

# HF18FZ

# MINIATURE INTERMEDIATE POWER RELAY



File No: E133481



File No: 40048406



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<br>(Res. load)      | 7A 220VAC/24VDC   | 5A 220VAC/24VDC |
|                                    | 5A 220VAC/24VDC   | 3A 220VAC/24VDC |
| Max. switching voltage             | 277VAC / 220VDC   |                 |
| Max. switching current             | 7A  | 5A              |
| Max. switching power               | 1939VA/ 210W  | 1385VA/ 150W    |
| Mechanical endurance               | 5 x 10 <sup>7</sup> OPS(DC type)  |                 |
|                                    | 2 x 10 <sup>7</sup> OPS(AC type)  |                 |
| Electrical endurance <sup>2)</sup> | 2 Form C:1 x 10 <sup>6</sup> OPS(7A 277VAC or 7A 30VDC, Resistive load,Room temp.,1s on 9s off)<br>5A 250VAC or 30VDC<br>0.5s on 1.5s off 5x10 <sup>5</sup> OPS |                 |
|                                    | 4 Form C:1 x 10 <sup>6</sup> OPS(5A 277VAC or 5A 30VDC, Resistive load,Room temp.,1s on 9s off)<br>3A 250VAC or 30VDC<br>0.5s on 1.5s off 2x10 <sup>5</sup> OPS |                 |

**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;<br>AC type: Approx. 0.9VA to 1.5VA |
|------------|---|

## 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                        | 15920 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. 1.00

## SAFETY APPROVAL RATINGS

|        |          |   |
|--------|----------|---|
| UL/CUL | 2 Form C | 7A 277VAC or 7A 30VDC                   |
|        | 4 Form C | 5A 277VAC or 5A 30VDC Resistive at 70°C |
| CQC    | 2 Form C | 7A 277VAC or 7A 30VDC Resistive at 70°C |
|        | 4 Form C | 5A 277VAC or 5A 30VDC Resistive at 70°C |
| VDE    | 2 Form C | 7A 277VAC or 7A 30VDC Resistive at 70°C |
|        | 4 Form C | 5A 277VAC or 5A 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/  | A | 12 | -2Z           | 2 | 3 | J | 1 | (XXX) |
| Coil voltage form          | A: AC(50Hz or 60Hz)<br>Nil: DC   |   |    |               |   |   |   |   |       |
| Coil voltage               | See "COIL DATA"  |   |    |               |   |   |   |   |       |
| Contact arrangement        | 2Z: 2 Form C<br>4Z: 4 Form C   |   |    |               |   |   |   |   |       |
| Termination                | 2: Socket  |   |    |               |   |   |   |   |       |
| Contact material           | 3: AgNi  |   |    |               |   |   |   |   |       |
| Custom component code      | Nil: Without Component<br>J: With free-wheeling diode(Only DC coil specifications) <sup>1)</sup> |   |    |               |   |   |   |   |       |
| Interface function code    | 1: No LED no button<br>2: With LED no button<br>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.

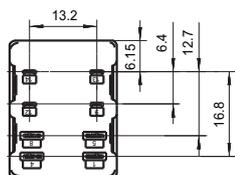
2) The customer special requirement express as special code after evaluating by Hongfa.

## OUTLINE DIMENSIONS

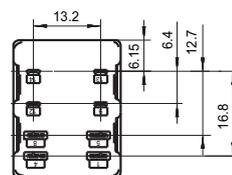
Unit: mm

### Outline Dimensions

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



HF18FZ/□□□□-2Z2□□□3□

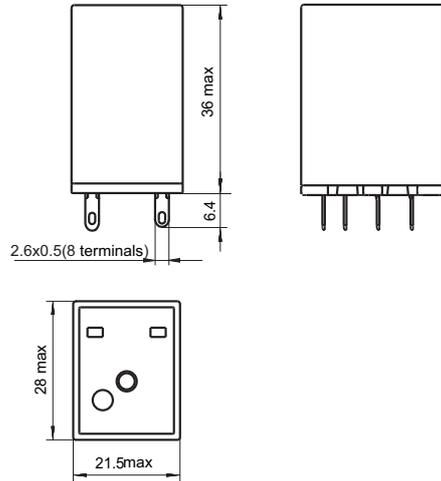


# OUTLINE DIMENSIONS

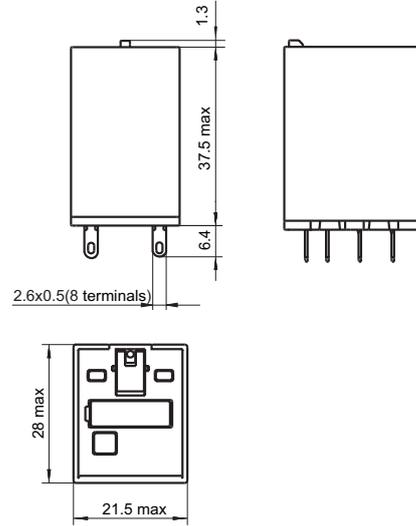
Unit: mm

## Outline Dimensions

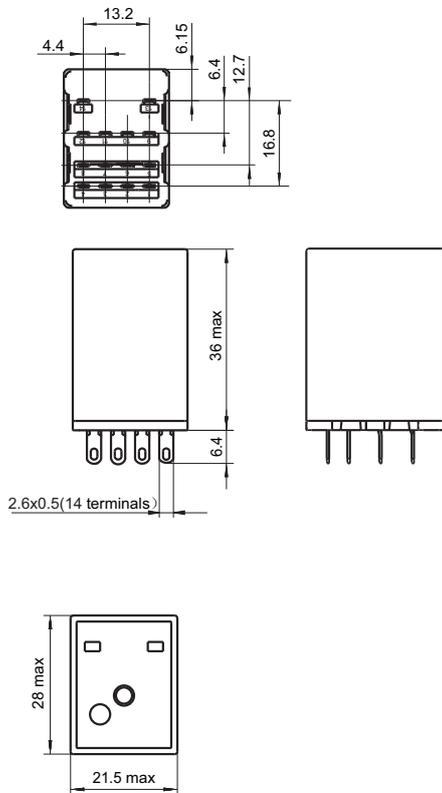
HF18FZ/□□□□-2Z2□□□1□  
HF18FZ/□□□□-2Z2□□□2□



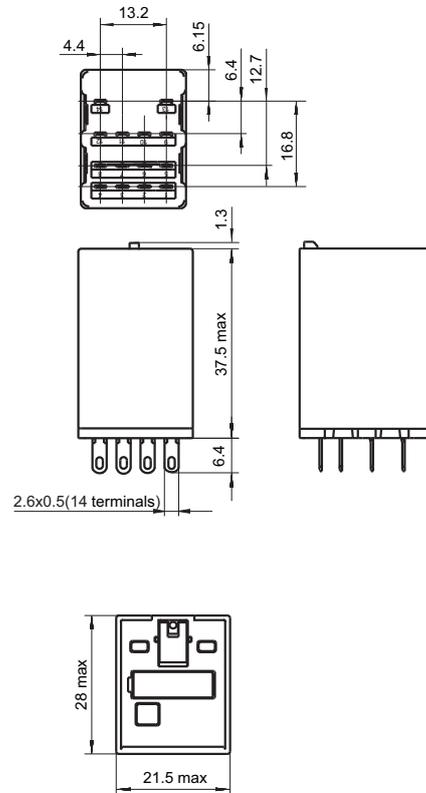
HF18FZ/□□□□-2Z2□□□3□



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



HF18FZ/□□□□-4Z2□□□3□

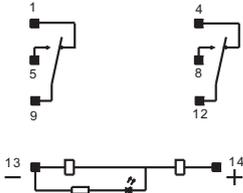


Remark: In case of no tolerance shown in outline dimension: outline dimension  $\leq 1\text{mm}$ , tolerance should be  $\pm 0.2\text{mm}$ ; outline dimension  $> 1\text{mm}$  and  $\leq 5\text{mm}$ , tolerance should be  $\pm 0.3\text{mm}$ ; outline dimension  $> 5\text{mm}$ , tolerance should be  $\pm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

## WIRING DIAGRAM(BOTTOM VIEW)

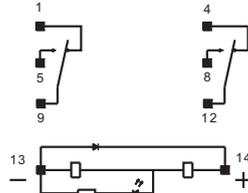
HF18FZ/□□□-2Z232  
HF18FZ/□□□-2Z233

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



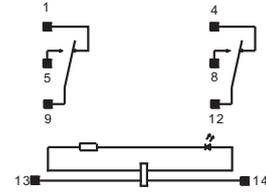
HF18FZ/□□□-2Z23J2  
HF18FZ/□□□-2Z23J3

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



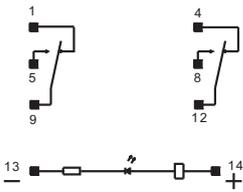
HF18FZ/A□□□-2Z232  
HF18FZ/A□□□-2Z233

2 Form C  
(AC, With LED)



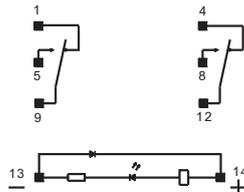
HF18FZ/220-2Z232  
HF18FZ/220-2Z233

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



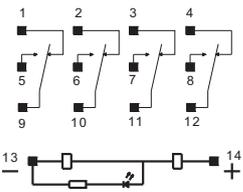
HF18FZ/220-2Z23J2  
HF18FZ/220-2Z23J3

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



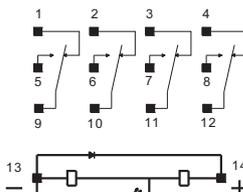
HF18FZ/□□□-4Z232  
HF18FZ/□□□-4Z233

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



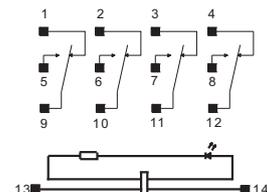
HF18FZ/□□□-4Z23J2  
HF18FZ/□□□-4Z23J3

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



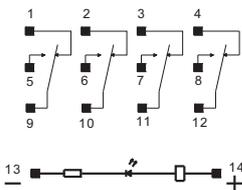
HF18FZ/A□□□-4Z232  
HF18FZ/A□□□-4Z233

4 Form C  
(AC, With LED)



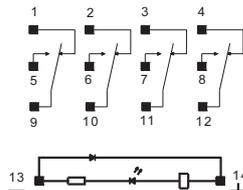
HF18FZ/220-4Z232  
HF18FZ/220-4Z233

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



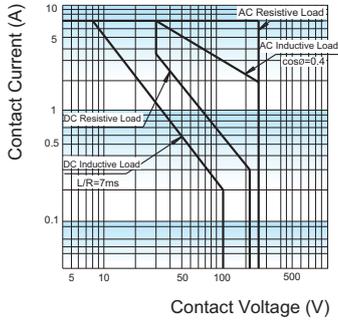
HF18FZ/220-4Z23J2  
HF18FZ/220-4Z23J3

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

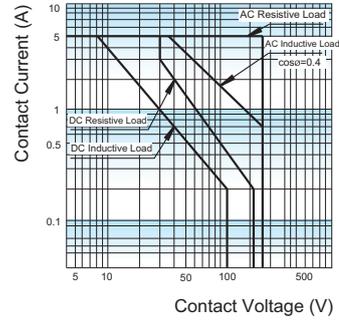


# CHARACTERISTIC CURVES

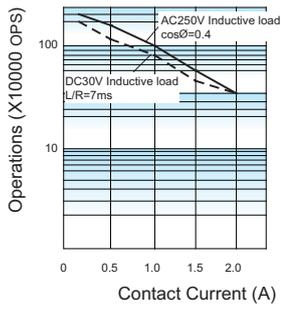
MAXIMUM SWITCHING POWER  
(2 Form C)



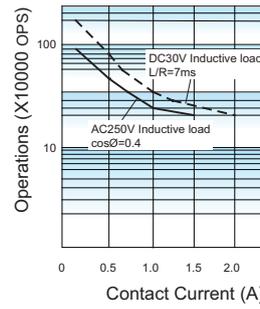
MAXIMUM SWITCHING POWER  
(4 Form C)



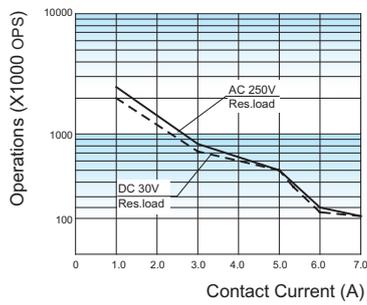
INDUCTIVE LOAD ENDURANCE CURVE  
(2 Form C)



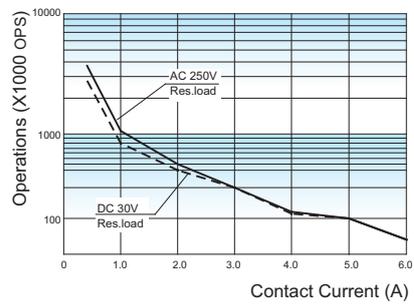
INDUCTIVE LOAD ENDURANCE CURVE  
(4 Form C)



RES. LOAD ENDURANCE CURVE  
(2 Form C)



RES. LOAD ENDURANCE CURVE  
(4 Form C)



# Relay Sockets



## Features

- The dielectric strength can reach 2000VAC and the insulation resistance is 1000MΩ
- Three mounting types are available: PCB mounting screw mounting and DIN rail mounting.
- With finger protection device
- Many kinds of Plug-in modules are available with the function of energizing indication and wiring protection.
- Components available: retainer, Marker and plug-in module

RoHS compliant

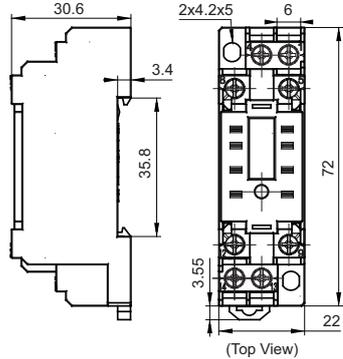
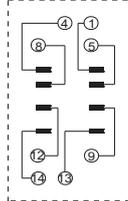
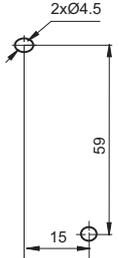
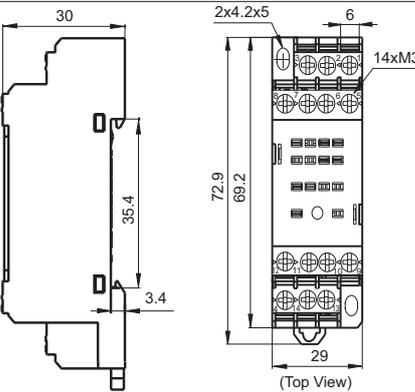
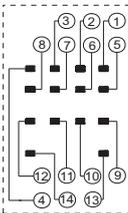
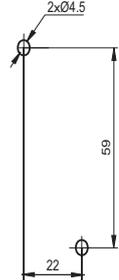
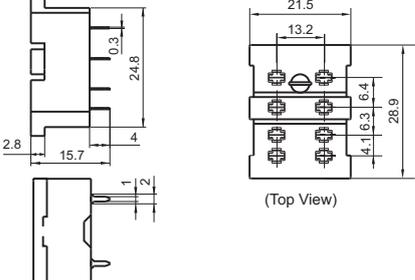
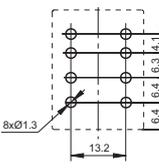
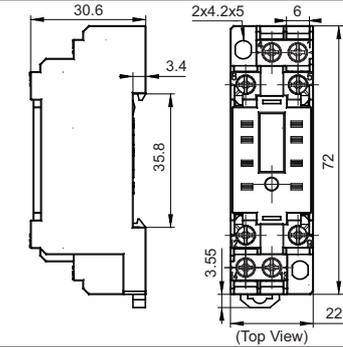
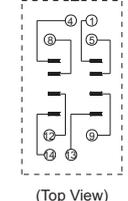
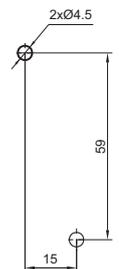
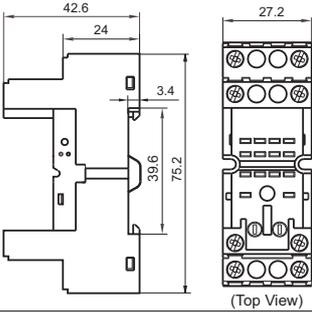
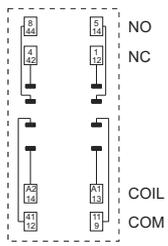
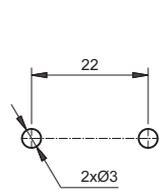
## CHARACTERISTICS

| Type          | Nominal Voltage | Nominal Current | Ambient Temperature | Dielectric Strength min. | Screw Torque | Wire Strip Length | Unit weight Approx. |
|---------------|-----------------|-----------------|---------------------|--------------------------|--------------|-------------------|---------------------|
| 18FZ-2Z-C2    | 250VAC          | 7A              | -40 °C ~ 70 °C      | 2000VAC                  | 0.6N · m     | 7mm               | Approx.30g          |
| 18FZ-4Z-C2    | 250VAC          | 5A              | -40 °C ~ 70 °C      | 2000VAC                  | 0.6N · m     | 7mm               | Approx.44g          |
| 18FF-2Z-A2    | 250VAC          | 7A              | -40 °C ~ 70 °C      | 2000VAC                  | —            | —                 | Approx.8g           |
| 18FF-2Z-C2    | 250VAC          | 7A              | -40 °C ~ 70 °C      | 2000VAC                  | 0.8N · m     | 7mm               | Approx.36g          |
| 18FF-2Z-C4    | 250VAC          | 7A              | -40 °C ~ 70 °C      | 2000VAC                  | 0.6N · m     | 7mm               | Approx.53g          |
| 18FF-2Z-C5    | 250VAC          | 7A              | -40 °C ~ 70 °C      | 2000VAC                  | 0.6N · m     | 7mm               | Approx.64g          |
| 18FF-2Z-C8    | 250VAC          | 7A              | -40 °C ~ 70 °C      | 2000VAC                  | 0.6N · m     | 7mm               | Approx.41g          |
| 18FF-2Z-C9    | 250VAC          | 7A              | -40 °C ~ 70 °C      | 2000VAC                  | —            | 7mm               | Approx.70g          |
| 18FF-2Z-C10   | 300VAC/DC       | 10A             | -40 °C ~ 70 °C      | 2000VAC                  | —            | 10mm              | Approx.57g          |
| 18FF-2Z-C10/P | 300VAC/DC       | 10A             | -40 °C ~ 70 °C      | 2000VAC                  | —            | 10mm              | Approx.58g          |
| 18FF-4Z-A2    | 250VAC          | 7A*             | -40 °C ~ 70 °C      | 2000VAC                  | —            | —                 | Approx.8g           |
| 18FF-4Z-C1    | 250VAC          | 7A*             | -40 °C ~ 70 °C      | 2000VAC                  | 0.8N · m     | 7mm               | Approx.58g          |
| 18FF-4Z-C2    | 250VAC          | 7A*             | -40 °C ~ 70 °C      | 2000VAC                  | 0.8N · m     | 7mm               | Approx.59g          |
| 18FF-4Z-C4    | 250VAC          | 7A*             | -40 °C ~ 70 °C      | 2000VAC                  | 0.6N · m     | 7mm               | Approx.64g          |
| 18FF-4Z-C5    | 250VAC          | 7A*             | -40 °C ~ 70 °C      | 2000VAC                  | 0.6N · m     | 7mm               | Approx.76g          |
| 18FF-4Z-C8    | 250VAC          | 7A*             | -40 °C ~ 70 °C      | 2000VAC                  | 0.6N · m     | 7mm               | Approx.51g          |
| 18FF-4Z-C9    | 250VAC          | 7A*             | -40 °C ~ 70 °C      | 2000VAC                  | —            | 7mm               | Approx.81g          |
| 18FF-4Z-C10   | 300VAC/DC       | 6A*             | -40 °C ~ 70 °C      | 2000VAC                  | —            | 10mm              | Approx.65g          |
| 18FF-4Z-C10/P | 300VAC/DC       | 6A*             | -40 °C ~ 70 °C      | 2000VAC                  | —            | 10mm              | Approx.66g          |

Remark: For sockets marked \*, their group of current totally should be not more than 20A.

# OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

| Socket   | Outline Dimensions  | Wiring Diagram   | PCB Layout  | Components Available  |
|--|---|--|---|---|
| <p><b>18FZ-2Z-C2</b></p>  <p>Screw Terminal,<br/>DIN rail or Screw mounting,<br/>With finger protection device</p>                              |  <p>(Top View)</p>   |  <p>(Top View)</p>   |    | <p>Metallic retainer</p> <p>18FZ-H1</p> <p>18FF-H2<br/>(be used in sets)</p>  |
| <p><b>18FZ-4Z-C2</b></p>  <p>Screw Terminal,<br/>DIN rail or Screw mounting,<br/>With finger protection device</p>                              |  <p>(Top View)</p>  |  <p>(Top View)</p>   |    | <p>Metallic retainer</p> <p>18FZ-H1</p> <p>18FF-H2<br/>(be used in sets)</p>  |
| <p><b>18FF-2Z-A2</b></p>  <p>PCB Terminal,<br/>PCB mounting<br/>Applicable for 2 poles</p>  |  <p>(Top View)</p> |  |  | <p>Metallic retainer</p> <p>18FF-H1</p>   |
| <p><b>18FF-2Z-C2</b></p>  <p>Screw Terminal,<br/>DIN rail or Screw mounting,<br/>With finger protection device<br/>Applicable for 2 poles</p> |  <p>(Top View)</p> |  <p>(Top View)</p> |  | <p>Metallic retainer</p> <p>18FZ-H1</p> <p>18FF-H2<br/>(be used in sets)</p>  |
| <p><b>18FF-2Z-C4</b></p>  <p>Screw Terminal,<br/>DIN rail or Screw mounting,<br/>With finger protection device<br/>Applicable for 2 poles</p> |  <p>(Top View)</p> |  <p>(Top View)</p> |  | <p>Plastic retainer</p> <p>18FF-H4</p> <p>Metallic retainer</p> <p>18FF-H5</p> <p>Marker</p> <p>18FF-M1</p> <p>Plug-in module<br/>HFAA to HFHU*</p> |

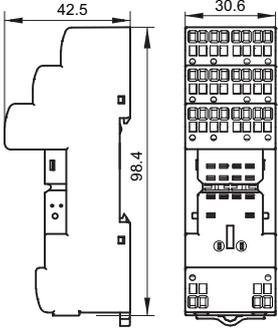
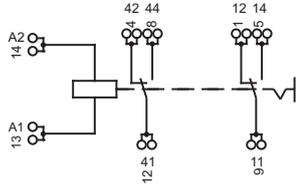
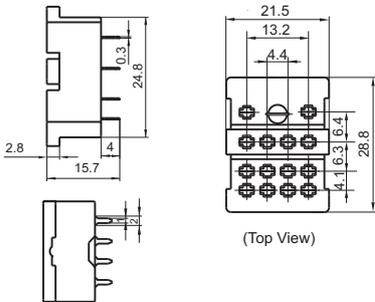
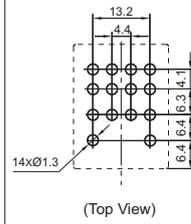
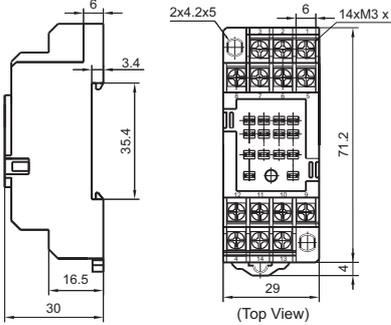
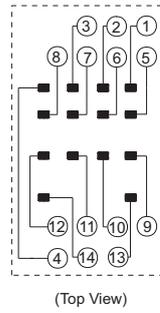
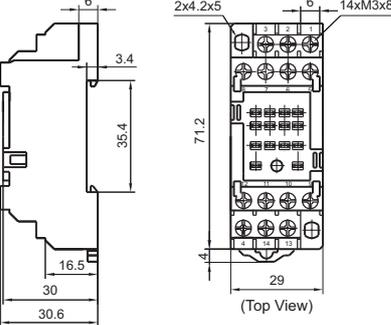
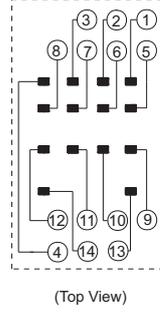
# OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

| Socket  | Outline Dimensions | Wiring Diagram    | PCB Layout | Components Available  |
|---|--------------------|-------------------|------------|---|
| <p><b>18FF-2Z-C5</b></p>  <p>Screw Terminal,<br/>DIN rail or Screw mounting,<br/>With finger protection device<br/>Applicable for 2 poles</p>  | <p>(Top View)</p>  | <p>(Top View)</p> |            | <p>Plastic retainer<br/>18FF-H4<br/>Metallic retainer<br/>18FF-H5</p> <p>Marker<br/>18FF-M1</p> <p>Plug-in module<br/>HFAA to HFHU*</p>         |
| <p><b>18FF-2Z-C8</b></p>  <p>Screw Terminal,<br/>DIN rail or Screw mounting,<br/>With finger protection device<br/>Applicable for 2 poles</p> | <p>(Top View)</p>  | <p>(Top View)</p> |            | <p>Plastic retainer<br/>18FF-H4<br/>Metallic retainer<br/>18FF-H5</p> <p>Marker<br/>18FF-M3</p> <p>Plug-in module<br/>HFAA to HFHU</p>          |
| <p><b>18FF-2Z-C9</b></p>  <p>Spring-loaded terminal<br/>DIN rail mounting<br/>With finger protection device<br/>Applicable for 2 poles</p>   | <p>(Top View)</p>  | <p>(Top View)</p> |            | <p>Plastic retainer<br/>18FF-H4</p> <p>Metallic retainer<br/>18FF-H5</p> <p>Plug-in module<br/>HFAA ~ HFHU*</p> <p>Marker<br/>18FF-M3</p>       |
| <p><b>18FF-2Z-C10</b></p>    | <p>(Top View)</p>  |                   |            | <p>Retainer*</p> <p>18FF-H4<br/>18FF-H5</p> <p>Jumper*</p> <p>18FF-J2</p> <p>Marker*</p> <p>18FF-M1</p> <p>Plug-in module*</p> <p>HFAA~HFHU</p> |

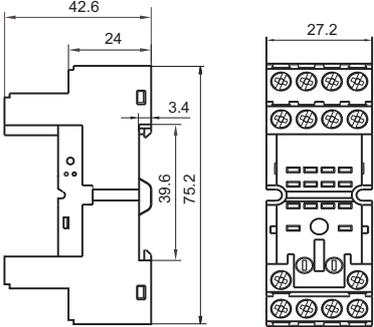
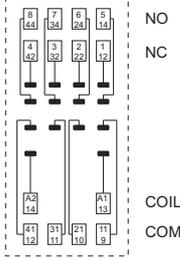
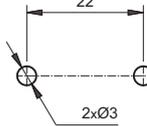
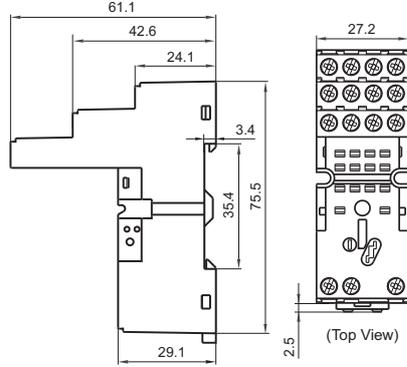
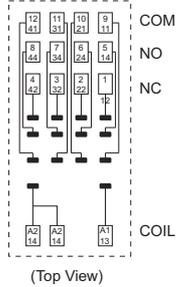
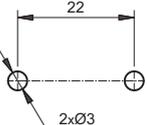
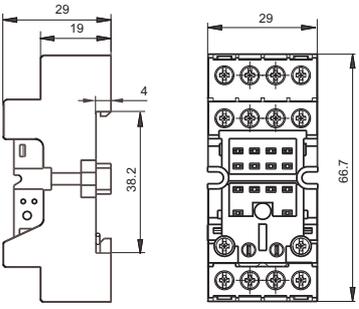
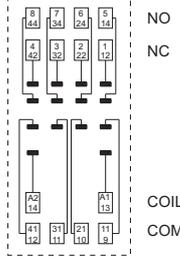
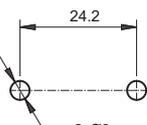
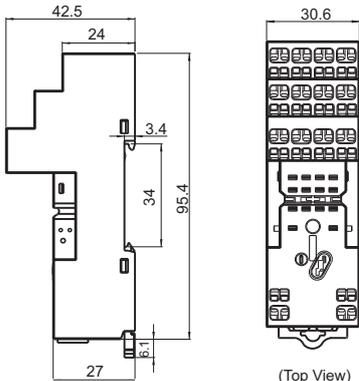
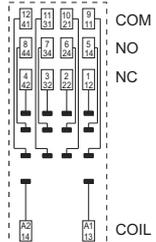
# OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

| Socket   | Outline Dimensions  | PCB Layout   | Components Available  |
|--|---|--|---|
| <p>18FF-2Z-C10/P</p>    |                      |                      | <p>Retainer*<br/>18FF-H4<br/>18FF-H5</p> <p>Jumper*<br/>18FF-J2</p> <p>Marker*<br/>18FF-M1</p> <p>Plug-in module*<br/>HFAA~HFHU</p> |
| <p>18FF-4Z-A2</p>  <p>PCB Terminal,<br/>PCB mounting<br/>Applicable for 4 poles</p>  |  <p>(Top View)</p>  |  <p>(Top View)</p> | <p>Metallic retainer<br/>18FF-H1</p>  |
| <p>18FF-4Z-C1</p>  <p>Screw Terminal,<br/>DIN rail or Screw mounting,<br/>Without finger protection device<br/>Applicable for 4 poles</p> |  <p>(Top View)</p> |  <p>(Top View)</p> | <p>Metallic retainer<br/>18FZ-H1<br/>18FF-H2<br/>(be used in sets)</p>  |
| <p>18FF-4Z-C2</p>  <p>Screw Terminal,<br/>DIN rail or Screw mounting,<br/>With finger protection device<br/>Applicable for 4 poles</p>    |  <p>(Top View)</p> |  <p>(Top View)</p> | <p>Metallic retainer<br/>18FZ-H1<br/>18FF-H2<br/>(be used in sets)</p>  |

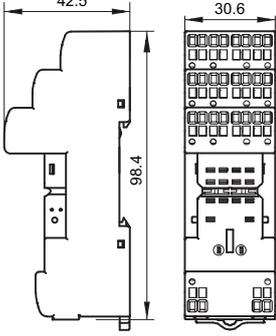
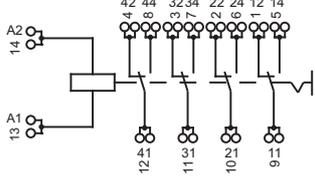
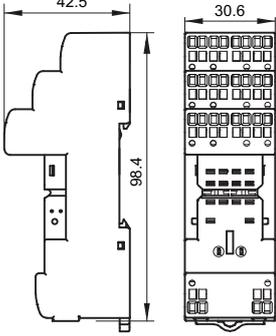
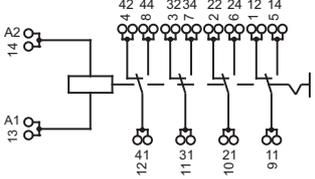
## OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

| Socket   | Outline Dimensions  | Wiring Diagram   | PCB Layout  | Components Available   |
|--|---|--|---|--|
| <p><b>18FF-4Z-C4</b></p>  <p>Screw Terminal,<br/>DIN rail or Screw mounting,<br/>With finger protection device<br/>Applicable for 4 poles</p>   |  <p style="text-align: center;">(Top View)</p>   |  <p style="text-align: center;">(Top View)</p>   |    | <p>Plastic retainer<br/>18FF-H4<br/>Metallic retainer<br/>18FF-H5</p> <p>Marker<br/>18FF-M1</p> <p>Plug-in module<br/>HFAA to HFHU*</p>      |
| <p><b>18FF-4Z-C5</b></p>  <p>Screw Terminal,<br/>DIN rail or Screw mounting,<br/>With finger protection device<br/>Applicable for 4 poles</p>  |  <p style="text-align: center;">(Top View)</p>  |  <p style="text-align: center;">(Top View)</p>  |   | <p>Plastic retainer<br/>18FF-H4<br/>Metallic retainer<br/>18FF-H5</p> <p>Marker<br/>18FF-M1</p> <p>Plug-in module<br/>HFAA to HFHU*</p>      |
| <p><b>18FF-4Z-C8</b></p>  <p>Screw Terminal,<br/>DIN rail or Screw mounting,<br/>With finger protection device<br/>Applicable for 4 poles</p> |  <p style="text-align: center;">(Top View)</p> |  <p style="text-align: center;">(Top View)</p> |  | <p>*Plastic retainer<br/>18FF-H4</p> <p>*Metallic retainer<br/>18FF-H5</p> <p>Marker<br/>18FF-M3</p> <p>*Plug-in module<br/>HFAA to HFHU</p> |
| <p><b>18FF-4Z-C9</b></p>  <p>Spring-loaded terminal<br/>DIN rail mounting<br/>With finger protection device<br/>Applicable for 2 poles</p>    |  <p style="text-align: center;">(Top View)</p> |  <p style="text-align: center;">(Top View)</p> |  | <p>Plastic retainer<br/>18FF-H4</p> <p>Metallic retainer<br/>18FF-H5</p> <p>Plug-in module<br/>HFAA ~ HFHU*</p> <p>Marker<br/>18FF-M3</p>    |

## OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

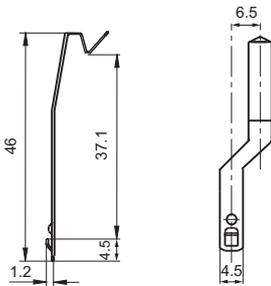
| Socket  | Outline Dimensions   | PCB Layout   | Components Available  |
|---|--|--|---|
|  <p>18FF-4Z-C10</p>    |   |  | Retainer*<br>18FF-H4<br>18FF-H5<br>Jumper*<br>18FF-J2<br>Marker*<br>18FF-M1<br>Plug-in module*<br>HFAA~HFHU |
|  <p>18FF-4Z-C10/P</p> |  |  | Retainer*<br>18FF-H4<br>18FF-H5<br>Jumper*<br>18FF-J2<br>Marker*<br>18FF-M1<br>Plug-in module*<br>HFAA~HFHU |

## DIMENSION OF RELATED COMPONENT (AVAILABLE)

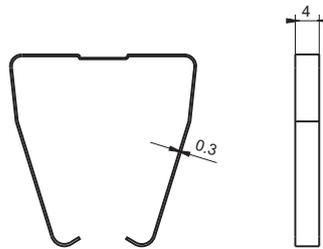
Unit: mm

### Retainer

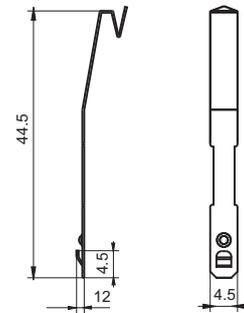
18FZ-H1 (Metallic retainer)



18FF-H1 (Metallic retainer)

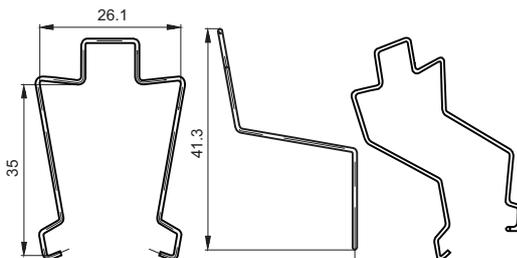


18FF-H2 (Metallic retainer)

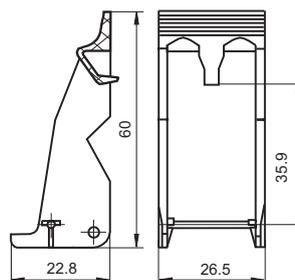


Remark: This retainer is for specific series. Please be aware before ordering.

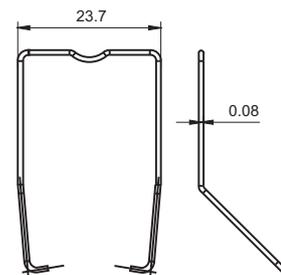
18FF-H3 (Metallic retainer)



18FF-H4 (Plastic retainer)



18FF-H5 (Metallic retainer)



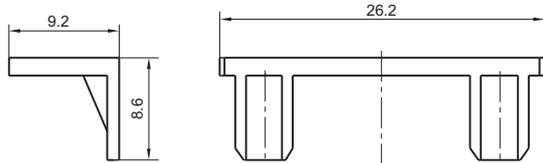
Remark: This retainer is for specific series. Please be aware before ordering.

**DIMENSION OF RELATED COMPONENT (AVAILABLE)**

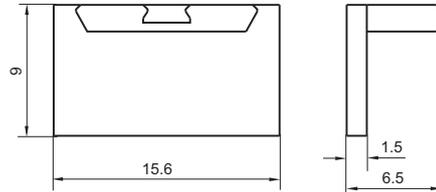
Unit: mm

Marker

18FF-M1



18FF-M3



**SELECTION OF PARTS**

| Type of Relay       | Mounting termination | Socket            | Retainer    | Marker     | Module    |   |   |
|---------------------|----------------------|-------------------|-------------|------------|-----------|---|---|
| HF18FZ/□□-2Z□□□1/2□ | Without button       | 18FF-2Z-A2        | 18FF-H1     | -          | -         |   |   |
|                     |                      | 18FF-2Z-C2        | 18FF-H2/H3  |            |           |   |   |
|                     |                      | 18FZ-2Z-C2        |             |            |           |   |   |
|                     |                      | 18FF-2Z-C4        | 18FF-H4/H5  | 18FF-M1    | HFAA~HFHU |   |   |
|                     |                      | 18FF-2Z-C5        |             |            |           |   |   |
|                     |                      | 18FF-2Z-C8        |             | 18FF-M3    |           |   |   |
| HF18FZ/□□-4Z□□□1/2□ | Without button       | 18FF-4Z-A2        | 18FF-H1     | -          | -         |   |   |
|                     |                      | 18FF-4Z-C1        | 18FF-H2     |            |           |   |   |
|                     |                      | 18FF-4Z-C2        | 18FF-H4/H5  | 18FF-M1    | HFAA~HFHU |   |   |
|                     |                      | 18FZ-4Z-C2        |             |            |           |   |   |
|                     |                      | 18FF-4Z-C4        |             |            |           |   |   |
|                     |                      | 18FF-4Z-C5        |             | 18FF-M3    |           |   |   |
|                     |                      | HF18FZ/□□-2Z□□□3□ | With button | 18FF-2Z-C2 | 18FZ-H1   | - | - |
|                     |                      |                   |             | 18FZ-2Z-C2 |           |   |   |
| 18FF-2Z-C4          | 18FF-H4              |                   |             | 18FF-M1    | HFAA~HFHU |   |   |
| 18FF-2Z-C5          |                      |                   |             |            |           |   |   |
| 18FF-2Z-C8          |                      |                   |             | 18FF-M3    |           |   |   |
| HF18FZ/□□-4Z□□□3□   | With button          | 18FF-4Z-C1        | 18FZ-H1     | -          | -         |   |   |
|                     |                      | 18FF-4Z-C2        |             |            |           |   |   |
|                     |                      | 18FZ-4Z-C2        |             |            |           |   |   |
|                     |                      | 18FF-4Z-C4        | 18FF-H4     | 18FF-M1    | HFAA~HFHU |   |   |
|                     |                      | 18FF-4Z-C5        |             |            |           |   |   |
|                     |                      | 18FF-4Z-C8        |             | 18FF-M3    |           |   |   |
|                     |                      | 18FF-4Z-C9        |             |            |           |   |   |

For your personal safety and the normal operation of the equipment, as well as to prevent fire, please note the following issues :

- 1.The rated current of the socket should be no less than the rated current of the relay.
- 2.Sockets are required to be firmly fixed to prevent the wiring from loosening and affecting the quality of wiring.
- 3.Be sure to disconnect power to the outlet before installation, disassembly, wiring, maintenance and inspection.
- 4.Prevent foreign objects such as wire shavings from falling inside this product when wiring.
- 5.Be sure to install the relay in place, and use accessories such as retainer if necessary to improve contact reliability. Do not use with incomplete connections.
- 6.Be sure to observe the relay ratings and do not overload the relay.
- 7.Before selecting a relay, make sure that the drive voltage matches the relay excitation voltage.

### Precautions for the use of non-threaded terminal type sockets

1.Lead end socket description :

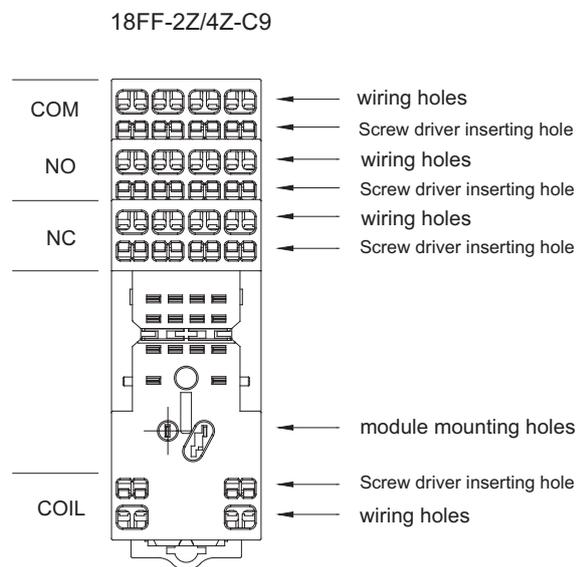


Figure 1

2.Things to be noticed when selecting soft wiring.

· The soft wiring can be divided into the following types.

0.5mm<sup>2</sup> above 1.5mm<sup>2</sup> below or AWG20 above AWG16 below the stranded wire or a single wire.

The front terminal of the wire needs to be peeled off 8mm to 9mm of insulation protection layer, the wire insulation protection layer diameter \*2.8mm or less. Please be sure to use according to this size.

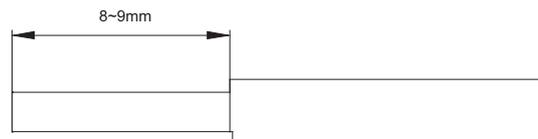


Figure 2

## Precautions For Use

- If the protective layer is stripped too short, the wire may be pulled out, and if it is too long, it may be short-circuited to the neighboring wires. If using the stranded wire with cold crimped terminals, please twist the stranded wire tightly before use to avoid loosening the wire.

When wiring, use a screwdriver as shown in the figure.

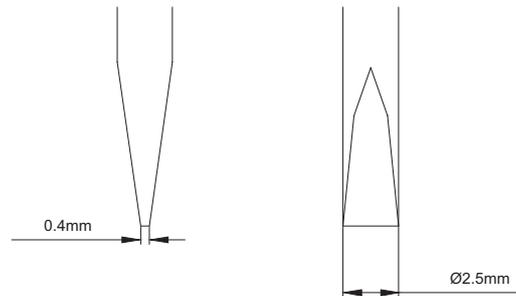


Figure 3

- The insertion position of the wire and the screwdriver and the insertion direction of the screwdriver are as shown in Figure 4.

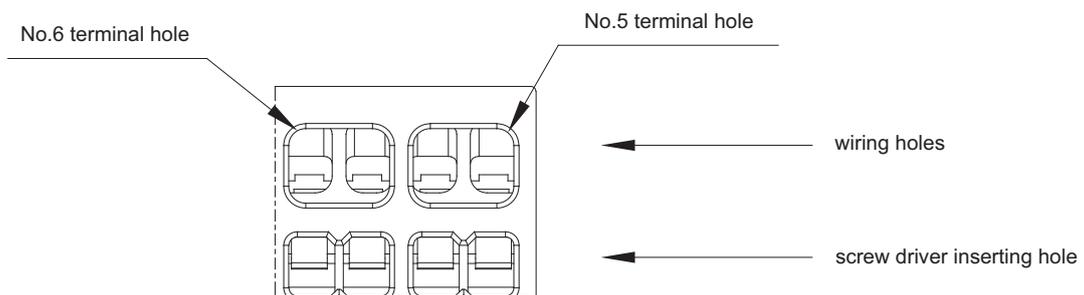


Figure 4

## Precautions For Use

Step 1. Insert the screwdriver into the screwdriver insertion hole (square hole) of the socket so that the screwdriver is inserted in a slightly angled direction until the head of the screwdriver is between the back of the spring terminal and the wall of the cover.

Step 2. Keep pushing the screwdriver in until it contacts the stop position inside the socket and the junction is released, keeping the screwdriver in that position. The screwdriver will not come off even if the hand is released.

Step 3. Keeping the screwdriver in the insertion hole, insert the wire or cold crimp terminal to the bottom of the wire insertion hole.

Step 4. Pull out the screwdriver and the wiring is completed.

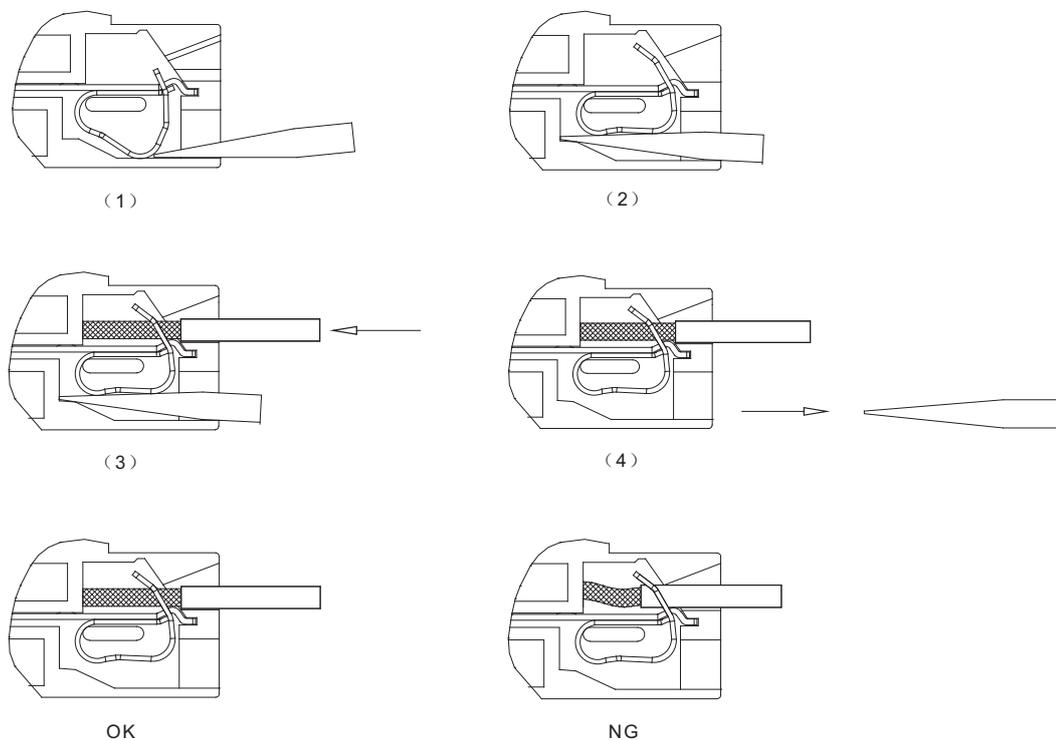


Figure 5

**Notes:** When using wire with insulation protection diameter of 2mm or less, do not insert the insulated part of the wire into the spring clamp opening position .

### Things to be noticed when selecting sockets:

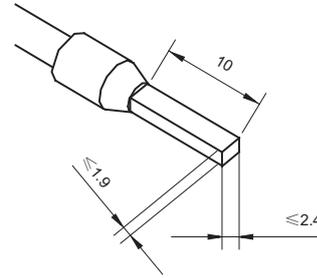
1. Please choose suitable relay socket according to the actual mounting environment, relay contact poles and terminal layout. If there is any query on selection, please contact Hongfa for the technical service.
2. Socket which can be mounted with Markers is furnished with a Marker; as for other related 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 HF18FF relay. If you have any special requirements, please contact us.
4. Main outline dimension, outline dimension  $> 50\text{mm}$ , tolerance should be  $\pm 1\text{mm}$ ;  $20\text{mm} < \text{outline dimension} \leq 50\text{mm}$ , tolerance should be  $\pm 0.5\text{mm}$ ;  $5\text{mm} < \text{outline dimension} \leq 20\text{mm}$ , tolerance should be  $\pm 0.4\text{mm}$ ; outline dimension  $\leq 5\text{mm}$ , tolerance should be  $\pm 0.3\text{mm}$ .
5. DIN rail mounting: recommend to use standard rail  $35 \times 7.5 \times 1\text{mm}$ ,  $35 \times 15 \times 1\text{mm}$ .

## Precautions For Use

18FF-2Z/4Z-C10  
18FF-2Z/4Z-C10/P

### Applicable conductor cross section

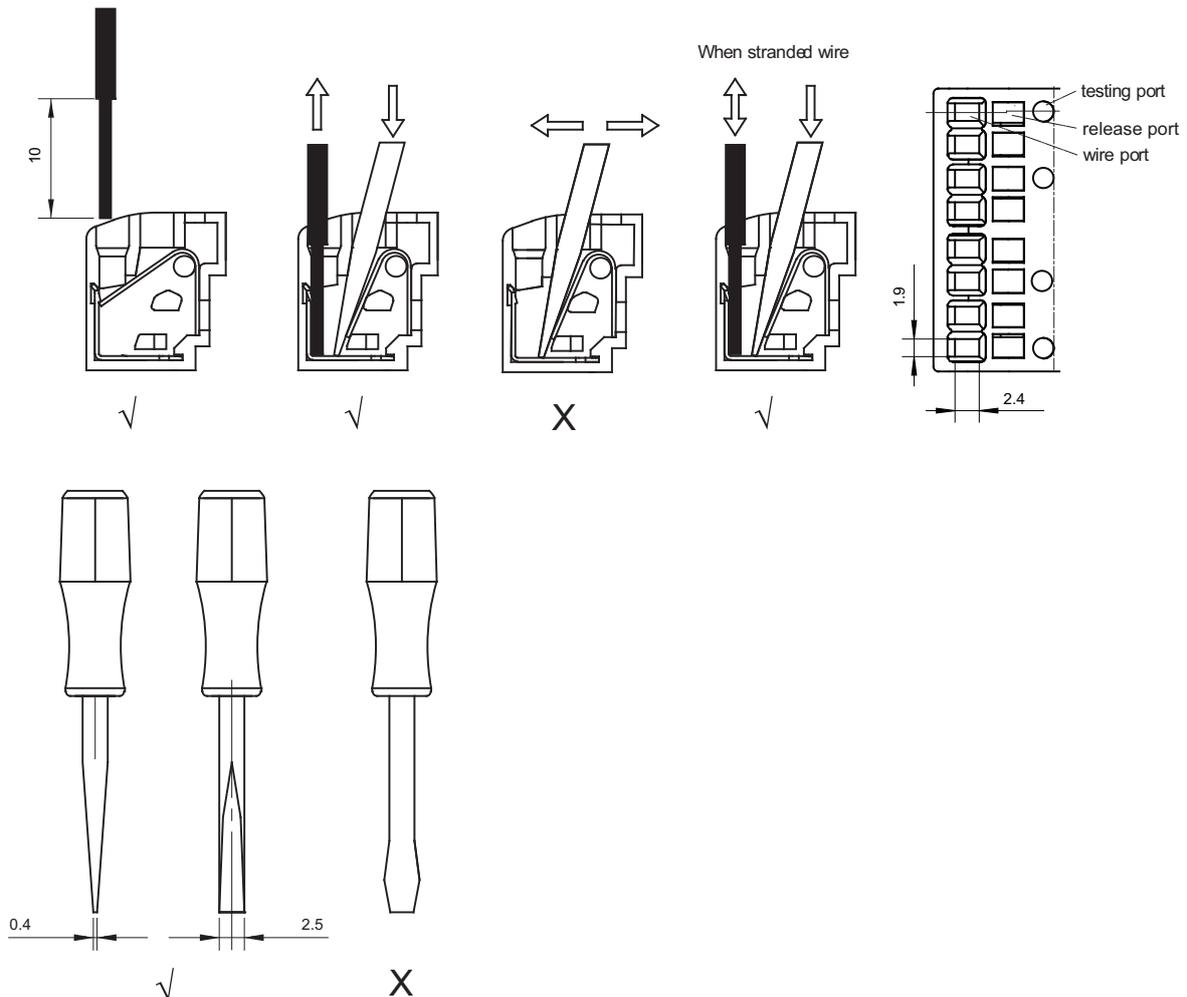
|                |   |  |
|----------------|---|--|
| solid wire     | 1x0.5/0.75/1.0/1.5/2.5 mm <sup>2</sup>      |  |
|                | 2x0.5/0.75/1.0/1.5 mm <sup>2</sup>          |  |
| Multi-stranded | Multi-stranded wire without standard sleeve | 1x0.5/0.75/1.0/1.5/2.5 mm <sup>2</sup> |
|                |   | 2x0.5/0.75/1.0/1.5 mm <sup>2</sup>     |
|                | Multi-stranded wire with standard sleeve    | 1x0.5/0.75/1.0/1.5 mm <sup>2</sup>     |
|                |   | 2x0.5/0.75/1.0 mm <sup>2</sup>         |



### Regarding push in socket

- The screwdriver insertion hole must not be wired.
  - When inserting the screwdriver into the hole, please insert it at an angle.
  - Do not twist or wiggle the screwdriver when it is in the hole, as this may cause damage the socket.
  - Do not forcibly bend or pull on the wire. Otherwise it may result broken wire.
  - Do not insert more than one wires into one wiring hole.
  - To prevent smoke and fire from the wiring material, check the power supply rating and that the wire sleeves used are in accordance with DIN 46228-4.
- The conductors used comply with GB/T 5023.3-2008 (IEC 60227-3) standard.

| Recommended Wires                | Film peel (when bar terminals are not used) |
|----------------------------------|---|
| 0.5~2.5mm <sup>2</sup> /AWG20~14 | ≥10mm                                       |



## Precautions For Use

### 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. Relevant accessories must be selected separately. Please indicate the model of the selected accessories when ordering;
3. Main outline dimension, outline dimension  $>50\text{mm}$ , tolerance should be  $\pm 1\text{mm}$ ;  $20\text{mm} < \text{outline dimension} \leq 50\text{mm}$ , tolerance should be  $\pm 0.5\text{mm}$ ;  $5\text{mm} < \text{outline dimension} \leq 20\text{mm}$ , tolerance should be  $\pm 0.4\text{mm}$ ; outline dimension  $\leq 5\text{mm}$ , tolerance should be  $\pm 0.3\text{mm}$ .
4. DIN rail mounting: recommend to use standard rail  $35 \times 7.5 \times 1\text{mm}$ ,  $35 \times 15 \times 1\text{mm}$ .  
When installed vertically, the coil terminal at the bottom please .

### 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.

© Xiamen Hongfa Electroacoustic Co., Ltd. All rights of Hongfa are reserved.