Subminiature Signal Relay	ETY

Features

- Low coil power requirement for IC compatibility
- Surge strength 1500V FCC68
- Terminals arranged on grid pattern
- Designed for compact, high density mounting
- Plastic sealed type

c UL us
(File No.:E122258)

1. COIL DATA (at 20°C)

1) Standard Type

Nominal Voltage (VDC)	Pick-up Voltage (VDC)	Drop-out Voltage (VDC)	Max Allowable Voltage (VDC)	Coil Current (mA)(±10%)	Coil Resistance (Ω)	Coil Power (mW)
3	2.25	0.3	3.9	66.7	45 x (1±10%)	200
5	3.75	0.5	6.5	40.0	125 x (1±10%)	
6	4.50	0.6	7.8	33.3	180 x (1±10%)	
9	6.75	0.9	11.7	22.2	405 x (1±10%)	
12	9	1.2	15.6	16.7	720 x (1±10%)	
24	18	2.4	31.2	8.33	2880 x (1±10%)	

2) Sensitive Type

Nominal Voltage (VDC)	Pick-up Voltage (VDC)	Drop-out Voltage (VDC)	Max Allowable Voltage (VDC)	Coil Current (mA)(±10%)	Coil Resistance (Ω)	Coil Power (mW)
3	2.40	0.3	3.9	50.0	60 x (1±10%)	150
5	4.00	0.5	6.5	30.0	167 x (1±10%)	
6	4.80	0.6	7.8	25.0	240 x (1±10%)	
9	7.20	0.9	11.7	16.7	540 x (1±10%)	
12	9.60	1.2	15.6	12.5	960 x (1±10%)	
24	19.2	2.4	31.2	6.25	3840 x (1±10%)	

Note: The maximum allowable voltage refers to the maximum voltage which relay coil could endure in a short period of time.

2. CONTACT DATA

Contact Arrangement		1 Form C
Contact Resistance		100mΩ max. (at 1A 6VDC)
Contact Material		AgNi + Au plated
Load		Resistive load (COSΦ=1)
Contact Ratings (Resistive Load)		2A 120VAC / 2A 24VDC
Minimum Load		1mA 5VDC
Max. Switching Voltage		120VAC / 60VDC
Max. Switching Current		2A
Max. Switching Power		240VA / 48W
Life Expectancy	Electrical	100,000 (at 30 operations/minute)
	Mechanical	10,000,000 (at 300 operations/minute)

3. CHARACTERISTICS

Insulation Resistance		100MΩ (at 500VDC)
Dielectric Strength	Open Contacts	400VAC (50/60Hz 1min)
	Coil and Contacts	1000VAC (50/60Hz 1min)
Operate Time (at nominal voltage)		4ms max.
Release Time (at nominal voltage)		3ms max.
Temperature Range		-40℃ ~ 85℃
Shock Resistance	Functional	10G
	Destructive	100G
Vibration Resistance		10 ~ 55Hz, 1.5mm DA
Humidity		5 ~ 85% RH
Termination		PCB (DIP)
Weight		Approx. 2.2g
Outline Dimension (L x W x H)		12.4 x 7.4 x 10.0mm

4. SAFETY APPROVAL RATINGS

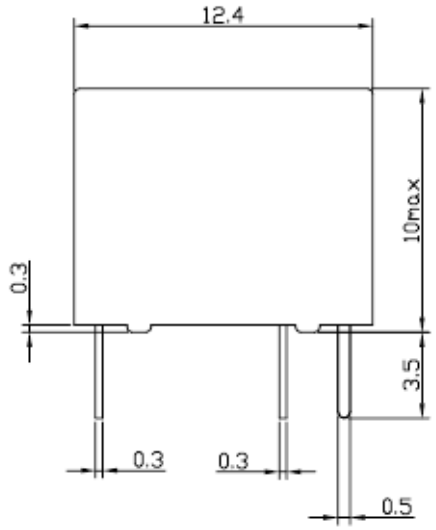
Safety Standard	Contact Form	Contact Rating
UL/cUL	1 Form C	1A/2A 120VAC 1A/2A 24VDC 0.5A 125VAC 1A 30VDC

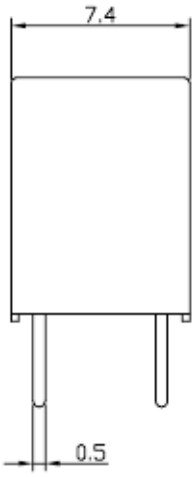
5. ORDERING INFORMATION

ETY - 12 S H ① ② ③ ④	
① Relay Model	ETY
② Coil Voltage	3=3VDC, 5=5VDC, 6=6VDC, 9=9VDC, 12=12VDC, 24=24VDC
③ Construction	S: Sealed Type
④ Coil Power	Nil: Standard Type (200mW) H: Sensitive Type (150mW)

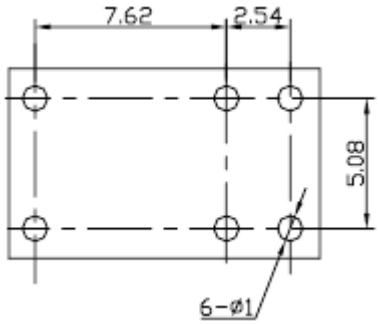
6. DIMENSIONS (Unit: mm)

Outline Dimensions

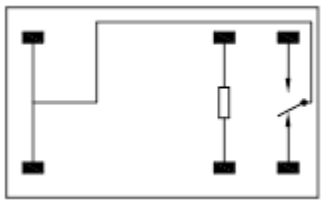




PCB Layout (Bottom View)



Wiring Diagram (Bottom View)



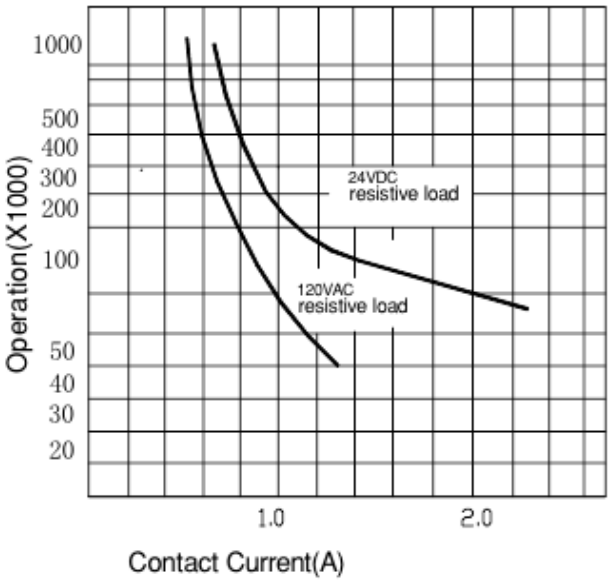
Remark: 1) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension >1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension >5mm, tolerance should be ±0.4mm.

2) The tolerance without indicating for PCB layout is always ±0.1mm.

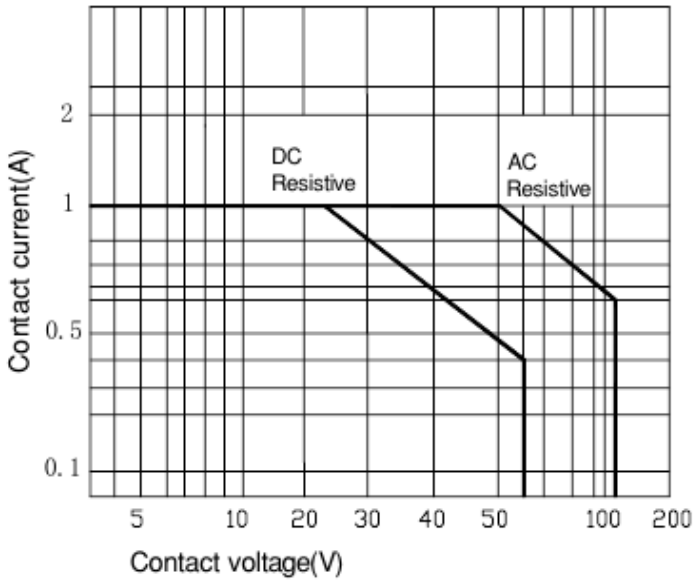
3) The additional tin top is max. 1mm.

7. CHARACTERISTIC CURVES

service life



Contact switching capacity



temperature