

## SAFETY APPROVAL RATINGS

|                                                             |                           |                                               |
|-------------------------------------------------------------|---------------------------|-----------------------------------------------|
| <b>UL/CUL</b><br>(AgNi, AgSnO <sub>2</sub> )                | version 1,3,5,6           | 10A 250VAC at 85°C                            |
|                                                             |                           | 10A 30VDC at 85°C                             |
| <b>VDE</b><br>(AgNi, AgNi+Au)                               | 1H (-;S) (1;3;5) (-;G)    | B300 at 85°C                                  |
|                                                             |                           | R300 at 85°C                                  |
|                                                             |                           | 1/2HP 240VAC at 85°C                          |
|                                                             |                           | AgSnO <sub>2</sub> : 1/3HP 120VAC at 85°C     |
|                                                             |                           | 8A 250VAC at 85°C                             |
| <b>VDE</b><br>(AgNi, AgNi+Au)                               | 1D (-;S) (1;3;6) (-;G)    | 8A 250VAC at 85°C                             |
|                                                             |                           | 8A 250VAC at 85°C                             |
|                                                             |                           | 8A 250VAC at 85°C                             |
|                                                             |                           | 8A 250VAC at 85°C                             |
|                                                             |                           | 8A 250VAC at 85°C                             |
| <b>VDE</b><br>(AgSnO <sub>2</sub> , AgSnO <sub>2</sub> +Au) | 1Z (-;S) (1;3) (-;G)      | 8A 250VAC at 85°C                             |
|                                                             |                           | 8A 250VAC at 85°C                             |
|                                                             |                           | 8A 250VAC at 85°C                             |
|                                                             |                           | 8A 250VAC at 85°C                             |
|                                                             |                           | 8A 250VAC at 85°C                             |
| <b>VDE</b><br>(AgSnO <sub>2</sub> , AgSnO <sub>2</sub> +Au) | 1H (-;S) (1;3;5), T.(-;G) | AC-15 (Make: 30A 250VAC COS Ø=0.7 at 85°C     |
|                                                             |                           | Break: 3A 250VAC COS Ø=0.4 at 85°C)           |
|                                                             |                           | NO: AC-15 (Make: 30A 250VAC COS Ø=0.7 at 85°C |
|                                                             |                           | Break: 3A 250VAC COS Ø=0.4 at 85°C)           |
|                                                             |                           | NO: AC-15 (Make: 30A 250VAC COS Ø=0.7 at 85°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

|                                              |                                                                                                                |                              |
|----------------------------------------------|----------------------------------------------------------------------------------------------------------------|------------------------------|
| <b>Type</b>                                  |                                                                                                                | HF118F / 012 -1H S 1 G (XXX) |
| <b>Coil voltage</b>                          | 5, 6, 9, 12, 18, 24, 48, 60VDC                                                                                 |                              |
| <b>Contact arrangement</b>                   | 1H: 1 Form A 1D: 1 Form B 1Z: 1 Form C                                                                         |                              |
| <b>Construction</b> <sup>1)2)</sup>          | S: Plastic sealed Nil: Flux proofed                                                                            |                              |
| <b>Version</b><br>(See Wiring Diagram below) | 1: 3.2mm 1 pole 8A<br>3: 3.2mm 1 pole 10A, double pinning<br>5: 5mm 8A, only 1 Form A 6: 5mm 8A, only 1 Form B |                              |
| <b>Contact material</b> <sup>3)</sup>        | T: AgSnO <sub>2</sub> G: AgNi+Au plated TG: AgSnO <sub>2</sub> +Au plated Nil: AgNi                            |                              |
| <b>Special code</b> <sup>4)</sup>            | XXX: Customer special requirement Nil: Standard                                                                |                              |

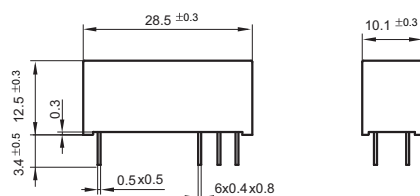
**Notes:** 1) We recommend flux proofed types for a clean environment (free from contaminations like H<sub>2</sub>S, SO<sub>2</sub>, NO<sub>2</sub>, dust, etc.). We suggest to choose plastic sealed types and validate it in real application for an unclean environment (with contaminations like H<sub>2</sub>S, SO<sub>2</sub>, NO<sub>2</sub>, dust, etc.).  
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.  
4) The customer special requirement express as special code after evaluating by Hongfa. e.g.(335) stands for product in accordance to IEC 60335-1 (GWT). e.g.(253) stands for Reflow soldering version.

## OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

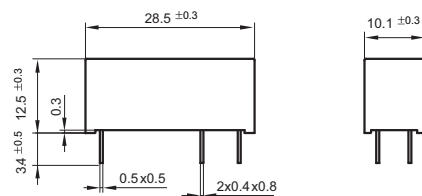
Unit: mm

### Outline Dimensions

#### 3.2mm pinning



#### 5mm pinning



## OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

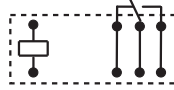
Unit: mm

### Wiring Diagram (Bottom view)

Version 1



Version 3



Version 5

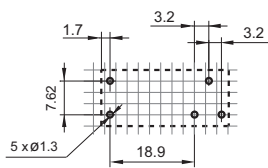


Version 6

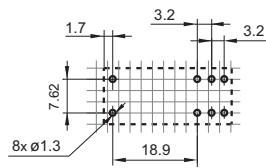


### PCB Layout (Bottom view)

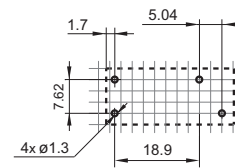
Version 1



Version 3



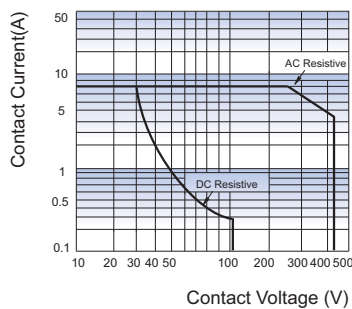
Version 5/6



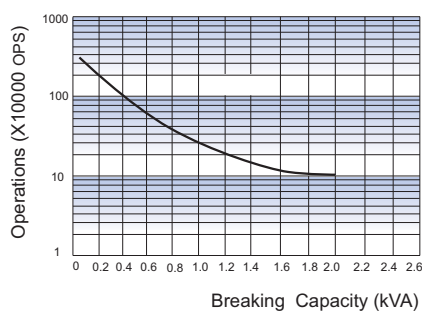
- Remark: 1) In case of no tolerance shown in outline dimension: outline dimension  $\leq 1\text{mm}$ , tolerance should be  $\pm 0.2\text{mm}$ ; outline dimension  $> 1\text{mm}$  and  $\leq 5\text{mm}$ , tolerance should be  $\pm 0.3\text{mm}$ ; outline dimension  $> 5\text{mm}$ , tolerance should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

## CHARACTERISTIC CURVES

MAXIMUM SWITCHING POWER



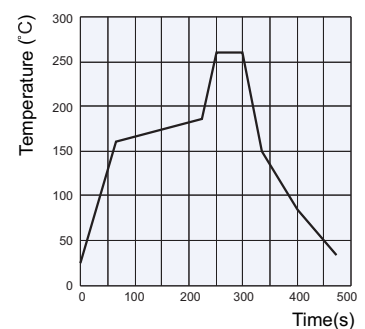
ENDURANCE CURVE



#### Notes:

- Curve: 1Z1 type
- Test conditions:  
 NO, Resistive load, 250VAC  
 Flux proofed, Room temp., 1s on 9s off.

REFLOW WELDING TEMPERATURE  
(Reflow soldering version)



# Relay Sockets



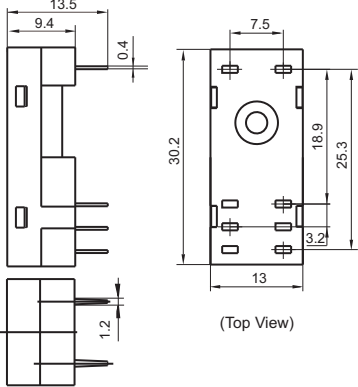
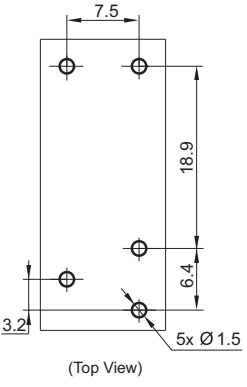
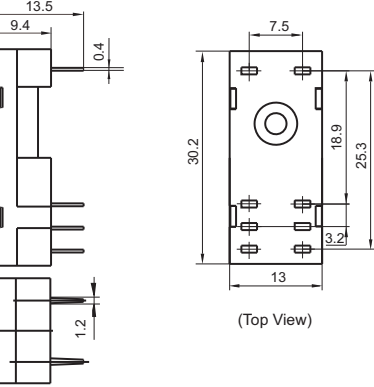
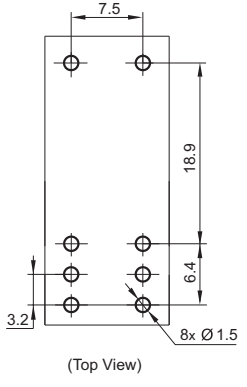
## Features

- The dielectric strength can reach 5000VAC and the insulation resistance is 1000MΩ
- Two mounting types are available: PCB and screw mounting.
- Environmental friendly product (RoHS compliant)

## CHARACTERISTICS

| Type         | Nominal Voltage | Nominal Current | Ambient Temperature | Dielectric Strength min. |
|--------------|-----------------|-----------------|---------------------|--------------------------|
| 118F-1Z-A1-1 | 250VAC          | 10A             | -40 °C to 70°C      | 5000VAC                  |
| 118F-2Z-A1   | 250VAC          | 10A             | -40 °C to 70°C      | 5000VAC                  |

## OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT Unit: mm

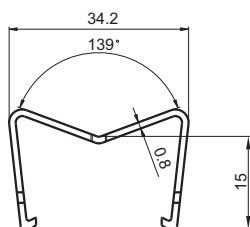
| Socket                                                                                                                                                                                          | Outline Dimensions                                                                                    | Wiring Diagram                                                                                         | Components Available                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------------|
| <p>118F-1Z-A1-1</p>  <p>PCB terminal,<br/>PCB or Screw mounting<br/>Applicable for<br/>HF118F/XXX-1XX1XX</p> |  <p>(Top View)</p> |  <p>(Top View)</p> | <p>metallic retainer<br/>118F-H1</p> |
| <p>118F-2Z-A1</p>  <p>PCB terminal,<br/>PCB or Screw mounting<br/>Applicable for<br/>HF118F/XXX-1XX3XX</p>   |  <p>(Top View)</p> |  <p>(Top View)</p> | <p>metallic retainer<br/>118F-H1</p> |

## DIMENSION OF RELATED COMPONENT (AVAILABLE)

Unit: mm

### Retainer

118F-H1 (Metallic retainer)



### Things to be noticed when selecting sockets:

1. Please choose suitable relay socket according to the actual mounting environment, relay contact poles and terminal layout. If there is any query on selection, please contact Hongfa for the technical service.
2. As for related components, they should be selected separately. Please do give clear indication of the types of relay sockets and related components you choose while placing order.
3. The above is only an example of typical socket and related component type which is suitable to HF118F 1 poles relay. If you have any special requirements, please contact us.
4. Main outline dimension(L, W, H)  $\geq 50$ mm, tolerance should be  $\pm 1$ mm; outline dimension  $> 20$ mm and  $< 50$ mm, tolerance should be  $\pm 0.5$ mm; outline dimension  $\leq 20$ mm, tolerance should be  $\pm 0.3$ mm.

### 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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