

HFS15

SOLID STATE RELAY



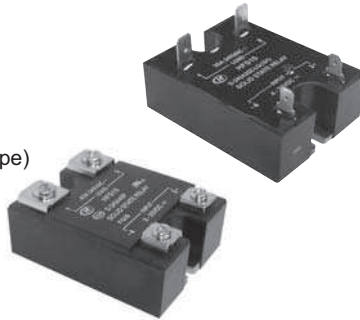
File No.: E133481



File No.: B050453286001(D-240 type)



File No.: CQC02001001936



Features

- Dielectric strength 4000V
- Photo isolation
- Removable finger proof cover available
- Built-in snubber
- Zero cross or random turn-on
- TRIAC AC output
- Panel mount
- DC or AC control
- With LED indicator or not
- Environmental friendly product (RoHS compliant)

INPUT (Ta = 25°C)

Control voltage range (DC input)	3VDC to 32VDC (Without LED) 4VDC to 32VDC (With LED)
Control voltage range (AC input)	85VAC to 132VAC (110V input) 175VAC to 264VAC (220V input) 19.2VAC to 28.8VAC (24V input)
Must operate voltage (DC input)	3VDC (Without LED) 4VDC (With LED)
Must operate voltage (AC input)	85VAC (110V input) 175VAC (220V input) 19.2VAC (24V input)
Must release voltage (DC input)	1.0VDC
Must release voltage (AC input)	10VAC (110V, 220V input) 2VAC (24V input)
Max. input current	25mA (DC input) 15mA (AC input)
Max. reverse protection voltage (DC input)	-32VDC

GENERAL (Ta = 25°C)

Dielectric strength (at 50/60Hz, 1min)	4000VAC (input to output)	
	2500VAC (input, output to base)	
Insulation resistance		1000MΩ (at 500VDC)
Ambient temperature	Operating	-30°C to 80°C
	Storage	-30°C to 100°C
Unit weight		Approx. 88g

DESCRIPTION

The HFS15 offer 3VDC to 32VDC, 24VAC, 110VAC or 220VAC input control, with outputs rated at 10A, 15A, 20A, 25A or 40A. All models include an internal snubber. The relays provide 4000VAC opto-isolation, between input and output.

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	0.58N·m to 0.98 N·m
M4	0.98N·m to 1.37 N·m

4. Please do not use the relay beyond the descriptions in the data sheet. If it is a must to use it beyond descriptions, please contact Hongfa for more technical support.

OUTPUT (Ta = 25°C)

Type	□-□ A10 □ □-□ A15 □ □-□ A20 □ □-□ A25 □ □-□ A40 □				
Load voltage range (at 47 to 63Hz)	□-240A □ □		48VAC to 280VAC		
	□-380A □ □		48VAC to 440VAC		
Max. transient overvoltage	□-240A □ □		600Vpk		
	□-380A □ □		800Vpk		
Load current range (A)	0.1 to 10	0.1 to 15	0.1 to 20	0.1 to 25	0.1 to 40
Max. I ² t for fusing (10ms, A ² s)	78	144	312	312	880
Max. surge current (10ms)	100Apk	150Apk	200Apk	250Apk	400Apk
Max. leakage current	5mA				
Max. on-state voltage drop	1.5Vr.m.s.				
Max. turn-on time	Zero cross turn on: 1/2 cycle+1ms				
	Random turn-on: 1ms				
Max. turn-off time	1/2 cycle+1ms				
Min. off-state dv/dt	200V/μs				
Min. power factor	0.5				

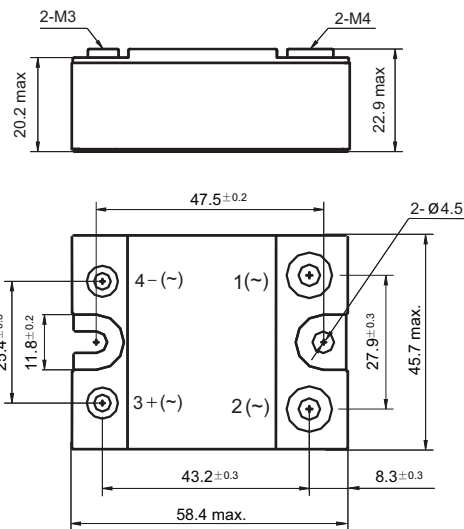
ORDERING INFORMATION

Type	HFS15 / D- 240 A 10 Z -L Q (XXX)						
Input voltage	D: 3VDC to 32VDC (Without LED) 4VDC to 32VDC (With LED) 24A: 24VAC 110A: 110VAC 220A: 220VAC						
Load voltage	240: 240V 380: 380V						
Load voltage form	A: AC						
Load current	10: 10A 15: 15A 20: 20A 25: 25A 40: 40A						
Zero cross function	Z: Zero cross turn-on P: Random turn-on						
LED indicator	L: With LED Nil: Without LED						
Terminal Type	Q: Faston Nil: Screw						
Customer special code							

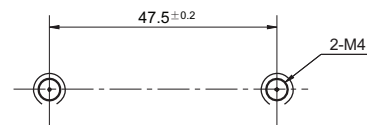
OUTLINE DIMENSIONS, WIRING DIAGRAM AND MOUNTING HOLES

Unit: mm

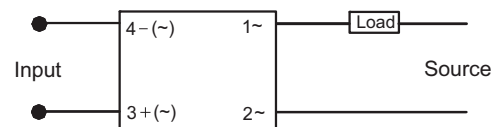
Outline Dimensions



Mounting Hole Layout

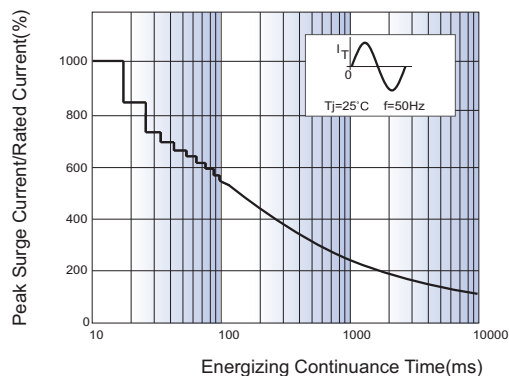


Wiring Diagram

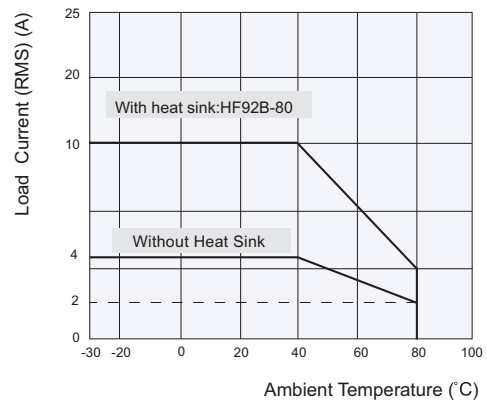


CHARACTERISTIC CURVES

Max. Permissible Non-repetitive Peak Surge Current rate vs. Continuance Time

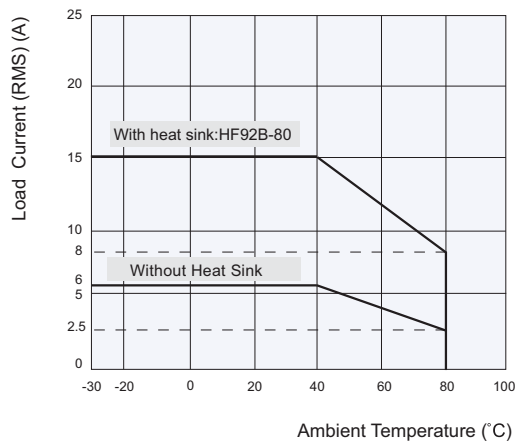


Max. Load Current vs. Ambient Temp. (10A)

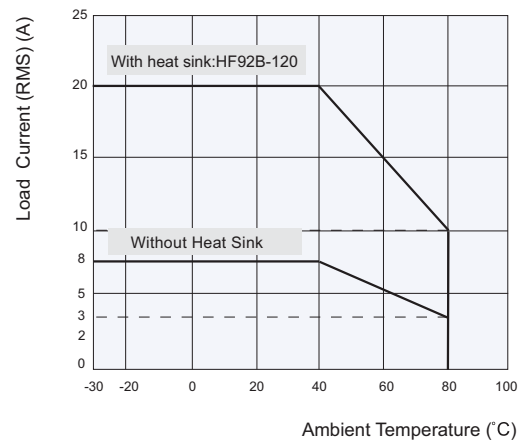


CHARACTERISTICS CURVES

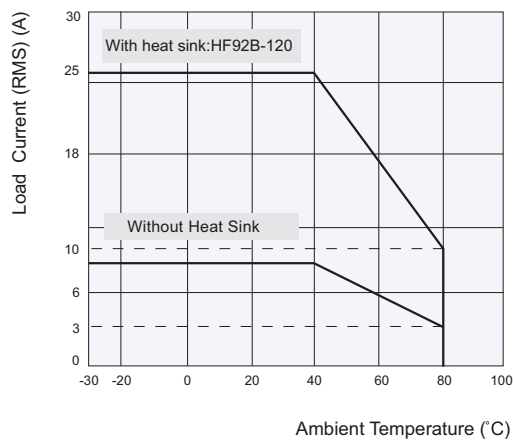
Max. Load Current vs. Ambient Temp. (15A)



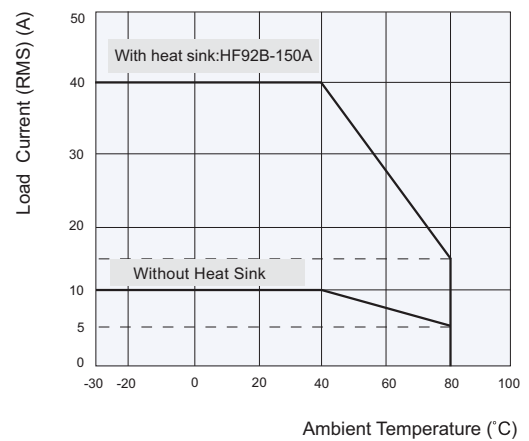
Max. Load Current vs. Ambient Temp. (20A)



Max. Load Current vs. Ambient Temp. (25A)



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



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.