

## Main Feature

1. 5mm slim size with 8A rated load.
2. 170mW low power consumption.
3. Dielectric Strength up to 4,000VAC and Surge Strength reached 6,000V.
4. 8mm creepage and clearance safety distance.
5. Class F insulation system.
6. Halogen Free series available.

## Contact Rating

Load Type	LR (DM)	LR (D)
Rated Load (Resistive)	8A 277VAC	8A 277VAC
	8A 30VDC	8A 30VDC
Rated Carrying Current	8A	8A
Max. Allowable Voltage	AC 400V	AC 400V
	DC 30V	DC 30V
Max. Allowable Current	8A	8A
Max. Allowable Power Force	2000VA	2000VA
	240W	240W
Contact Material	Ag Alloy	Ag Alloy
Contact Form	SPST	SPDT

## Application

PLC, Factory Machine, Timer / Counter, Temperature Controller, Measuring Instrument, Testing Instrument, OA Equipments...etc.

## Performance (at Initial Value)

- Contact Resistance ..... 100mΩ Max. @1A,6VDC
- Operate Time..... 8 mSec. Max.
- Release Time ..... 4 mSec. Max.
- Dielectric Strength:
  - Between Coil & Contact.....4,000VAC at 50/60 Hz for one minute
  - Between Contacts..... 1,000VAC at 50/60 Hz for one minute
- Surge Strength ..... 6,000V (between coil & Contact 1.2 / 50μSec.)
- Insulation Resistance ..... 100 MegaΩ Min. at 500VDC.
- Max. On/Off Switching:
  - Electrical ..... 6 Cycles per Minute.
  - Mechanical..... 180 Cycles per Minute.
- Temperature Range..... -40~85°C
- Humidity Range..... 45~85% RH.
- Coil Temperature Rise..... 40°C Max

- Vibration:
  - Endurance ..... 10 to 55 Hz dual Amplitude width 1.5mm
  - Error Operation ..... 10 to 55 Hz dual Amplitude width 1.0mm
- Shock:
  - Endurance ..... 1,000 m/S<sup>2</sup>
  - Error Operation ..... 100 m/S<sup>2</sup>
- Life Expectancy:
  - Mechanical .....5x10<sup>6</sup> Operations at No Load condition.
  - Electrical ..... (NO: 5x10<sup>4</sup>, NC: 3x10<sup>4</sup>) Operations at Rated Resistive Load.
- Contact Material .....Ag Alloy.
- Weight .....About 6 g.

## Accessories & Sockets

- PLF.....See Page 168
- PLS.....See Page 168
- PL-05-0 .....See Page 169

## Safety Standard & File Number

- UL & C-UL.....E141060 & E175730
- VDE.....40029874

## Coil Specification (at 20 °C)

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance (±10%)	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
LR	3	56.6	53	Abt. 0.17	70% Maximum	5% Minimum	150%
	4.5	37	121				
	5	34	147				
	6	28.3	211				
	9	18.8	476				
	12	14.2	847				
	15	11.3	1,323				
	18	9.4	1,905				
	24	7.1	3,388	Abt. 0.217			
48	4.5	10,617					
	60	3.6	16,590				

## Ordering Information

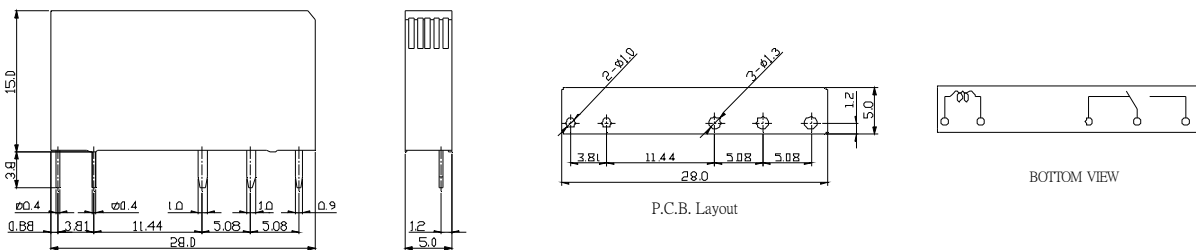
LR	- SH	- 1	12	D	M	N	- L	F		
									<b>Insulation System:</b>	<b>Nil:</b> Standard Class <b>F:</b> F Class
									<b>Operation function:</b>	<b>Nil:</b> Vertical Mounting <b>L:</b> Level Mounting
									<b>Contact Material:</b>	<b>Nil:</b> AgNi <b>N:</b> AgSnO2 <b>S:</b> AgSnO2 Gilded
									<b>Contact Form:</b>	<b>Nil:</b> One Form C <b>M:</b> One Form A
									<b>Coil Type:</b>	<b>D:</b> Standard DC Coil
									<b>Coil Voltage:</b>	<b>03:</b> 3V, <b>04:</b> 4.5V, <b>05:</b> 5V, <b>06:</b> 6V, <b>09:</b> 9V, <b>12:</b> 12V, <b>15:</b> 15V, <b>18:</b> 18V, <b>24:</b> 24V, <b>48:</b> 48V, <b>60:</b> 60V
									<b>Number of Pole:</b>	<b>1:</b> One Pole
									<b>Type of Sealing:</b>	<b>SS:</b> RT II Flux Proofed Relays <b>SH:</b> RT III Wash Tight Relays
									<b>Type:</b>	<b>LR</b>

## Classification

Model	LR			
Coil Type	Standard DC Coil			
Contact Form	1C		1A	
Flux Proofed Relays	LR-SS-1□□D/F	LR-SS-1□□D-L/F	LR-SS-1□□DM/F	LR-SS-1□□DM-L/F
Wash Tight Relays	LR-SH-1□□D/F	LR-SH-1□□D-L/F	LR-SH-1□□DM/F	LR-SH-1□□DM-L/F

Dimension ( $\leq 5\text{mm} \pm 0.2\text{mm}$ ,  $> 5\text{mm} \pm 0.3\text{mm}$ , the tolerance of PCB thru hole:  $+0.1\text{mm}$ )

LR-SS/SH-D



LR-SS/SH-D-L

