



14×9×5.3

# PS

us E158859 R50044271

## Features

- Surface mount type (SMT) shaped terminals.
- Conforms to FCC Part 68 1.5kV surge and dielectric 1000VAC.
- Monostable relay.
- Application for telecommunication equipment, office equipment, security alarm systems, measuring instruments, medical Monitoring equipment, audio visual equipment, flight simulator, sensor control.

## Ordering Information

**PS 12 W**  
1 2 3

1 Part number: PS

2 Coil rated voltage(V): DC:3,4,5,6,9,12,24  
3 Contact material: Nil: AgPd; W: AgNi

## Contact Data

Contact Arrangement	2C(DPDT(B-M)) (Bifurcated Crossbar)		
Contact Material	AgPd(Au plated) AgNi(Au plated)		
Contact Rating (Resistive)	1A,2A/30VDC; 0.5A/125VAC		
Max. Switching Power	60W 62.5VA	Min. Switching Load: 0.01mA/10mV(Reference Value)	
Max. Switching Voltage	220VDC 250VAC		Max. Switching Current:2A
Contact Resistance	≤50mΩ	Item 4.12 of IEC 61810-7	
Operational Life	Electrical	2×10 <sup>5</sup> (DC AgPd);1×10 <sup>5</sup> (DC AgNi) 1×10 <sup>5</sup> (AC)	Item 4.30 of IEC 61810-7
	Mechanical	1×10 <sup>8</sup>	Item 4.31 of IEC 61810-7

### CAUTION:

Relays previously tested or used above 10mA resistive at 6V maximum JDC or peak ACJ 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) (75%of rated voltage)	Drop-out voltage VDC(min) (10% of rated voltage)	Coil power W	Operate time ms	Release time ms
	Rated	Max.						
PS-003	3	7.5	64.3	2.25	0.3	0.14	Approx.2	Approx.1
PS-004	4.5	11.25	144.6	3.38	0.45	0.14		
PS-005	5	12.5	178	3.75	0.5	0.14		
PS-006	6	15.0	257	4.50	0.6	0.14		
PS-009	9	22.5	579	6.75	0.9	0.14		
PS-012	12	30.0	1028	9.00	1.2	0.14		
PS-024	24	48.0	2880	18.0	2.4	0.20		

**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

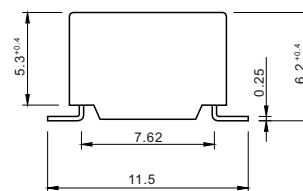
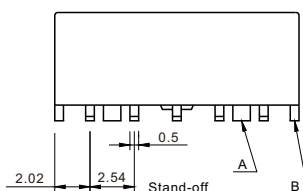
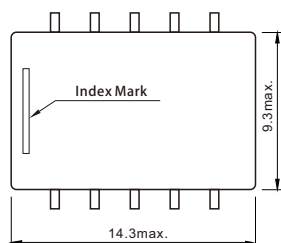
Electrostatic Capacitance		
Between Open Contacts	Approx.0.4pF	Item 4.41 of IEC 61810-7
Between coil & Contacts	Approx.0.9pF	Item 4.41 of IEC 61810-7
Between Contact Poles	Approx.0.2pF	Item 4.41 of IEC 61810-7
Insulation Resistance	1000M $\Omega$ min (at 500VDC)	Item 4.11 of IEC 61810-7
Dielectric Strength		
Between Open Contacts	1000VAC 1min	Item 4.9 of IEC 61810-7
Between Coil & Contacts	1000VAC 1min	
Between Contact Poles	1000VAC 1min	
Surge Withstand Voltage		
Between Open Contacts	1500V	FCC 68
Between Coil & Contacts	1500V	
Between Contact Poles	2500V	
Shock Resistance	Functional:490m/s <sup>2</sup> 11ms; Destructive:980 m/s <sup>2</sup> 6ms	Item 4.26 of IEC 61810-7
Vibration Rresistance	10Hz~55Hz Double amplitude Functional: 3mm Destructive:5mm	Item 4.28 of IEC 61810-7
Terminals Strength	5N	Item 4.24 of IEC 61810-7
Temperature Range	-40°C~85°C(-40°F~185°F)	
Mass	Approx. 1.5g	Item 4.7 of IEC 61810-7

### Safety Approvals

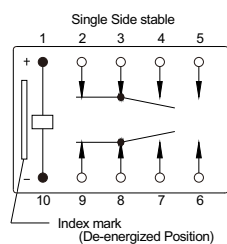
Safety approval	UL&CUR	TUV
Load	1A,2A/30VDC; 0.5A/125VAC	1A/30VDC; 0.5A/125VAC

### Dimensions

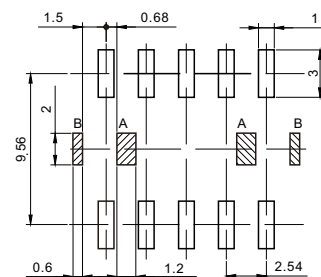
mm



Dimensions



Wiring diagram  
(Bottom view)



Soldering Pad (for Terminal)

Temporary glue Pad  
(for Stand-off A or B)

Tolerance $\pm$ 0.1

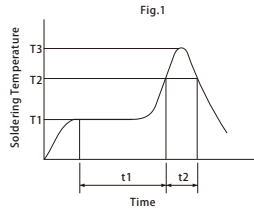
Mounting (Bottom view)

**CAUTION:** In case of no tolerance shown in outline dimension: outline dimension $\leq$ 1mm, tolerance should be $\pm$ 0.2mm ;  
outline dimension >1mm and  $\leq$ 5mm, tolerance should be $\pm$ 0.3mm; outline dimension >5mm, tolerance should  
be $\pm$ 0.4mm.

## SOLDERING and MOUNTING RECOMMENDATIONS

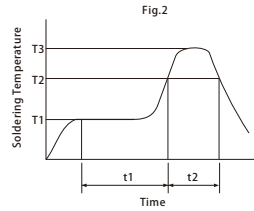
### 1. Conditions for Terminal Soldering by reflow soldering method

#### a. In case of Infrared Soldering



T1: +120 to +150°C (+248°F to +302°F)  
 T2: +180 to +200°C (+356°F to +392°F)  
 T3: +265°C (+509°F) Max.  
 t1: 60 to 90 Sec.  
 T2: +30 Sec. Max.

#### b. In case of Vapor Phase Soldering



T1: +120 to +150°C (+248°F to +302°F)  
 T2: +180 to +200°C (+356°F to +392°F)  
 T3: +235°C (+455°F) Max.  
 t1: +40 to 60 Sec  
 t2: +60 Sec. Max.

### 2. Usage of Stand-Off A & B in Base Area

The stand-offs shown in the Fig. 3 are designed to anchor relays temporarily to PC board with glue before

