

Power Relays

El.italia serie FW-FRS11L

Features

Subminiature light weight power relay
 Switching capacity up to 20A
 Dielectric strength 2,500Vrms
 Impulse voltage: 4,800V
 Insulation system class "F" available
 Dust cover or wash tight type



CE Us: E139468

DE : 40014769 (only FRS11L)

Ordering information

FRS11L1 B C - S 20 - DC12V E

1 2 3 4 5 6 7

1 Relay model: FRS11L (Height: 17.1mm); FRS11L1 (Height: 15.0mm)	6 Rated voltage
2 Power consumption: NIL: 0.36W; B: 0.45W (No VDE)	7 Insulation standard: NIL: B class; F : F class (155°C)
3 Contact arrangement: A: 1 Form A; B: 1 Form B; C: 1 Form C	Note: RoHS : Compliant relay RoHS-I : AgNi contact RoHS-N: AgSnO ₂ contact
4 Construction: NIL: Dust cover; S: Wash tight type	
5 Contact rating: FRS11L : 20: 20A/125VAC; 16A/277VAC; 10A/250VAC 12: 12A/125VAC; 5A/250VAC FRS11L1: 10: 10A/250VAC; 7 : 7A/250VAC (1 Form B); 5 : 5A/250VAC	

Coil rating

Rated voltage (V)	Coil resistance Ω/+10%		Must operate voltage % of rated voltage (at 20°C)	Must dropout voltage	Maximum voltage	Power consumption (W) Approx.	Operate time (ms)	Release time (ms)
	FRS11L	FRS11L(B)						
3	25	20	75 Max.	10 Min.	130 Max.	FRS11L: 0.36	<15	<10
5	69	56						
6	100	80						
9	225	180						
12	400	320						
18	900	720						
24	1600	1280						
48	6400	5120						

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.

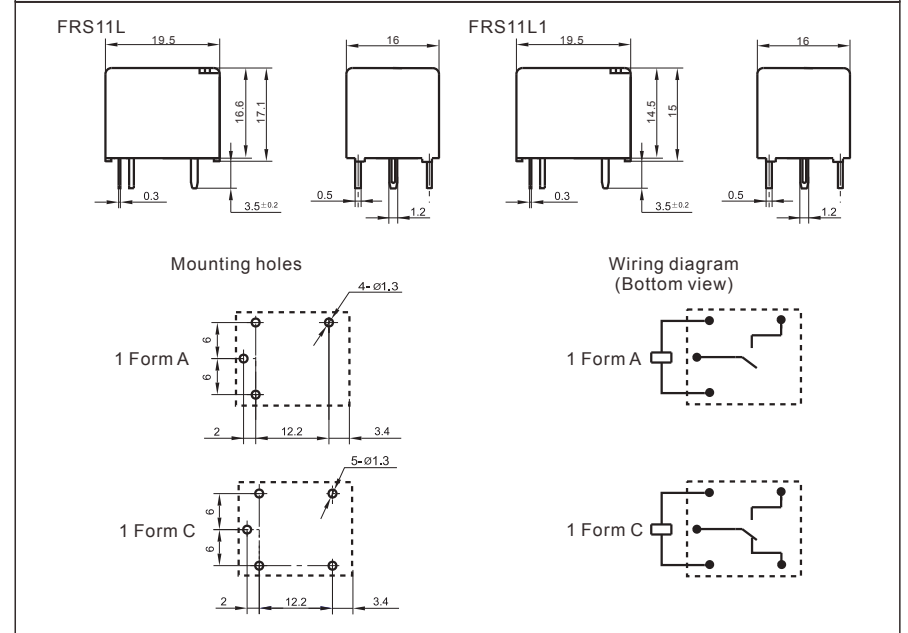
Characteristics

Contact arrangement	SPST (1 Form A or 1 Form B); SPDT (1 Form C)
Contact material	Silver alloy
Contact resistance	100mΩ Max. (at 1A 6VDC)
Contact rating (resistive)	FRS11L UL rating 1 Form C (NO/NC): 20A 125VAC - resistive 16A 277VAC - general use 10A 250VAC - general use (+85°C) TV-8, 125VAC 1 Form A (NO) : 1HP (16FLA) 125VAC; 1HP (8FLA) 250VAC 1 Form B (NC) : 1/2HP (9.8FLA) 125VAC; 1/2HP (4.9FLA) 250VAC VDE rating : NO: 10A 250VAC; NC: 7A 250VAC (0.36W only)

Contact rating (resistive)	FRS11L1 UL rating 1 Form C (NO/NC): 10A/250VAC - general use (+85°C) 7A/250VAC - resistive use (+85°C) 5A/250VAC - resistive use (+85°C) 1 Form A (NO) : 10A/250VAC - resistive use (+85°C) 1HP (16FLA) 125VAC; 1HP (8FLA) 250VAC 1 Form B (NC) : 7A 250VAC - resistive use (+85°C) 1/2HP (9.8FLA) 125VAC; 1/2HP (4.9FLA) 250VAC
Switching power	3,840VA Max.
Switching voltage	277VAC Max.
Insulation resistance	250MΩ Min. (500VDC)
Dielectric strength	1,000VAC (50Hz/min) Between open contacts 2,500VAC (50Hz/min) Between coil and contact
Shock resistance	100m/s ² 11ms
Vibration resistance	1.0mm Double amplitude 10-55Hz
Ambient temperature	-40°C to +85°C
Humidity	93% RH, 40°C
Operation life	Mechanical DC coil: 10 ⁷ Electrical DC coil: 10 ⁶ (at rated load)
Weight	10g Approx.

(Specifications are subject to change without notices.)

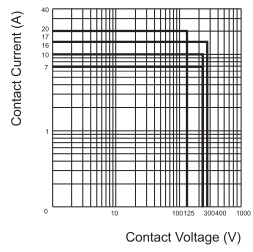
Dimensions



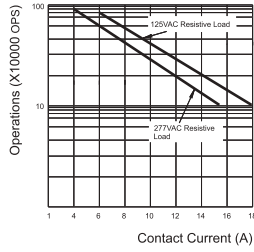
Reference data

mm

MAX. SWITCHING POWER



ENDURANCE CURVE



COIL TEMPERATURE RISE

