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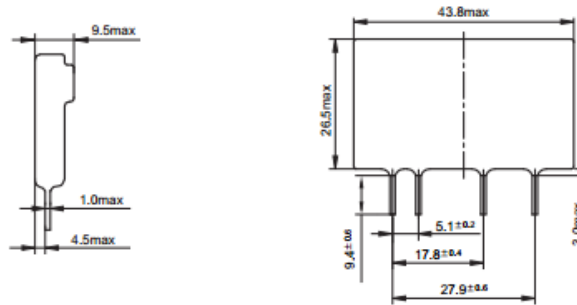
Datasheet

5 A PCB Mount, Zero Crossing Triac Solid State Relay, 32 V

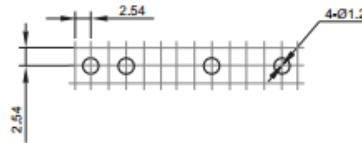
RS Stock number [476-646](#)

Dimensions: (mm)

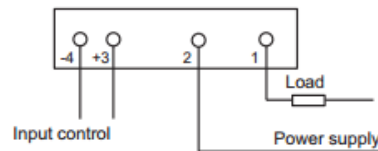
Outline Dimensions



PCB Layout
(Bottom view)



Wiring Diagram



Features

Input: DC control

Double SCAR AC output or TRIAC AC output

4000V dielectric strength

Printed circuit board mount

RoHS compliant

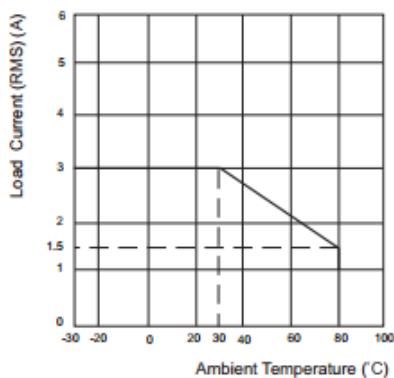
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Datasheet

Characteristic Curves

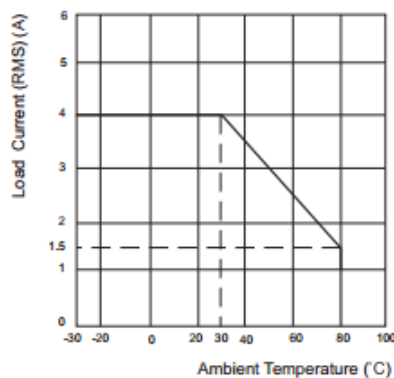
Max. Load Current vs. Ambient Temp. (3A)

HFS41/□D-□□3□-□G



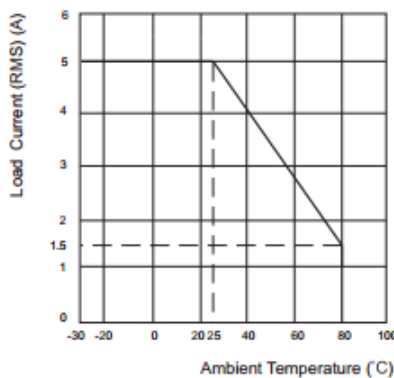
Max. Load Current vs. Ambient Temp. (4A)

HFS41/□D-□□4□-□G

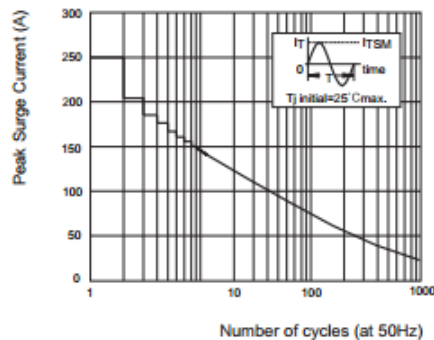


Max. Load Current vs. Ambient Temp. (5A)

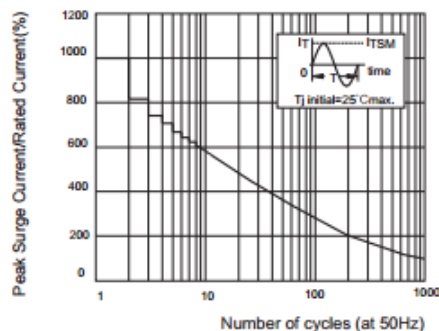
HFS41/□D-□□5□-□G



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)



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Datasheet

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

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

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: 250A _{pk}
Max.off-state leakage current		1.5mA
Max.on-state voltage drop		1.5V _{rms}
Max. turn-on time	Zero-cross	1/2 cycle + 1ms
	Random	1ms
Max. turn-off time		1/2 cycle + 1ms
Max. transient overvoltage		600V _{pk} (at 240VAC rated voltage)
		800V _{pk} (at 380VAC rated voltage)
		1200V _{pk} (at 480VAC rated voltage)
Min. off-state dv/dt		200V/μs
Min. power factor		0.5

Precautions

Soldering must be completed within 10 seconds at 260°C or less of within 5 seconds at 350°C or less.

This series serves to dissipate heat. Install the relays so they are adequately ventilated. If poor ventilation is unavoidable, reduce the load current by half.

The input circuitry does not incorporate a circuit protecting the series from being damaged due to a reversed connection.

Make sure that the polarity is correct when connecting the input lines

When using the series for an AC load with a peak voltage of more than 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.

Description

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. This range offers a choice of 240VAC, 380VAC and 480VAC versions. Input voltage specifications have 3 to 15VDC and 15 to 32VDC. All models except the 480VAC type include an internal snubber.