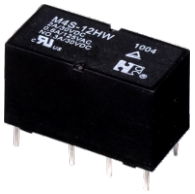


20×10×12

M4S

c UL us 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	W	A
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 Contact material：W: AgNi
5 Nominal coil power：Nil:0.15W；A:0.2W

Contact Data

Contact Arrangement		2C(DPDT(B-M))	
Contact Material		AgNi(Au plated)	
Contact Rating (Resistive)		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
Operational Life	Electrical	1×10^5	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 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 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		

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

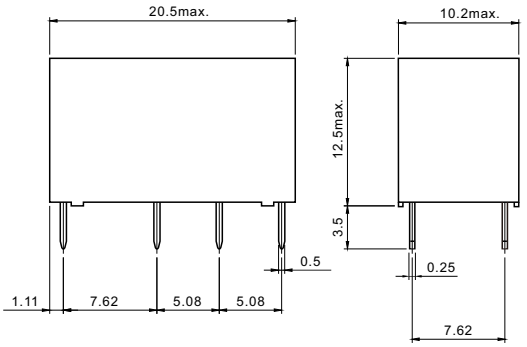
Electrostatic Capacitance		
Between Open Contacts	Approx.0.7pF	Item 4.41 of IEC 61810-7
Between Coil & Contacts	Approx.1.0pF	Item 4.41 of IEC 61810-7
Between Contact Poles	Approx.0.9pF	Item 4.41 of IEC 61810-7
Insulation Resistance	1000MΩ min (at 500VDC)	Item 4.11 of IEC 61810-7
Dielectric Strength		
Between Open Contacts Between Coil & Contacts Between Contact Poles	1000VAC 1min 1000VAC 1min 1000VAC 1min	Item 4.9 of IEC 61810-7
Surge Withstand Voltage		
Between Open Contacts Between Coil & Contacts Between Contact Poles	1500V 1500V 1500V	FCC 68
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℃~90℃(-40°F~194°F) (-40℃~80℃ for 0.3W Coil)	
Mass	Approx. 4.8g	Item 4.7 of IEC 61810-7

Safety Approvals

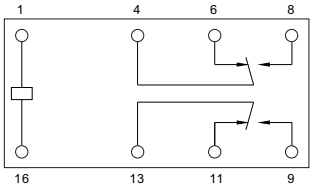
Safety approval	UL&CUR	TÜV
Load	2A,3A/30VDC; 0.6A/125VAC	2A/30VDC; 0.6A/125VAC

Dimensions

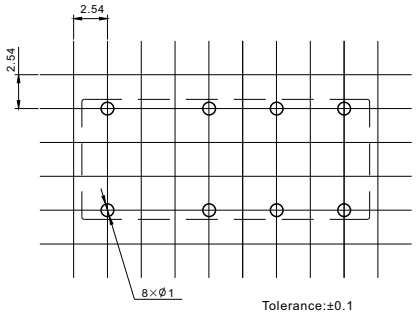
mm



Dimensions



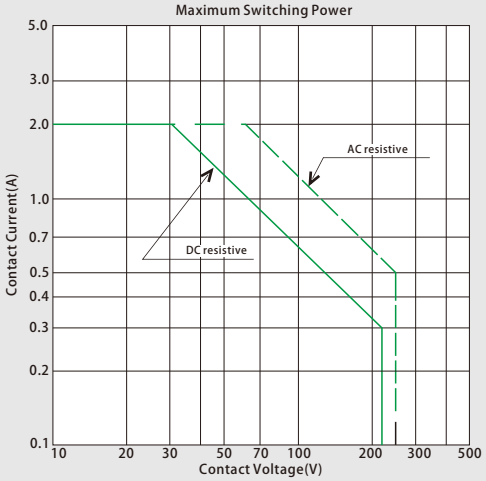
Wiring diagram
(Bottom view)



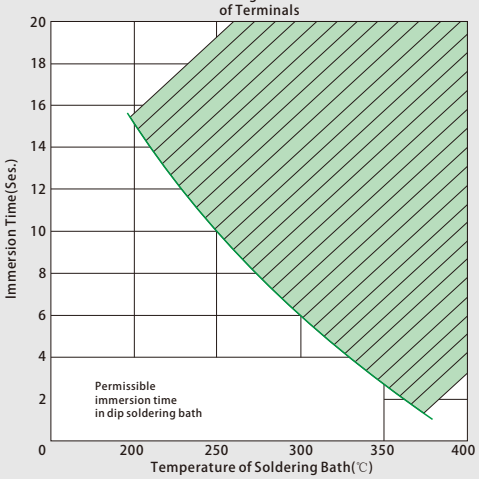
Mounting (Bottom view)

CAUTION: 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.

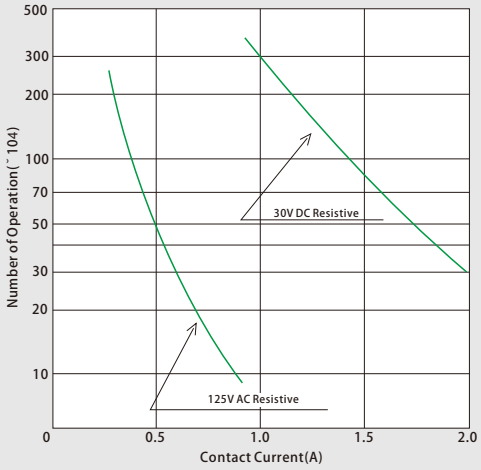
Maximum Switching Power



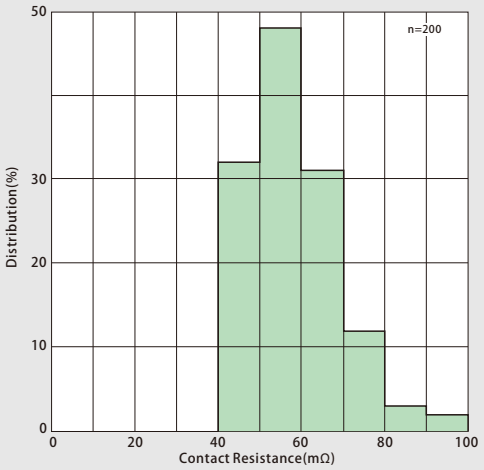
Soldering Condition of Terminals



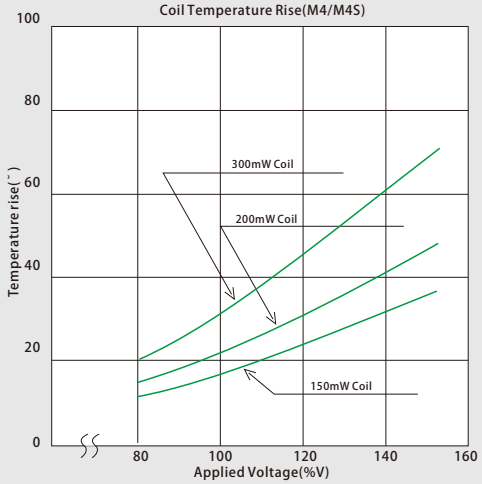
Life Curve

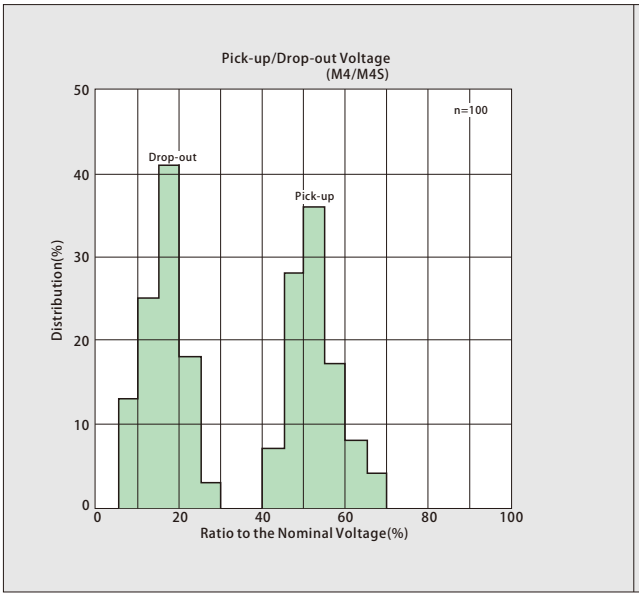


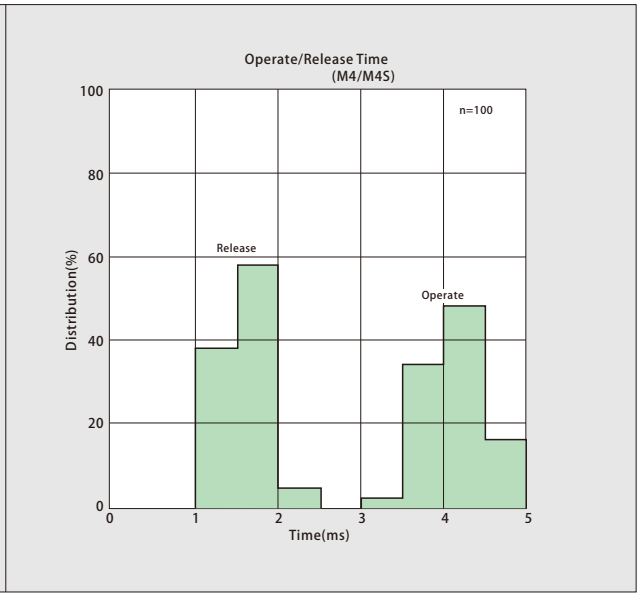
Contact Resistsnce



Coil Temperature Rise(M4/M4S)




Pick-up/Drop-out Voltage
(M4/M4S)
n=100
Drop-out
Pick-up
Distribution(%)
0
10
20
30
40
50
0
20
40
60
80
100
Ratio to the Nominal Voltage(%)


Operate/Release Time
(M4/M4S)
n=100
Release
Operate
Distribution(%)
0
20
40
60
80
100
0
1
2
3
4
5
Time(ms)