

Power Relays

Features

Miniature relay (15.7mm height)
 0.25W power consumption
 High contact capacity
 Dielectric strength 5,000Vrms
 Dust cover or wash tight type



Us: E141516 (For 3.5mm version)

Ordering information

FRM10NI - 1C S 2 - DC12V G E

1 2 3 4 5 6 7

1 Relay model	7 Contact material: NIL: AgCdO; I: AgNi; N: AgSnO ₂
2 Contact arrangement: 1A: 1 Form A; 1C: 1 Form C	8 Contact plating: G: Au plated
3 Construction: NIL: Dust cover type; S: Wash tight type	8 Insulation standard: NIL: B class; F: F class
4 Version: 1: Terminal space 3.5mm (10A) 2: Terminal space 5.0mm (16A)	Note: RoHS : Compliant relay
5 Rated voltage	

Coil rating

Rated voltage (V)	Coil resistance Ω±10%	Must operate voltage	Must dropout voltage	Maximum voltage	Power consumption	Operate time (ms)	Release time (ms)	
								% of rated voltage (at 20°C)
DC	5 6 9 12 24 48 60 110	100 144 325 576 2304 9216±15% 12857±15% -	70 Max.	10 Min.	130 Max.	0.25W	<15	<8

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

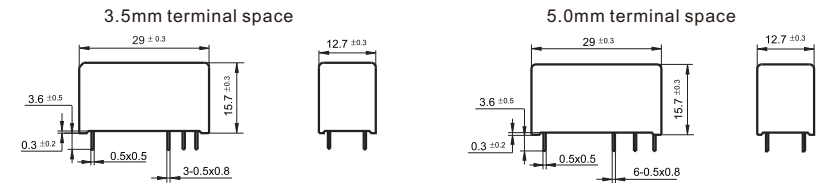
Contact arrangement	SPST (1 Form A); SPDT (1 Form C)
Contact material	Silver alloy
Contact resistance	100mΩ Max. (at 1A 6VDC)
Contact rating (resistive)	10A 250VAC (3.5mm terminal space) 16/12A 250VAC (5.0mm terminal space)
Switching power	2,500VA Max.(3.5mm terminal space); 6,250VA Max.(5.0mm terminal space)
Switching voltage	AC 440V Max.
Insulation resistance	1,000MΩ Min. (500VDC)
Dielectric strength	1,000VAC (50Hz/min) Between open contacts 5,000VAC (50Hz/min) Between coil and contact 2,500VAC (50Hz/min) Between pole and pole
Surge voltage	10,000V Between coil and contact (1.2 x 50µs)
Shock resistance	Functional : 98 m/s ² Destructive: 980m/s ²
Vibration resistance	1.5mm Double amplitude 10-55Hz
Ambient temperature	-40°C to +85°C (High temperature: -40°C to +105°C for 1 pole only)

El.italia serie FW-FRM10NI

Humidity	85% RH, 40°C	
Operation life	Mechanical	10 ⁷
	Electrical	10 ⁵
Weight	14g Approx.	

(Specifications are subject to change without notices.)

Dimensions



Wiring diagram (Bottom view)

3.5mm terminal space

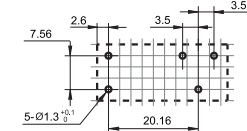


5.0mm terminal space

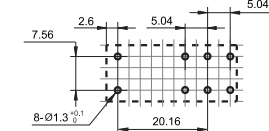


Mounting holes

3.5mm terminal space

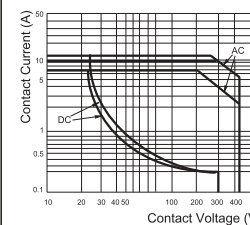


5.0mm terminal space

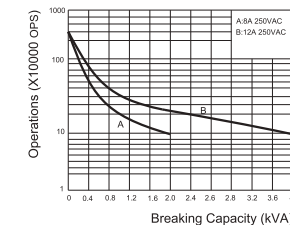


Reference data

MAXIMUM SWITCHING POWER



ENDURANCE CURVE



COIL OPERATING RANGE (DC) *

