

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

| | | | | | | |
|---|---|---|---|--|---|---|
| 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 ₂ contact | | |

Coil rating

| Rated voltage (V) | Coil resistance Ω +/-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

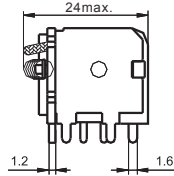
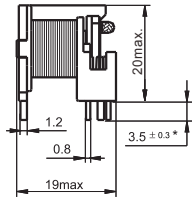
| | | |
|----------------------------|---|---------------------------------|
| Contact arrangement | SPST (1 Form A or 1 Form B) SPDT (1 Form C) | |
| Contact material | Silver alloy | |
| Contact resistance | 30m Ω Max. | |
| Contact rating (resistive) | NO: 40A/14VDC NC: 30A/14VDC (Special request NO: 45A/14VDC) | |
| Switching voltage | DC 75V Max. | |
| Insulation resistance | 100M Ω 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 ⁷ |
| | Electrical | 10 ⁵ (at rated load) |
| Weight | Open type: 17g Approx. Wash tight type: 21g Approx. | |

(Specifications are subject to change without notices.)

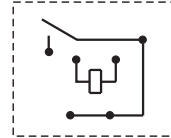
Dimensions

mm

Open type

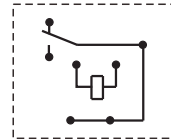
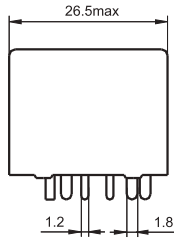
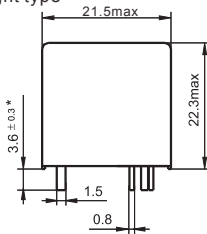


Wiring diagram
(Bottom view)



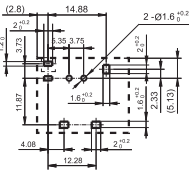
1 Form A

Dust cover /
Wash tight type

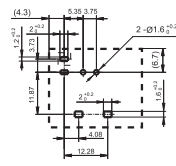


1 Form C

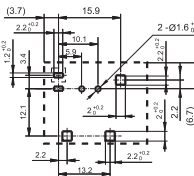
Mounting holes



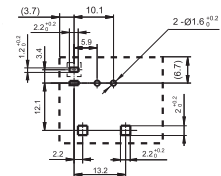
FRA2-1



FRA2-1R



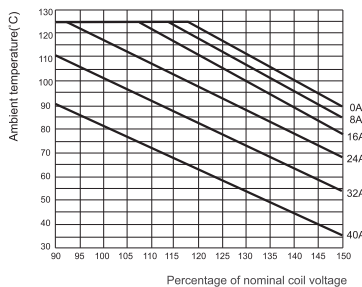
FRA2-2



FRA2-2R

Reference data

1. Coil operating voltage range



2. Load limit curve (at 23°C)

