HF32FA-G SUBMINIATURE INTERMEDIATE POWER RELAY

c UL us
File No.:E134517

VDE
File No.:40006182

CQC
File No.:CQC09002028689

Features

- 10A switching capability
- Creepage/clearance distance>8mm
- 5kV dielectric strength (between coil and contacts)
- UL insulation system: Class F
- Meets 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	$AgSnO_2$
Contact rating (Res. Load)	10A 250VAC
Max. switching voltage	250VAC
Max. switching current	10A
Max. switching power	2500VA
Mechanical endurance	1 x 10^6 OPS
Electrical endurance	1 x 10^4 OPS

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 85˚C
Shock resistance	Functional	98m/s²
	Destructive	980m/s²
Vibration resistance		10Hz to 55 Hz 1.65mm DA
Termination		PCB
Unit weight		Approx.4.6g
Construction		Plastic sealed, Flux proofed

Notes: 1) The vibration resistance should be 0.6mm,10Hz to 55Hz for NC contact. Along with the length direction.
2) The data shown above are initial values.
3) Please find coil temperature curve in the characteristic curves below.

COIL

Coil power	Standard: Approx. 450mW; Sensitive: Approx. 230mW

COIL DATA at 23˚C

Standard type

Nominal Voltage VDC	Pick-up Voltage VDC max.	Drop-out Voltage VDC min.	Max. Allowable Voltage VDC	Coil Resistance Ω
3	2.25	0.15	3.9	20 x (1±10%)
5	3.75	0.25	6.5	55 x (1±10%)
6	4.50	0.30	7.8	80 x (1±10%)
9	6.75	0.45	11.7	180 x (1±10%)
12	9.00	0.60	15.6	320 x (1±10%)
18	13.5	0.90	23.4	720 x (1±10%)
24	18.0	1.20	31.2	1280 x (1±10%)
48	36.0	2.40	62.4	5120 x (1±10%)

Sensitive type

Nominal Voltage VDC	Pick-up Voltage VDC max.	Drop-out Voltage VDC min.	Max. Allowable Voltage VDC	Coil Resistance Ω
3	2.25	0.15	5.1	38 x (1±10%)
5	3.75	0.25	8.5	108 x (1±10%)
6	4.50	0.30	10.2	155 x (1±10%)
9	6.75	0.45	15.3	350 x (1±10%)
12	9.00	0.60	20.4	620 x (1±10%)
18	13.5	0.90	30.6	1390 x (1±10%)
24	18.0	1.20	40.8	2480 x (1±10%)
48	36.0	2.40	81.6	9920 x (1±10%)

SAFETY APPROVAL RATINGS

UL/CUL	10A 250VAC at 85˚C 15A 120VAC at 70˚C B300 at 40˚C
VDE	10A 250VAC at 85˚C

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

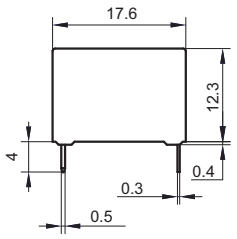
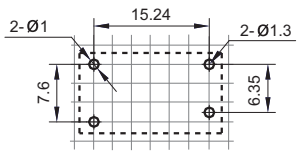
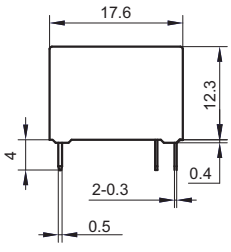
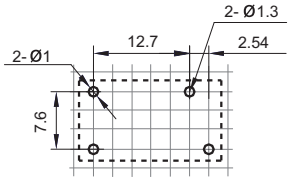
ORDERING INFORMATION

	HF32FA-G /	012	-H	S	L	1	G	(XXX)
Type								
Coil voltage	3, 5, 6, 9, 12, 18, 24, 48VDC							
Contact arrangement	**H:** 1 Form A							
Construction [1]	**S:** Plastic sealed	**Nil:** Flux proofed						
Coil power	**L:** Sensitive	**Nil:** Standard						
Termination	**1:** Type 1	**2:** Type 2						
Contact plating [2]	**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) Under the ambience with dangerous gas like H_2S, SO_2 or NO_2, plastic sealed type is recommended; Please test the relay in real applications. If the ambience allows, flux proofed type is preferentially recommended.
If water cleaning is required after the relay is assembled on PCB, please contact us for suggestion about suitable parts.
2) For gold plated type, the min. switching current and min. switching voltage is 10mA 5VDC.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

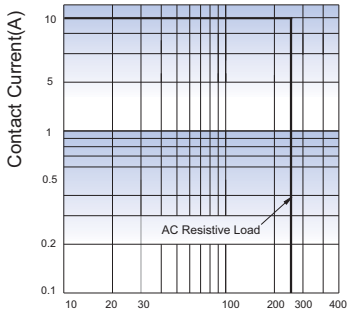
Unit: mm

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

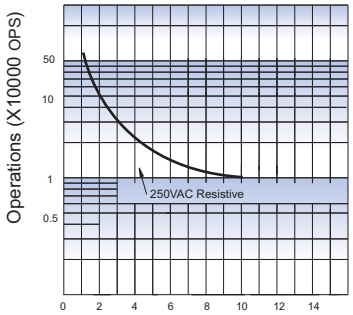
Remark: 1) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension >1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension >5mm, tolerance should be ±0.4mm.
2) The tolerance without indicating for PCB layout is always ±0.1mm.
3) The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

CHARACTERISTIC CURVES

MAXIMUM SWITCHING POWER



ENDURANCE CURVE



TEMPERATURE RISE