

Power Relays

El.italia serie FW-FRM10LH

Features

Miniature heavy duty relay (12.3mm height)
 10A switching capabilities
 Dielectric strength 5,000Vrms
 Isolation spacing greater than 8mm
 Dust cover or wash tight type



RoHS: E141516

Ordering information

FRM10LH - 1C S 1 J DC12V G

1 2 3 4 5 6 7

1 Relay model
 2 Contact arrangement: 1A: 1 Form A; 1C: 1 Form C
 3 Construction: NIL: Dust cover; S: Wash tight type
 4 Version: 1: Terminal space 3.2mm;
 2: Terminal space 5mm (for SPST only)
 5 Termination: NIL: Standard type;
 K: Terminal spacing 3.2mm & double contact pin (for 1 pole)

6 Rated voltage
 7 Contact material: NIL: AgSnO₂; I: AgNi;
 G : Gold flash
 Note: RoHS :RoHS compliant relay;

Coil rating

Rated voltage (V)	Coil resistance Ω±10%		Rated current (mA)		Must operate voltage % of rated voltage (at +20°C)	Must dropout voltage % of rated voltage (at +20°C)	Maximum voltage	Power consumption (W) Approx.	Operate time (ms)	Release time (ms)
	1 pole	2 poles	1 pole	2 poles						
5	113	70	44	71.5	70 Max.	10 Min.	1 pole: 230%	1 pole: 0.25	<10	<5
6	164	100	36.7	60						
9	360	225	25	40						
12	620	400	19.4	30						
18	1295	902	13.9	20						
24	2350±15%	1600	10.2	15						
48	8000±15%	6400±15%	6	7.5	2 poles: 200%	2 poles: 0.36	<10	<5		
60	12500±15%	10000±15%	4.8	6						

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.

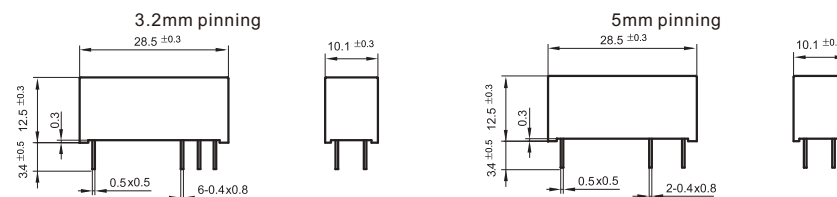
Characteristics

Contact arrangement	SPST (1 Form A or 1 Form B); SPDT (1 Form C); DPST (2 Form A or 2 Form B); DPDT (2 Form C)
Contact material	Silver alloy
Contact resistance	100mΩ Max. (at 1A 6VDC)
Contact rating (resistive)	1 pole: 10A 250VAC/30VDC; 2 poles: 5A 250VAC/30VDC
Switching power	1 pole: 2,500VA 300W Max.; 2 poles: 1,250VA 150W Max.
Switching voltage	AC 440V / DC 125V Max.
Insulation resistance	1,000MΩ Min. (500VDC)
Dielectric strength	1,000VAC (50Hz/min) Between open contacts 5,000VAC (50Hz/min) Between coil and contact (Surge voltage: 10,000V) 2,500VAC (50Hz/min) Between contact set
Shock resistance	Functional : 98m/s ² (NO) 49m/s ² (NC) Destructive: 980m/s ²
Vibration resistance	1.65mm Double amplitude 10-55Hz (NO) 0.80mm Double amplitude 10-55Hz (NC) <No coil voltage for NC>
Ambient temperature	-40°C to +85°C
Humidity	85% RH. 40°C
Operation	Mechanical 1 x 10 ⁷ Electrical 1 x 10 ⁵ (at rated load)
Weight	8g Approx.

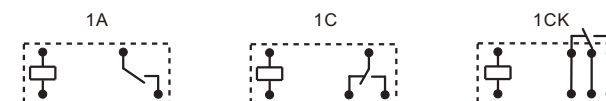
(Specifications are subject to change without notices.)

Dimensions

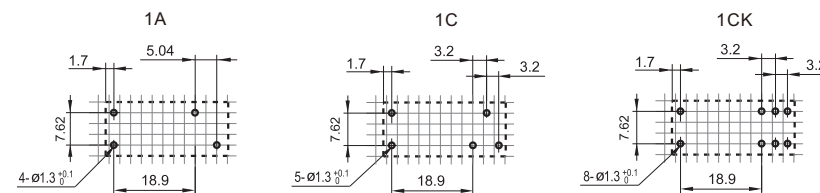
mm



Wiring diagram
(Bottom view)



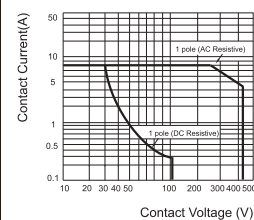
Mounting holes



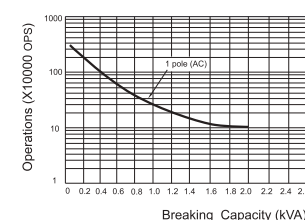
Reference data

1 pole

MAXIMUM SWITCHING POWER



ENDURANCE CURVE



REFLOW WELDING TEMPERATURE
(Reflow soldering version)

