HF38F SUBMINIATURE INTERMEDIATE POWER RELAY

File No.:E133481

File No.:R50063830

File No.:CQC02001001944

Features

- 5A switching capability
- 1 Form A and 1 Form C
- Standard and sensitive coils available
- Wash tight and flux proofed types available
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (20.5 x 10.5 x 20.5) mm

CONTACT DATA

Contact arrangement	1A, 1C
Contact resistance	100mΩ (at 1A 6VDC)
Contact material	See ordering info.
Contact rating (Res. load)	NO: 5A 250VAC/30VDC NC: 3A 250VAC/30VDC
Max. switching voltage	250VAC / 30VDC
Max. switching current	5A
Max. switching power	1250VA / 150W
Mechanical endurance	1 x 10^7OPS
Electrical endurance	1 x 10^5OPS

CHARACTERISTICS

Insulation resistance		1000MΩ (at 500VDC)
Dielectric strength	Between coil & contacts	2000VAC 1min
	Between open contacts	1000VAC 1min
Operate time (at nomi. volt.)		10ms max.
Release time (at nomi. volt.)		5ms max.
Humidity		45% to 85% RH
Ambient temperature		-40˚C to 85˚C
Shock resistance	Functional	98m/s^2
	Destructive	980m/s^2
Vibration resistance		10Hz to 55Hz 3.3mm DA
Termination		PCB
Unit weight		Approx. 8g
Construction		Wash tight, Flux proofed

Notes: 1) The data shown above are initial values.
2) Please find coil temperature curve in the characteristic curves below.

COIL

Coil power	Standard: 360mW; Sensitive: 250mW

COIL DATA at 23˚C

Standard Type

Nominal Voltage VDC	Pick-up Voltage VDC	Drop-out Voltage VDC	Max. Allowable Voltage VDC	Coil Resistance Ω
3	2.1	0.15	3.9	25 x (1±10%)
5	3.5	0.25	6.5	69 x (1±10%)
6	4.2	0.30	7.8	100 x (1±10%)
9	6.3	0.45	11.7	225 x (1±10%)
12	8.4	0.60	15.6	400 x (1±10%)
18	12.6	0.90	23.4	900 x (1±10%)
24	16.8	1.20	31.2	1600 x (1±10%)
48	33.6	2.40	62.4	6400 x (1±10%)

Sensitive Type

Nominal Voltage VDC	Pick-up Voltage VDC	Drop-out Voltage VDC	Max. Allowable Voltage VDC	Coil Resistance Ω
3	2.2	0.15	3.9	36 x (1±10%)
5	3.6	0.25	6.5	100 x (1±10%)
6	4.3	0.30	7.8	145 x (1±10%)
9	6.5	0.45	11.7	325 x (1±10%)
12	8.6	0.60	15.6	575 x (1±10%)
18	13.0	0.90	23.4	1300 x (1±10%)
24	17.3	1.20	31.2	2310 x (1±10%)
48	34.6	2.40	62.4	9220 x (1±10%)

SAFETY APPROVAL RATINGS

UL&CUL	5A 250VAC/30VDC
TÜV (AgNi, AgCdO)	NO: 5A 250VAC/30VDC NC: 3A 250VAC/30VDC

Notes: Only some typical ratings are listed above. If more details are required, please contact us.

ORDERING INFORMATION

	HF38F /	012	-H	S	L	T	(XXX)
Type							
Coil voltage	3, 5, 6, 9, 12, 18, 24, 48VDC						
Contact arrangement	**H:** 1 Form A	**Z:** 1 Form C					
Construction [1]	**S:** Wash tight	**Nil:** Flux proofed					
Coil power	**L:** Sensitive	**Nil:** Standard					
Contact material	**T:** $AgSnO_2$	**3:** AgNi	**Nil:** AgCdO				
Customer special code							

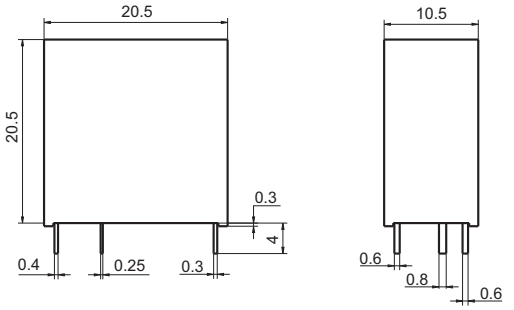
Notes: 1) Under the ambience with dangerous gas like H_2S, SO_2 or NO_2, wash tight type is recommended; Please test the relay in real applications. If the ambience allows, flux proofed type is preferentially recommended.

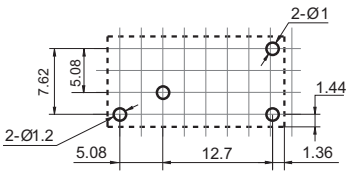
OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

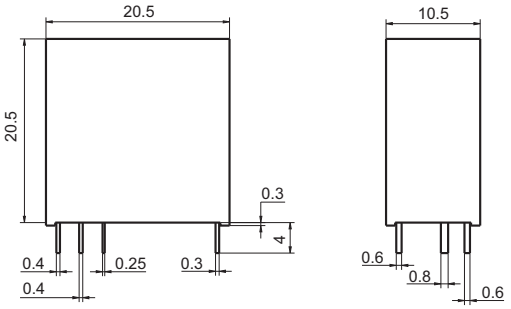
Outline Dimensions | Wiring Diagram (Bottom view) | PCB Layout (Bottom view)

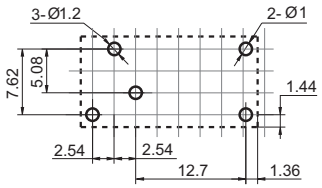
1 Form A





1 Form C

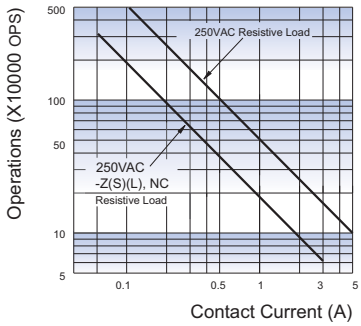




Remark: 1) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension >1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension >5mm, tolerance should be ±0.4mm.
2) The tolerance without indicating for PCB layout is always ±0.1mm.
3) The width of the gridding is 2.54mm.

CHARACTERISTIC CURVES

ENDURANCE CURVE



COIL TEMPERATURE RISE