

Features

Small size and high contact rating (100A)
High temperature design
Plug in or PC board terminal
Optional mounting bracket
Wash tight type is available



Ordering information

FRC3B A - 1 A N S - DC12V
1 2 3 4 5 6 7

1 Relay model: FRC3; FRC3B	6 Construction: NIL: Dust cover; S: Wash tight type (only for plain dust cover & metal bracket dust cover)
2 Contact arrangement: A: 1 Form A; C: 1 Form C	7 Rated voltage
3 Mounting termination: NIL: Moulded bracket dust cover; 1: Plain dust cover; 2: Metal bracket dust cover	Note: RoHS : RoHS compliant relay RoHS-I : AgNi contact RoHS-N: AgSnO ₂ contact
4 Version: NIL: Plug in type; A: PCB type	
5 Coil suppression: NIL: Standard type; N: With diode; R : Resistor; T: Transil (DB-03)	

Coil rating

Rated voltage	Coil resistance $\Omega \pm 10\%$		Rated current (mA)		Must operate voltage	Must dropout voltage	Maximum voltage	Power consumption (W) Approx.	Operate time (ms)	Release time (ms)
(V)	FRC3	FRC3B	FRC3	FRC3B	% of rated voltage (at 20°C)					
12	80	50	150	240	65 Max.			FRC3 : 1.8	<10	<10
24	320	195	75	123	10 Min.			FRC3B: 2.9		

*If use resistor:
DC 6V with 180 Ω resistor
DC 12V with 680 Ω resistor
DC 24V with 2,702 Ω resistor

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

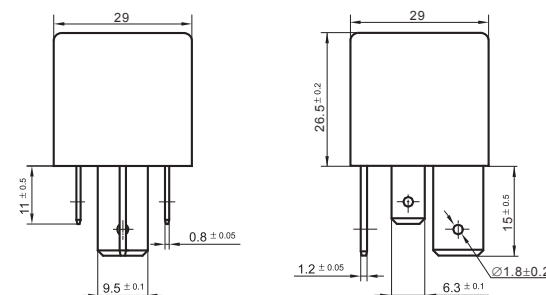
Contact arrangement		SPST (1 Form A); SPDT (1 Form C)
Contact material		Silver alloy
Contact resistance		30m Ω Max.
Contact rating (resistive)		FRC3 : N.O.: 70A 14VDC (Special: 80A 14VDC); N.C.: 60A 14VDC FRC3B: N.O.: 100A 14VDC; N.C.: 70A 14VDC
Switching power		FRC3: 980W Max.; FRC3B: 1,200W Max.
Switching voltage		DC 75V Max.
Insulation resistance		100M Ω Min. (500VDC)
Dielectric strength		500VAC (50Hz/min)
Shock resistance		20g Approx.
Vibration resistance		1.5mm 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 ⁷
	Electrical	10 ⁵ (at rated load)
Weight		47g Approx.

(Specifications are subject to change without notices.)

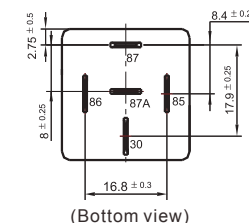
Dimensions

mm

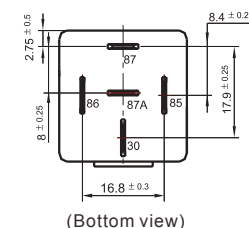
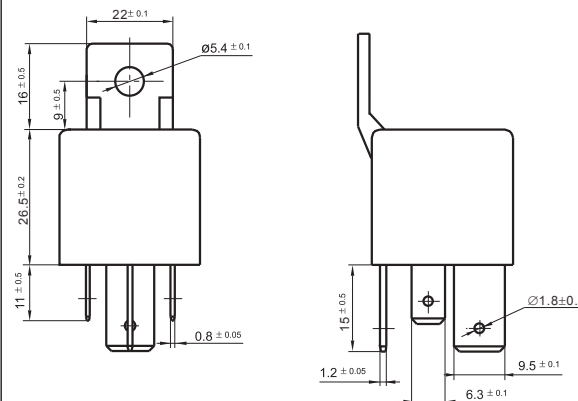
Dust cover



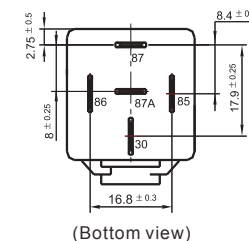
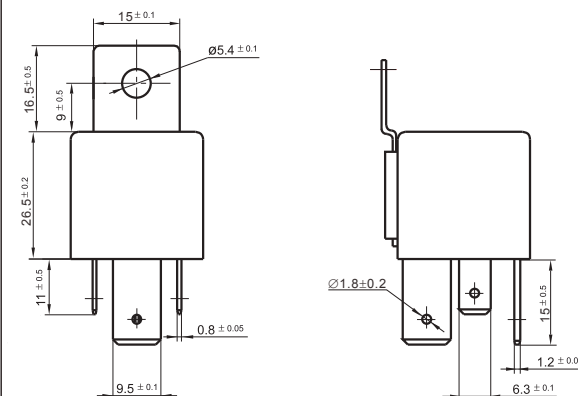
Mounting holes



Moulded bracket dust cover



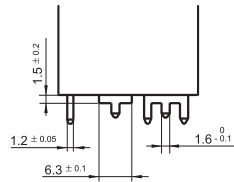
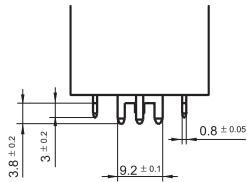
Metal bracket dust cover



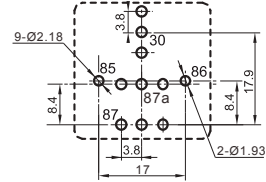
Dimensions

mm

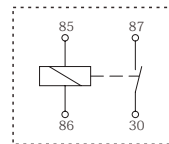
PCB type terminal



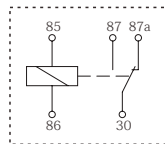
Mounting holes



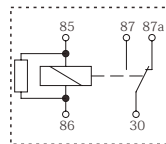
Wiring diagram



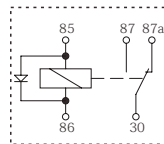
1 Form A



1 Form C



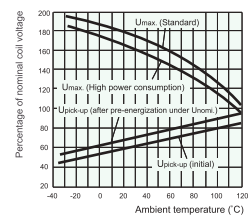
With resistor



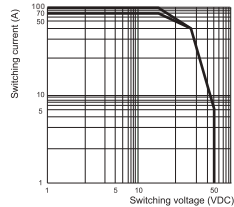
With diode

Reference data

1. Coil operating voltage range



2. Load limit curve



3. Ambient temperature curve of the electrical endurance test

