | 480 | | V _{rms} | 48-480 | | | |
| Load Current Range I _L * | | | A | 10 | 16 | 25 | |
| Single Cycle Surge Current | 240 & 480 | Resistive | A | 100 | 160 | 208 | |
| Leakage Current (Off-State) (@rated voltage) | | | mA | 5 | | | |
| On-State Voltage Drop (@rated current) | | f=60Hz. V _L =Nom | V _{rms} | 1.6 | | | |
| Static dv/dt (Off-State) (Min.) | | IL = Max. | V/μs | 400 | | 475 | |
| Repetitive Peak Off-State Voltage | | 240 | | V _{rms} | 600 | | |
| | 480 | | | 800 | | | |
| I ² T Rating | 240 & 480 | | A ² Sec | 55 | 144 | 259 | |
| Zero Turn-On Voltage | | | V _{pk} | 15 | | | |
| Thermal Resistance, Junction to case (R _{0-j-c}) (Max.) | | | °C/W | 2.4 | 2.1 | 2 | |
| Turn -On Time (Max.) | | | f= 60/ 50 Hz. | ms | 10 for Zero Voltage Turn-On | | |
| | | | | | 0.1 for Random Voltage Turn-On | | |
| Turn -Off Time (Max.) | | | | 10 for Zero Voltage Turn-On | | | |
| | | | | 8.3/10 for Random Voltage Turn-On | | | |

* See Derating curve

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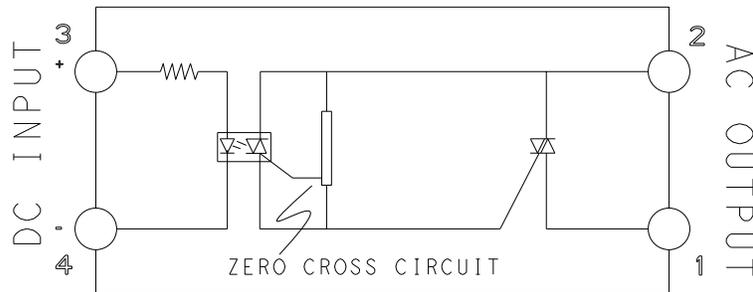
ELECTRICAL CHARACTERISTICS (THERMAL DERATING CURVES)



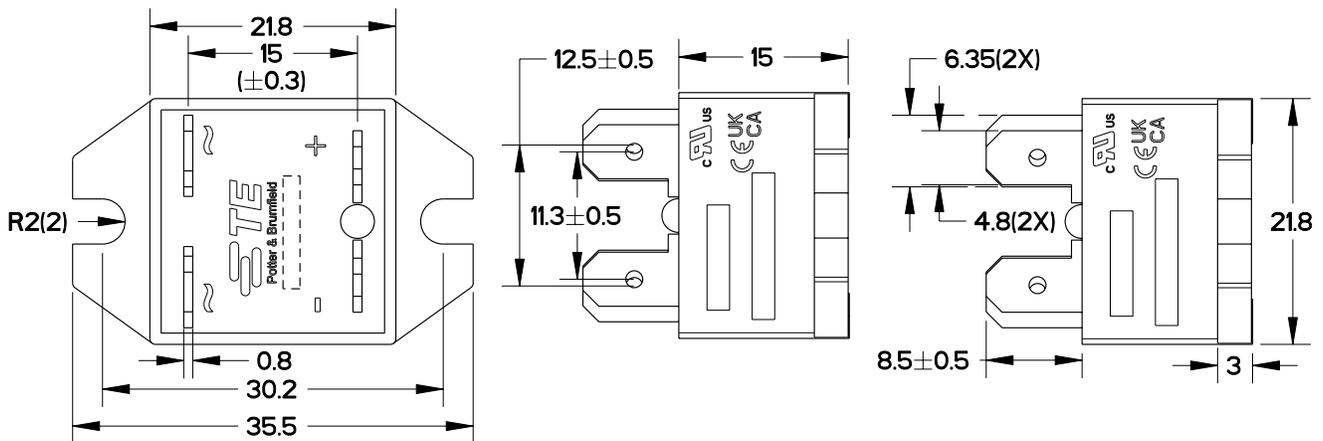
HEATSINK RECOMMENDATIONS

- We recommend that solid state relay modules be mounted to a heatsink sufficient to maintain the module's base temperature at 85°C under worst case ambient temperature and load conditions.
- The heatsink mounting surface should be a smooth (30-40 micro-inch finish), flat (30-40 micro-inch flatness across mating area), un-painted surface which is clean and free of oxidation.
- An even coating of thermal compound (Dow Corning DC340 or equivalent) should be applied to both the heatsink and module mounting surfaces and spread to a uniform depth of .002" to eliminate all air pockets.

OPERATING DIAGRAMS



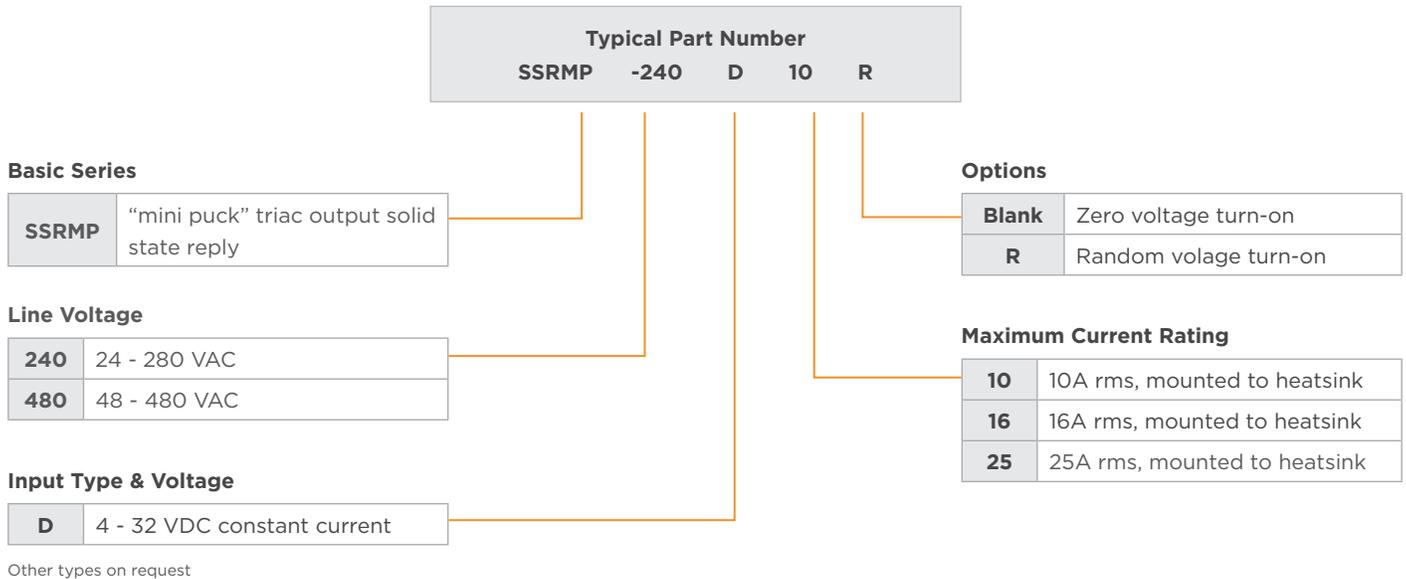
OUTLINE DIMENSIONS



Note:

- All dimensions are in mm

ORDERING INFORMATION



PART NUMBER LIST

| TE Part Number | Product Code | TE Part Number | Product Code |
|----------------|--------------|----------------|---------------|
| 2323802-1 | SSRMP-240D25 | 2323802-9 | SSRMP-240D10R |
| 2323802-2 | SSRMP-240D16 | 2323802-8 | SSRMP-240D16R |
| 2323802-3 | SSRMP-240D10 | 2323802-7 | SSRMP-240D25R |
| 2323802-4 | SSRMP-480D25 | 1-2323802-3 | SSRMP-480D10R |
| 2323802-5 | SSRMP-480D16 | 1-2323802-2 | SSRMP-480D16R |
| 2323802-6 | SSRMP-480D10 | 1-2323802-1 | SSRMP-480D25R |

OUR AUTHORIZED DISTRIBUTORS ARE MORE LIKELY TO MAINTAIN THE FOLLOWING ITEMS IN STOCK FOR IMMEDIATE DELIVERY.

| Product code | |
|---------------|---------------|
| SSRMP-240D10 | SSRMP-480D10 |
| SSRMP-240D10R | SSRMP-480D10R |
| SSRMP-240D25 | SSRMP-480D25 |
| SSRMP-240D25R | SSRMP-480D25R |

Notes:

1. Catalog and product specification according to IEC 61810-1 and to be used only together with the 'Definitions' section.
2. Catalog and product data is subject to the terms of the disclaimer and all chapters of the 'Definitions' section, available at <http://relays.te.com/definitions>
3. Catalog product data, 'Definitions' section, application notes and all specifications are subject to change.
4. To view solid-state relay application notes [click here](#)

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