

JQC-3FF-M SUBMINIATURE AUTOMOTIVE RELAY

Typical Applications

Anti-theft lock, central door lock



Features

- 15A switching capability
- 1 Form A and 1 Form C configurations
- Subminiature, standard PCB layout
- Plastic sealed and flux proofed types
- RoHS & ELV compliant

CHARACTERISTICS

Contact arrangement	1A, 1C
Voltage drop(initial) ¹⁾	Typ.:20mV(at 10A) Max.:250mV(at 10A)
Max.continuous current ²⁾	10A
Max.switching voltage	30VDC
Max.switching current ³⁾	15A
Min.contact load	1A 6VDC
Electrical endurance	See“CONTACT DATA”
Mechanical endurance	1 x 10 ⁷ ops(300ops/min)
Initial insulation resistance	100MΩ (at 500VDC)
Dielectric strength ⁴⁾	Between contacts: 750VAC Between coil & contacts: 1500VAC
Operate time	Typ.:5ms Max.:10ms (at nomi. vol.)

Release time ⁵⁾	Typ.:3ms Max.:10ms
Shock resistance ⁶⁾	98m/s ²
Vibration resistance ⁶⁾	10Hz to 55Hz 1.5mm DA
Ambient temperature	-40°C to 85°C
Termination	PCB ⁷⁾
Unit weight	Approx. 10g
Construction	Plastic sealed Flux proofed

- Notes:** 1) Equivalent to the max.initial contact resistance is 100mΩ (at 1A 6VDC).
 2) For NO contacts,measured when applying 100% rated vottage on coil.
 3) At 23°C, 13.5VDC(100 cycles,resistive load).
 4) 1min,leakage current less than 1 mA.
 5) The value is measured when voltage drops suddenly from nominal voltage to 0VDC and coil is not paralleled with suppression circuit.
 6) When energized,opening time of NO contacts shall not exceed 100 μs,when non-energized,opening time of NC contacts shall not exceed 100 μs,meantime,NO contacts shall not be closed.
 7) Since it is an environment product, please select lead- free solder when welding. The recommended soldering temperature and time is (250±3)°C, (5±0.3)s.

CONTACT DATA

Load voltage	Load type		Load current A			On/Off ratio		Electrical endurance OPS	Contact material	Load wiring diagram
			1C		1A	On s	Off s			
			NO	NC	NO					
13.5VDC	Resistive	Make	15	5	15	5	5	1 x 10 ⁵	JQC-3FF-M/M1: AgSnO ₂ JQC-3FF-M2: AgNi	
		Break	15	5	15	5	5			

Notes: 1) When the load voltage is at 24VDC or higer, or the applications conditions are different from the table above, please submit the detailed application conditions to Jintian to get more support. .



JINTIAN RELAY

ISO9001、ISO14001、OHSAS18001 CERTIFIED

COIL

at 23°C

Type	Rated Voltage VDC	Pick-up Voltage VDC	Drop-out Voltage VDC min.	Coil Resistance $x(1\pm 10\%)\Omega$	Power consumption W	Max. allowable overdrive Voltage ²⁾ VDC	
						at 23°C	at 85°C
JQC-3FF-M	9	≤ 6.75	≥ 0.90	180	0.45	11.7	10.8
	12	≤ 9.00	≥ 1.20	320	0.45	15.6	14.4
	24	≤ 18.00	≥ 2.40	1280	0.45	31.2	28.8
JQC-3FF-M1	9	≤ 5.85	≥ 0.65	126	0.64	11.3	10.3
	12	≤ 7.80	≥ 0.90	225	0.64	15.0	13.8
	24	≤ 15.60	≥ 1.80	900	0.64	30.0	27.6
JQC-3FF-M2	9	≤ 5.15	≥ 0.60	100	0.80	10.8	9.90
	12	≤ 6.80	≥ 0.80	180	0.80	14.4	13.2
	24	≤ 13.70	≥ 1.60	720	0.80	28.8	26.4

Notes: 1) The data shown above are initial values.
2) Max. allowable overdrive voltage is stated with no load applied.

ORDERING INFORMATION

JQC-3FF-M / 012 - 1H S (XXX)

Type

JQC-3FF-M: 0.45W
JQC-3FF-M1: 0.64W
JQC-3FF-M2: 0.80W

Coil voltage 009: 9VDC 012: 12VDC 024: 24VDC

Contact arrangement 1H: 1Form A 1Z: 1Form C

Construction¹⁾ S: Plastic sealed Nil: Flux proofed

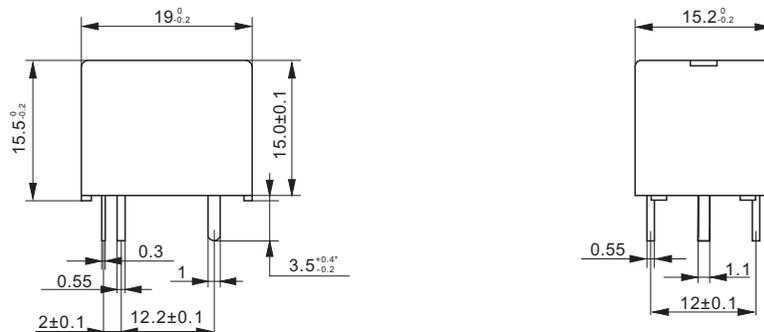
Special code²⁾ XXX: Customer special requirement Nil: Standard

Notes: 1) Contact is recommended for suitable condition and specifications if water cleaning or surface process is involved in assembling relays on PCB.
2) The customer special requirement express as special code after evaluating by Jintian..

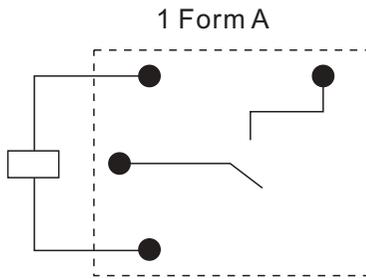
OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

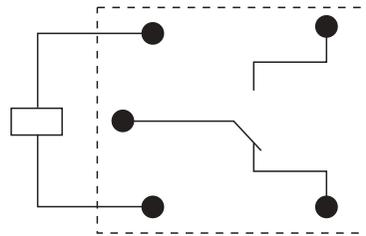
Outline Dimensions (1 Form A / 1 Form C)



PCB Layout
(Bottom view)

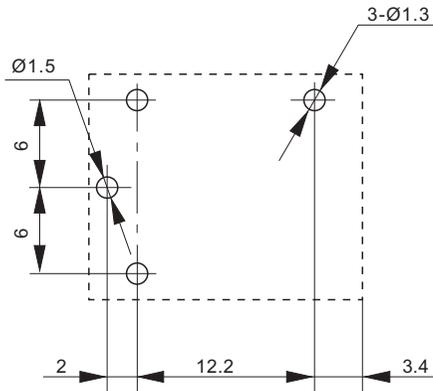


1 Form C

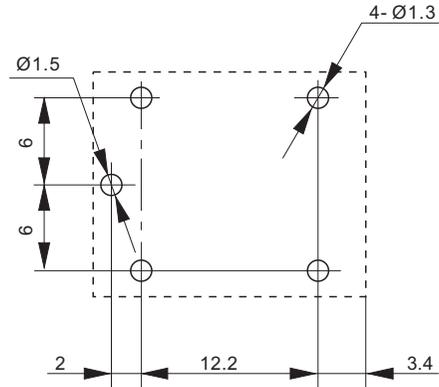


Wiring Diagram
(Bottom view)

1 Form A



1 Form C



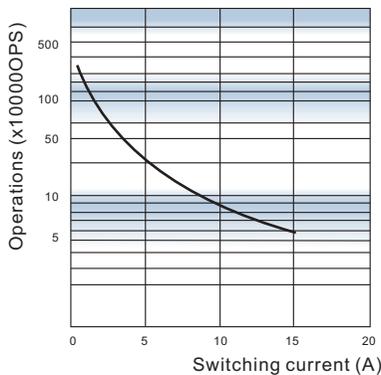
Remark: 1) The pin dimension of the product outline drawing is the size before tinning (it will become larger after tinning), and the mounting hole size is the recommended design size of the PCB board hole. The specific PCB board hole design size can be mapped and adjusted according to the actual product.

2) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$.

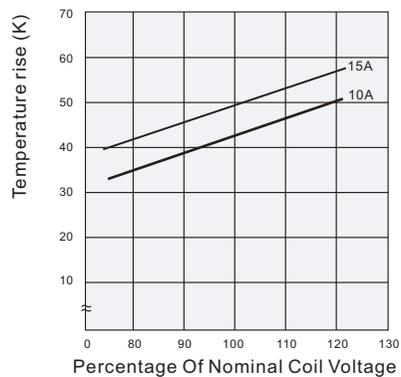
3) The tolerance without indicating for PCB layout is always $\pm 0.1\text{mm}$.

CHARACTERISTIC CURVES

Electrical endurance curve



Coil temperature rise



Disclaimer

The specification is for reference only. See to "Terminology and Guidelines" for more information. Specifications subject to change without notice. We could not evaluate all the performance and all the parameters for every possible application. Thus the user should be in a right position to choose the suitable product for their own application. If there is any query, please contact JINTIAN for the technical service. However, it is the user's responsibility to determine which product should be used only.