

## 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) terminal distance  
 Open type, dust cover or wash tight type



## Ordering information

**FRA2 B C - C 1 DC12V R**  
 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 Ω±10%	Rated current (mA)	Must operate voltage			Power consumption (W) Approx.	Operate time (ms)	Release time (ms)
			Must operate voltage	Must dropout voltage	Maximum voltage			
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

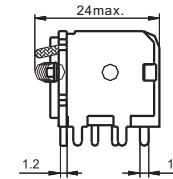
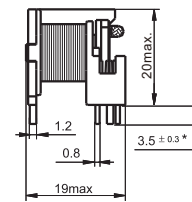
Contact arrangement	SPST (1 Form A or 1 Form B) SPDT (1 Form C)	
Contact material	Silver alloy	
Contact resistance	30mΩ Max.	
Contact rating (resistive)	NO: 40A/14VDC NC: 30A/14VDC (Special request NO: 45A/14VDC)	
Switching power	630W Max.	
Switching voltage	DC 75V Max.	
Insulation resistance	100MΩ Min. (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	
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.)

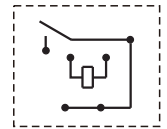
## Dimensions

mm

### Open type

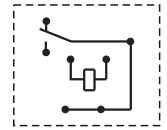
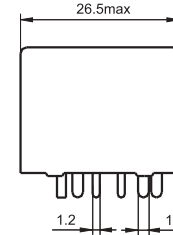
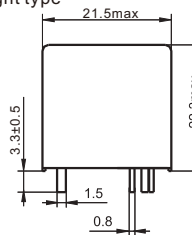


### Wiring diagram (Bottom view)



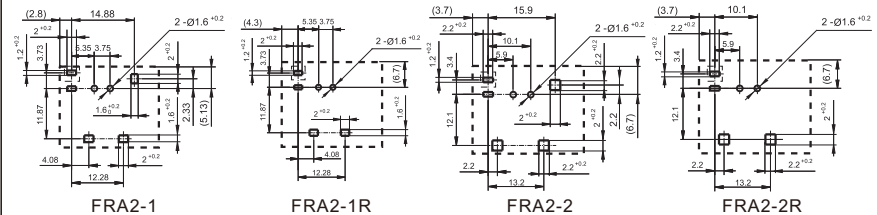
1 Form A

### Dust cover / Wash tight type



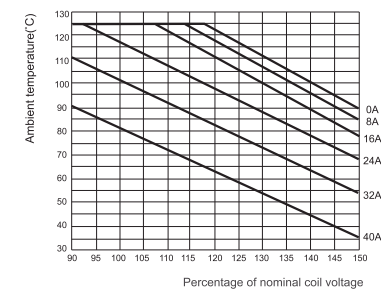
1 Form C

### Mounting holes



## Reference data

### 1. Coil operating voltage range



### 2. Load limit curve (at 23°C)

