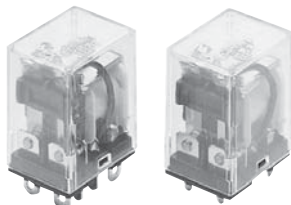


»» Features

- ☐ 10A general purpose Power Relay.
- ☐ Contact rating up to 12A 250VAC (DPNO).
- ☐ Epoxy sealed type and flux free.
- ☐ Quick connect terminal or PCB terminal available.
- ☐ Special version of larger contact gap 1.9mm.
(IEC 255/VDE 0436) (DPNO Only)
- ☐ Optional to be equipped with lamp, diode, flashed contact, and flanged cover.
- ☐ Complies with RoHS-Directive 2011/65/EU.



»» Type List

Terminal style	Contact form	Designation (provided with)	Enclosure style			
			Straight cover	Flanged cover	Sealed type	Sealed type washable
Quick terminal	DPDT	-----	SCL-DPDT	SCL-DPDT-C1	SCL-DPDT-V	SCL-DPDT-S
	DPNO		SCL-DPNO	SCL-DPNO-C1	SCL-DPNO-V	SCL-DPNO-S
	DPDT	Diode	SCL-D-DPDT	SCL-D-DPDT-C1	SCL-D-DPDT-V	SCL-D-DPDT-S
	DPNO		SCL-D-DPNO	SCL-D-DPNO-C1	SCL-D-DPNO-V	SCL-D-DPNO-S
	DPDT	Lamp	SCL-L-DPDT	SCL-L-DPDT-C1	SCL-L-DPDT-V	SCL-L-DPDT-S
	DPNO		SCL-L-DPNO	SCL-L-DPNO-C1	SCL-L-DPNO-V	SCL-L-DPNO-S
PCB terminal	DPDT	-----	SCL-1-DPDT	-----	SCL-1-DPDT-V	SCL-1-DPDT-S
	DPNO		SCL-1-DPNO	-----	SCL-1-DPNO-V	SCL-1-DPNO-S
	DPDT	Diode	SCL-1-D-DPDT	-----	SCL-1-D-DPDT-V	SCL-1-D-DPDT-S
	DPNO		SCL-1-D-DPNO	-----	SCL-1-D-DPNO-V	SCL-1-D-DPNO-S
	DPDT	Lamp	SCL-1-L-DPDT	-----	SCL-1-L-DPDT-V	SCL-1-L-DPDT-S
	DPNO		SCL-1-L-DPNO	-----	SCL-1-L-DPNO-V	SCL-1-L-DPNO-S
	DPDT	Manual	SCL-1-M-DPDT	-----	-----	-----
	DPNO		SCL-1-M-DPNO	-----	-----	-----

»» Ordering Information

SCL - ☐ - ☐ - DPDT - ☐ - ☐ ☐
 1 2 3 4 5 6 7

- | | |
|---|---|
| 1. SCL -- Basic series designation | DPNO -- Double pole normally open |
| 2. Blank -- Quick terminal | 5. Blank -- Standard type |
| 1 -- PCB terminal | F -- Class F |
| 3. Blank -- Without special features | 6. Blank -- Straight cover |
| L -- Provided with pilot light | C1 -- Flanged cover |
| D -- Diode across coil | V -- Sealed type |
| M -- Provided with manual operator | S -- Sealed type washable |
| H -- 2 mm contact gap (For DPNO and DC coil type only) | 7. ☐ -- Coil voltage (please refer to the coil rating data for the availability) |
| 4. DPDT -- Double pole double throw | |

»» Contact Rating

◆ Standard Type

Resistive load	10A 240VAC, 10A 28VDC
Max. switching current	10A
Max. switching voltage	277VAC/30VDC
Max. switching capacity	2400VA

◆ SCL-H Type

Resistive load	15A 240VAC
Max. switching current	16A
Max. switching voltage	277VAC
Max. switching capacity	3600VA

»» Coil Rating (DC)

◆ Standard Type

Rated voltage (V)	Rated current ±10 % at 23°C (mA)	Coil resistance ±10 % at 23°C (Ω)	Max. continuous voltage at 70°C	Pick up voltage(Max.) at 23°C	Drop out voltage(Min.) at 23°C	Power consumption at rated voltage
6	150	40	110 % of rated voltage	75 % of rated voltage	10 % of rated voltage	approx. 0.9W
9	100	90				
12	75	160				
15	60	250				
24	37	650				
48	19	2,600				
60	15	4,000				
110	10	11,000				
120	11	11,000				

◆ SCL-H Type

Rated voltage (V)	Rated current ±10 % at 23°C (mA)	Coil resistance ±10 % at 23°C (Ω)	Max. continuous voltage at 70°C	Pick up voltage(Max.) at 23°C	Drop out voltage(Min.) at 23°C	Power consumption at rated voltage
3	400	7.5	115 % of rated voltage	80 % of rated voltage	10 % of rated voltage	approx. 1.2W
6	200	30				
9	133.3	67.5				
12	100	120				
24	50	480				
48	25	1,920				
60	20	3,000				
100	12	8,330				
110	10.9	10,080				
120	10	12,000				

»» Coil Rating (AC)

Rated voltage (V)	Coil resistance ±10 % at 23°C (Ω)	Max. continuous voltage at 70°C	Pick up voltage(Max.) at 23°C	Drop out voltage(Min.) at 23°C	Power consumption at rated voltage
12	40	110 % of rated voltage	85 % of rated voltage	30 % of rated voltage	approx. 1.2VA
24	160				
100	3,400				
110	3,400				
115	3,400				
120	3,400				
220	13,600				
230	13,600				
240	13,600				

»» Specification

Contact material	AgSnO alloy	
Contact resistance ⁽¹⁾	30 mΩ Max.; (-H) 50 mΩ Max. (at 1A/6VDC by 4-wire resistance measurement)	
Operate time ⁽¹⁾	25 ms Max.	
Release time ⁽¹⁾	25 ms Max.	
Vibration resistance	Operating extremes	10~55Hz , amplitude 1.0 mm
	Damage limits	10~55Hz , amplitude 1.0 mm
Shock resistance	Operating extremes	20G ; (-H) 10G
	Damage limits	100G
Life expectancy	Mechanical	10,000,000 ops. ; (-H) 3,000,000 ops. (frequency 18,000 ops./hr)
	Electrical	100,000 ops. (frequency 1,800 ops./hr) [(-H)1,200 ops./hr]
Operating ambient temperature	-25~+70°C (no freezing)	
Weight	Approx. 35 g	

Note : (1) Initial value. Operate and release time excluding contact bounce.

(2) Unless otherwise specified, all tests are under room temperature and humidity.

(3) Consider the heat of PCB is necessary, please check the actual condition of PCB.

(4) Do not use the relay exceeding the coil rating, contact rating and life expectancy, or this may cause the risk of overheating.

(5) To assure optimum performance, avoid the relay from dropping, hitting, or other unnecessary shocks.

(6) Do not switch the contacts without any load as the contact resistance may become increased rapidly.

(7) Flux tight version is recommended. If there is cleaning process and sealed type is selected, the vent-hole should be removed after the process.

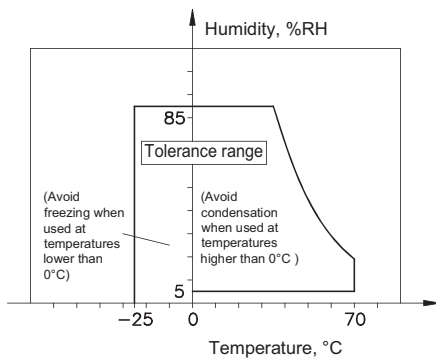
(8) Use suitable harnesses and bus bars according to the current as below :

10A type : Min. 2.0 mm²

15A type : Min. 3.0 mm²

(9) Usage, transport and storage conditions

- 1. Temperature: -25~+70°C
- 2. Humidity: 5 to 85% R.H.
- 3. Pressure: 86 to 106 kPa
- Furthermore, the humidity range varies with the temperature. So, use relays within the range indicated in the graph below.



(10) Please contact Song Chuan for the detailed information.

»» Insulation Data

Insulation resistance ⁽¹⁾	100 MΩ Min. (DC 500V)	
Dielectric strength ⁽¹⁾	Between open contact	: AC 1000V , 50/60Hz 1 min.
	Between contact and coil	: AC 1500V , 50/60Hz 1 min.
	Between contact circuits	: AC 1500V , 50/60Hz 1 min.
Insulation of IEC 61810-1		
Clearance / creepage distances	Between coil to contact	: Basic, ≥ 1.5mm / ≥ 2.5mm Reinforce, > 3.0mm / > 5.0mm (for SCL-1-H-DPNO)
	Between open contact	: Functional Basic, ≥ 1.5mm / ≥ 2.5mm(for 2mm contact gap)
Rated insulation voltage	250V	
Rated impulse withstand voltage	2500V	
Pollution degree	2	
Rated voltage	230 / 400V	
Rated voltage	II	

Note : (1) Initial value.

»» Safety Approval

◆ Standard Type

Certified	UL / CUL	CSA	TUV
File No.	E88991	1474290	R50055516

◆ SCL-H Type

Certified	UL / CUL	TUV
File No.	E88991	R50055516

»» Safety Approval Rating

◆ Standard Type

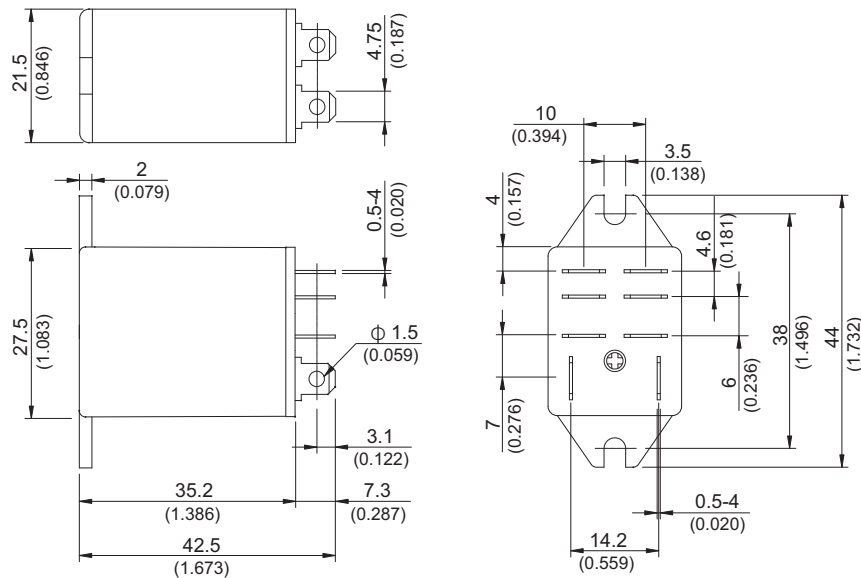
UL / CUL	CSA	TUV
10A 277VAC/28VDC 15A 125VAC 1/3HP 7.5FLA 125VAC 1/2HP 5.0FLA 250VAC 1/3HP 3.0FLA 277VAC 15A 240VAC (DPNO ONLY)	10A 277VAC/28VDC 15A 125VAC 1/3HP 7.5FLA 125VAC 1/2HP 5.0FLA 250VAC 1/3HP 3.0FLA 277VAC 15A 240VAC (DPNO ONLY)	10A 250VAC 10A 30VDC

◆ SCL-H Type

UL / CUL	TUV
16A 277VAC 1/2HP 250VAC	15A 250VAC

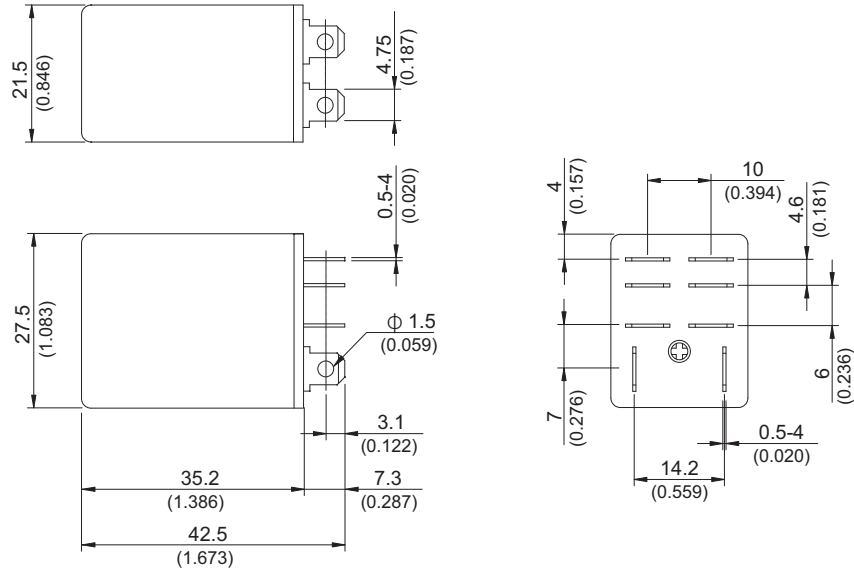
»» Outline Dimensions

◆ SCL (C1)

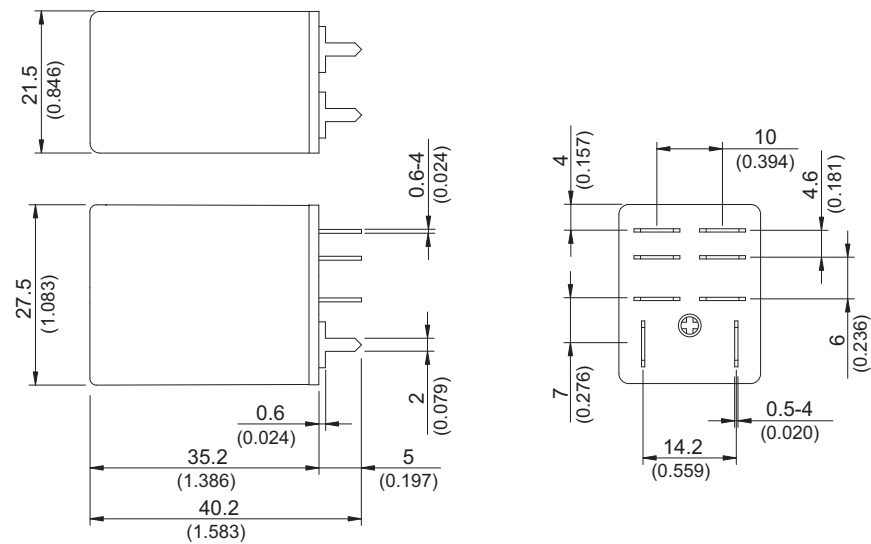


»» Outline Dimensions

◆ SCL



◆ SCL-1

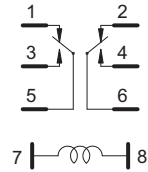


TOLERANCE:
 LESS THAN: 1(0.039) $\pm 0.1(0.004)$
 5(0.197) $\pm 0.3(0.012)$
 20(0.787) $\pm 0.5(0.020)$
 MORE THAN: 20(0.787) $\pm 1(0.039)$

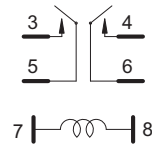
Wiring Diagram

BOTTOM VIEW

DPDT



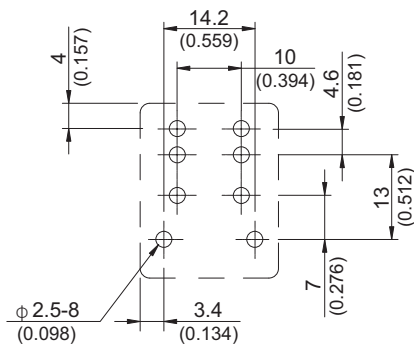
DPNO



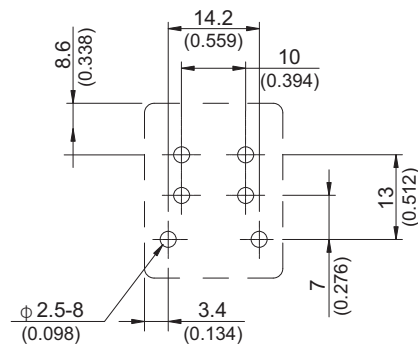
PC Board Layout

BOTTOM VIEW

DPDT



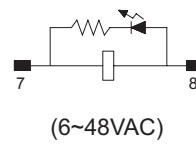
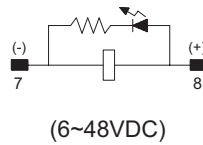
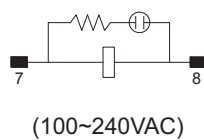
DPNO



Designation(Provided with)

BOTTOM VIEW

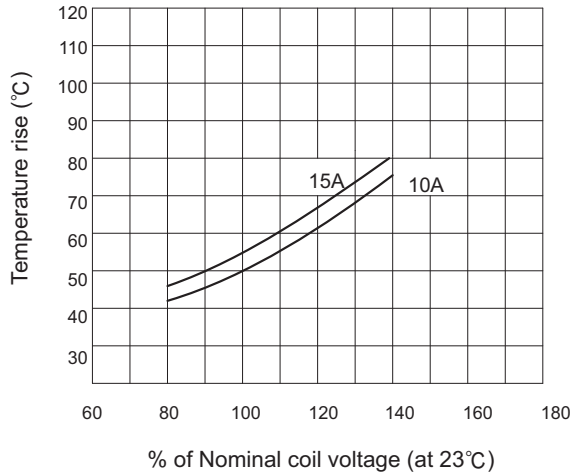
Lamp



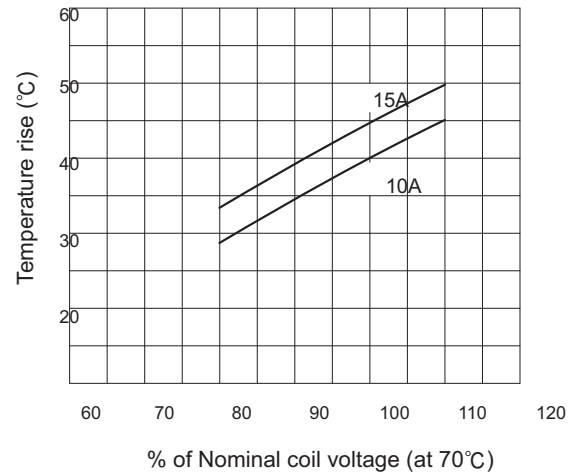
»» Engineering Data

◆ DC coil

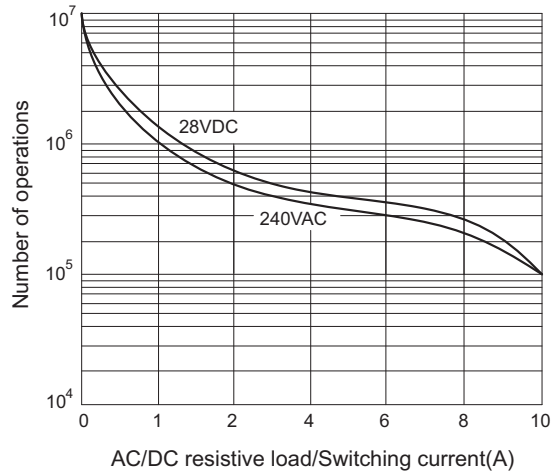
Coil temperature rise (Standard type)



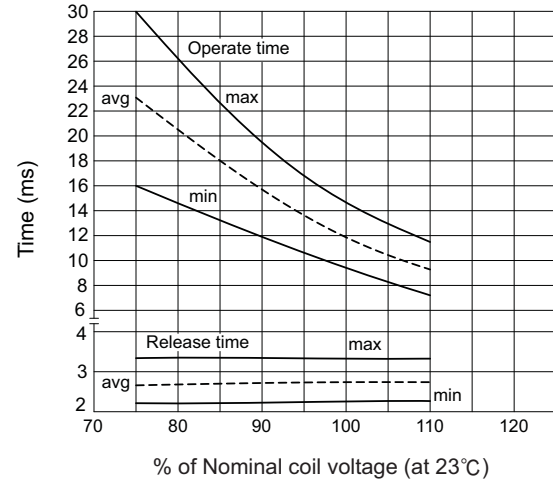
Coil temperature rise (Standard type)



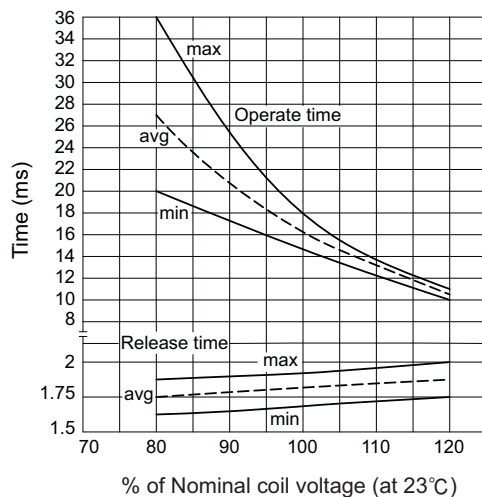
Life expectancy



Operate time/Release time (Standard type)



Operate time/Release time (SCL -H type)



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