

Features

Subminiature light weight relay
Surge resistiveness of 5,000V
Employment of suitable plastic material for high temperature
and various chemical solution
Dust cover or wash tight type
Applications: home appliances, audio equipment, office
machines, automobiles, etc.

CAUTION: E141516

 : R50019143 (For FRS16 only)

Ordering information

FRS16 H A - S 05 - 1 DC12V - 1
1 2 3 4 5 6 7 8

1 Relay model: FRS16; FRS16N	6 Termination (only for "N" type): 1: FRS16N-1; 2: FRS16N-2
2 Power consumption: B: 0.45W; H: 0.2W (for SPST only) <special request 0.23W for "FRS16NA-10">	7 Rated voltage
3 Contact arrangement: A: 1 Form A; C: 1 Form C	8 Special high capacity (1 Form A only)
4 Construction: NIL: Dust cover; S: Wash tight type	Note: RoHS : RoHS compliant relay; RoHS- I: AgNi contact; RoHS-N: AgSnO ₂ contact
5 Contact rating: 03: 3A; 05: 5A; 08: 8A (8A 250VAC for SPST only); 10: 10A (FRS16N-10 for SPST only)	

Coil rating

Rated voltage (V)	Coil resistance Ω ±10%				Must operate voltage	Must dropout voltage	Maximum voltage	Power consumption (W) Approx.	Operate time (ms)	Release time (ms)
	"B" Type	"H" Type	"NBA-10"	"NA-10"						
3	20	45	20	38				"B" Type: 0.45		
5	55	125	55	108						
6	80	180	80	155						
9	180	400	180	350						
12	320	720	320	620	75 Max.	5 Min.	130 Max.	"H" Type: 0.20 (Special: 0.23) (for SPST only)	<8	<5
18	—	—	720	1390						
24	1280	2800	1280	2480						
48	5100	—	5120	9920						

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	100m Ω Max.
Contact rating (resistive)	FRS16BA: 10A 120VAC 5A 250VAC/28VDC Lamp load: 5A/250VAC Rush current 80A FRS16HA & FRS16BC: 5A 120VAC 3A 250VAC/28VDC Special high capacity: 8A 250VAC (1 Form A only) - (No approval) FRS16NA-5: 5A 250VAC/30VDC 1/8HP 125VAC/250VAC FRS16NA-10: 10A 250VAC (No approval) FRS16NBC: 3A 250VAC/30VDC
Switching power	1,250VA / 150W Max.
Switching voltage	AC 250V / DC 30V Max.
Insulation resistance	100M Ω Min. (500VDC)
Dielectric strength	1,000VAC (50Hz/min) Between open contacts FRS16 : 2,500VAC (50Hz/min) Between coil and contact FRS16N: 5,000VAC (50Hz/min) Between coil and contact
Shock resistance	10g Min.
Vibration resistance	1.5mm Double amplitude 10-55Hz



Ambient temperature	FRS16: -40°C to +70°C; FRS16N: -40°C to +85°C	
Humidity	95% RH, 35°C	
Operation life	Mechanical	10 ⁷
	Electrical	10 ⁵ (at rated load)
Weight	FRS16: 6g Approx.; FRS16N: 5g Approx.	

(Specifications are subject to change without notices.)

Dimensions

mm

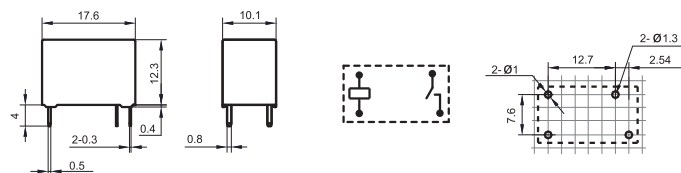
		Wiring diagram (Bottom view)	Mounting holes
FRS16			
1 Form A			
1 Form C			
FRS16N-1			
1 Form A			
1 Form C			

Dimensions

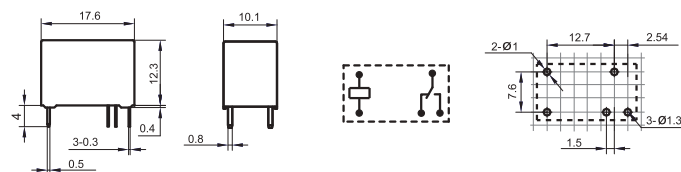
mm

FRS16N-2

1 Form A



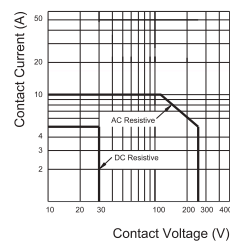
1 Form C



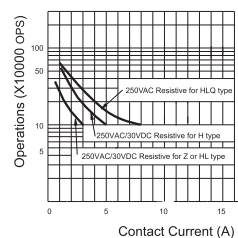
Reference data

FRS16

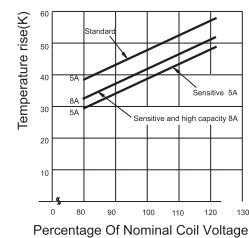
MAXIMUM SWITCHING POWER



ENDURANCE CURVE

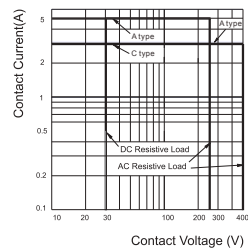


COIL TEMPERATURE RISE

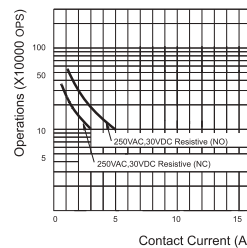


FRS16N

MAXIMUM SWITCHING POWER



ENDURANCE CURVE



TEMPERATURE RISE

