



»» Features

- ☐ 10.5mm slim type miniature PCB Relay.
- ☐ UL/CUL, TUV approved.
- ☐ High ratings 7A 250VAC and high insulation 2500V between coils to contacts.
- ☐ Special design for household appliances applications.
- ☐ Flux free and sealed types are both available.
- ☐ Comply with RoHS-Directive 2011/65/EU.
- ☐ Relay with AgCdO contact material is exempt from the Directives.

»» Type List

◆ Standard Type

Terminal style	Contact form	High insulation type	Designation		
			Flux tight	Sealed type	Sealed type washable
PCB terminal	1A (SPNO)	-----	851-1A-C	851-1A-V	851-1A-S
		B	851B-1A-C	851B-1A-V	851B-1A-S
	1C (SPDT)	-----	851-1C-C	851-1C-V	851-1C-S
		B	851B-1C-C	851B-1C-V	851B-1C-S

◆ High Power Type

PCB terminal	1A (SPNO)	-----	851H-1A-C	851H-1A-V	851H-1A-S
		B	851HB-1A-C	851HB-1A-V	851HB-1A-S
	1C (SPDT)	-----	851H-1C-C	851H-1C-V	851H-1C-S
		B	851HB-1C-C	851HB-1C-V	851HB-1C-S

◆ High Sensitivity Type

PCB terminal	1A (SPNO)	-----	851N-1A-C	851N-1A-V	851N-1A-S
		B	851NB-1A-C	851NB-1A-V	851NB-1A-S
	1C (SPDT)	-----	851N-1C-C	851N-1C-V	851N-1C-S
		B	851NB-1C-C	851NB-1C-V	851NB-1C-S

»» Ordering Information

851 ☐ ☐ ☐ - 1A - ☐ - C ☐

1 2 3 4 5 6 7 8

1. 851 -- Basic series designation

2. Blank -- Standard type

H -- High power type

3. Blank -- Standard type

N -- High sensitivity type

4. Blank -- Standard type

B -- High insulation type

5. 1A -- Single pole normally open

1B -- Single pole normally closed

1C -- Single pole double throw

6. Blank -- Standard type

F -- Class F

7. C -- Flux tight

V -- Sealed type

S -- Sealed type washable

8. ☐ -- Coil voltage (please refer to the coil rating data for the availability)

»» Contact Rating

Load type	851	851H
Resistive load	5A 250VAC	7A 250VAC

»» Coil Rating (DC)

◆ Standard Type

Rated voltage (V)	Rated current $\pm 10\%$ at 23°C (mA)	Coil resistance $\pm 10\%$ at 23°C (Ω)	Max. continuous voltage at 85°C	Pick up voltage(Max.) at 23°C	Drop out voltage(Min.) at 23°C	Power consumption at rated voltage
3	120	25	160% of rated voltage	75% of rated voltage	5% of rated voltage	approx. 0.36W
5	72.5	69				
6	60	100				
9	40	225				
12	30	400				
18	20	900				
24	15	1600				
36	10	3600				
48	7.5	6400				

◆ High Sensitivity Type

Rated voltage (V)	Rated current $\pm 10\%$ at 23°C (mA)	Coil resistance $\pm 10\%$ at 23°C (Ω)	Max. continuous voltage at 85°C	Pick up voltage(Max.) at 23°C	Drop out voltage(Min.) at 23°C	Power consumption at rated voltage
3	83.3	36	170% of rated voltage	75% of rated voltage	5% of rated voltage	approx. 0.25W
5	50	100				
6	41.3	145				
9	27.7	325				
12	20.9	575				
18	13.8	1300				
24	10.4	2310				
36	6.9	5180				

»» Specification

Contact material	AgCdO alloy (for 851(N) type) ; AgSnO alloy (for 851H type)	
Contact resistance ⁽¹⁾	100m Ω Max. (1A/6VDC by 4 pipes m Ω meter)	
Operate time ⁽¹⁾	10ms Max.	
Release time ⁽¹⁾	5ms Max.	
Insulation resistance ⁽¹⁾	1000M Ω Min. (DC 500V)	
Dielectric strength ⁽¹⁾	Between open contact : AC750V,50/60Hz 1 min.	
	Between contact and coil : AC2000V,50/60Hz 1 min. : AC2500V,50/60Hz 1 min. (for High insulation type)	
Vibration resistance	Operating extremes	10~55Hz, amplitude 1.5 mm
	Damage limits	10~55Hz, amplitude 1.5 mm

Shock resistance	Operating extremes	10G
	Damage limits	50G
Life expectancy	Mechanical	10,000,000 operations (frequency 18,000 operations/hr)
	Electrical	100,000 operations (frequency 1,200 operations/hr)
Operating ambient temperature	-40~+85°C (no freezing)	
Weight	Approx. 8g	

Note : (1) initial value

»» Safety Approval

Certified	UL / CUL	TUV
File No.	E88991	R 09854137

»» Safety Approval Rating

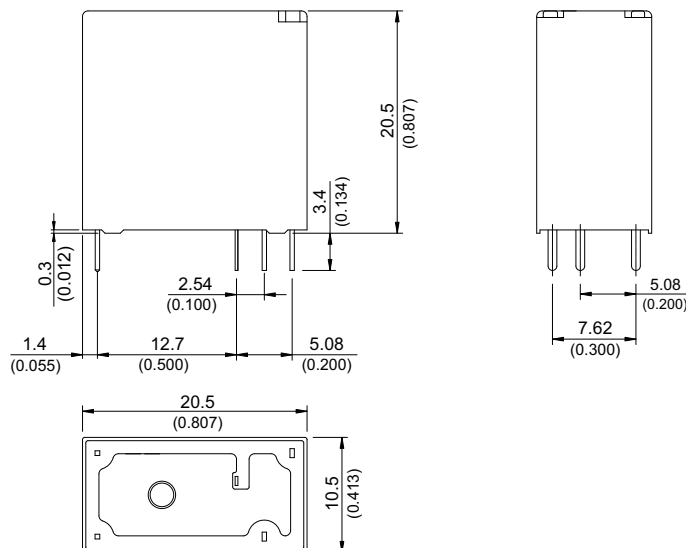
◆ UL / CUL

851		851H	
NO	NC	NO	NC
7A 277VAC 7A 30VDC 1/10HP 125/250VAC	5A 277VAC 5A 30VDC 1/10HP 125/250VAC	10A 277VAC 7A 30VDC 1/4HP 125/250VAC	7A 277VAC 7A 30VDC 1/4HP 125/250VAC

◆ TUV

851		851H	
NO	NC	NO	NC
7A 250VAC 5A 250VAC cos ϕ 0.4 7A 30VDC	5A 250VAC 3A 250VAC cos ϕ 0.4 5A 30VDC	10A 250VAC 7A 250VAC cos ϕ 0.4 7A 30VDC	7A 250VAC 5A 250VAC cos ϕ 0.4 7A 30VDC

»» Outline Dimensions



Wiring Diagram BOTTOM VIEW

1C



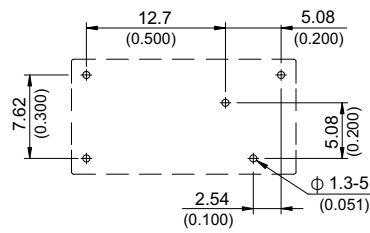
1A



1B



PC Board Layout BOTTOM VIEW



Engineering Data

