HF32FA-T

SUBMINIATURE INTERMEDIATE HIGH TEMPERATURE POWER RELAY

c UL us
File No.:E134517

VDE
File No.:40006182

CQC
File No.:CQC09002028689

Features

- High temperature: 105˚C
- 5A switching capability
- 1 Form A configuration
- Creepage/clearance distance>8mm
- 5kV dielectric strength (between coil and contacts)
- UL insulation system: Class F
- Meeting VDE 0700, 0631 reinforce insulation
- Product in accordance to IEC 60335-1 available
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (17.6 x 10.1 x 12.3) mm

CONTACT DATA

Contact arrangement	1A
Contact resistance	70mΩ max.(at 1A 6VDC)
Contact material	AgNi
Contact rating (Res. load)	5A 250VAC 5A 30VDC
Max. switching voltage	250VAC/30VDC
Max. switching current	5A
Max. switching power	1250VA/150W
Mechanical endurance	1 x 10^6OPS
Electrical endurance	1 x 10^5OPS (5A 250VAC, Resistive load, Room temp., 1.5s on 1.5s off)

CHARACTERISTICS

Insulation resistance		1000MΩ (at 500VDC)
Dielectric strength	Between coil & contacts	5000VAC 1min
	Between open contacts	1000VAC 1min
Operate time (at nomi. volt.)		8ms max.
Release time (at nomi. volt.)		4ms max.
Humidity		5% to 85% RH
Ambient temperature		-40˚C to 105˚C
Shock resistance	Functional	98m/s^2
	Destructive	980m/s^2
Vibration resistance		10Hz to 55Hz 1.65mm DA
Termination		PCB
Unit weight		Approx.4.6g
Construction		Plastic sealed, 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	Sensitive: Approx. 200mW

COIL DATA at 23˚C

Sensitive type

Nominal Voltage VDC	Pick-up Voltage VDC max.	Drop-out Voltage VDC min.	Max. Voltage VDC *	Coil Resistance Ω
3	2.25	0.15	5.1	45 x (1±10%)
5	3.75	0.25	8.5	125 x (1±10%)
6	4.50	0.30	10.2	180 x (1±10%)
9	6.75	0.45	15.3	400 x (1±10%)
12	9.00	0.60	20.4	720 x (1±10%)
18	13.5	0.90	30.6	1600 x (1±10%)
24	18.0	1.20	40.8	2800 x (1±10%)

Notes: * Maximum voltage refers to the maximum voltage which relay coil could endure in a short period of time.

SAFETY APPROVAL RATINGS

UL/CUL	5A 250VAC
VDE	5A 250VAC at 105˚C 3A 400VAC at 105˚C

Notes: 1) All values unspecified are at room temperature.
2) Only typical loads are listed above. Other load specifications can be available upon request.

ORDERING INFORMATION

	HF32FA-T /	012	-H	S	L	1	G	(XXX)
Type								
Coil voltage	3, 5, 6, 9, 12, 18, 24VDC							
Contact arrangement	**H:** 1 Form A							
Construction[1)2)]	**S:** Plastic sealed	**Nil:** Flux proofed						
Coil power	**L:** Sensitive							
Termination	**1:** Type 1	**2:** Type 2						
Contact plating[3)]	**G:** Gold plated	**Nil:** No gold plated						
Customer special code	e.g. (335) stands for product in accordance to IEC 60335-1 (GWT)							

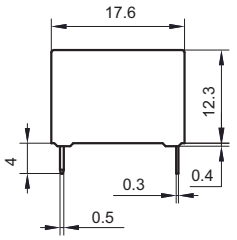
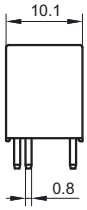
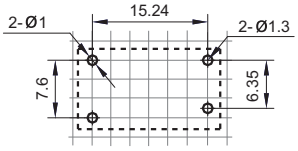
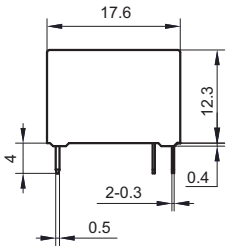
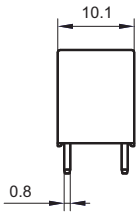
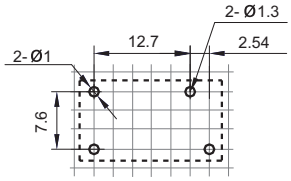
Notes: 1) We recommend flux proofed types for a clean environment (free from contaminations like H_2S, SO_2, NO_2, dust, etc.).
We suggest to choose plastic sealed types and validate it in real application for an unclean environment (with contaminations like H_2S, SO_2, NO_2, dust, etc).

2) Contact is recommended for suitable condition and specifications if water cleaning or surface process is involved in assembling relays on PCB.

3) For gold plated type, the min. switching current and min. switching voltage is 10mA 5VDC.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

	Outline Dimensions		Wiring Diagram (Bottom view)	PCB Layout (Bottom view)
1 Form A & Type 1				
1 Form A & Type 2				

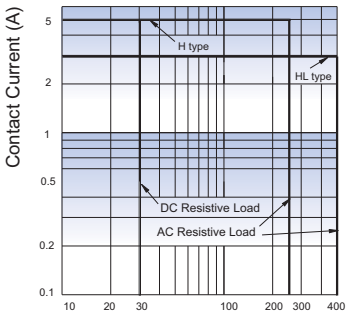
Remark: 1) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension >1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension >5mm, tolerance should be ±0.4mm.

2) The tolerance without indicating for PCB layout is always ±0.1mm.

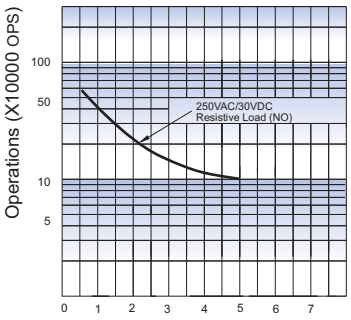
3) The width of the gridding is 2.54mm.

CHARACTERISTIC CURVES

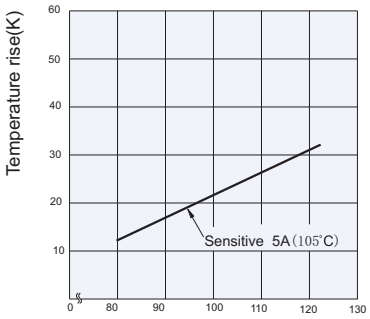
MAXIMUM SWITCHING POWER



ENDURANCE CURVE



TEMPERATURE RISE



Test conditions: Flux proofed,
Room temp., 1.5s on 1.5s off