

20×10×11

# M1BS



## 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.

## Ordering Information

**M1BS 12 H A W**  
 1 2 3 4 5

1 Part number: M1BS  
 2 Coil rated Voltage: DC:3:3V; 5:5V; 6:6V; 9:9V;  
 12:12V; 24:24V; 48:48V

3 Enclosure: H: Sealed Type  
 4 Nominal coil power: Nil:0.55W; A:0.4W  
 5 Contact material: W: AgNi

## Contact Data

Contact Arrangement		2C (DPDT(B-M))	
Contact Material		AgNi(Gold clad)	
Contact Rating (resistive)		2A/30VDC; 0.6A/125VAC	
Max. Switching Power		60W 125VA	Min. Switching load: 1mA/10mV (Reference Value)
Max. Switching Voltage		220VDC 250VAC	Max. Switching Current:2A
Contact Resistance or Voltage drop		≤50mΩ	Item 4.12 of IEC 61810-7
Operational Life	Electrical	1 × 10 <sup>5</sup>	Item 4.30 of IEC 61810-7
	Mechanical	10 <sup>8</sup>	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 )	Release voltage VDC(min) (10% of rated voltage)	Coil power W	Operate Time ms	Release Time ms
	Rated	Max						
M1BS-003	3	4.2	16	2.1	0.3	0.56	Approx. 4.5	Approx. 1.5
M1BS-005	5	7.0	45	3.5	0.5	0.56		
M1BS-006	6	8.4	66	4.2	0.6	0.55		
M1BS-009	9	12.3	140	6.3	0.9	0.58		
M1BS-012	12	17.4	280	8.4	1.2	0.52		
M1BS-024	24	34.0	1070	16.8	2.4	0.54		
M1BS-048	48	64.9	3900	33.6	4.8	0.59		
M1BS-003A	3	4.9	22.5	2.1	0.3	0.4	Approx. 4.5	Approx. 1.5
M1BS-005A	5	8.1	62.5	3.5	0.5	0.4		
M1BS-006A	6	9.7	90	4.2	0.6	0.4		
M1BS-009A	9	14.5	203	6.3	0.9	0.4		
M1BS-012A	12	19.4	360	8.4	1.2	0.4		
M1BS-024A	24	38.9	1440	16.8	2.4	0.4		
M1BS-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

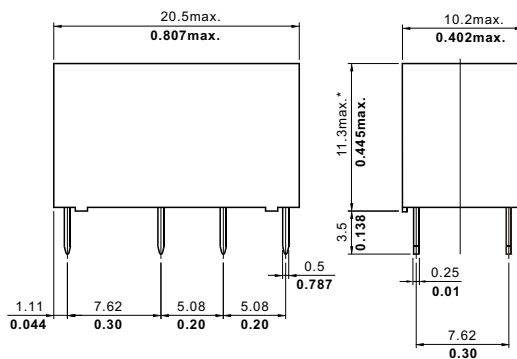
Electrostatic capacitance		
Between open Contacts	Approx.0.7pF	Item 4.41 of IEC 61810-7
Between coil & Contacts	Approx.1.0pF	Item 4.41 of IEC 61810-7
Between Contact Poles	Approx.0.9pF	Item 4.41 of IEC 61810-7
Insulation Resistance	1000M $\Omega$ min (at 500VDC)	Item 7 of IEC 60255-5
Dielectric Strength		
Between open Contacts	1000VAC 1min	Item 6 of IEC 60255-5
Between coil & Contacts	1000VAC 1min	Item 6 of IEC 60255-5
Between Contact Poles	1000VAC 1min	Item 6 of IEC 60255-5
Surge Withstand Voltage		
Between open Contacts	1500V	FCC 68
Between coil & Contacts	1500V	FCC 68
Between Contact Poles	1500V	FCC 68
Shock resistance	Functional:100m/s <sup>2</sup> 11ms; Survival:1000 m/s <sup>2</sup> 6ms	IEC 68-2-27 Test Ea
Vibration resistance	10Hz~55Hz Double amplitude Functional : 1.5mm Survival:5mm	IEC 68-2-6 Test Fc
Terminals strength	5N	IEC 68-2-21 Test Ua1
Solderability	235 $^{\circ}$ C $\pm$ 2 $^{\circ}$ C 3s $\pm$ 0.5s	IEC 68-2-20 Test Ta method 1
Temperature Range	-40 $^{\circ}$ C~65 $^{\circ}$ C(-40 $^{\circ}$ F~149 $^{\circ}$ F) (-40 $^{\circ}$ C~70 $^{\circ}$ C for 0.4W Coil)	
Mass	Approx. 4.5g	

## Safety approvals

Safety approval	UL&CUR	TÜV
Load	2A/30VDC 0.6A/125VAC	2A/30VDC、0.6A/125VAC

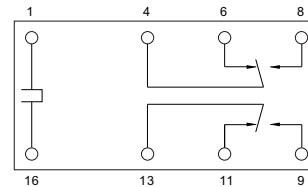
## Dimensions

mm/inch

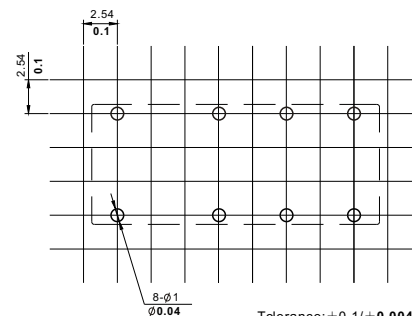


\*Note: 12.3max. (48V, 0.4W)

Dimensions

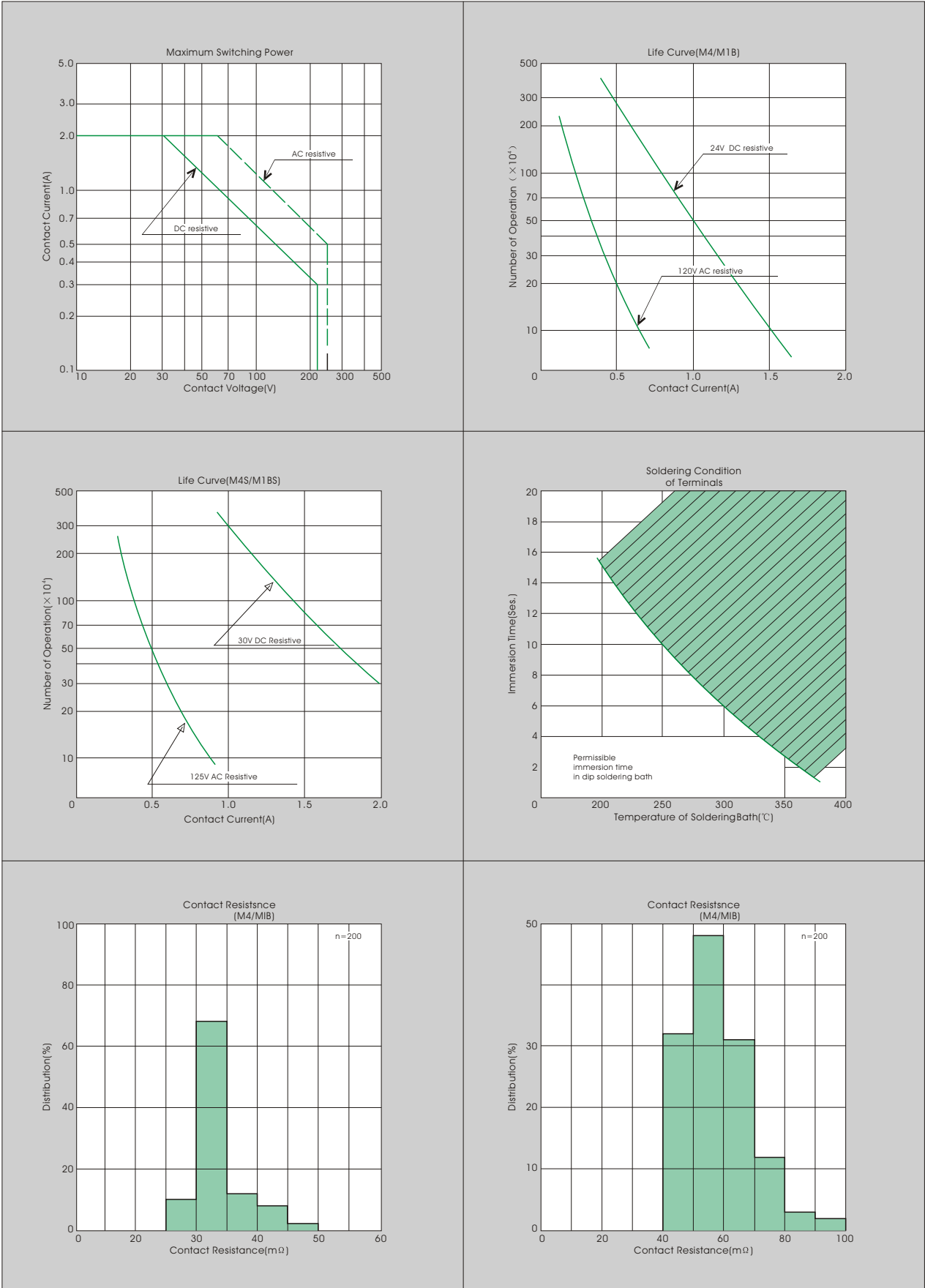


Wiring diagram  
(Bottom view)



Mounting (Bottom view)

- NOTES 1).Dimensions are in millimeters.  
2).Inch equivalents are given for general information only.



# M4/M1B Series Data

