# **FORWARD RELAYS**



c¶us E158859 ▲ R5604271

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## Features

• DIL Pitch Terminals .High Sensitivity :0.14W or 0.10W Nominal Power。 • Conforms to FCC Part 68 1.5kV Surge and Dielectric 1000VAC。

- Monostable or bistable relays Single and double Coil magnet latching Type available.
  Application for Telecommunication Equipment,Office Equipment,Security Alarm Systems, Measuring instruments, Medical Monitoring Equipment,Audio Visual Equipment, Flight Simulator,Sensor Control.

Or	Ordering Information						
$\underline{\mathbf{P}}_{1}$	$\frac{\mathbf{L}}{2}$	<u>12</u>	$\frac{\mathbf{W}}{4}$				
1 Part number: P 2 Operating function: NIL: Single Side Stable;				NIL: Single Side Stable:	3 Coil rated voltage(V): DC:3,4.5,5,6,9,12,24 4 Contact material: NIL: AgPd; W: AgNi		
				L:1 Coil Latching; K:2 Coil Latching	· · · · · · · · · · · · · · · · · · ·		

### **Contact Data**

Oomact	<i>a</i> ta			
Contact Arra	ngement	2C (DPDT(B-M)) (Bifurcated Crossbar)		
Contact Mate	erial	AgPd(Gold clad ) AgNi(Gold clad)		
Contact Rati	ng (resistive)	1A,2A/30VDC; 0.5A/125VAC		
Max. Switchi	ng Power	60W 62.5VA	Min. Switching load: 0.01mA/10mV (Reference Value)	
Max. Switchi	ng Voltage	220VDC 250VAC	Max. Switching Current:2A	
Contact Res Voltage drop		≤ <b>50m</b> Ω	Item 4.12 of IEC 61810-7	
Operation life	Electrical	1A/30VDC: $2 \times 10^5$ (Ag Ni: $1 \times 10^5$ ) 0.5A/125VAC: $1 \times 10^5$	Item 4.30 of IEC 61810-7	
	Mechanical	10 <sup>8</sup>	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.

## **Coil Parameter**

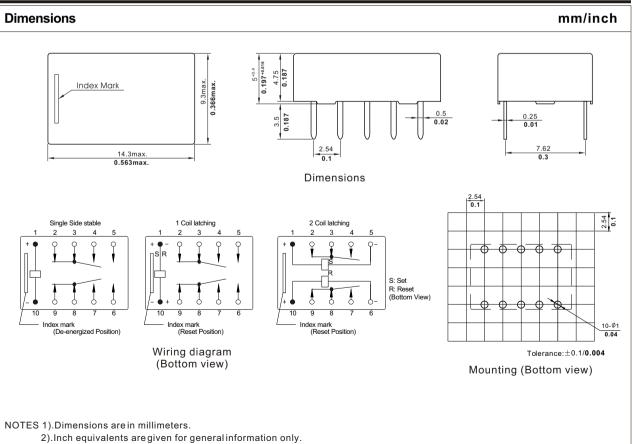
Dash	Coil voltage VDC		Coil resistance	Pick up voltage VDC(max)	Release voltage VDC(min)	Coil	Operate	Release /Reset	
numbers	Rated	Max.	Ω±	10%	(75%of rated voltage )	(10% of rated voltage)	power W	Time ms	Time ms
P-003	3	7.5		64.3	2.25	0.3	0.14		
P-004	4.5	11.25		144.6	3.38	0.45	0.14		
P-005	5	12.5		178	3.75	0.5	0.14		
P-006	6	15.0		257	4.50	0.6	0.14	Approx.2	Approx.1
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 Latch	ning					Reset(Max)			Reset
PL-003	3	8.7		90	2.25	-2.25	0.10		
PL-004	4.5	13.0	2	202.5	3.38	-3.38	0.10		
PL-005	5	14.5		250	3.75	-3.75	0.10	Approx.2	Approx.1
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			Reset(Max)		Reset	
PK-003	3	6	45	45	2.25	2.25	0.20		
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 18	180 405	180	4.50	4.50	0.20	Approx.2	Approx.1
PK-009 PK-012	9 12	18 24	405 720	405 720	6.75 9.00	6.75 9.00	0.20		
PK-012	24	36	1920	1920	18.0	18.0	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 (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 latch 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	1000MΩ min(at 500VDC)	Item 7 of IEC 60255-5		
Dielectric Strength				
Between open Contacts	1000VAC 1min	Item 6 of IEC 60255-5		
Between coil & Contacts	1000VAC 1min	Item 6 of IEC 60255-5		
Between Contact Poles	1000VAC 1min	Item 6 of IEC 60255-5		
Surge Withstand Voltage				
Between open Contacts	1500V	FCC 68		
Between coil & Contacts	1500V	FCC68		
Between Contact Poles	2500V	FCC 68		
Shock resistance	Functional:500m/s <sup>2</sup> 11ms; Survival:1000 m/s <sup>2</sup> 6ms	IEC 68-2-27 TestEa		
Vibration resistance	10Hz~55Hz Double amplitude Functional:3mm Survival:5mm	IEC 68-2-6 TestFc		
Terminalsstrength	5N	IEC 68-2-21 Test Ua1		
Solderability	235℃±2℃ 3s±0.5s	IEC 68-2-20 Test Ta method 1		
Temperature Range	-40°C~70°C(-40°C~158°C)			
Mass	Approx.1.5g			

## Safety approvals

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



NOTES 1). Dimensions are in millimeters.

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