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

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^2t for fusing (10ms, A^2s)	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				

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 beyondthe descriptions in the data sheet. If it is a must to use it beyond descriptions, please contact Hongfa for more technical support.

ORDERING INFORMATION

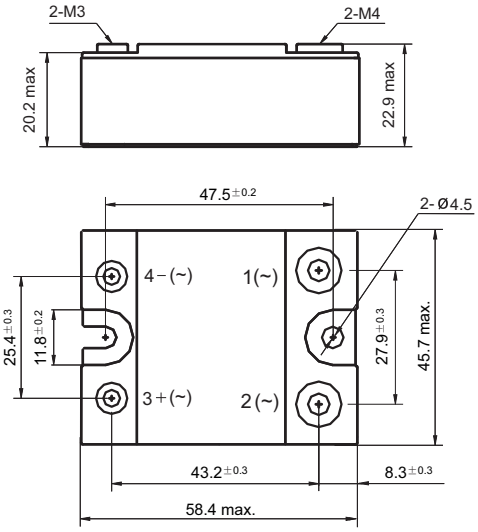
	HFS15 /	D-	240	A	10	Z	-L	Q	(XXX)

Type			
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			

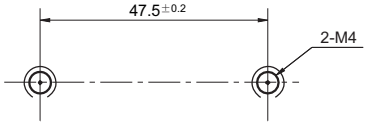
OUTLINE DIMENSIONS, WIRING DIAGRAM AND MOUNTING HOLES

Unit: mm

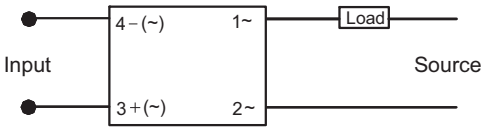
Outline Dimensions



Mounting Hole Layout

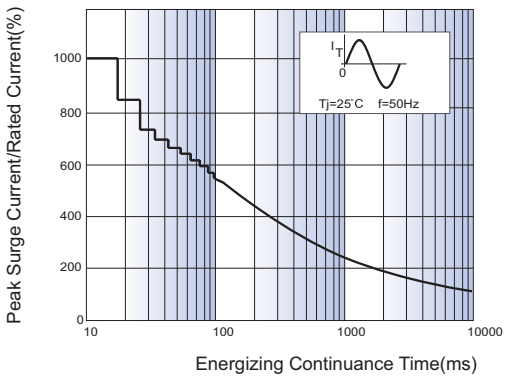


Wiring Diagram

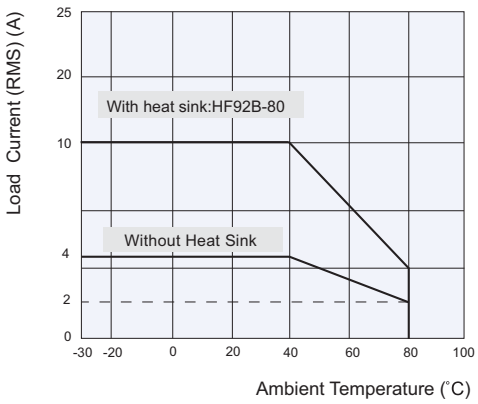


CHARACTERISTIC CURVES

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

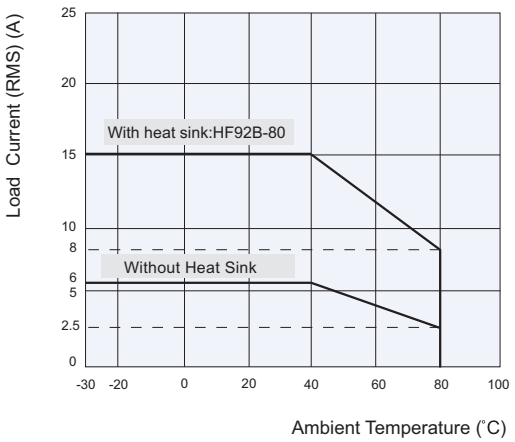


Max. Load Current vs. Ambient Temp. (10A)

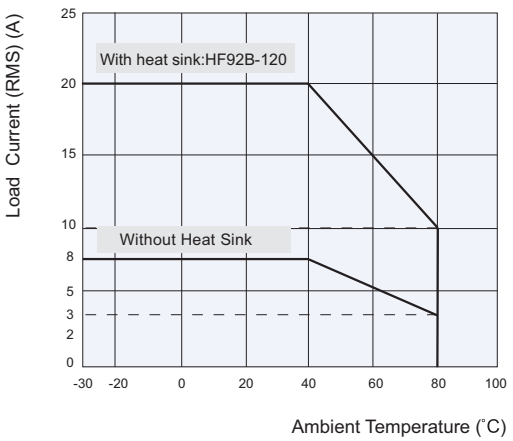


CHARACTERISTICS CURVES

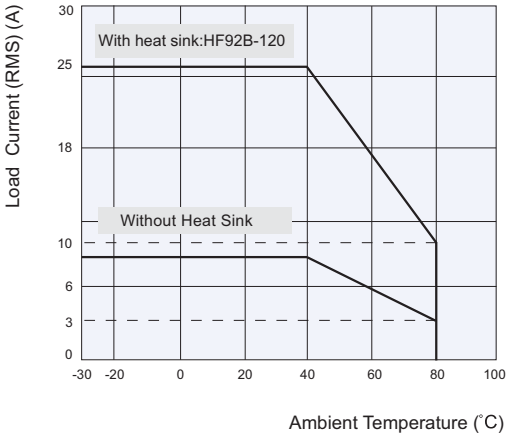
Max. Load Current vs. Ambient Temp. (15A)



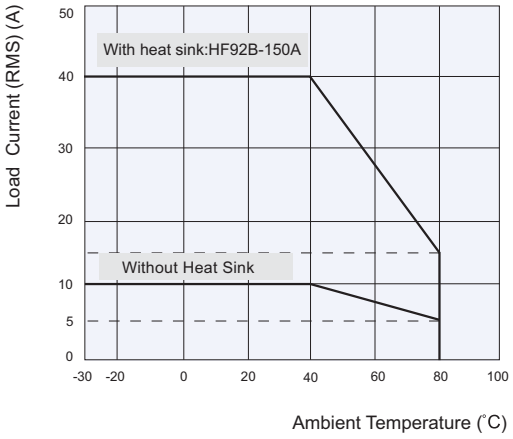
Max. Load Current vs. Ambient Temp. (20A)



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.