

# HFS41(JGX-41F)

## SOLID STATE RELAY

**c us**

File No: E133481



File No.: J50061405



File No.: CQC0300100658



### Features

- Input: DC control
- Double SCR AC output or TRIAC AC output
- 4000V dielectric strength
- Printed circuit board mount
- RoHS compliant

### INPUT

Input voltage	1D	3 to 15VDC
	2D	15 to 32VDC
Must operate voltage	1D	3VDC
	2D	15VDC
Must release voltage		1.0VDC
Max. Input current	1D	40mA
	2D	20mA

### GENERAL

Dielectric strength (input-output)	4000VAC, 50/60Hz 1min.
Insulation resistance	1000MΩ (at 500VDC)
Vibration	10 to 55Hz 1.5mm DA
Ambient operating temperature range	-30°C to +80°C
Ambient storage temperature range	-30°C to +100°C
Ambient humidity	45 to 85% RH
weight	Max. 15g

### OUTPUT

Load voltage range (at 47 to 63Hz)		48 to 264VAC (240VAC rated voltage)
		48 to 400VAC (380VAC rated voltage)
		48 to 480VAC (480VAC rated voltage)
Load current range		0.1 to 5A (see Fig.1)
Max.surge current (10ms)	Triac output: 10 times of rated current SCR output: 250Apk	
Max.off-state leakage current (at Rated voltage)		1.5mA
Max.on-state voltage drop		1.5VAC
Max. turn-on time	Zero-cross	1/2 cycle + 1ms
	Random	1ms
Max. turn-off time		1/2 cycle + 1ms
Max. transient overvoltage		600Vpk (at 240VAC rated voltage)
		800Vpk (at 380VAC rated voltage)
		1200Vpk (at 480VAC rated voltage)
Min. off-state dv/dt		200V/μs
Min. power factor		0.5

### DESCRIPTION

HFS41 pin-out is compatible with standard OAC type I/O modules, and all models are available with random turn-on as an alternative to zero-cross turn-on. The HFS41 SSR range offers a choice of 240VAC, 380VAC, 480VAC versions. Input Voltage specifications have 3-15VDC and 15-32VDC. All models except the 480VAC type include an internal snubber.

### 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. The input circuitry does not incorporate a circuit protecting the SSR from being damaged due to a reversed connection. Make sure that the polarity is correct when connecting the input lines.
4. When using the HFS41 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). For 220VAC the recommended varistor voltage is 470V; For 380VAC, the recommended varistor voltage is 750V.



HONGFA RELAY

ISO9001、ISO/TS16949、ISO14001、OHSAS18001 CERTIFIED

2006 Rev. 2.00

## ORDERING INFORMATION

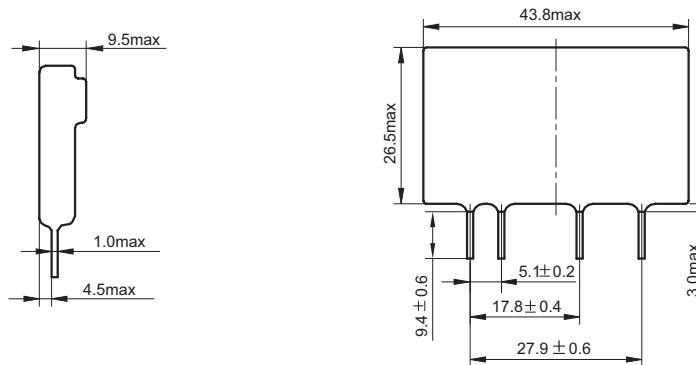
Type	HFS41 /	2	D-	240	A	5	Z	S-	N	G	XXX
Input voltage	1: 3 to 15V 2: 15 to 32V										
Input voltage form	D: DC										
Load voltage	240: 240V 380: 380V 480: 480V										
Load voltage form	A: AC										
Load current	3: 3A 5: 5A										
Zero cross function	Z: Zero cross turn-on P: Random cross turn-on										
Output component	S: SCR Nil: TRIAC										
RC snubber	N: Without RC Snubber Nil: With RC Snubber										
Sead form	G: Epoxy resin vacuum-dipped										
Special request code	( Only for special requirements, e.g. 555 stand for RoHS compliant )										

Notes: HFS41 is an environmental friendly product, please mark special code (555) when order.

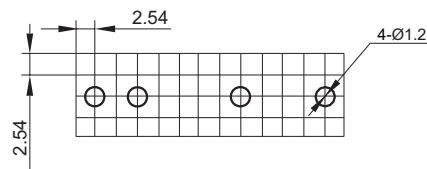
## OUTLINE DIMENSIONS, WIRING DIAGRAM AND MOUNTING HOLES

Unit: mm

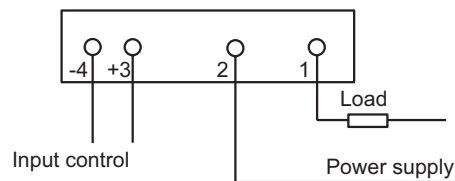
Outline Dimensions



PCB Layout

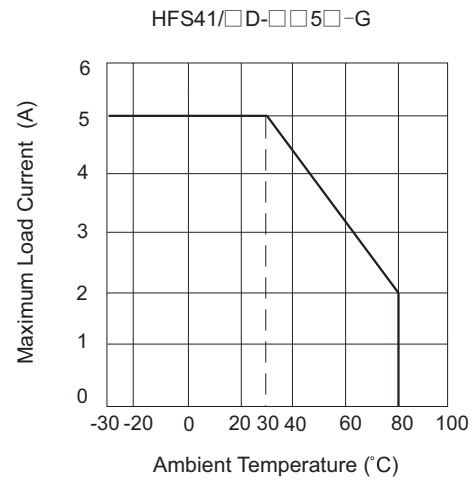
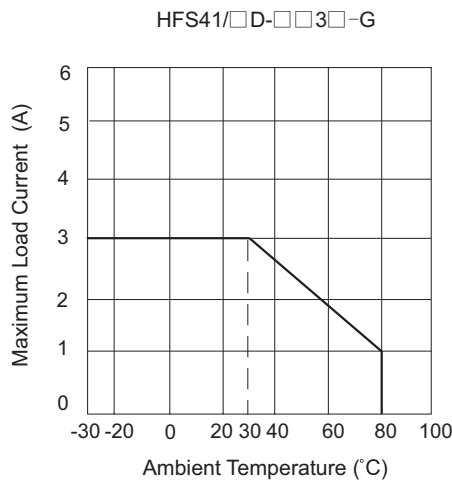


Wiring Diagram

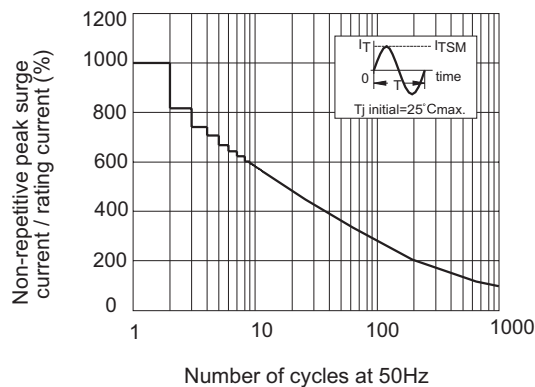


## CHARACTERISTIC CURVE

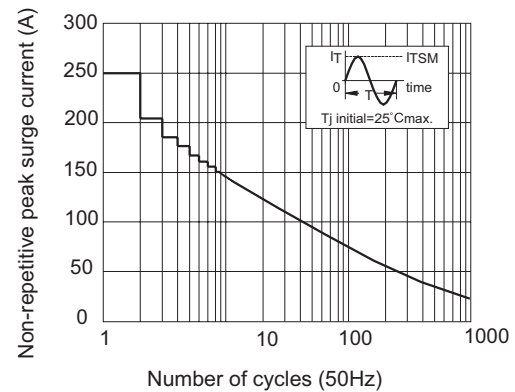
Max. Load Current vs. Ambient Temperature



Max. Permissible Non-repetitive Peak Surge Current vs. Number of cycles



TRIAC AC switch output Maximum permissible non-repetitive peak surge current vs. Number of cycles



SCR AC switch Output Maximum permissible non-repetitive peak surge current vs. Number of cycles

### 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.