

# M 1 B S



20.0×9.8×11.0



E158859

## Features

- DIL Pitch Terminals .High Sensitivity ◦
- Conforms to FCC Part 68 1.5kV Surge and Dielectric 1000VAC ◦
- Fully sealed (immersion clearable).
- 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	
Contact Material	PdRu	
Contact Rating (resistive)	2A/30VDC; 0.6A/125VAC	
Max. Switching Power	60W 125VA	Min. Switching load: 1mA/1V (Reference Value)
Max. Switching Voltage	220VDC 250VAC	Max. Switching Current:2A
Contact Resistance or Voltage drop	≤100mΩ	Item 3.12 of IEC255-7
Operation life	Electrical	3 × 10 <sup>5</sup> (Ag Alloy : 1 × 10 <sup>5</sup> )
	Mechanical	10 <sup>8</sup>
		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

Coil voltage VDC		Coil resistance Ω±10%	Pick up voltage VDC(max) (70% of rated voltage )	release voltage VDC(min) (10% of rated voltage)	Coil power W	Operate Time ms	Release Time ms
Rated	Max.						
3	4.2	16	2.1	0.3	0.56		
5	7.0	45	3.5	0.5	0.56		
6	8.4	66	4.2	0.6	0.55		
9	12.3	140	6.3	0.9	0.58	≤3	≤1.5
12	17.4	280	8.4	1.2	0.52		
24	34.0	1070	16.8	2.4	0.54		
48	64.9	3900	33.6	4.8	0.59		
3	4.9	22.5	2.1	0.3	0.4		
5	8.1	62.5	3.5	0.5	0.4		
6	9.7	90	4.2	0.6	0.4		
9	14.5	203	6.3	0.9	0.4	≤3	≤1.5
12	19.4	360	8.4	1.2	0.4		
24	38.9	1440	16.8	2.4	0.4		
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.

## Qualification inspection:

Perform the qualification test as specified in the table IV of IEC255-19-1 and minimum sample size 24.

**Characteristics**

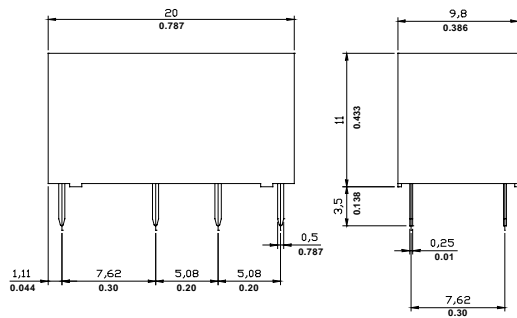
Electrostatic capacitance			
Between open Contacts	Approx.0.7pF	Item 3.41	of IEC255-5
Between coil & Contacts	Approx.1.0pF	Item 3.41	of IEC255-5
Between Contact Poles	Approx.0.9pF	Item 3.41	of IEC255-5
Insulation Resistance	1000M $\Omega$ min (at 500VDC)	Item 7	of IEC255-5
Dielectric Strength			
Between 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; Endurance:1000 m/s <sup>2</sup> 6ms	IEC68-2-27	Test Ea
Vibration resistance	10~55Hz Double amplitude Functional: 1.5mm Endurance:5mm	IEC68-2-6	Test Fc
Terminals strength	5N	IEC68-2-21	Test Ua1
Solderability	230 $^{\circ}$ C $\pm$ 2 $^{\circ}$ C 10 $\pm$ 0.5s -40~65 $^{\circ}$ C (-40~149 $^{\circ}$ F)	IEC68-2-20	Test Ta method 1
Temperature Range	(-40~70 $^{\circ}$ C for 0.4W Coil)		
Weight	4.5g		

**Ordering Information**

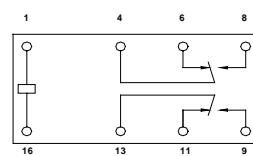
<b>M1BS</b>	<b>12</b>	<b>H</b>	<b>A</b>	
				Nominal coil power:Nil:0.55W; A:0.40W
				Sealing H: Sealed Type
				Nominal coil Voltage9VDC):3:3V;5:5V;6:6V;9:9V;12:12V;24:24V;48:48V
				Type : M1BS

**Dimensions**

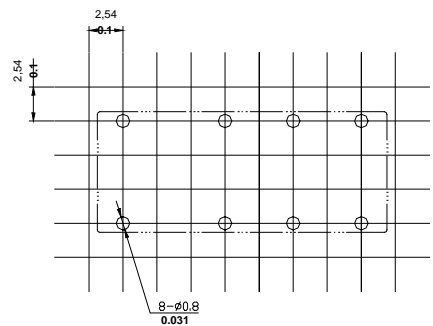
mm/inch



Dimensions



Wiring diagram  
(Bottom views)



Tolerance:  $\pm 0.1/\pm 0.004$

Mounting (Bottom views)

NOTES 1).Dimensions are in millimeter.

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