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Please note that the number of variants of Goodsky relay part numbers means that it is not possible to maintain stock of every one. If you are researching to replace just one relay on a component, say as a spare part for domestic equipment, you may need to contact the manufacturer of that equipment. Stock of Goodsky relays is maintained in the UK for those exact parts where there is a continuous demand within the UK.

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### Important Note

The information shown in these documents is for guidance only. No liability is accepted for any errors or omissions. The designer or user is solely responsible for the safe and proper application of the parts, assemblies or equipment described.

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# LR SERIES

## For General Control

**Application :** Control Board on PLC / Timer / Temp Controller / Measuring Instruments

**Features :**

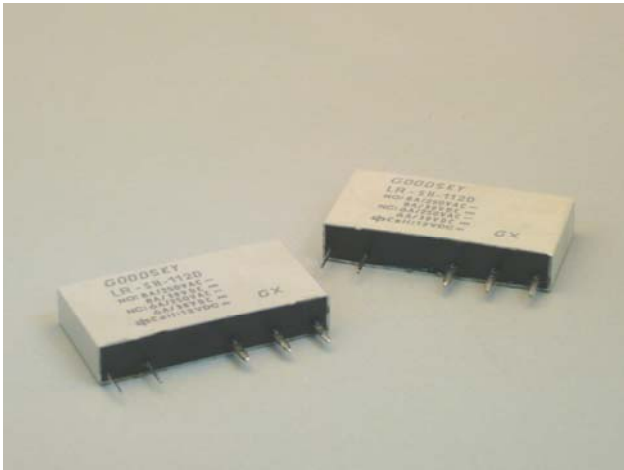
- ◆ Slimmest Size in the World  
(28.0×5.0×15.0mm)
- ◆ Width = 5mm
- ◆ 8A, 250VAC

**Safety Standard :** VDE, C-UL  
(Certification in Progress)

**RoHS Compliant**

# LR性能比較表 (Performance Comparison List)

品牌 Supplier		GOODSKY	MILLIONSPOT	Finder	SONG CHUAN	SCHRACK	TYCO	
型號 Item		LR	H400	34.51	882	SNR	V23092	
Coil Type		DVC	DCV	DCV	DCV	DCV	DCV	
接點部 Contact Specs	開關型式 Contact Configuration	1a, 1b, 1c	1a, 1b, 1c	1c	1a, 1c	1a, 1c	1a, 1b, 1c	
	接點材質 Contact Material	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgNi/AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub> /AgNi	AgSnO <sub>2</sub>	
	接點規格 Contact Rating	8A /250VAC 8A 30VDC	6A/250VAC	6A/250VAC 6A/30VDC 0.2A/110VDC 0.12A/220VDC	6A/240VAC NO: 8A/240VAC NC: 6A/240VAC	5A/250VAC 6A/250VAC 2A/250VAC Cosφ =0.4 3A/250VAC Cosφ =0.4 1A/24VDC L/R=48mS	6A/250VAC	
	最大流通電流 Max. Allowable Current	8A	6A	6A	8A/6A	6A	6A	
	最大承受電壓 Max. Allowable Voltage	380VAC / 120 VDC	400VAC/300VDC	400VAC	277VAC/250VAC	440VAC/250VAC	400VAC/300VDC	
線圈部 Coil Specs	額定電壓 Nominal Voltage	5,6,9,12,18,24,48 ,60 VDC	4.5, 6, 12, 18, 24, 48	5, 12, 24, 48, 60	3, 4.5, 5, 9, 12, 18, 24, 48, 60	5, 12, 24, 48	5, 12, 24, 48	
	動作電壓 Pull-In Voltage %	80%	66%	70%	75%	70%	70%	
	開放電壓 Drop-Out Voltage %	5%	5%	5%	5%	5%	10%	
	額定消耗功率 Power Consumption	0.22W	0.17W	0.17W	S = 0.21W	0.17W	0.17W	
	最大承受電壓 Max. Allowable Voltage	135%	235%	150%	160%	223%	-	
性能 Performance	接點阻抗 Contact Resistance		100mΩ	100mΩ	-	100mΩ	-	100mΩ
	動作時間 Operate Time		12ms	8mS	5mS	10mS	5mS	5mS
	開放時間 Release Time		8ms	4mS	3mS	5mS	2.5mS	2.5mS
	最大開閉頻率 Max. On/Off Switching:	機械 Mechanical	300 / Min	180 ops. /min	-	7,200 ops. /h	20 ops. /Sec	1,200 ops. /min
		電氣 Electrical	6 / Min	6 ops. /min	-	360 ops. /h	6 ops. /min	6 ops. /min
	耐電壓(AC) Dielectric Strength	I/O	4000V	4,000V	4,000V	4,000V	4,000V	4,000V
		O/O	1000V	1,000V	1,000V	1,000V	1,000V	1,000V
	振動 Vibration	耐久 Endurance	100m/S <sup>2</sup>	10~55Hz 1.0mm	10~55Hz 1.0mm	10~55Hz 1.0mm	-	-
		誤動作 Error Operation	100m/S <sup>2</sup>	10~55Hz 1.0mm	10~55Hz 1.0mm	10~55Hz 1.0mm	-	-
	壽命 Life Expectancy	機械 Mechanical	1x10 <sup>7</sup>	5x10 <sup>4</sup>	10x10 <sup>6</sup>	30x10 <sup>6</sup>	10x10 <sup>6</sup>	-
		電氣 Electrical	1x10 <sup>5</sup>	NO: 5x10 <sup>4</sup> NC: 3x10 <sup>4</sup>	60x10 <sup>3</sup>	10x10 <sup>3</sup>	7x10 <sup>4</sup>	-
	使用環境溫度 Temperature Range		-40~85℃	-40~+85℃	-40~+85℃	-40~+85℃	-40~+85℃	-40~+85℃
	使用環境溼度 Humidity Range		40~85%RH	5%~85%RH	-	-	-	20%~85% RH
重量 Weight		11g	4g	-	6g	6g	6g	
安全規格 Safety Standard		VDE, CUL	UL, CUL, VDE	GOST, CUL, VDE	UL, CUL, VDE	CUL, VDE	UL, CSA, VDE, SEMKO, SWISS	
寸法 Dimension	外型尺寸 Dimension	30x10x10.5	28.2x5.0x15.0	28.0x5.0x15.0	28.0x5.0x15.0	28.0x5.0x15.0	28.0x5.0x15.0	
端腳外型 Terminal Type	直Pin(DIP)	-	○	○	○	○	○	
	90°Pin(SMD)	-	○	○	-	○	-	



## Main Feature

1. Slim size(28.0 x 5.0 x 15.0mm).
2. Wide switching capacity 100mA/12VDC~6A/250VAC.
3. Sensitive coil 170mW.
4. 4KV coil-contact, 6/8mm creepage/clearance, NO version with 8/8mm creepage/clearance upon request.
5. Light weight approx.6g.
6. Reinforced insulation(protection class II)
7. Allow high function/packing density

## Contact Rating

Load Type	LR (DM)	LR (D)
Rated Load (Resistive)	8A 250VAC 8A 30VDC	8A 250VAC 8A 30VDC
Rated Carrying Current	8A	8A
Max. Allowable Voltage	AC 400V DC 30V	AC 400V DC 30V
Max. Allowable Current	8A	8A
Max. Allowable Power Force	180W	180W
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 Resistance ..... 6,000V (between coil & Contact 1.2/50 μ Sec.)
- Insulation Resistance ..... 100MΩ 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.
- Temperature Range..... 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.

## Safety Standard & Its File Number

- In Progress

## Coil Specification (at 20°C)

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance ( $\Omega \pm 10\%$ )	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
LR	5	34	147	Abt. 0.17	70% Maximum	5% Minimum	150%
	6	28.3	211				
	9	18.8	476				
	12	14.2	847				
	18	9.4	1905				
	24	7.1	3388				
	48	4.5	10617	Abt. 0.217			

## Ordering Information

LR - SH - 1 12 D M N - L

Terminal Size:

NIL: Vertical Mounting

L: Horizontal Mounting

Contact Material:

Nil: AgNi 10%

N: AgSnO<sub>2</sub>

S: AgSnO<sub>2</sub> Gilded

Contact Form:

Nil: One Form C

M: One Form A

Coil Type:

D: Standard DC Coil

Coil Voltage: 05: 5V, 06: 6V, 09: 9V, 12: 12V, 18: 18V, 24: 24V, 48: 48V

Number of Pole:

1: One Pole

Type of Sealing:

Nil: RT 0 Unclosed Relays

SS: RT II Flux Proofed Relays

SH: RT III Wash Tight Relays

Type:



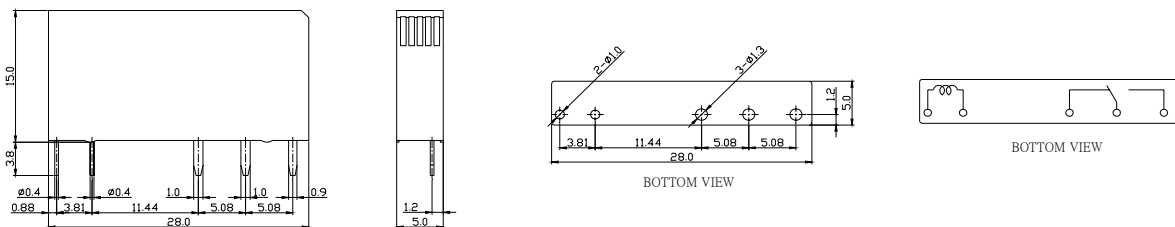
LR

## Classification

Model	LR	
Terminal Size	Standard DC Coil	
Contact Form	1C	1A
Unclosed Relay	LR-1□□D	LR-1□□DM
Flux Proofed Relay	LR-SS-1□□D	LR-SS-1□□DM
Wash Tight Relay	LR-SH-1□□D	LR-SH-1□□DM

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-DL



LR-SS/SH-DML

