



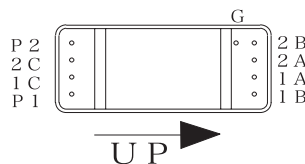
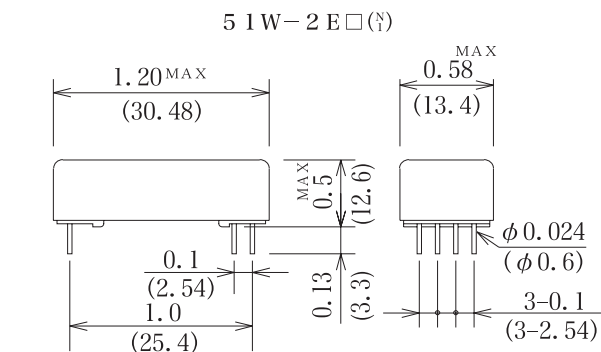
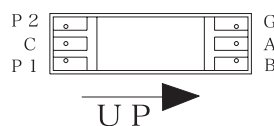
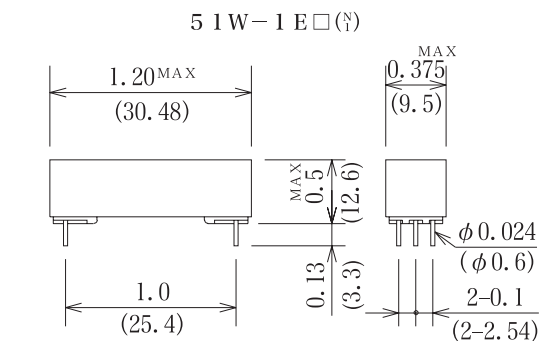
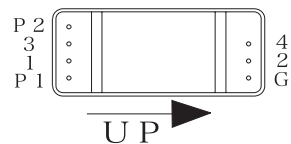
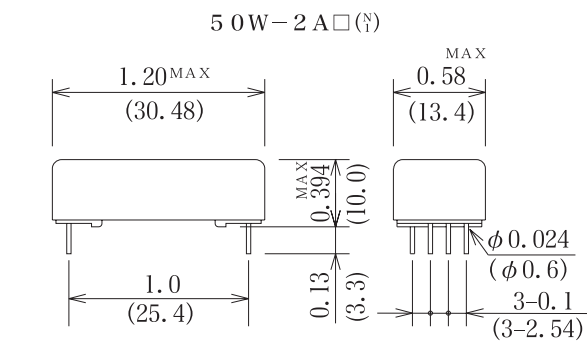
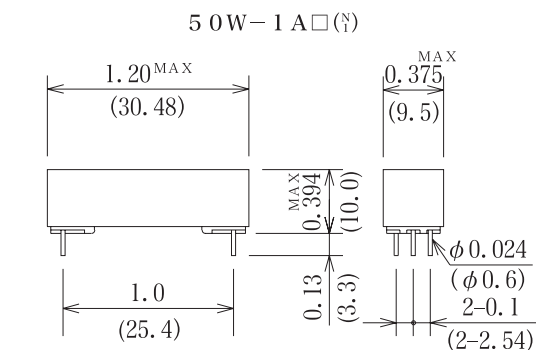
# Mercury Wetted Relays for Mounting on P.C. Boards.(1)



This small, light mercury relay is used for PC board equipped magnetic shields. It is also ideal for measuring instruments and various commercial applications.

## Mechanical Dimensions

All dimensions are measured in inches (millimeters).





5□W Series			Model Number			Model Number			Model Number			Model Number		
			50W-1A□□			50W-2A□□			51W-1E□□			51W-2E□□		
Parameters	Test Condition	Units	1 Form A			2 Form A			1 Form C			2 Form C		
<b>Coil Specifications</b>														
Nominal coil voltage		VDC	5	12	24	5	12	24	5	12		5	12	
Coil resistance	±10%at20°C	Ω	100	400	1600	80	300	1200	100	400		80	300	
Operating voltage	15°C~35°C	VDC-Max	3.6	9.6	19.2	3.6	9.6	19.2	3.6	9.6		3.6	9.6	
Operating voltage range	15°C~35°C	VDC	—	—	—	—	—	—	3.6/5.5	9.6/13.2		3.6/5.5	9.6/13.2	
Release voltage	15°C~35°C	VDC-Min	0.8	1.2	2.4	0.8	1.2	2.4	0.7	1.2		0.7	1.2	
<b>Contact Ratings</b>														
Switching voltage	Max. DC/Peak AC resistance	Volts	1000 (at 1mA)						500					
Switching current	Max. DC/Peak AC resistance	Amps	2.0						1.0					
Carry current	Max. DC/Peak AC resistance	Amps	2.0						2.0					
Contact rating	Max. DC/Peak AC resistance	Watts	50						50					
Life expectancy	1V. 10mA	×10 <sup>6</sup> cycles	1000						1000					
Dynamic noise	1.5ms after opening	μV (P-P)	100						150					
Contact resistance	Maximum initial	mΩ	80						80					
Contact resistance stability	Maximum initial	mΩ	5.0						5.0					
<b>Relay Specifications</b>														
Insulation resistance	Between all isolated pins at 500V 20°C 40%RH	Ω	10 <sup>10</sup>			10 <sup>10</sup>			10 <sup>10</sup>			10 <sup>10</sup>		
Capacitance		pF-Max												
Across open contacts	Shield guarding		0.1			0.1			0.6			0.6		
	Contact to Shield		3.5			4.0			1.6			1.6		
Open contact to coil	:Break-shield								4.5			4.5		
	Shield floating		0.6			0.4			0.8			0.6		
Dielectric strength	Shield guarding: Make-Coil	VDC	1000			1000			1000			1000		
	:Break-Coil		1000			1000			1000			1000		
Operating time	At nominal coil voltage,	msec	3.0			3.0			3.0			3.0		
	50Hz Square wave		(No Bounce)			(No Bounce)			(No Bounce)			(No Bounce)		
Release time	Diode suppression	msec	3.0			3.0			3.0			3.0		
Environmental Ratings		Schematics												
Measurement reference conditons		Top view												
Temp. : 15°C~35°C	Humidity : 25%~85%RH													
Atmospheric pressure : 860~1060hPa														
Storage temp. : -30°C~+80°C														
Operating temp : -10°C~+60°C														
The operating and Release Voltage and the coil resistance are specified at 20°C. These values change approximately 0.4%/°C change in the ambient temperature.														
Vibration : 20Gs to 2000Hz														
Shock : 50Gs														

### Notes :

- Values are specified with a resistive load being applied. A contact protective circuit is required for C and L type loads.
- The values for the operating time and release time however, are when the rated coil voltage is applied and a clamp diode is attached.
- The 50W and 51W series models have Hg wet contacts, are position sensitive, and must be mounted within 30° of the vertical plane. See the schematic.
- The relays mounted in the Model 51W fully observe the (+) and (-) polarity desightsins of the coil drive Voltage.

### ORDERING CODE

5 0 W - □ □ □ □  
(1) (2) (3) (4)

5 1 W - □ □ □ □  
(1) (2) (3) (4)

Example 50W-1A11 Represents Series 50W with 1Form A, Hg Wet, Coil Voltage 5V and Electrostatic Shield.

- |   |  |
|---|--|
| (1) Number of capsule<br>1-1capsule<br>2-2capsules                                | (3) Coil Voltage<br>1-5VDC<br>2-12VDC<br>3-24VDC (51W N/A) |
| (2) Contact Form<br>A-Form A<br>E-Multi-pole<br>(Break-before-Make action Form C) | (4) Shield<br>N-No Shield<br>1-Electrostatic Shield        |