

20×10×12

UL E158859 R50044268

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

M4S - 12 H A W
1 2 3 4 5

1 Part number: M4S
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 Nominal coil power: Nil:0.15W; A:0.2W
5 Contact material: W:AgNi

Contact Data

| | | |
|------------------------|--------------------------|--|
| Contact Arrangement | 2C(DPDT(B-M)) | |
| Contact Material | AgNi(Au plated) | |
| Contact Rating | 2A,3A/30VDC; 0.6A/125VAC | |
| Max. Switching Power | 90W 125VA | Min. Switching Load: 1mA/10mV(Reference Value) |
| Max. Switching Voltage | 220VDC 250VAC | Max. Switching Current:3A |
| Contact Resistance | ≤100mΩ | Item 4.12 of IEC 61810-7 |
| Electrical Endurance | 1×10 ⁵ | Item 4.30 of IEC 61810-7 |
| Mechanical Endurance | 1×10 ⁸ | Item 4.31 of IEC 61810-7 |

Notes: 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) (5% or 10% of rated voltage) | Coil power W | Operate time ms | Release time ms |
|--------------|------------------|-------|-------------------------|--|--|--------------|-----------------|-----------------|
| | Rated | Max | | | | | | |
| M4S-003 | 3 | 7.5 | 60 | 2.1 | 0.15 | 0.15 | Approx. 4.5 | Approx. 1.5 |
| M4S-005 | 5 | 12.5 | 167 | 3.5 | 0.25 | 0.15 | | |
| M4S-006 | 6 | 15.0 | 240 | 4.2 | 0.3 | 0.15 | | |
| M4S-009 | 9 | 22.5 | 540 | 6.3 | 0.45 | 0.15 | | |
| M4S-012 | 12 | 30.0 | 960 | 8.4 | 0.6 | 0.15 | | |
| M4S-024 | 24 | 52.9 | 3840 | 16.8 | 1.2 | 0.15 | | |
| M4S-048 | 48 | 84.9 | 7680 | 33.6 | 2.4 | 0.30 | | |
| M4S-003A | 3 | 6.5 | 45 | 2.1 | 0.3 | 0.2 | Approx. 4.5 | Approx. 1.5 |
| M4S-005A | 5 | 10.8 | 125 | 3.5 | 0.5 | 0.2 | | |
| M4S-006A | 6 | 13.0 | 180 | 4.2 | 0.6 | 0.2 | | |
| M4S-009A | 9 | 19.5 | 405 | 6.3 | 0.9 | 0.2 | | |
| M4S-012A | 12 | 26.5 | 720 | 8.4 | 1.2 | 0.2 | | |
| M4S-024A | 24 | 52.9 | 2880 | 16.8 | 2.4 | 0.2 | | |
| M4S-048A | 48 | 103.9 | 11520 | 33.6 | 4.8 | 0.2 | | |

Notes: 1. The use of any coil voltage less than the rated coil voltage will compromise the operation of the relay.
2. Pick-up and drop-out voltage are for test purposes only and are not to be used as design criteria.

Characteristics

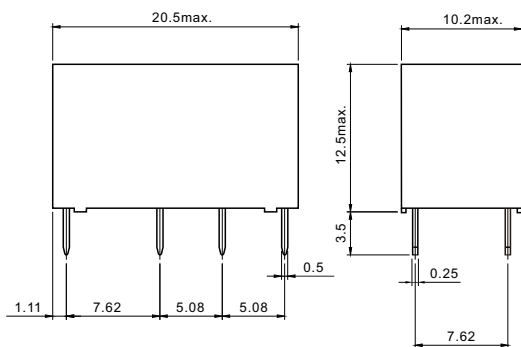
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|---------------------------|---|--------------------------|
| Electrostatic Capacitance | | |
| Between Open Contacts | Approx.0.7pF | Item 4.41 of IEC 61810-7 |
| Between Contacts and Coil | Approx.1.0pF | Item 4.41 of IEC 61810-7 |
| Between Contact 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 Contacts and Coil | 1000VAC 1min | |
| Between Contact Poles | 1000VAC 1min | |
| Surge Withstand Voltage | | |
| Between Open Contacts | 1500V | FCC 68 |
| Between Contacts and Coil | 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~90°C(-40°F~194°F) (-40°C~80°C for 0.3W Coil) | |
| Weight(Approx.) | 4.8g | Item 4.7 of IEC 61810-7 |

Safety Approvals

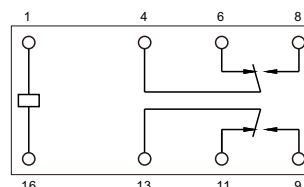
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|-----------------|--------------------------|-----------------------|
| Safety approval | UL&CUR | TüV |
| Load | 2A,3A/30VDC; 0.6A/125VAC | 2A/30VDC; 0.6A/125VAC |

Dimensions

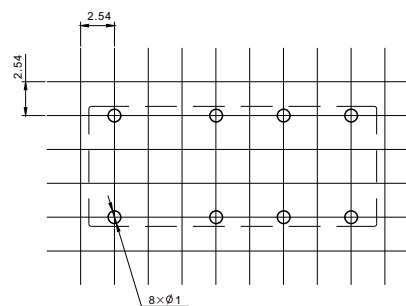
mm



Dimensions



Wiring diagram
(Bottom view)



Mounting (Bottom view)

Remark: In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm ;
outline dimension >1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension >5mm, tolerance should be ±0.4mm.

FORWARD RELAYS

