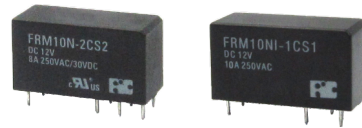


Power Relays

El.italia serie FW-FRM10N

Features

Miniature relay (15.7mm height)
High contact capacity
Dielectric strength 5,000Vrms
Creepage distance 10mm
Dust cover or wash tight type



RoHS: E141516

Ordering information

FRM10N I - 2C S 2 - DC12V G F
1 2 3 4 5 6 7 8

1 Relay model	6 Rated voltage
2 Power consumption: NIL: 0.41W; I : 0.25W (available for 1 pole DC only)	7 Contact material: NIL: AgCdO; I: AgNi; N : AgSnO ₂ ; G: Au
3 Contact arrangement: 1A: 1 Form A; 1C: 1 Form C; 2A: 2 Form A; 2C: 2 Form C	8 Insulation standard: NIL: B class; F: F class Note: RoHS : Compliant relay RoHS-I : AgNi contact RoHS-N: AgSnO ₂ contact
4 Construction: NIL: Dust cover type; S: Wash tight type	
5 Version: 1: Terminal space 3.5mm (for single pole only) 2: Terminal space 5.0mm (for double poles only)	

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)
	FRM10N	FRM10NI						
			% of rated voltage (at 20°C)			Approx.		
DC	5	62	100	FRM10N: 70 Max.	FRM10N: 150Max.	FRM10N: 0.41W	<15	<8
	6	90	144					
	9	202	325					
	12	360	576					
	24	1440	2304					
	48	5760±15%	9216±15%					
60	7500±15%	12857±15%						
110	25200±15%	-						
AC	24	350±15%	-	75 Max.	15 Min.	110 Max.		
	115	8100±15%	-					
	230	32500±15%	-					

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.

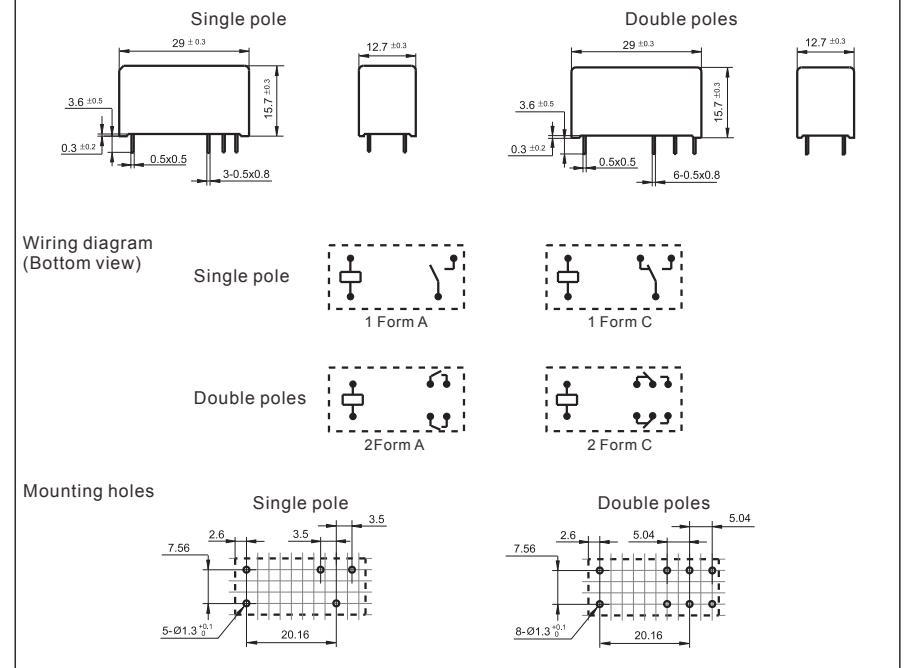
Characteristics

Contact arrangement	SPST (1 Form A); SPDT (1 Form C); DPST (2 Form A); DPDT (2 Form C)
Contact material	Silver alloy
Contact resistance	100mΩ Max. (at 1A 6VDC)
Contact rating (resistive)	1 pole : 12A 250VAC (FRM10NI: 10A 250VAC) 2 poles: 8A 250VAC/30VDC
Switching power	1 pole: 3,000VA Max. (FRM10NI: 2,500VA Max.); 2 poles: 2,000VA Max.
Switching voltage	AC 440V / DC 300V 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	10g/5g, 10-150Hz
Ambient temperature	DC coil: -40°C to +85°C (High temperature: -40°C to +105°C for 1 pole only) AC coil: -40°C to +70°C

Humidity	85% RH, 40°C	
Operation life	Mechanical	DC coil: 10 ⁷ AC coil: 10 ⁶
	Electrical	DC coil: 10 ⁶ AC coil: 5 x 10 ⁴ (at rated load)
Weight	13.5g Approx.	

(Specifications are subject to change without notices.)

Dimensions



Reference data

