

Features

Single and double coils magnet latching relay
50A switching capacity
Lamp load to 5,000W
PC board mounting
Manual switch function available
Dust cover

Ordering information

FRL10N A - L1 DC12V R				
1	2	3	4	5
1 Relay model		5 Polarity: NIL: Standard type; R: Reverse polarity		
2 Contact arrangement: A: 1 Form A		Note: RoHS : RoHS compliant relay		
3 Sort: L1: 1 coil latching; L2: 2 coils latching		RoHS-I : AgNi contact		
4 Rated voltage		RoHS-N: AgSnO ₂ contact		

Coil rating

Rated voltage (V)	Coil resistance Ω +/- 10%		Switching voltage (V DC)	Pulse magnitude (ms)	Power consumption (W)	Operate time (ms)	Release time (ms)
	1 Coil	2 Coils					
6	24	12+12	4.8	≥50	1 coil: 1.5 2 coils: 2 x 3.0	≤15	≤15
9	54	27+27	7.2				
12	96	48+48	9.6				
24	384	192+192	19.2				
48	1536	768+768	38.4				

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 voltage are for test purposes only and are not to be used as design criteria.

Characteristics

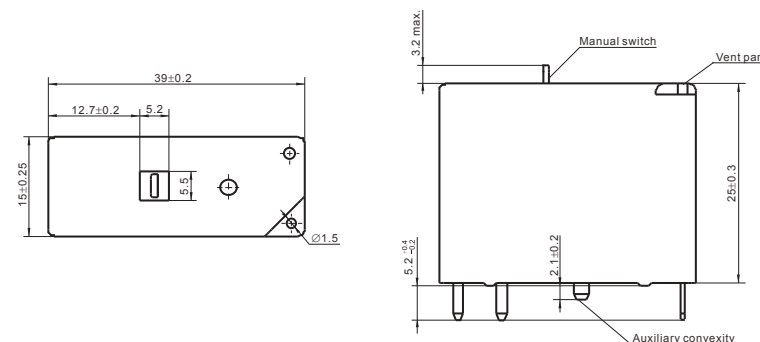
Contact arrangement		SPST (1 Form A)
Contact material		Silver alloy
Contact resistance		≤20mΩ Max.
Contact rating (resistive)		50A 277VAC (Resistive load) 5,000W 240VAC (Incandescent lamp); 16A 277VAC (Inductive load) 5HP 240VAC (Motor load)
Switching power		12,500VA Max.
Switching voltage		AC 440V Max.
Switching current		50A Max.
Insulation resistance		1,000MΩ Min. (500VDC)
Dielectric strength		1,500VAC (50Hz/min) Between open contacts 4,000VAC (50Hz/min) Between coil and contact
Creepage distance		8mm
Shock resistance		Functional : 98m/s ² 11ms Destructive: 980m/s ² 11ms
Vibration resistance		1.5mm Double amplitude 10-55Hz
Terminals strength		10N
Solderability		235°C ±2°C 3s ±0.5s
Ambient temperature		-40°C to +70°C
Humidity		85% RH, 40°C
Operation life	Mechanical	1 x 10 ⁶
	Electrical	1 x 10 ⁴
Weight		25g Approx.

(Specifications are subject to change without notices.)

Dimensions

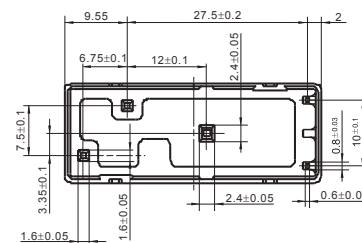
mm

Outline Dimensions

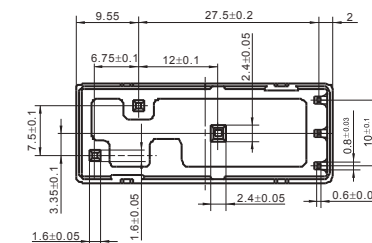


(Bottom view)

Single coil latching

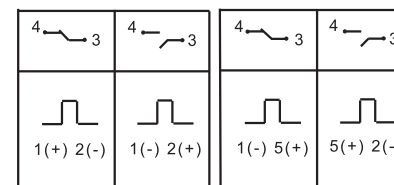


Double coils latching



Wiring diagram (Bottom view)

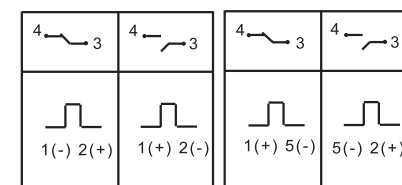
Standard polarity



Single coil, 1 Form A

Double coils, 1 Form A

Reverse polarity



Single coil, 1 Form A

Double coils, 1 Form A