HFKE SUBMINIATURE HIGH POWER RELAY

Features

- 20A switching capability
- Ambient temp.: -40˚C to 85˚C
- 1 Form A and 1 Form C contact arrangement
- Plastic sealed and Flux proofed types available
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (22.0 x 16.0 x 16.4) mm

CONTACT DATA

Contact arrangement	1A	1C
Contact resistance	100mΩ max.(at 1A 24VDC)	
Contact material	$AgSnO_2In_2O_3$	
Contact rating (Res. load)	20A 13.5VDC	NO: 15A 13.5VDC NC: 12A 13.5VDC
Max. switching voltage	14VDC	
Max. switching current	20A	
Max. switching power	270W	202W
Mechanical endurance	1×10^7OPS	
Electrical endurance	1×10^5OPS	

CHARACTERISTICS

Insulation resistance		100MΩ (at 500VDC)
Dielectric strength	Between coil & contacts	1500VAC 1min
	Between open contacts	750VAC 1min
Operate time (at nomi. volt.)		10ms max.
Release time (at nomi. volt.)		5ms max.
Shock resistance	Functional	$98m/s^2$
	Destructive	$980m/s^2$
Vibration resistance		10Hz to 55Hz 1.5mm DA
Humidity		5% to 85% RH
Ambient temperature		-40˚C to 85˚C
Termination		PCB
Unit weight		Approx.15g
Construction		Plastic sealed, Flux proofed

Notes: 1) The data shown above are initial values.
2) UL insulation system: Class A

COIL

Coil power	Approx. 640mW

COIL DATA at 23˚C

Nominal Voltage VDC	Pick-up Voltage VDC max.	Drop-out Voltage VDC min.	Max. Allowable Voltage VDC	Coil Resistance Ω
3	1.8	0.3	3.6	14 x (1±10%)
5	3.0	0.5	6.0	39 x (1±10%)
6	3.6	0.6	7.2	56 x (1±10%)
9	5.4	0.9	10.8	127 x (1±10%)
12	7.2	1.2	14.4	225 x (1±10%)
18	10.8	1.8	21.6	506 x (1±10%)
24	14.4	2.4	28.8	900 x (1±10%)
48	28.8	4.8	57.6	3600 x (1±10%)

ORDERING INFORMATION

	HFKE /	012	-1H	S	(XXX)
Type					
Coil voltage	3, 5, 6, 9, 12, 18, 24, 48VDC				
Contact arrangement	**1H**: 1 Form A **1Z**: 1 Form C				
Construction [1]	**S:** Plastic sealed **Nil:** Flux proofed				
Customer special code					

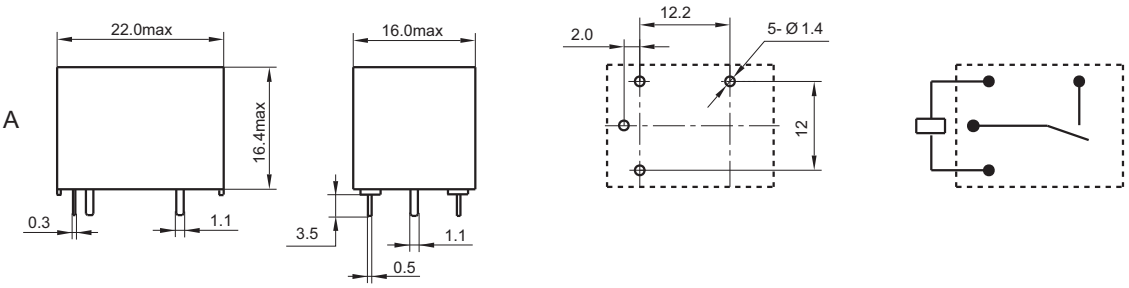
Notes: 1) We recommend flux proofed types for a clean environment (free from contaminations like H_2S, SO_2, NO_2, dust, etc.).
We suggest to choose plastic sealed types and validate it in real application for an unclean environment (with contaminations like H_2S, SO_2, NO_2, dust, etc.).
If water cleaning is required after the relay is assembled on PCB, please contact us for suggestion about suitable parts.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

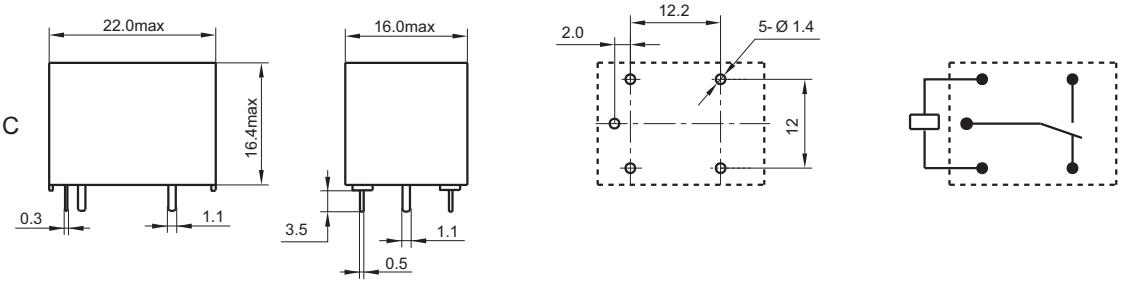
Unit: mm

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

Disclaimer

This datasheet is for the customers' reference. All the specifications are 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 Hongfa for the technical service. However, it is the user's responsibility to determine which product should be used only.