

# HFS34(JG-34F)

# SOLID STATE RELAY



File No: E134517



File No.: J50061405



## Features

- 4000V dielectric strength
- Photo isolation
- Zero cross or random turn-on
- Removable finger proof cover available
- Double SCR AC output
- Panel mount
- DC or AC control
- RoHS compliant

## INPUT

|                                            |                                                   |
|--------------------------------------------|---------------------------------------------------|
| Control voltage range (DC input)           | 3 to 32VDC (Without LED)<br>4 to 32VDC (With LED) |
| Control voltage range (AC input)           | 90 to 280VAC                                      |
| Must operate voltage (DC input)            | Max. 3VDC                                         |
| Must operate voltage (AC input)            | 90VAC                                             |
| Must release voltage (DC input)            | 1VDC                                              |
| Must release voltage (AC input)            | 10VAC                                             |
| Ma. input current (DC input)               | 25mA (at 32VDC)                                   |
| Max. reverse protection voltage (DC input) | -32VDC                                            |

## OUTPUT

|                                               |            |                                                |               |               |
|-----------------------------------------------|------------|------------------------------------------------|---------------|---------------|
| Type                                          |            | D -240□                                        | D -380□       | D -480□       |
| Load voltage range                            |            | 48 to 280 VAC                                  | 48 to 400 VAC | 48 to 530 VAC |
| Transient voltage                             |            | 600Vpk                                         | 800Vpk        | 1200Vpk       |
| Max.OffStateLeakageCurrent (at Rated Voltage) |            | 5mA                                            | 5mA           | 5mA           |
| Max. On-State Voltage Drop (at Rated Current) |            | 1.7Vrms                                        |               |               |
| Load Current                                  |            | 40A, 50A, 60A, 70A, 80A                        |               |               |
| Non-rep. Surge Current (20ms)                 |            | 10 times of rated current                      |               |               |
| Power Factor (min.)                           |            | 0.5                                            |               |               |
| Max. Turn-on Time                             |            | Random turn-on (DC input) : 1ms                |               |               |
|                                               |            | Zero cross turn-on (DC input) : 1/2 cycle +1ms |               |               |
|                                               |            | AC input type : 20 ms                          |               |               |
| Max turn-off time                             | (DC input) | 1ms+ 1/2 cycle                                 |               |               |
|                                               | (AC input) | 40ms                                           |               |               |
| Min. off-state (dv/dt)                        |            | 500V/μs                                        |               |               |

## GENERAL

|                                         |           |                                                              |
|-----------------------------------------|-----------|--------------------------------------------------------------|
| Dielectric strength (at 50/60Hz, 1min.) |           | 4000VAC (input to output)<br>2500VAC (input, output to base) |
| Insulation resistance                   |           | 1000MΩ (at 500VDC)                                           |
| Ambient temperature                     | Operating | -30°C to +80°C                                               |
|                                         | Storage   | -30°C to +100°C                                              |
| Ambient Humidity                        |           | 45 to 85% RH                                                 |
| Unit weight                             |           | 88g                                                          |

## DESCRIPTION

The HFS34 offer 3 to 32VDC or 90 to 280VAC input control, with outputs rated at 40A, 50A, 60A, 70A or 80A. SCR output provides high dv/dt capability more than 500V/us. All models include an internal snubber. The relays provide 4000VAC opto-isolation between input and output. Outline dimension is 58.4mmX45.7mmX22.9mm.

## PRECAUTIONS

1. When choosing a SSR, please notice the actual load current and working ambient temperature. To use the SSR correctly, please refer to CHARACTERISTIC DATA and make sure the heat sink size when it works in full load current.
2. Apply heat-radiation silicon grease of a heat conductive sheet between the SSR and heat sink. There will be a space between the SSR and heat sink Attached to the SSR. Therefore, the generated heat of the SSR cannot be radiated properly without the grease. As a result, the SSR may be overheated and damaged or deteriorated.
3. Tighten the SSR terminal screws properly. If the screws are not tight, the SSR will be Damaged by heat generated when the power in ON. Perform wiring using the tightening torque shown in the following table.

|            |                              |
|------------|------------------------------|
| Screw size | Recommended tightened torque |
| M3         | 0.58 to 0.98 N·m             |
| M4         | 0.98 to 1.37 N·m             |



HONGFA RELAY

ISO9001、ISO/TS16949、ISO14001、OHSAS18001 CERTIFIED

2006 Rev. 2.00

## ORDERING INFORMATION

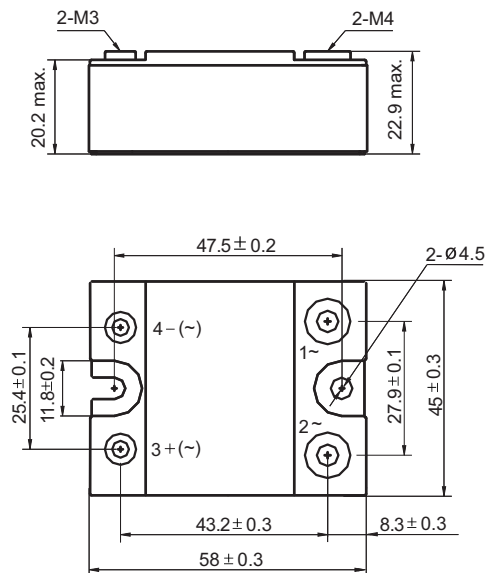
|                      |                                                                         |  |  |  |  |  |  |  |  |  |
|----------------------|-------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|
| Type                 | HFS34 / D- 240 A 40 Z S -L XXX                                          |  |  |  |  |  |  |  |  |  |
| Input voltage        | D: 3 to 32VDC (Without LED)<br>4 to 32VDC (With LED)<br>A: 90 to 280VAC |  |  |  |  |  |  |  |  |  |
| Nominal voltage      | 240: 48 to 280V    380: 48 to 400V<br>480: 48 to 530V                   |  |  |  |  |  |  |  |  |  |
| Load voltage form    | A: AC                                                                   |  |  |  |  |  |  |  |  |  |
| Load current         | 40: 40A    50: 50A    60: 60A    70: 70A    80: 80A                     |  |  |  |  |  |  |  |  |  |
| Zero cross function  | Z: Zero cross turn-on    P: Random turn-on                              |  |  |  |  |  |  |  |  |  |
| Output component     | S: SCR                                                                  |  |  |  |  |  |  |  |  |  |
| LED indicator        | L: With LED(Unavailable for AC input type)    Nil: Without LED          |  |  |  |  |  |  |  |  |  |
| Special request code | ( Only for special requirements, e.g. 555 stand for RoHS compliant )    |  |  |  |  |  |  |  |  |  |

Notes: HFS34 is an environmental friendly product, please mark special code (555) when order.

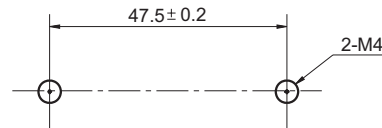
## OUTLINE DIMENSIONS, WIRING DIAGRAM AND MOUNTING HOLES

Unit: mm

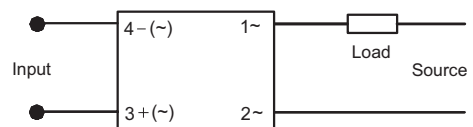
Outline Dimensions



Mounting Hole Layout

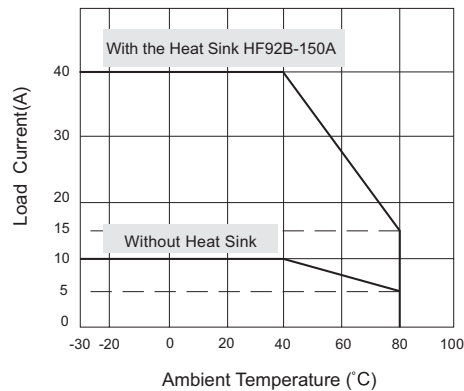


Wiring Diagram

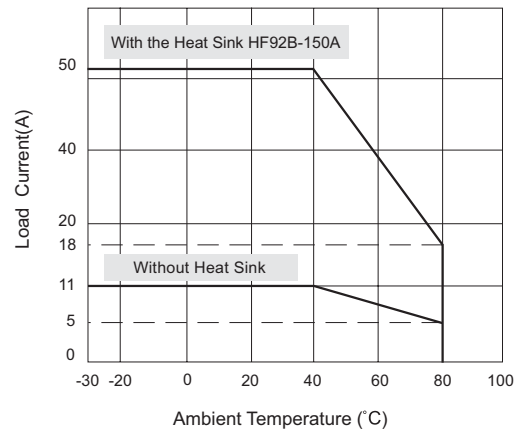


## CHARACTERISTIC CURVE

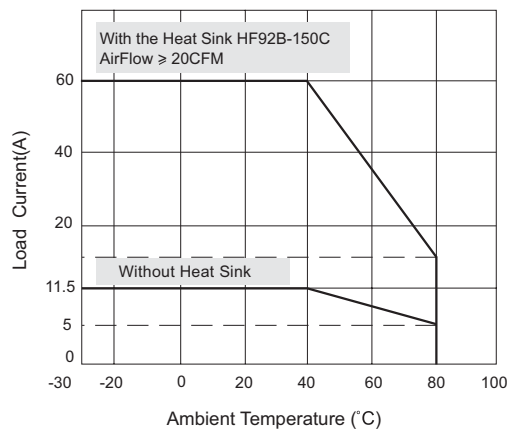
Max. Load Current vs. Ambient Temp. (40A)



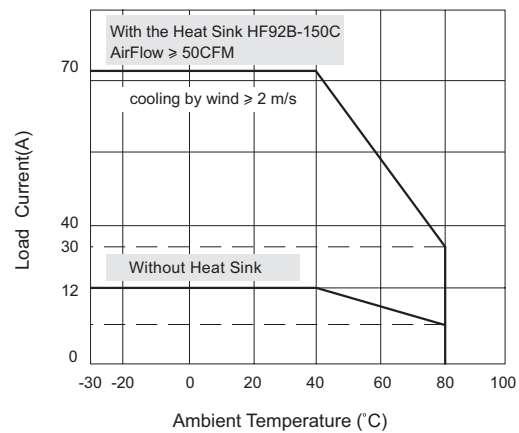
Max. Load Current vs. Ambient Temp. (50A)



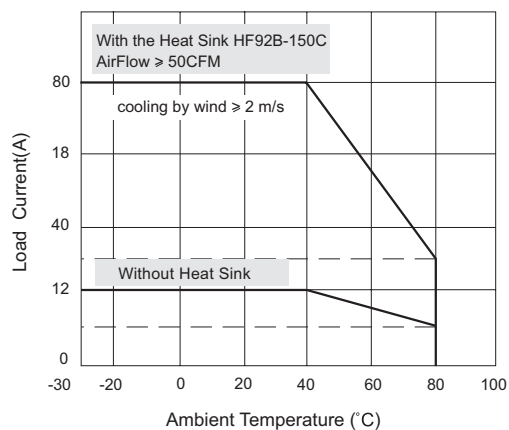
Max. Load Current vs. Ambient Temp. (60A)



Max. Load Current vs. Ambient Temp. (70A)



Max. Load Current vs. Ambient Temp. (80A)



### 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.