

General Purpose Power Relays

El.italia serie FW-FRM3

Features

Small size and light weight
High reliability, long service life
Cover load from 3A up to 10A on 2, 3 and 4 poles
Test bottom is available (FRM3N)



CEus: E141516

⚠ : R50086180 (For FRM3 only)

Ordering information

FRM3 H A-2 A 5 - L - DC12V XXX							
1	2	3	4	5	6	7	8
1 Relay model: FRM3; FRM3N(test button type)				5 Contact capacity: 3: 3A; 5 : 5A;			
2 Cover: NIL: Standard type; H: Mount frange type				7: 7A; 10: 10A			
3 Contact arrangement: A-2: 2 Form A; NIL-2: 2 Form C;				6 Coil suppression: L: With LED; N: With diode			
A-3: 3 Form A; NIL-3: 3 Form C;				7 Rated voltage			
A-4: 4 Form A; NIL-4: 4 Form C				8 Special code			
4 Construction: A: PCB mounting;				Note: RoHS : RoHS compliant relay			
B: Plug in type				RoHS-I : AgNi contact			
				RoHS-N: AgSnO ₂ contact			

Coil rating

	Rated voltage (V)	Coil resistance Ω+/-10%	Rated current (mA)		Must operate voltage % of rated voltage (at +20°C)	Must dropout voltage	Maximum voltage	Power consumption Approx.	Operate time (ms)	Release time (ms)
			50Hz	60Hz						
AC	6	11.5	234	200	80 Max.	30 Min.	110 Max.	1.2VA	<25	<25
	12	46	117	100						
	24	184	58.5	50						
	36	370	39	33.4						
	48	735	28	24						
	120	4550	14.1	13.6						
DC	220/240	14400	11.4	10						
	5	27.5	182		10 Min.	0.9W				
	6	40	150							
	12	160	75							
	24	650	36.9							
	36	1500	24.5							
48	2600	18.5								
	110	11000	10							

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	DPST (2 Form A); DPDT (2 Form C); 3PST (3 Form A); 3PDT (3 Form C); 4PST (4 Form A); 4PDT (4 Form C)
Contact material	Silver alloy
Contact resistance	50mΩ Max. (at 6VDC 1A)
Contact rating (resistive)	See figure 1 & 2
Switching power	2,500VA / 300W Max.
Switching voltage	AC 250V / DC 125V Max.
Insulation resistance	1,000MΩ Min. (500VDC)
Dielectric strength	1,000VAC (50Hz/min) Between open contacts 1,500VAC (50Hz/min) Between coil and contact (Special: 2,000VAC)
Shock resistance	Functional : 100m/s ² Destructive: 1,000m/s ²
Vibration resistance	1.5mm Double amplitude 10-55Hz
Ambient temperature	-55°C to +70°C
Humidity	85% RH, 40°C

Operation life	Mechanical	FRM3: 2 x 10 ⁷ ; FRM3N: 1 x 10 ⁷	
		Electrical	FRM3 : DPDT or 3PDT : 7Amp: 1 x 10 ⁵ 5Amp: 2 x 10 ⁵ 4PDT : 5Amp: 1 x 10 ⁵ 3Amp: 2 x 10 ⁵ FRM3N: 1 x 10 ⁵
		Weight	FRM3: 35g Approx.; FRM3N: 37g Approx.

Figure 1: FRM3

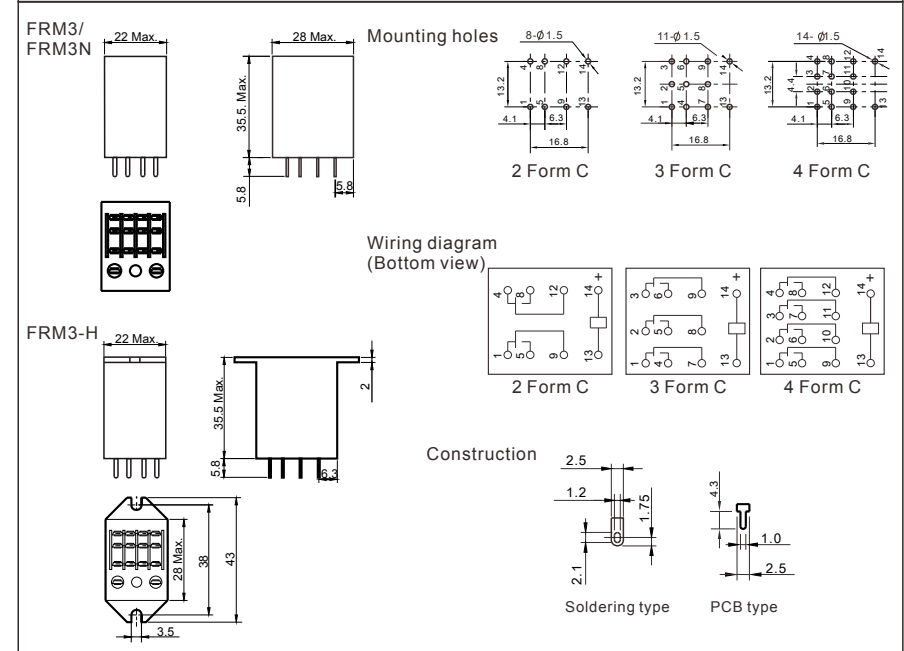
Contact arrangement	2 & 3 poles			4 poles	
Rating load	UL : 5A 220VAC/28VDC 7A 220VAC/28VDC (Special: 10A 220VAC/28VDC) TÜV: 7A 250VAC/30VDC			UL : 3A 220VAC/28VDC 5A 220VAC/28VDC TÜV: 5A 250VAC/30VDC	
Switching current	5A	7A	10A	3A	5A
Switching capacity	1,250VA / 150W	1,540VA / 210W	2,500VA / 300W	660VA / 90W	1,250VA / 150W

Figure 2: FRM3N

Item	Load		
	2 poles	3 poles	4 poles
Rating load	250V AC	250V AC	250V AC
Switching current	10A	7A (No approval)	5A
Switching capacity	2,500VA / 300W	1,540VA / 210W	1,250VA / 150W

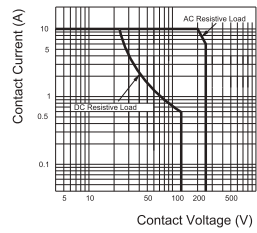
(Specifications are subject to change without notices.)

Dimensions

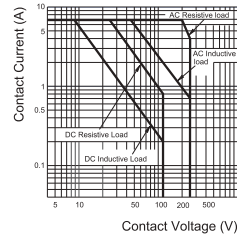


Reference data

MAXIMUM SWITCHING POWER
(2 Form C)



MAXIMUM SWITCHING POWER
(3 Form C)



MAXIMUM SWITCHING POWER
(4 Form C)

