

# FRM3W General Purpose Power Relays

## Features

- Small size and light weight
- High reliability, long service life
- Cover load from 10A up to 20A on 1, 2 and 3 poles
- Strong construction for vibration and shock
- Insulation system Class F available



us: E141516

## Ordering information

<b>FRM3W H A-2 A L 10 DC12V B N XXX</b>									
1	2	3	4	5	6	7	8	9	10
1 Relay model					6 Contact capacity: 10: 10A; 12: 12A; 15: 15A; 20: 20A				
2 Cover Type: NIL: Standard type; H: Mount frange type					7 Rated voltage				
3 Contact arrangement: NIL1: 1C; A-1: 1A; B-1: 1B; NIL2: 2C; A-2: 2A; B-2: 2B; NIL3: 3C; A-3: 3A; B-3: 3B					8 Class of insulation systems: NIL: Standard; B: B Class (130°C); F: F Class (155°C)				
4 Construction: A: PCB mounting; B: Plug in type					9 Contact material: NIL: AgCdO; N: AgSnO <sub>3</sub>				
5 Coil suppression: L: with LED; N: With diode					10 Special code				

## Coil rating

	Rated voltage (V)	Coil resistance Ω $\pm$ -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	10 Min.	0.9W				
	5	27.5	182							
	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	SPDT (1 Form C); DPDT (2 Form C); 3PDT (3 Form C)		
Contact material	Silver alloy		
Contact resistance	50mΩ Max. (at 1A 6VDC)		
Contact rating (resistive)	See figure 1		
Switching voltage	AC 300V / DC 30V Max.		
Insulation resistance	500MΩ Min. (500VDC)		
Dielectric strength	1,000VAC (50Hz/min) Between open contacts		
Shock resistance	Functional : 98m/s <sup>2</sup> Destructive: 980m/s <sup>2</sup>		
Vibration resistance	1.5mm Double amplitude 10-55Hz		
Ambient temperature	-40°C to +85°C		
Humidity	85% RH, 30°C		
Operation life	Mechanical	2 x 10 <sup>7</sup>	
	Electrical	1 x 10 <sup>5</sup>	
Weight	For 1 & 2 poles: 35g Approx.; For 3 poles: 50g		

General Purpose Power Relays

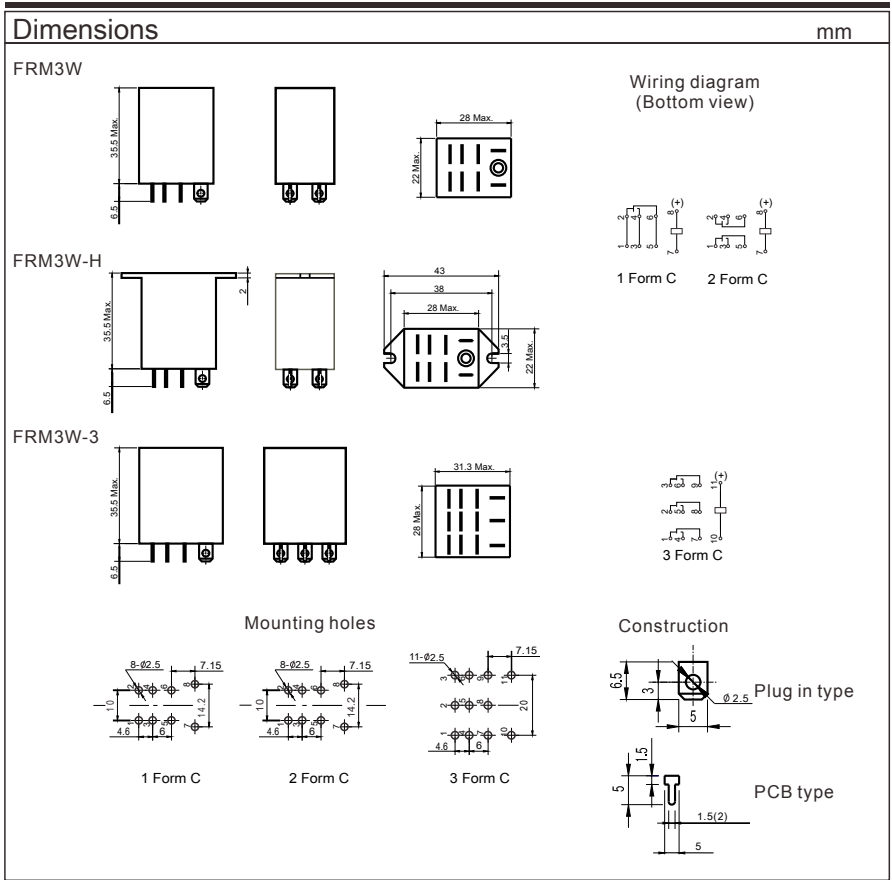


# FRM3W

Figure 1

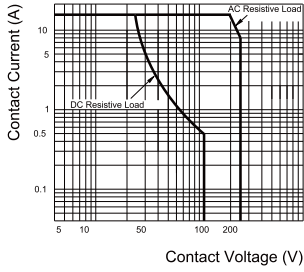
Item 1	1 pole	2 & 3 poles
Rating load	15A 250VAC 15A 28VDC Special request: 20A 277VAC / 28VDC	10A 250VAC 10A 28VDC Special request: (for 2 poles) 10A 277VAC / 28VDC 12A 250VAC / 28VDC ½HP 125VAC
Maximum switching voltage	AC 250V / DC 30V	
Maximum current	20A	10A / 12A

(Specifications are subject to change without notices.)



## Reference data

MAXIMUM SWITCHING POWER  
(1 From C)



MAXIMUM SWITCHING POWER  
(2 From C and 3 From C)

