

Miniature Power Relays Series M12

Type M12 . . . 100/001

Monostable



- Miniature size 12,3 mm high
- PCB mounting
- 5 kV / 8 mm insulation
- Switching capability 8 A / 250 VAC
- DC coils 3,75 to 141 VDC
- General purpose, industrial electronics
- Sealed according IP 67 standard
- 2 different pin layout configurations
- Low coil power consumption

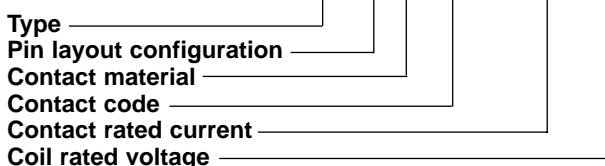
Product Description

Miniature sealed relay according to IP 67. Suitable for automatic soldering.

Produced on fully automated production line.

Ordering Key

M12 E A 001 24VDC 8



Approvals



USA



CANADA/USA



GERMANY

Pin layout configuration

B = 5.0 mm
(only no contact)
E = 3.2 mm / 5.0 mm
(only co contact)

Contact material

A = Ag CdO₁₂
C = Ag CdO, Gold plated
S = Ag SnO₂

Type Selection

Contact configuration	Contact rating	Contact code
1 normally open contact (SPST-NO {1-form A})	8 A	100 5 mm only
1 change over contact (SPDT-CO {1-form C})	8 A	001 3.2 mm only

Coil Characteristics, DC (20 °C)

Rated voltage VDC	Winding resistance $\Omega \pm 10\%$	Pick up Voltage VDC	Max. allowable Voltage VDC	Drop out voltage \geq VDC
5	113 \pm 10%	3.75	11.8	0.5
6	164 \pm 10%	4.50	14.1	0.6
12	617 \pm 10%	9.00	28.2	1.2
18	1295 \pm 10%	12.60	42.3	1.8
24	2350 \pm 10%	18.40	56.4	2.4
48	9600 \pm 15%	36.40	112.8	4.8
60	12500 \pm 15%	45.60	141.0	6.0

Special loads - Motor loads

	AC1		(IEC 947-5)		Motor loads			
	250 VAC	250 VAC	AC 15	DC13	AgCdO		AgSnO ₂	
					115 VAC	250 VAC	115 VAC	250 VAC
M12 001	8A	2.5A	24 VDC	5A	1/8 HP	1/3 HP	1/3 HP	3/4 HP

Specifications are subject to change without notice

Contact Characteristics

Rating	8 A	
Material (standard version) ¹⁾	Ag CdO	
Current (for AC)		
Rated current	8 A	
Max. switching current	10 A	
Voltage		
Rated voltage	250 VAC - 50 Hz	
Max. switching voltage	125 VDC 440 VAC	
Power		
Max. switch. power with resistive load	2000 VA - 150 W	
Life		
Expected min. operations: Mechanical	2x10 ⁷ ops (72000 ops/hour)	
Electrical	1x10 ⁹ ops (360 ops/hour)	
UL / CUR rating	8 A	250 VAC
	5 A	30 VDC
	8 A	24 VDC
VDE rating	8 A	250 VAC
	5 A	30 VDC
	8 A	24 VDC

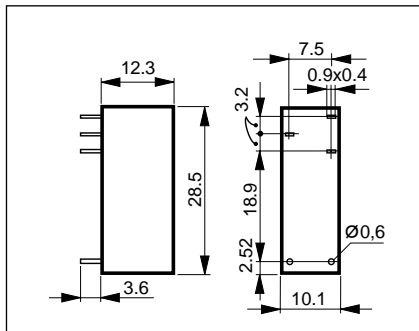
General Data

Operating time at rated voltage	≤ 7 ms
Operating bounce time	≤ 1 ms
Release time	≤ 3 ms
Release bounce time	≤ 3 ms
Ambient temperature ²⁾	- 40 °C to +85 °C
Vibration resistance	10 to 500 Hz 20 g / 5 g
Inside protection according to IEC 144	IP 67 sealed
Weight	8.2 g
Working class/type of service	C / Continuous
Shock Resistance: Functional	100 m/s ²
Destructive	1000 m/s ²

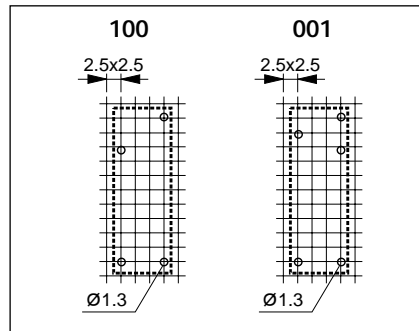
Insulation

Insulation Resistance at 500 VAC	1000 MΩ
Test voltage (1 min.) Open contacts	1000 VAC
Coil/Contacts	5000 VAC

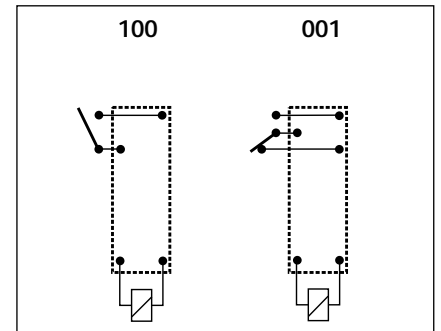
Dimensions



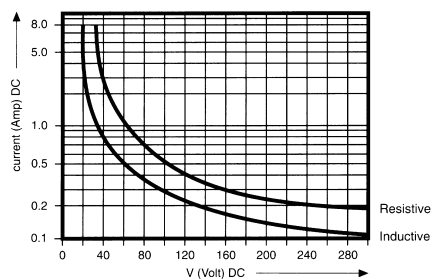
Pin View



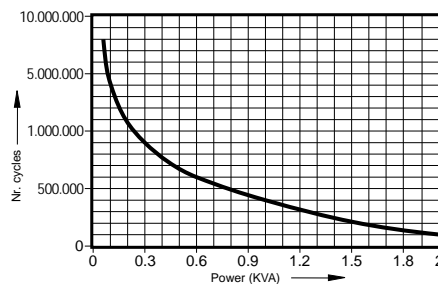
Wiring Diagrams



1 Max. switching power DC



2 Expected switching cycles/switching current at 250 VAC. - For resistive loads and repetition rate 360 cycles/h.



3 Reduction of expected life against load power factor cos φ For all types

