

HFS40A

SOLID STATE RELAY



Features

- 2500V dielectric strength
- LED status indicator
- Photo isolation
- Built-in snubber
- Zero cross or random turn-on
- Printed circuit board mount
- Environmental friendly product (RoHS compliant)

INPUT (TA = 25°C)

Control voltage range	05D	4 to 6VDC
	12D	9.6 to 14.4VDC
	24D	19.2 to 28.8VDC
Must operate voltage	05D	4VDC
	12D	9.6VDC
	24D	19.2VDC
Must release voltage	05D	1.0VDC
	12D	
	24D	
Max. reverse protection voltage	05D	-6VDC
	12D	-14.4VDC
	24D	-28.8VDC
Max. input current		20mA

GENERAL (TA = 25°C)

Dielectric strength (input to output)		2500VAC, 50/60Hz, 1min
Insulation resistance		1000MΩ (at 500VDC)
Max. capacitance (input to output)		8pF
Vibration resistance		10 to 55Hz 1.5mm DA
Shock resistance		980m/s ²
Ambient temperature	Operating	-30°C to 80°C
	Storage	-30°C to 100°C
Ambient humidity		45% to 85% RH
Unit weight		Approx. 18g

DESCRIPTION

This SPST-NO printed circuit board mount SSR provides AC output switching in a high density package. The HFS40A's DC input is compatible with 5, 12 and 24V logic systems. The relays include a LED indicator to provide input status information. All models include an internal snubber. The relays provide 2500VAC opto-isolation, between input and output. Encapsulation, thermally conductive epoxy.

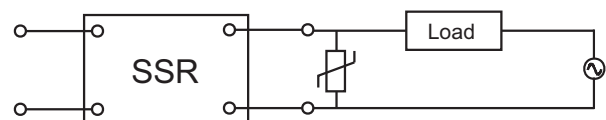
APPLICATIONS

- I/O interface
- Programmable controllers

PRECAUTIONS

1. Soldering must be completed within 10 seconds at 260°C or less or within 5 seconds at 350°C or less.
2. The SSR case serves to dissipate heat. Install the relays so that they are adequately ventilated. If poor ventilation is unavoidable, reduce the load current by half.
3. When using the HFS40A series for an AC load with a peak voltage of more than the rated, connect the load terminals of the relay to an inrush absorber (varistor). The recommended varistor voltage as follow:

The rated voltage	The recommended varistor voltage
200VAC	470VAC
380VAC	750VAC



OUTPUT (TA = 25°C)

Load voltage range	220A: 48 to 280VAC 380A: 48 to 440VAC	
Load current range	2A type: 0.1 to 2A 3A type: 0.1 to 3A	
Max. surge current (10ms)	2A type: 30A _{pk} 3A type: 120A _{pk}	
Max. I ² t for fusing (10ms)	2A type: 3.1A ² s 3A type: 78A ² s	
Max. leakage current	1.5mA	
Max. on-state voltage drop	1.5V _{rms}	
Max. turn-on time	Zero cross turn-on	1/2 cycle +1ms
	Random turn-on	1ms
Max. turn-off time	1/2 cycle +1ms	
Max. transient overvoltage	HFS40A/□□-220A□□□	600V _{pk}
	HFS40A/□□-380A□□□	800V _{pk}
Min. off-state dv/dt	100V/μs	
Min. power factor	0.5	



HONGFA RELAY

ISO9001, ISO/TS16949, ISO14001, OHSAS18001, IECQ QC 080000 CERTIFIED

2008 Rev. 1.00

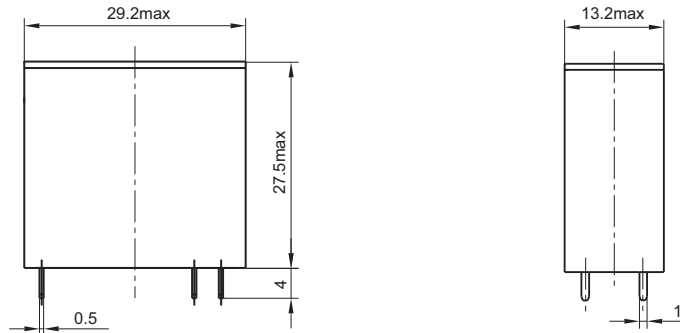
ORDERING INFORMATION

Type	HFS40A / 05 D- 220 A 2 Z- L (XXX)						
Input voltage	05: 4 to 6V	12: 9.6 to 14.4V					
	24: 19.2 to 28.8V						
Input voltage form	D: DC						
Load voltage	220: 220V	380: 380V					
Load voltage form	A: AC						
Load current	02: 2A	03: 3A					
Zero cross function	Z: Zero cross turn-on			P: Random turn-on			
LED indicator	L: With LED						
Customer special code							

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

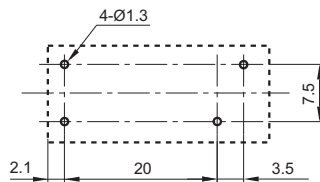
Unit: mm

Outline Dimensions

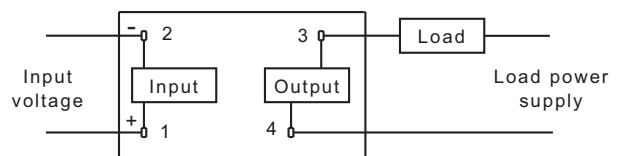


PCB Layout

(Bottom view)

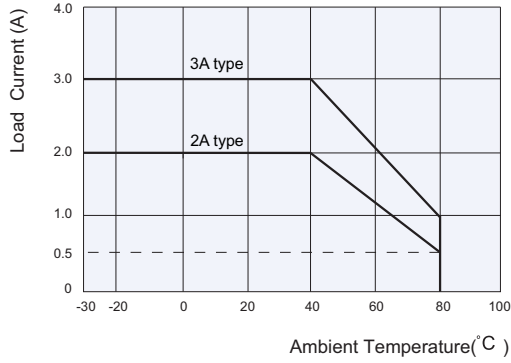


Wiring Diagram

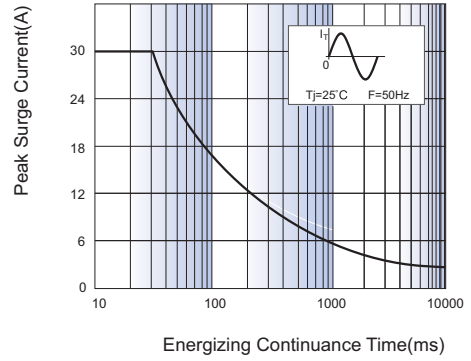


CHARACTERISTIC CURVES

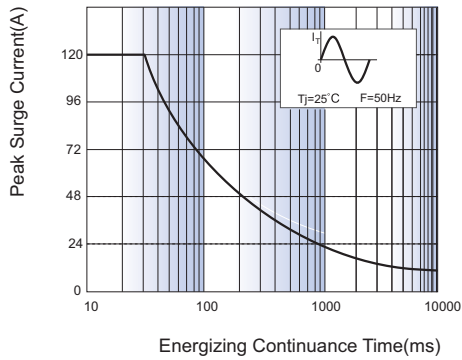
Max. Load Current
vs. Ambient Temperature



Max. Permissible Non-repetitive
Peak Surge Current vs. Continuance Time
(2A type)



Max. Permissible Non-repetitive
Peak Surge Current vs. Continuance Time
(3A type)



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.

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