

# FORWARD RELAYS



14×9×5

# P



Features
<ul style="list-style-type: none"> <li>• DIL pitch terminals. High sensitivity :0.14W or 0.10W nominal power.</li> <li>• Conforms to FCC Part 68 1.5kV surge and dielectric 1000VAC.</li> <li>• Monostable, single or double coil latching relay .</li> <li>• Application for telecommunication equipment, office equipment, security alarm systems, measuring instruments, medical monitoring equipment, audio visual equipment, flight simulator, sensor control.</li> </ul>

Ordering Information	
$\frac{P}{1}$ $\frac{L}{2}$ $\frac{12}{3}$ $\frac{W}{4}$	
1 Part number: P 2 Operating function: NIL: Single Side Stable; L:1 Coil Latching; K:2 Coil Latching	3 Coil rated voltage(V): DC:3,4,5,5,6,9,12,24 4 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
Operation Life	Electrical $2 \times 10^5$ (DC AgPd); $1 \times 10^5$ (DC AgNi) $1 \times 10^5$ (AC)    Item 4.30 of IEC 61810-7
	Mechanical $1 \times 10^8$ Item 4.31 of IEC 61810-7

**CAUTION:** Relays previously tested or used above 10mA resistive at 6V maximum (DC or peak AC) open circuit are not recommended for subsequent use in low level applications.

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.							
P-003	3	7.5	64.3	2.25	0.3	0.14	Approx.2	Approx.1	
P-004	4.5	11.25	144.6	3.38	0.45	0.14			
P-005	5	12.5	178	3.75	0.5	0.14			
P-006	6	15.0	257	4.50	0.6	0.14			
P-009	9	22.5	579	6.75	0.9	0.14			
P-012	12	30.0	1028	9.00	1.2	0.14			
P-024	24	48.0	2880	18.0	2.4	0.20			
1 Coil Latching				Set	Reset(Max)		Set	Reset	
PL-003	3	8.7	90	2.25	-2.25	0.10	Approx.2	Approx.2	
PL-004	4.5	13.0	202.5	3.38	-3.38	0.10			
PL-005	5	14.5	250	3.75	-3.75	0.10			
PL-006	6	17.4	360	4.50	-4.50	0.10			
PL-009	9	26.1	810	6.75	-6.75	0.10			
PL-012	12	34.8	1440	9.00	-9.00	0.10			
PL-024	24	57.6	3840	18.0	-18.0	0.15			
2 Coil Latching			Set Coil	Reset Coil	Set	Reset(Max)	Set	Reset	
PK-003	3	6	45	45	2.25	2.25	0.20	Approx.2	Approx.2
PK-004	4.5	9	101	101	3.38	3.38	0.20		
PK-005	5	10	125	125	3.75	3.75	0.20		
PK-006	6	12	180	180	4.50	4.50	0.20		
PK-009	9	18	405	405	6.75	6.75	0.20		
PK-012	12	24	720	720	9.00	9.00	0.20		
PK-024	24	36	1920	1920	18.0	18.0	0.30		

**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(reset)voltage are for test purposes only and are not to be used as design criteria.  
 3.When latching relays are installed in equipment, the set and reset coil should not be powered simultaneously. Coil should not be pulsed with less than the nominal coil voltage and pulse width should be a minimum of three times the specified operate time of the relay. If these conditions are not followed, it is possible for the relay to be in the magnetically neutral position.

### Characteristics

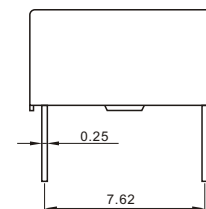
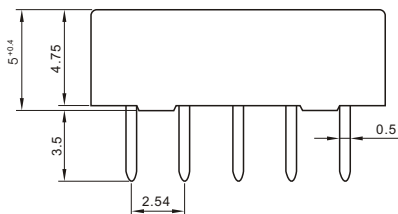
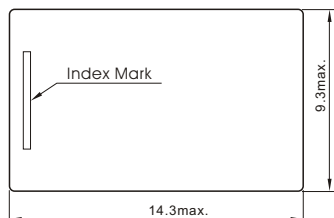
Electrostatic Capacitance		
Between Open Contacts	Approx.0.4pF	Item 4.41 of IEC 61810-7
Between Coil & Contacts	Approx.0.9pF	Item 4.41 of IEC 61810-7
Between Contact Poles	Approx.0.2pF	Item 4.41 of IEC 61810-7
Insulation Resistance	1000M $\Omega$ min (at 500VDC)	Item 4.11 of IEC 61810-7
Dielectric Strength		
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	FCC68
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 Resistance	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~70°C(-40° F~158° F)	
Mass	Approx. 1.5g	Item 4.7 of IEC 61810-7

### Safety Approvals

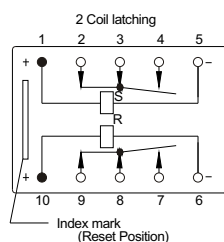
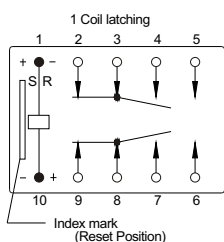
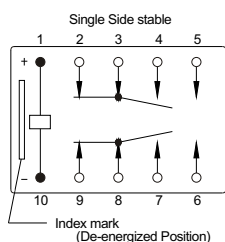
Safety approval	UL&CUR	TÜV
Load	1A,2A/30VDC; 0.5A/125VAC	1A/30VDC; 0.5A/125VAC

### Dimensions

mm

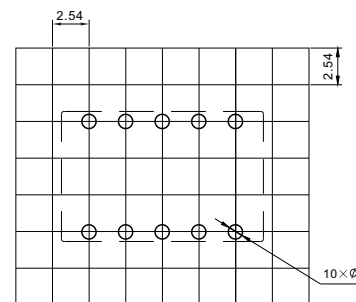


Dimensions



S: Set  
R: Reset  
(Bottom View)

Wiring diagram  
(Bottom view)



Tolerance:±0.1  
Mounting (Bottom view)

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