

## Features

- Miniature high power design for PC board
- Automobile relay with high switching power
- Switching current up to 45A
- Low cost and high performance
- European(11mm) or USA(8mm) footprints
- Open type, dust cover or wash tight type



## Ordering information

<b>FRA2 B C - C 1 DC12V R</b>						
1	2	3	4	5	6	7
1 Relay model				5 Version: 1: USA(8mm); 2: European(11mm)		
2 Contact rating: NIL: 40A 14VDC; B: 45A 14VDC				6 Rated voltage		
3 Contact arrangement: A: 1 Form A; B: 1 Form B; C: 1 Form C				7 Termination: R: Without one COM PIN		
4 Construction: NIL: Open type; C: Dust cover; S : Wash tight type				Note: RoHS : RoHS compliant relay RoHS-I : AgNi contact RoHS-N: AgSnO <sub>2</sub> contact		

## Coil rating

Rated voltage (V)	Coil resistance $\Omega$ +/-10%	Rated current (mA)	Must operate voltage	Must dropout voltage	Maximum voltage	Power consumption (W) Approx.	Operate time (ms)	Release time (ms)
			% of rated voltage (at 20°C)					
6	19	315	57.5 Max.	10 Min.	150 Max.	1.6	<5	<5
12	90	133						
24	360	66						

- 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

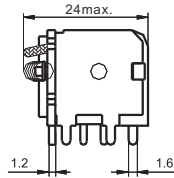
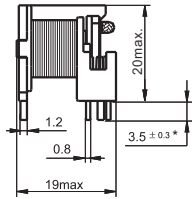
Contact arrangement	SPST (1 Form A or 1 Form B) SPDT (1 Form C)	
Contact material	Silver alloy	
Contact resistance	30m $\Omega$ Max.	
Contact rating (resistive)	NO: 40A/14VDC NC: 30A/14VDC (Special request NO: 45A/14VDC)	
Switching voltage	DC 75V Max.	
Insulation resistance	100M $\Omega$ Min. (500VDC)	
Dielectric strength	500VAC (50Hz/min) Between open contacts 750VAC (50Hz/min) Between coil and contact	
Shock resistance	20g Approx.	
Vibration resistance	1.27mm Double amplitude 10-40Hz	
Ambient temperature	Operation: -40°C to +105°C (Special request: -40°C to +125°C)	
Humidity	85% RH, 40°C	
Operation life	Mechanical	10 <sup>7</sup>
	Electrical	10 <sup>5</sup> (at rated load)
Weight	Open type: 17g Approx. Wash tight type: 21g Approx.	

(Specifications are subject to change without notices.)

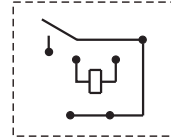
## Dimensions

mm

Open type

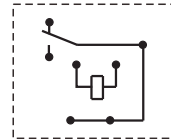
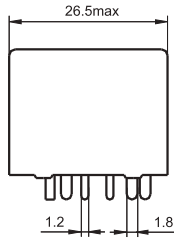
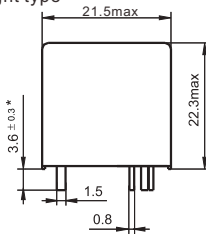


Wiring diagram  
(Bottom view)



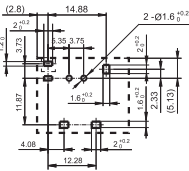
1 Form A

Dust cover /  
Wash tight type

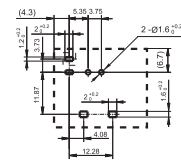


1 Form C

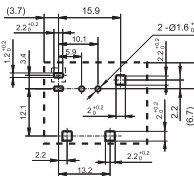
Mounting holes



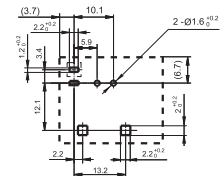
FRA2-1



FRA2-1R



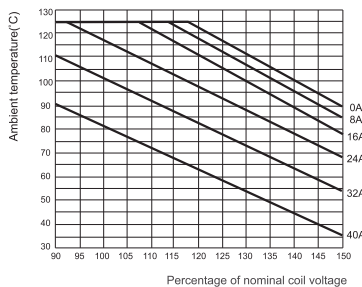
FRA2-2



FRA2-2R

## Reference data

1. Coil operating voltage range



2. Load limit curve (at 23°C)

