

Latching Relays

El.italia serie FW-FRL1THB

Features

- 1 coil magnet latching relay available
- Small size and light weight
- Switching capacity up to 50A
- Low coil power consumption
- Strong anti-shock, anti vibration, high reliability and long life



FAUS: E139468

Ordering information

FRL1THB C - S 1 L1 DC12V

1 2 3 4 5 6

1 Relay model	5 Rated voltage
2 Contact arrangement: A: 1 Form A; B: 1 Form B; C: 1 Form C	Note: AgSnO ₂ contact
3 Construction: E: Dust cover; S: Wash tight type	
4 Termination: 1: Snap outside	

Coil rating

1 coil latching

Rated voltage (V DC)	Coil resistance Ω +/-10%	Must operate voltage % of rated voltage	Operating voltage range	Plus magnitude (ms)	Power consumption (W) Approx.	Operate time (ms)	Release time (ms)
5	16.7	80 Max.	120 Max.	≥100	1.5	≤15	≤15
12	96						
24	384						
48	1536						

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

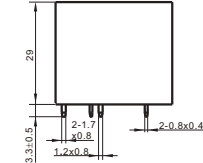
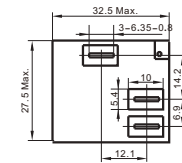
Contact arrangement	SPST (1 Form A or 1 Form B); SPDT (1 Form C)
Contact material	Silver alloy
Contact resistance (initial)	20mΩ Max. (Measured at 1A 24VDC)
Contact rating (resistive)	Resistive load : 50A/277VAC (5 x 10 ⁴) 1C: 40A/277VAC (3 x 10 ⁴) Incandescent lamp: 5,000W 240VAC (3 x 10 ⁴) Electronic ballast : 16A/280VAC (6 x 10 ⁴) Motor load : 5HP 277VAC (3 x 10 ⁴)
Switching power	12,500VA / 1,500W Max.
Switching voltage	AC 300V / DC 110V Max.
Switching current	50A Max.
Insulation resistance	1,000MΩ Min. (500VDC)
Dielectric strength	1,500VAC (50Hz/min) Between open contacts 2,500VAC (50Hz/min) Between coil and contact (Special request: 4,000VAC)
Shock resistance	200m/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 +85°C
Humidity	85% RH, 40°C
Operation life	10 ⁶
	Mechanical Electrical (Please refer to contact rating)
Weight	28g Approx.

(Specifications are subject to change without notices.)

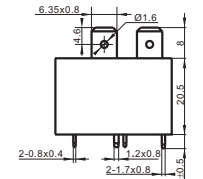
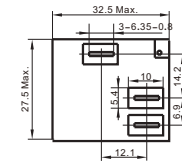
Dimensions

mm

FRL1TH



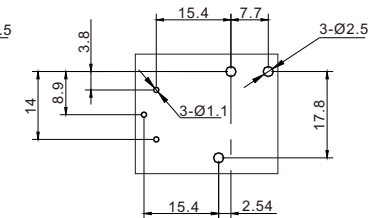
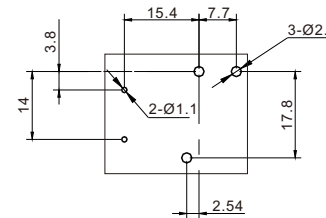
FRL1TH-1



Mounting holes

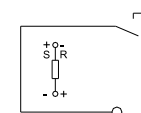
1 coil latching

2 coils latching

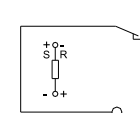


Wiring diagram
(Bottom view)

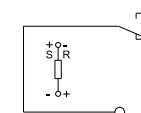
Single coil latching



1 Form A



1 Form B



1 Form C

