



### 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 <sub>2</sub> In <sub>2</sub> O <sub>3</sub>	
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 x 10 <sup>7</sup> OPS	
Electrical endurance	1 x 10 <sup>5</sup> OPS	

### 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 <sup>2</sup>
	Destructive	980m/s <sup>2</sup>
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
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### 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%)



HONGFA RELAY

ISO9001, ISO/TS16949, ISO14001, OHSAS18001, IECQ QC 080000 CERTIFIED

2012 Rev. 1.01

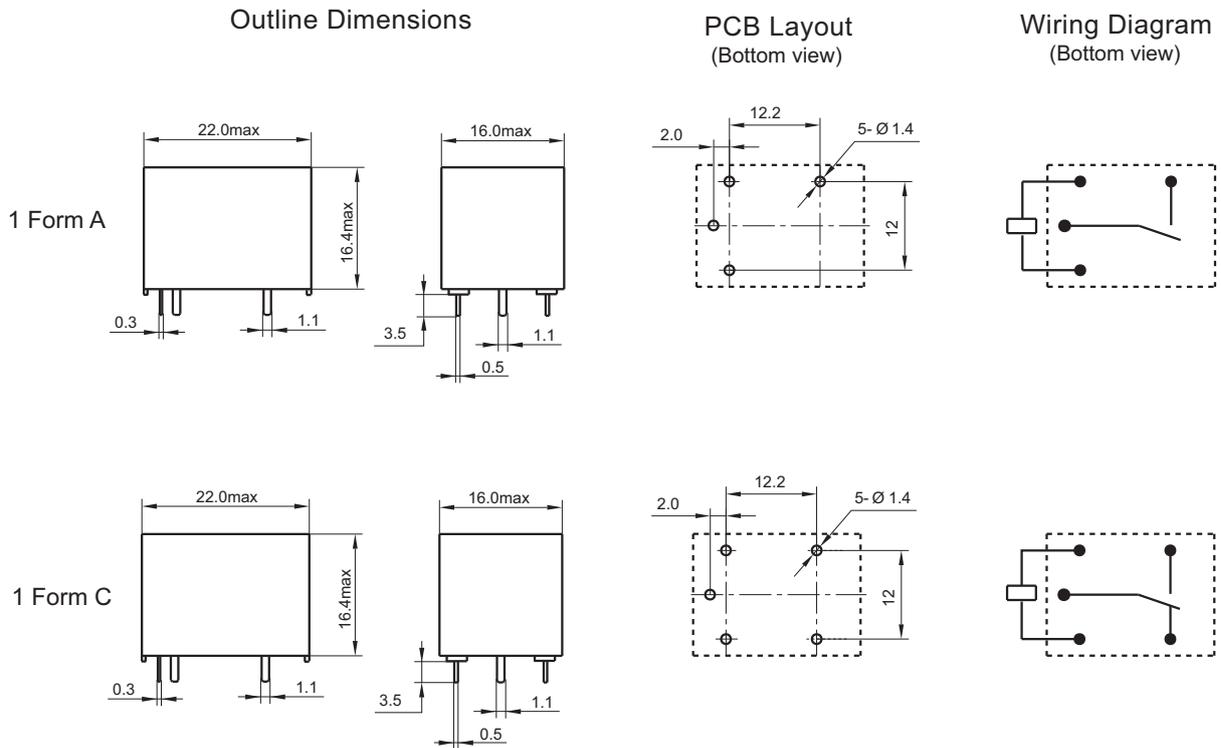
## ORDERING INFORMATION

Type	HFKE /	012	-1H	S	(XXX)
Coil voltage	3, 5, 6, 9, 12, 18, 24, 48VDC				
Contact arrangement	1H: 1 Form A    1Z: 1 Form C				
Construction <sup>1)</sup>	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<sub>2</sub>S, SO<sub>2</sub>, NO<sub>2</sub>, dust, etc.). We suggest to choose plastic sealed types and validate it in real application for an unclean environment (with contaminations like H<sub>2</sub>S, SO<sub>2</sub>, NO<sub>2</sub>, 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



Remark: 1) 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  $\pm 0.4\text{mm}$ .  
2) The tolerance without indicating for PCB layout is always  $\pm 0.1\text{mm}$ .

### 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.

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