



20.0×9.8×12.0

M 4



E158859

**Features**

- DIL Pitch Terminals .High Sensitivity ◦
- Conforms to FCC Part 68 1.5kV Surge and Dielectric 1000VAC ◦
- Fully sealed (immersion cleaning).
- 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 ◦

**Contact Data**

Contact Arrangement	2C (DPDT(B-M)) (Bifurcated Crossbar)	
Contact Material	Ag-Pd( Gold clad ) Ag-Ni(Gold clad)	
Contact Rating (resistive)	1A/24VDC; 0.5A/120VAC	
Max. Switching Power	30W 62.5VA	Min. Switching load: 0.01mA/10mV (Reference Value)
Max. Switching Voltage	220VDC 250VAC	Max. Switching Current:2A
Contact Resistance or Voltage drop	≤50mΩ	Item 3.12 of IEC255-7
Operation life	Electrical	1A/24VDC: $5 \times 10^5$ (Ag Alloy : $1 \times 10^5$ )
	Mechanical	0.5A/120VAC: $2 \times 10^5$ $10^8$
		Item 3.30 of IEC255-7 Item 3.31 of IEC255-7

**CAUTION:**

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

**Coil Parameter**

Dash Numbers	Coil voltage VDC		Coil resistance $\Omega \pm 10\%$	Pick up voltage VDC(max) (70% or 66%of rated voltage )	release voltage VDC(min) (5% or 10% of rated voltage)	Coil power W	Operate Time ms	Release Time ms
	Rated	Max.						
M4-003	3	7.5	60	2.1	0.15	0.15		
M4-005	5	12.5	167	3.5	0.25	0.15		
M4-006	6	15.0	240	4.2	0.3	0.15		
M4-009	9	22.5	540	6.3	0.45	0.15		
M4-012	12	30.0	960	8.4	0.6	0.15	≤5	≤3
M4-018	18	40.0	1620	12.6	0.9	0.20		
M4-024	24	52.9	2880	16.8	1.2	0.20		
M4-048	48	84.9	7680	33.6	2.4	0.30		
M4-003A	3	6.5	45	2.1	0.3	0.2		
M4-005A	5	10.8	125	3.5	0.5	0.2		
M4-006A	6	13.0	180	4.2	0.6	0.2		
M4-009A	9	19.5	405	6.3	0.9	0.2	≤5	≤3
M4-012A	12	26.5	720	8.4	1.2	0.2		
M4-024A	24	52.9	2880	16.8	2.4	0.2		
M4-048A	48	103.9	11520	33.6	4.8	0.2		
M4-005M	5	7.7	56	3.3	0.5	0.45		
M4-006M	6	9.2	80	4.0	0.6	0.45		
M4-009M	9	13.7	180	6.0	0.9	0.45		
M4-012M	12	18.3	320	8.0	1.2	0.45	≤5	≤3
M4-018M	18	27.5	720	12.0	1.8	0.45		
M4-024M	24	36.7	1280	15.9	2.4	0.45		
M4-048M	48	72.5	5000	33.0	4.8	0.45		

- 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 3.41 of IEC255-7
Between coil & Contacts	Approx.1.0pF	Item 3.41 of IEC255-7
Between Contact Poles	Approx.0.9pF	Item 3.41 of IEC255-7
Insulation Resistance	1000M $\Omega$ min (at 500VDC)	Item 7 of IEC255-5
Dielectric Strength		
Between open Contacts	1000VAC 1min	Item 6 of IEC255-5
Between coil & Contacts	1000VAC 1min	Item 6 of IEC255-5
Between Contact Poles	1000VAC 1min	Item 6 of IEC255-5
Surge Withstand Voltage		
Between open Contacts	1500V	FCC68
Between coil & Contacts	1500V	FCC68
Between Contact Poles	1500V	FCC68
Shock resistance	Functional:100m/s <sup>2</sup> 11ms; Survival:1000 m/s <sup>2</sup> 6ms	IEC68-2-27 Test Ea
Vibration resistance	10~55Hz Double amplitude Functional: 1.5mm Survival:5mm	IEC68-2-6 Test Fc
Terminals strength	5N	IEC68-2-21 Test Ua1
Solderability	235 $^{\circ}$ C $\pm$ 2 $^{\circ}$ C 3 $\pm$ 0.5s	IEC68-2-20 Test Ta method 1
Temperature Range	-40~90 $^{\circ}$ C (-40~194 $^{\circ}$ F) (-40~80 $^{\circ}$ C for 0.3W Coil)	
Mass	4.5g	

**Qualification inspection:**

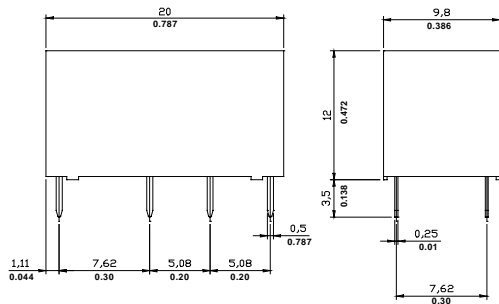
Perform the qualification test as specified in the table IV of IEC255-19-1 and minimum sample size24.

**Safety approvals**

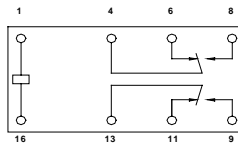
Safety approval	UL&CUR
Load	1A/24VDC 0.5A/125VAC

**Dimensions**

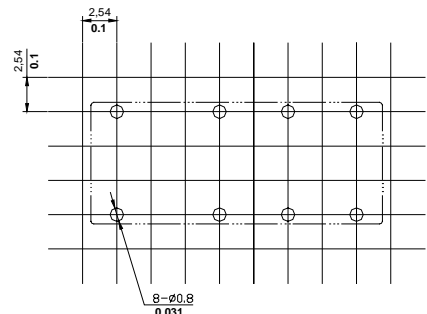
mm/inch



Dimensions



Wiring diagram  
(Bottom views)



Mounting (Bottom views)

NOTES 1).Dimensions are in millimeter.

2).Inch equivalents are given for general information only.