

Latching Relays

El.italia serie FW-FRL1TH

Features

- 1 coil magnet latching relay available
- Small size and light weight
- Switching capacity up to 40A
- Low coil power consumption
- Strong anti-shock, anti vibration, high reliability and long life



FAUS: E139468

Ordering information

FRL1TH N C - S 1 DC12V

1 2 3 4 5 6

1 Relay model	5 Termination: 1: Snap outside
2 Contact rating: NIL: 30A; N: 40A	6 Rated voltage
3 Contact arrangement: A: 1 Form A; B: 1 Form B; C: 1 Form C	Note: AgSnO ₂ contact
4 Construction: E: Dust cover; S: Sealed	

Coil rating

1 coil latching

Rated voltage (V DC)	Coil resistance Ω +/-10%	Must operate voltage % of rated voltage	Operating voltage range (ms)	Plus magnitude (ms)	Power consumption (W) Approx.	Operate time (ms)	Release time (ms)
5	28	80 Max.	120 Max.	≥100	0.9	≤15	≤15
12	160						
24	640						
48	2560						

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

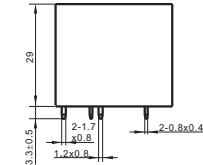
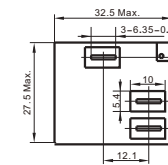
Contact arrangement	SPST (1 Form A or 1 Form B); SPDT (1 Form C)
Contact material	Silver alloy
Contact resistance (initial)	20mΩ Max. (Measured at 1A 24VDC)
Contact rating (resistive)	Resistive load : 40A/277VAC 28VDC (2 x 10 ⁴) 30A/277VAC 28VDC (3 x 10 ⁴) Incandescent lamp: 5,000W 240VAC (1 x 10 ⁵) Electronic ballast : 5A/280VAC (6 x 10 ³) Motor load : 2HP 250VAC (2 x 10 ³)
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	Mechanical 10 ⁶ Electrical (Please refer to contact rating)
Weight	28g Approx.

(Specifications are subject to change without notices.)

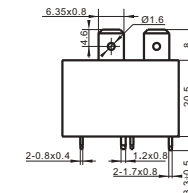
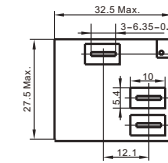
Dimensions

mm

FRL1TH



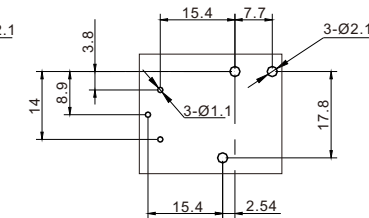
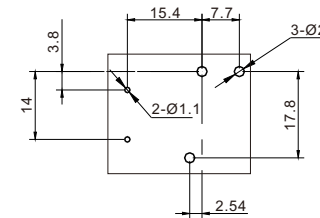
FRL1TH-1



Mounting holes

1 coil latching

2 coils latching



Wiring diagram
(Bottom view)

Single coil latching

