

## Professionally approved products. Datasheet

# SPST-NO PCB Mount Latching Relay, 24V dc For Use In Power Applications

RS Stock 476-656



### Features

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

### INPUT (TA = 25°C)

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 (TA = 25°C)

Dielectric strength (input-output)	4000VAC, 50/60Hz 1min
Insulation resistance	1000MΩ (at 500VDC)
Vibration resistance	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
Unit weight	Approx. 15g

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### OUTPUT (TA = 25°C)

Load voltage range	48 to 280VAC (240VAC rated voltage)	
	48 to 440VAC (380VAC rated voltage)	
	48 to 530VAC (480VAC rated voltage)	
Load current range	0.1 to 5A	
Max. surge current (10ms)	Triac output: 10 times of rated current SCR output: 250Apk	
Max. off-state leakage current	1.5mA	
Max. on-state voltage drop	1.5Vrms	
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

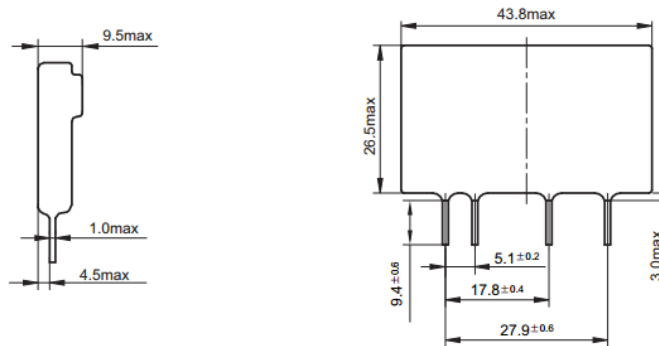
HFS41 pin-out is compatible with standard OAC type I/O modules, and all models are available with random turn-on as an alternative to zero-cross turn-on. The HFS41 SSR range offers a choice of 240VAC, 380VAC, 480VAC versions. Input Voltage specifications have 3 to 15VDC and 15 to 32VDC. All models except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

### PRECAUTIONS

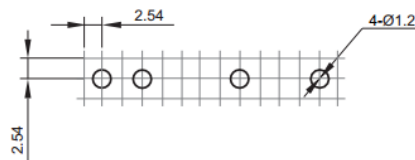
1. Soldering must be completed within 10 seconds at 260°C or less or within 5 seconds at 350°C or less.
2. The SSR case serves to dissipate heat. Install the relays so that they are adequately ventilated. If poor ventilation is unavoidable, reduce the load current by half.
3. The input circuitry does 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.

### Dimensions: (mm)

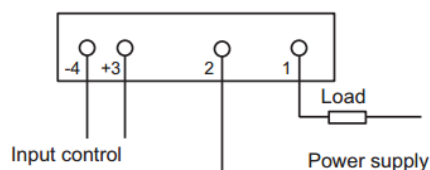
#### Outline Dimensions



#### PCB Layout (Bottom view)



#### Wiring Diagram

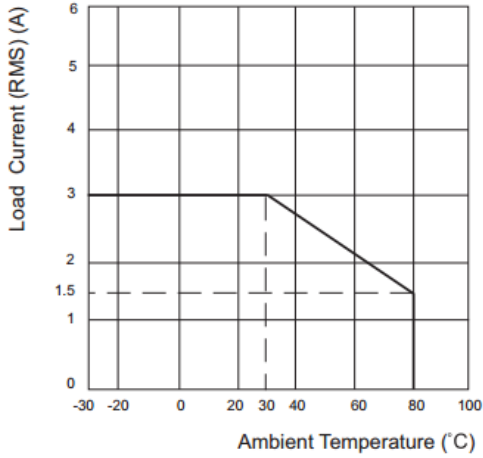


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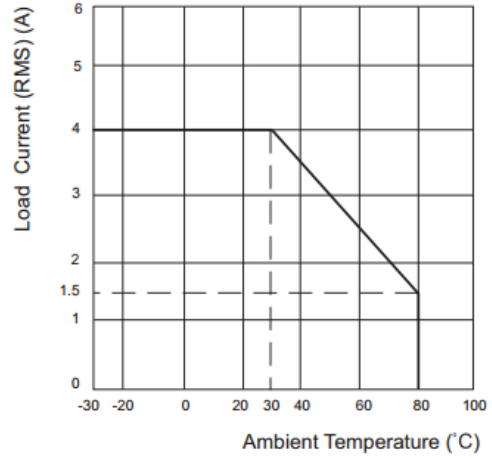
Max. Load Current vs. Ambient Temp. (3A)

HFS41/D-□□3□-□G



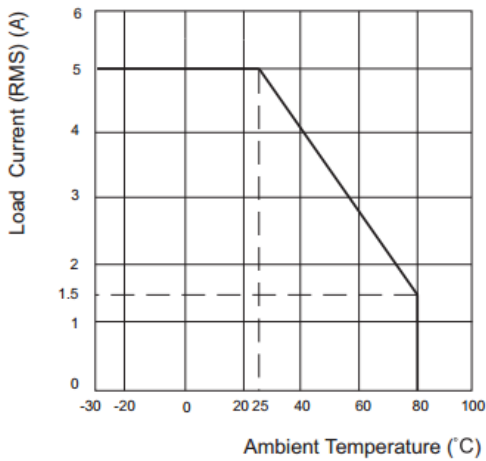
Max. Load Current vs. Ambient Temp. (4A)

HFS41/D-□□4□-□G

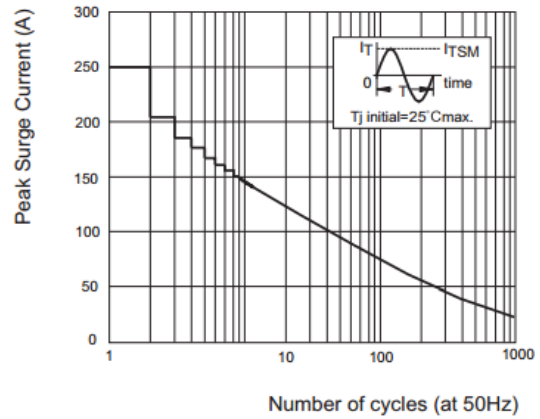


Max. Load Current vs. Ambient Temp. (5A)

HFS41/D-□□5□-□G



Max. Permissible Non-repetitive Peak Surge Current vs. Number of Cycles (SCR AC switch output)



Max. Permissible Non-repetitive Peak Surge Current vs. Number of Cycles (TRIAC AC switch output)

