

# Automotive Relays

# El.italia serie FW-FRC7

## Features

- Up to 35A contact rating
- High temperature design
- 1 Form A & 1 Form C arrangements
- Ideal use for control car
- Quick connect or PCB terminals
- Wash tight type is available



## Ordering information

### FRC7 A - S A R - DC12V

1 2 3 4 5 6

1 Relay model: FRC7; FRC7B; FRC7N	5 Coil suppression: NIL: Standard type; N : With diode; R: Resistor; T : Transil (DB-03)
2 Contact arrangement: A: 1 Form A; C: 1 Form C	
3 Construction: NIL: Dust cover; S: Wash tight type	
4 Version: NIL: Plug in type (pin width for #85, #86 is 4.8mm); 1 : Plug in type (pin width for #85, #86 is 2.75mm); A : PCB type	6 Rated voltage Note: RoHS : RoHS compliant relay RoHS-I : AgNi contact RoHS-N: AgSnO <sub>2</sub> contact

## Coil rating

Rated voltage (V)	Coil resistance $\Omega \pm 10\%$		Rated current (mA)		Must operate voltage % of rated voltage (at 20°C)	Must dropout voltage 10 Min.	Maximum voltage 130 Max.	Power consumption (W) Approx.	Operate time (ms)	Release time (ms)
	1 Form A	1 Form C	1 Form A	1 Form C						
6	30	25	200	250	Unsealed: 60 Max.; Sealed: 65 Max.	10 Min.	130 Max.	1 Form A: 1.2; 1 Form C: 1.5	<10	<7
12	120	96	100	124						
24	480	384	50	62.5						

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

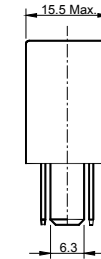
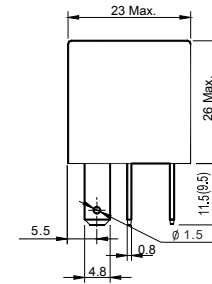
Contact arrangement	SPST (1 Form A); SPDT (1 Form C)
Contact material	Silver alloy
Contact resistance	50m $\Omega$ Max.
Contact rating (resistive)	FRC7 : 25A 14VDC (NO) 20A 14VDC (NC) FRC7B: 35A 14VDC (NO) 25A 14VDC (NC) FRC7N: 25A 14VDC (only available with "1 Form A")
Switching power	FRC7: 490W Max.; FRC7N: 420W Max.
Switching voltage	DC 75V Max.
Insulation resistance	100M $\Omega$ Min. (500VDC)
Dielectric strength	500VAC (50Hz/min)
Shock resistance	10g Approx.
Vibration resistance	1.27mm Double amplitude 10-40Hz
Ambient temperature	-40°C to +85°C (Special request up to 125°C)
Humidity	85% RH, 40°C
Operation life	Mechanical: 10 <sup>7</sup> Electrical: 10 <sup>5</sup> (at rated load)
Weight	FRC7: 18.5g Approx.; FRC7N: 14g Approx.

(Specifications are subject to change without notices.)

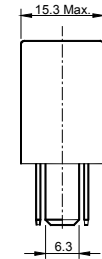
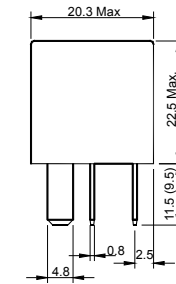
## Dimensions

mm

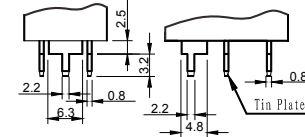
### FRC7/FRC7B



### FRC7N

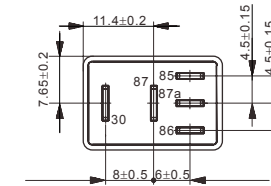


### PCB layout

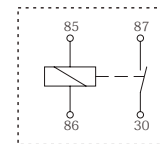


Note: Terminals as shown above are also available.

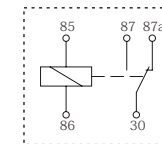
### Mounting holes



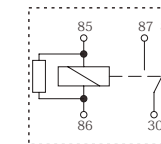
## Wiring diagram



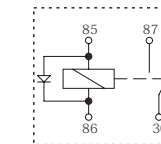
1 Form A



1 Form C



With resistor



With diode

## Reference data

