

Power Relays

Features

Miniature relay (15.7mm height)
 16A switching capability
 Inrush current up to 80A
 Dielectric strength 5,000Vrms
 Creepage distance 10mm
 Wash tight type is available



US: E141516

Ordering information

FRM10NH - 1C S 2 DC12V G E

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: 2: Terminal space 5.0mm
 5 Rated voltage
 6 Contact material: NIL: AgCdO; N: AgSnO₂;
 I : AgNi; G: AU plated

7 Insulation standard: NIL: Standard (85°C);
 F : F class (155°C)
 Note: RoHS : RoHS compliant relay;
 RoHS-I : AgNi contact;
 RoHS-N: AgSnO₂ contact

Coil rating

	Rated voltage (V)	Coil resistance Ω/-10%	% of rated voltage (at 20°C)		Maximum voltage	Power consumption	Operate time (ms)	Release time (ms)
			Must operate voltage	Must dropout voltage				
DC	5	62	70 Max.	10 Min.	150 Max.	0.41W	<15	<8
	6	90						
	9	202						
	12	360						
	18	810						
	24	1440						
	48	5760±15%						
AC	60	7500±15%	75 Max.	15 Min.	110 Max.	0.75VA		
	110	25200±15%						
	24	350±15%						
	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)	
Contact material	Silver alloy	
Contact resistance	100mΩ Max. (1A 6VDC)	
Contact rating (resistive)	16A 250VAC	
Switching power	4.000VA 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	
Shock resistance	Functional : 98m/s ² Destructive: 980m/s ²	
Vibration resistance	10g/5g, 10-150Hz	
Ambient temperature	AC: -40°C to +70°C; DC: -40°C to +85°C (High temperature: -40°C to +105°C)	
Humidity	85% RH, 40°C	
Operation life	Mechanical	DC coil: 10 ⁷ ; AC coil: 10 ⁶
	Electrical	DC coil: 10 ⁵ ; AC coil: 5 x 10 ⁴ (at rated load)
Weight	13.5g Approx.	

(Specifications are subject to change without notices.)

El.italia serie FW-FRM10NH

Dimensions

mm

Dimensions (mm):
 1 Form A: 29 ±0.3 (width), 15.7 ±0.3 (height), 3.6 ±0.5 (coil lead), 0.3 ±0.2 (coil lead), 0.5x0.5 (coil lead), 6-0.5x0.8 (terminal spacing)
 1 Form C: 12.7 ±0.3 (width)

Wiring diagram (Bottom view):
 1 Form A: SPST (NO, NC)
 1 Form C: SPDT (NO, NC, COM)

Mounting holes:
 1 Form A: 6-Ø1.3^{+0.1}₀, 2.6 (pitch), 5.04 (width), 7.56 (height)
 1 Form C: 8-Ø1.3^{+0.1}₀, 2.6 (pitch), 5.04 (width), 5.04 (width), 7.56 (height)

Reference data

