

# HF18FZ-G MINIATURE INTERMEDIATE POWER RELAY



File No: E133481



File No: 10048406



File No: CQC17002183722



## Features

- Multiple switching capability (2C, 4C type)
- With LED
- Conform to the CE low voltage directive
- 2.0kV dielectric strength(between coil and contacts)
- High electrical life
- High mechanical life
- With test button
- Automatic production

RoHS compliant

## CONTACT DATA

Contact arrangement	2C	4C
Contact resistance <sup>1)</sup>	100mΩ max.(at 1A 6VDC)	
Contact material	See"ORDERING INFORMATION"	
Contact rating (Res. load)	12A 277VAC/30VDC	6A 277VAC/30VDC
Max. switching voltage	277VAC / 30VDC	
Max. switching current	12A	6A
Max. switching power	3324VA/ 360W	1662VA/ 180W
Mechanical endurance	2 x 10 <sup>7</sup> OPS(DC type) 1 x 10 <sup>7</sup> OPS(AC type)	
Electrical endurance <sup>2)</sup>	2 Form C:1 x 10 <sup>5</sup> OPS (12A 277VAC or 12A 30VDC, Resistive load,Room temp.,1s on 9s off)	
	4 Form C:1 x 10 <sup>5</sup> OPS (6A 277VAC or 6A 30VDC, Resistive load,Room temp.,1s on 9s off)	

Notes: 1) The data shown above are initial values.

2) Please refer to the characteristic curves for detailed electrical endurance information.If you need other conditions,please contact us.

## COIL

Coil power	DC type: Approx. 0.8W to 1.1W; AC type: Approx. 0.9VA to 1.5VA
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## CHARACTERISTICS

Insulation resistance		1000MΩ (at 500VDC)
Dielectric strength	Between coil & contacts	2000VAC 1min
	Between open contacts	1000VAC 1min
	Between contact sets	2000VAC 1min(2 Form C) 1500VAC 1min(4 Form C)
Operate time (at nomi. volt.)		20ms max.
Release time (at nomi. volt.)		DC type: 15ms max.
		AC type: 25ms max.
Temperature rise		85K max.
Shock resistance	Functional	200m/s <sup>2</sup> (NO), 100m/s <sup>2</sup> (NC)
	Destructive	1000m/s <sup>2</sup>
Vibration resistance		10Hz to 55Hz 1mm DA
Humidity		5% to 85% RH
Ambient temperature		-40°C to 70°C
Termination		Plug-in
Unit weight		Approx. 39.4g
Construction		Dust protected

Notes: 1) The data shown above are initial values.

## COIL DATA

at 23°C

Nominal Voltage VDC	Pick-up Voltage VDC max. <sup>1)</sup>	Drop-out Voltage VDC min.	Max. Voltage VDC <sup>2)</sup>	Coil Resistance Ω
6	4.8	0.60	6.6	41 x (1±15%)
12	9.6	1.20	13.2	165 x (1±15%)
24	19.2	2.40	26.4	662 x (1±15%)
48	38.4	4.80	52.8	2725 x (1±15%)
100/110	80.0	11.0	110/121	11440 x (1±15%)
220	170.0	22.0	242	53780 x (1±15%)

Nominal Voltage VAC	Pick-up Voltage VAC max. <sup>1)</sup>	Drop-out Voltage VAC min.	Max. Voltage VAC <sup>2)</sup>	Coil Resistance Ω
12	9.60	3.60	13.2	46 x (1±15%)
24	19.2	7.20	26.4	180 x (1±15%)
48	38.4	14.4	52.8	788 x (1±15%)
100/110	80.0	33.0	110/121	3750 x (1±15%)
110/120	88.0	36.0	121/132	4430 x (1±15%)
200/220	160.0	66.0	220/242	12950 x (1±15%)
220/240	176.0	72.0	242/264	18790 x (1±15%)

Notes: 1) Under ambient temperature, applying more than 80% of rating voltage to coil, relay will take action accordingly. But in order to meet the stated product performance, please apply rated voltage to coil.

2) Maximum voltage refers to the maximum voltage which relay coil could endure in a short period of time.



HONGFA RELAY

ISO9001, IATF16949, ISO14001, ISO45001, IECQ QC 080000, ISO/IEC 27001 CERTIFIED

2025 Rev. 2.00

## SAFETY APPROVAL RATINGS

UL/CUL	2 Form C	12A 277VAC or 12A 30VDC
	4 Form C	6A 277VAC or 6A 30VDC Resistive at 70°C
CQC	2 Form C	12A 277VAC or 12A 30VDC Resistive at 70°C
	4 Form C	6A 277VAC or 6A 30VDC Resistive at 70°C

Notes: 1) Only typical loads are listed above. Other load specifications can be available upon request.

## ORDERING INFORMATION

Type	HF18FZ-G/	A	12	-2Z	2	3	J	1	(XXX)
Coil voltage form	A: AC(50Hz or 60Hz) Nil: DC								
Coil voltage	See "COIL DATA"								
Contact arrangement	2Z: 2 Form C 4Z: 4 Form C								
Termination	2: Socket								
Contact material	5: AgSnO <sub>2</sub> In <sub>2</sub> O <sub>3</sub> (2Z)      T: AgSnO <sub>2</sub> (4Z)								
Custom component code	Nil: Without Component J: With free-wheeling diode(Only DC coil specifications) <sup>1)</sup>								
Interface function code	1: No LED no button 2: With LED no button 3: With LED and button								
Special code <sup>2)</sup>	XXX: Customer special requirement      Nil: Standard								

Notes: 1) Free-wheeling diode is available only for DC coil relay.

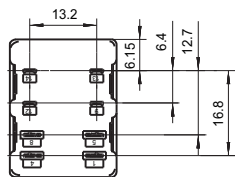
2) The customer special requirement express as special code after evaluating by Hongfa.

## OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

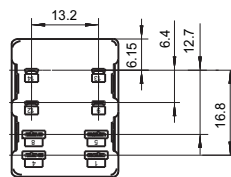
Unit: mm

### Outline Dimensions

HF18FZ-G/□□□□-2Z2□□□1□  
HF18FZ-G/□□□□-2Z2□□□2□



HF18FZ-G/□□□□-2Z2□□□3□

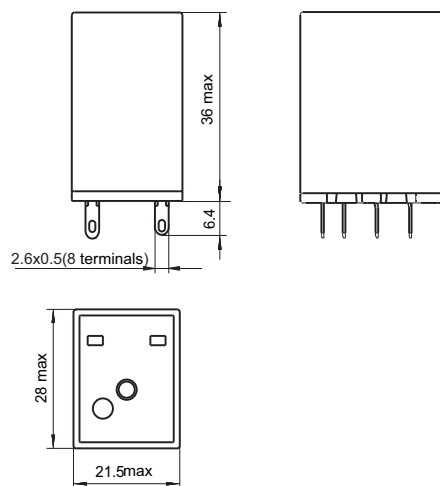


# OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

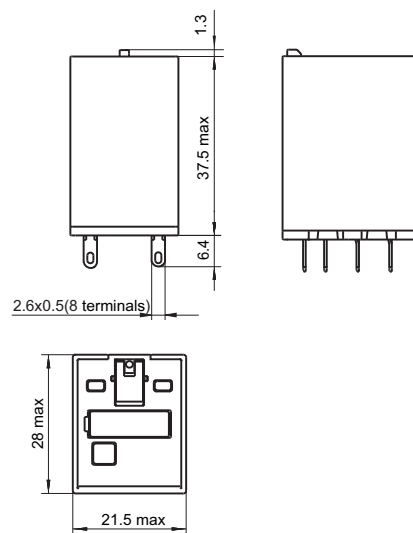
Unit: mm

## Outline Dimensions

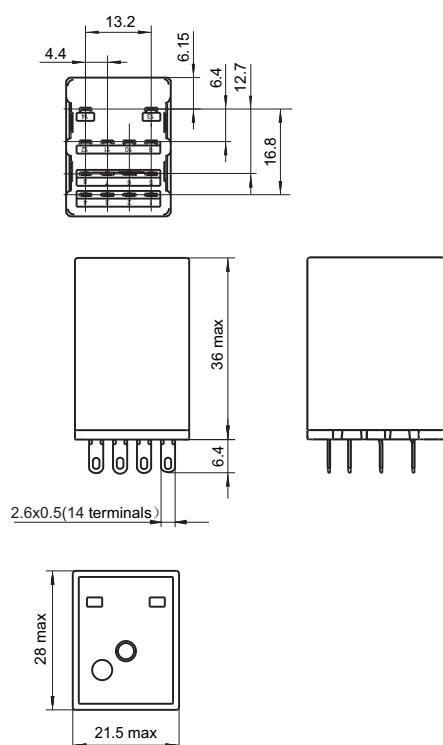
HF18FZ-G/□□□□-2Z2□□□1□  
HF18FZ-G/□□□□-2Z2□□□2□



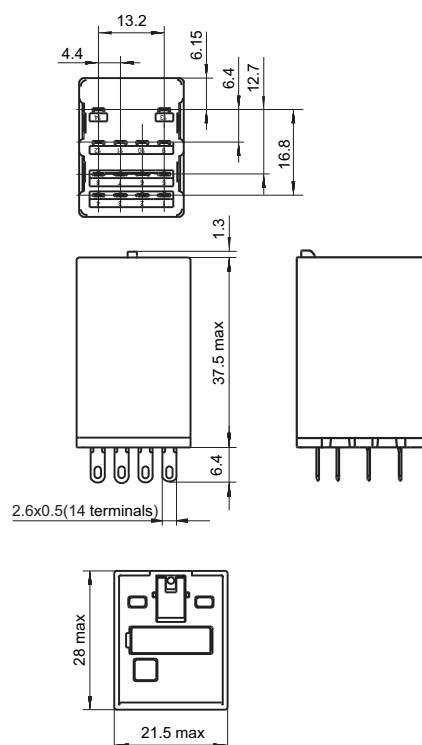
HF18FZ-G/□□□□-2Z2□□□3□



HF18FZ-G/□□□□-4Z2□□□1□  
HF18FZ-G/□□□□-4Z2□□□2□



HF18FZ-G/□□□□-4Z2□□□3□



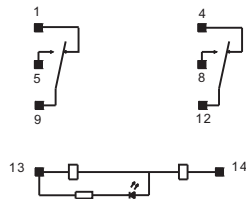
Remark: In case of no tolerance shown in outline dimension: outline dimension  $\leq 1\text{mm}$ , tolerance should be  $\pm 0.2\text{mm}$ ; outline dimension  $> 1\text{mm}$  and  $\leq 5\text{mm}$ , tolerance should be  $\pm 0.3\text{mm}$ ; outline dimension  $> 5\text{mm}$ , tolerance should be  $\pm 0.4\text{mm}$ .

## OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

### Wiring Diagram (Bottom view)

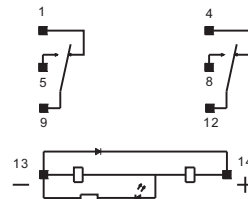
HF18FZ-G/□□□-2Z252  
HF18FZ-G/□□□-2Z253

2 Form C(With LED)  
(Without 220VDC)



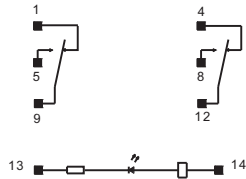
HF18FZ-G/□□□-2Z25J2  
HF18FZ-G/□□□-2Z25J3

2 Form C  
(DC, With fly-wheel diode and LED)  
(Without 220VDC)



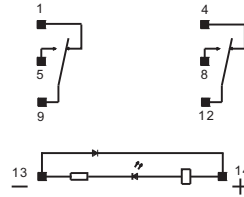
HF18FZ/220-2Z252  
HF18FZ/220-2Z253

2 Form C(With LED)  
(220VDC)



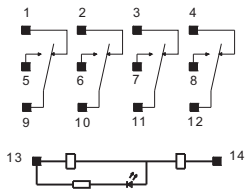
HF18FZ/220-2Z25J2  
HF18FZ/220-2Z25J3

2 Form C  
(DC, With fly-wheel diode and LED)  
(220VDC)



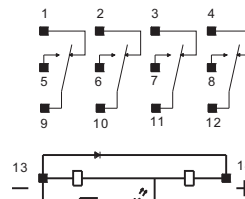
HF18FZ/□□□-4Z2T2  
HF18FZ/□□□-4Z2T3

4 Form C  
(With LED)  
(Without 220VDC)



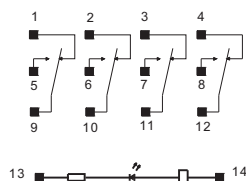
HF18FZ/□□□-4Z2TJ2  
HF18FZ/□□□-4Z2TJ3

4 Form C  
(DC, With fly-wheel diode and LED)  
(Without 220VDC)



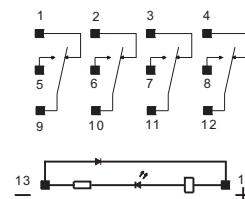
HF18FZ/220-4Z2T2  
HF18FZ/220-4Z2T3

4 Form C  
(DC, With LED)  
(220VDC)



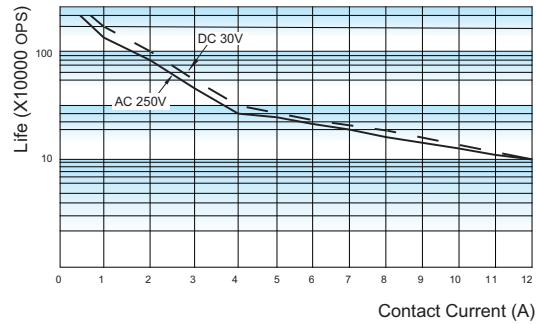
HF18FZ/220-4Z2TJ2  
HF18FZ/220-4Z2TJ3

4 Form C  
(DC, With fly-wheel and LED)  
(220VDC)

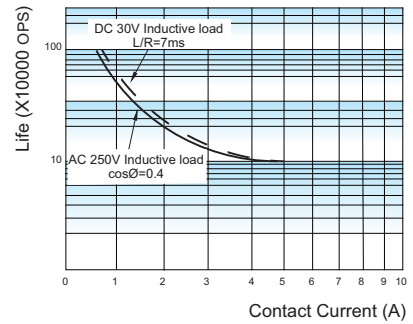


## CHARACTERISTIC CURVES

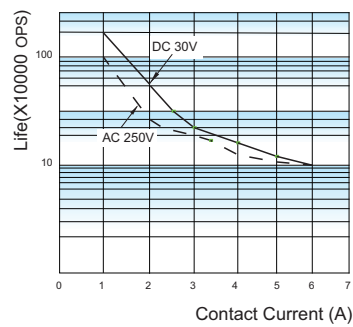
RESISTIVE ENDURANCE  
2Z-G



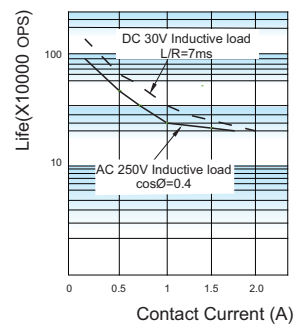
INDUCTIVE ENDURANCE  
2Z-G



RESISTIVE ENDURANCE  
4Z-G



INDUCTIVE ENDURANCE  
4Z-G



### Disclaimer

The specification is for reference only. See to "Terminology and Guidelines" for more information. Specifications 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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