



»» Features

- Miniature 12A 125VAC, 10A 250VAC/30VDC PCB Relay.
- UL/CUL, CSA, TUV, VDE approved.
- 450mW and 200mW coil are available.
- High CTI 250 material or product comply with IEC 60335-1 are available.
- Complies with RoHS-Directive 2011/65/EU.
- Optional for halogen free version.

»» Type List

◆ 835

Terminal style	Contact form	Insulation system	Designation (provided with)		
			Flux tight	Sealed type	Sealed type washable
PCB terminal	1A (SPNO)	-----	835-1A-C	835-1A-V	835-1A-S
		F	835-1A-F-C	835-1A-F-V	835-1A-F-S

◆ 835L

PCB terminal	1A (SPNO)	-----	835L-1A-C	835L-1A-V	835L-1A-S
		F	835L-1A-F-C	835L-1A-F-V	835L-1A-F-S

◆ 835NL

PCB terminal	1A (SPNO)	-----	835NL-1A-C	835NL-1A-V	835NL-1A-S
		F	835NL-1A-F-C	835NL-1A-F-V	835NL-1A-F-S

»» Ordering Information

835 - 1A - - C

1 2 3 4 5 6 7 8

- | | |
|------------------------------------|---|
| 1. 835 -- Basic series designation | 6. C -- Flux tight |
| 2. Blank -- Standard type | V -- Sealed type |
| N -- High sensitivity type | S -- Sealed type washable |
| 3. Blank -- Standard type | 7. Blank -- Standard type |
| L -- Low power type | E1 -- Comply with IEC 60335-1 |
| 4. 1A -- Single pole normally open | 8. <input type="checkbox"/> -- Coil voltage (please refer to the coil rating data for the availability) |
| 5. Blank -- Standard type | |
| F -- Class F | |

»» Contact Rating

Type	835	835L	835NL
Resistive load	10A 240VAC 12A 120VAC (※)	8A 240VAC	5A 240VAC 8A 240VAC (※)

Max. switching current	12A
Max. switching voltage	277VAC
Max. switching capacity	2400VA

»» Coil Rating (DC)

◆ 835 / 835L

Rated voltage (V)	Rated current ±10 % at 23°C (mA)	Coil resistance ±10 % at 23°C (Ω)	Max. continuous voltage at 85°C	Pick up voltage(Max.) at 23°C	Drop out voltage(Min.) at 23°C	Power consumption at rated voltage
3	150	20	160 % of rated voltage	75 % of rated voltage	5 % of rated voltage	approx. 0.45W
5	90.9	55				
6	75	80				
9	50	180				
12	37.5	320				
18	25	720				
24	18.8	1,280				

◆ 835NL

Rated voltage (V)	Rated current ±10 % at 23°C (mA)	Coil resistance ±10 % at 23°C (Ω)	Max. continuous voltage at 85°C	Pick up voltage(Max.) at 23°C	Drop out voltage(Min.) at 23°C	Power consumption at rated voltage
3	66.7	45	160 % of rated voltage	80 % of rated voltage	5 % of rated voltage	approx. 0.2W
5	40.0	125				
6	33.3	180				
9	22.2	405				
12	16.7	720				
18	11.1	1,620				
24	8.3	2,880				

»» Specification

Contact material	AgSnO / AgNi alloy	
Contact resistance ⁽¹⁾	100mΩ Max. (at 1A/6VDC by 4-wire resistance measurement)	
Operate time ⁽¹⁾	10ms Max.	
Release time ⁽¹⁾	5ms Max. (for 835)	
	7ms Max. (for 835L/NL)	
Vibration resistance	Operating extremes	10~50Hz , amplitude 1.0 mm
	Damage limits	10~50Hz , amplitude 1.0 mm

Shock resistance	Operating extremes	10G
	Damage limits	100G
Life expectancy	Mechanical	10,000,000 ops. (frequency 18,000 ops./hr)
	Electrical	100,000 ops. (※) 30,000 ops. (for 835/835NL) (frequency 900 ops./hr)
Operating ambient temperature	-40 ~ +85°C (no freezing)	
Weight	Approx. 6 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) Applying no diode to this relay. The life expectancy will be lower when a diode is used. To use a varistor (ZNR) could absorb the coil surge of relay that is recommended.

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

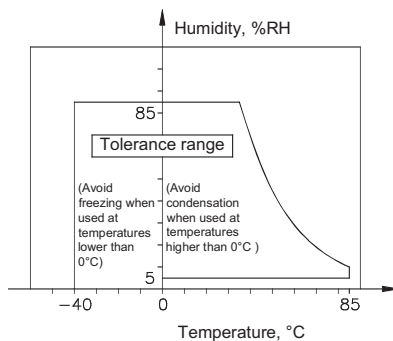
(6) To assure optimum performance, avoid the relay from dropping, hitting, or other unnecessary shocks.

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

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

(9) Usage, transport and storage conditions

- 1. Temperature: -40 ~ +85°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. (for 835)
		: AC 750V , 50/60Hz 1 min. (for 835L/NL)
	Between contact and coil	: AC 2500V , 50/60Hz 1 min.
Insulation of IEC 61810-1		
Clearance / creepage distances	Between coil to contact	: Basic, ≥ 1.5mm / ≥ 2.5mm
	Between open contact	: Functional
Rated insulation voltage	250V	

Rated impulse withstand voltage	2500V
Pollution degree	2
Rated voltage	230 / 400V
Overvoltage category	II

Note : (1) Initial value.

»» Safety Approval

Certified	UL/CUL	CSA	TUV	VDE
File No.	E74321	1474283	R9552647	40010643

»» Safety Approval Rating

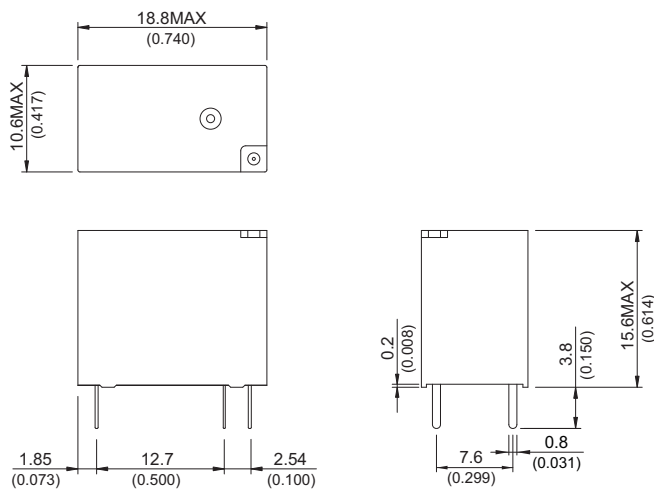
◆ 835

UL/CUL	CSA	TUV	VDE
12A 125VAC 10A 277VAC/30VDC TV-5	12A 125VAC 10A 277VAC/30VDC	12A 125VAC 10A 277VAC/30VDC	10A 250VAC T85 4A 400VAC T85

◆ 835L/835NL

UL / CUL	VDE
8A 277VAC 10A 125VAC 8A 30VDC	8A 250VAC T85 4A 400VAC T85

»» Outline Dimensions

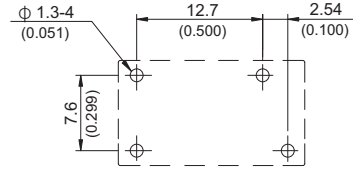


TOLERANCE:
 LESS THAN: 1(0.039) ±0.1(0.004)
 5(0.197) ±0.3(0.012)
 20(0.787) ±0.5(0.020)
 MORE THAN: 20(0.787) ±1(0.039)

Wiring Diagram BOTTOM VIEW



PC Board Layout BOTTOM VIEW



Engineering Data

