

20×10×11



Features

- DIL pitch terminals. High sensitivity.
- Conforms to FCC Part 68 1.5kV surge and dielectric 1000VAC.
- High reliability bifurcated contact.
- Application for telecommunication equipment, office equipment, security alarm systems, measuring instruments, medical monitoring equipment, audio visual equipment, flight simulator, sensor control.

Ordering Information

M1B 12 H W A

1 2 3 4 5

1 Part number: M1B
 2 Coil rated voltage: DC:3:3V; 5:5V; 6:6V; 9:9V;
 12:12V; 24:24V; 48:48V

3 Enclosure: H: Wash tight
 4 Contact material: Nil: AgPd; W: AgNi
 5 Nominal coil power: Nil:0.55W; A:0.4W

Contact Data

| | | | |
|----------------------------|------------|--|--|
| Contact Arrangement | | 2C(DPDT(B-M)) (Bifurcated Crossbar) | |
| Contact Material | | AgPd(Au plated) AgNi(Au plated) | |
| Contact Rating (Resistive) | | 0.01mA/10mV to 1A/24VDC; 0.5A/120VAC | |
| Max. Switching Power | | 60W 125VA | Min. Switching Load:0.01mA/10mV(Reference Value) |
| Max. Switching Voltage | | 220VDC 250VAC | Max. Switching Current:2A |
| Contact Resistance | | ≤50mΩ | Item 4.12 of IEC 61810-7 |
| Operational Life | Electrical | 1A/24VDC:5×10 ⁵ (Ag Ni:1×10 ⁵) 2A/30VDC:1×10 ⁵ 0.5A/120VAC:2×10 ⁵ | Item 4.30 of IEC 61810-7 |
| | Mechanical | 1×10 ⁸ | Item 4.31 of IEC 61810-7 |

CAUTION:

Relays previously tested or used above 10mA resistive at 6V maximum (DC or peak AC) open circuit are not recommended for subsequent use in low level applications.

Coil Parameter

| Dash numbers | Coil voltage VDC | | Coil resistance Ω ± 10% | Pick-up voltage VDC(max) (70% of rated voltage) | Drop-out voltage VDC(min) (10% of rated voltage) | Coil power W | Operate time ms | Release time ms |
|--------------|------------------|------|-------------------------|---|--|--------------|-----------------|-----------------|
| | Rated | Max. | | | | | | |
| M1B-003 | 3 | 4.2 | 16 | 2.1 | 0.3 | 0.56 | Approx. 4.5 | Approx. 1.5 |
| M1B-005 | 5 | 7.0 | 45 | 3.5 | 0.5 | 0.56 | | |
| M1B-006 | 6 | 8.4 | 66 | 4.2 | 0.6 | 0.55 | | |
| M1B-009 | 9 | 12.3 | 140 | 6.3 | 0.9 | 0.58 | | |
| M1B-012 | 12 | 17.4 | 280 | 8.4 | 1.2 | 0.52 | | |
| M1B-024 | 24 | 34.0 | 1070 | 16.8 | 2.4 | 0.54 | | |
| M1B-048 | 48 | 64.9 | 3900 | 33.6 | 4.8 | 0.59 | | |
| M1B-003A | 3 | 4.9 | 22.5 | 2.1 | 0.3 | 0.4 | Approx. 4.5 | Approx. 1.5 |
| M1B-005A | 5 | 8.1 | 62.5 | 3.5 | 0.5 | 0.4 | | |
| M1B-006A | 6 | 9.7 | 90 | 4.2 | 0.6 | 0.4 | | |
| M1B-009A | 9 | 14.5 | 203 | 6.3 | 0.9 | 0.4 | | |
| M1B-012A | 12 | 19.4 | 360 | 8.4 | 1.2 | 0.4 | | |
| M1B-024A | 24 | 38.9 | 1440 | 16.8 | 2.4 | 0.4 | | |
| M1B-048A | 48 | 77.8 | 5760 | 33.6 | 4.8 | 0.4 | | |

- CAUTION:** 1.The use of any coil voltage less than the rated coil voltage will compromise the operation of the relay.
 2.Pickup and release voltage are for test purposes only and are not to be used as design criteria.

Characteristics

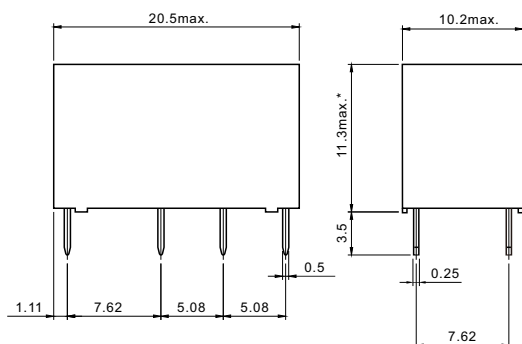
| | | |
|---------------------------|---|--------------------------|
| Electrostatic Capacitance | | |
| Between Open Contacts | Approx.0.7pF | Item 4.41 of IEC 61810-7 |
| Between Coil & Contacts | Approx.1.0pF | Item 4.41 of IEC 61810-7 |
| Between Contact Poles | Approx.0.9pF | Item 4.41 of IEC 61810-7 |
| Insulation Resistance | 1000M Ω min (at 500VDC) | Item 4.11 of IEC 61810-7 |
| Dielectric Strength | | |
| Between Open Contacts | 1000VAC 1min | Item 4.9 of IEC 61810-7 |
| Between Coil & Contacts | 1000VAC 1min | |
| Between Contact Poles | 1000VAC 1min | |
| Surge Withstand Voltage | | |
| Between Open Contacts | 1500V | FCC 68 |
| Between Coil & Contacts | 1500V | |
| Between Contact Poles | 1500V | |
| Shock Resistance | Functional:98m/s ² 11ms; Destructive:980 m/s ² 6ms | Item 4.26 of IEC 61810-7 |
| Vibration Resistance | 10Hz~55Hz Double amplitude Functional:1.5mm Destructive:5mm | Item 4.28 of IEC 61810-7 |
| Terminals Strength | 5N | Item 4.24 of IEC 61810-7 |
| Temperature Range | -40°C~65°C (-40°F~149°F) (-40°C~70°C for 0.4W Coil) | |
| Mass | Approx. 4.8g | Item 4.7 of IEC 61810-7 |

Safety Approvals

| Safety approval | UL&CUR | TUV |
|-----------------|----------------------------------|-----------------------|
| Load | 20A/30VDC; 1A/24VDC; 0.5A/120VAC | 1A/24VDC; 0.5A/120VAC |

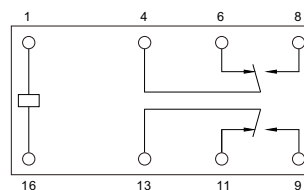
Dimensions

mm

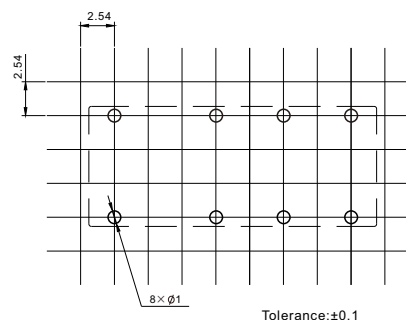


*Note:12.3max. (48V, 0.4W)

Dimensions



Wiring diagram
(Bottom view)



Mounting (Bottom view)

CAUTION: In case of no tolerance shown in outline dimension: outline dimension \leq 1mm,tolerance should be \pm 0.2mm ;
outline dimension >1mm and \leq 5mm, tolerance should be \pm 0.3mm; outline dimension >5mm, tolerance should be \pm 0.4mm.

FORWARD RELAYS

