



D53-C3 Three Phase Solid State Relay

Features

- Photo isolation
- LED status indicator
- 4000V dielectric strength
- Zero cross or random turn-on
- Built-in snubber
- Removable finger proof cover available
- Panel mount
- RoHS compliant

DESCRIPTION

The D53-C3 relay is a three phase (3PST-NO). It has a 4-32VDC input control voltage with outputs rated from 10A - 60A. The 53D-C3 relays include LED status indicator. All models include an internal snubber and also provide 4000V of isolation between input-output-base. Encapsulation is thermally conductive epoxy.

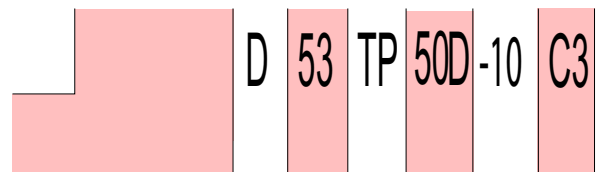
INPUT (TA = 25°C)

Control voltage range	4 to 32VDC
Must operate voltage	4VDC
Must release voltage	1VDC
Max. input current	35mA
Max. reverse protection voltage	-32VDC

OUTPUT (TA = 25°C)

Load voltage range	48-530VAC
Load current range	D53TP10D: 10A
	D53TP15D: 15A
	D53TP25D: 25A
	D53TP40D: 40A
	D53TP50D: 50A
	D53TP60D: 60A
Max. transient overvoltage	1200 Vpk
Max. surge current (10ms)	D53TP10D: 100Apk
	D53TP15D: 150Apk
	D53TP25D: 250Apk
	D53TP40D: 400Apk
	D53TP50D: 500Apk
	D53TP60D: 600Apk
Max. on-state voltage drop	1.5Vrms
Min. load current	100mA
Max. leakage current	10mA
Min. off-state dv/dt	200V/μs
Max. turn-on time	1/2cycle + 1ms
Max. turn-off time	1/2cycle + 1ms
Min. power factor	0.5

ORDERING INFORMATION



Input voltage D: 4 to 32VDC

Load voltage 53: 48 - 530VAC

Output number TP : Three Phase Output

Load current 10D: 10A 15D: 15A 25D: 25A
40D: 40A 50D: 50A 60D: 60A

Zero cross function Nil: Zero cross turn-on -10: Random turn-on

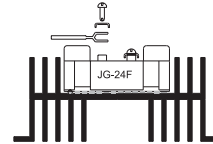
C3 C3 Semiconductors

GENERAL (TA = 25°C)

Dielectric strength (input to output)	4000VAC 50Hz/60Hz, 1min	
Insulation resistance	1000MΩ (at 500VDC)	
Max. capacitance (input to output)	8pF	
Ambient temperature	Operating	-30°C to 80°C
	Storage	-30°C to 100°C
Ambient humidity	45% to 85% RH	
Termination	Screw	
Mounting model	Panel mount	
Unit weight	Approx. 315g	

INSTALLATION

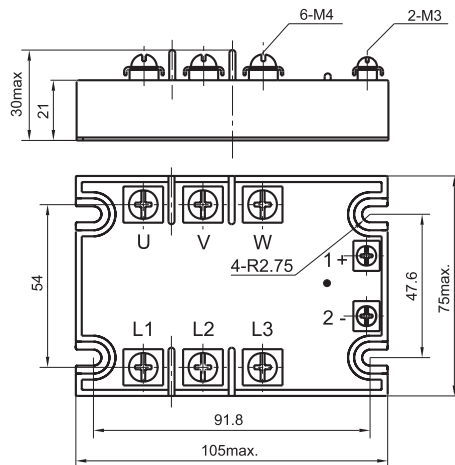
1. When mounting the relays side by side, provide a space equivalent to the width of a single SSR between two adjacent SSRs. Otherwise, reduce the load current flow to 1/2 to 1/3 of the rated current.
2. When mounting relays on heat sink surface, first apply a heat conductive grease to the metal back surface of the SSR. Press the SSR firmly onto the heat sink to ensure a good seal. Screw the SSR down to the heat sink.
3. Next, wire the screw terminals and securely tighten the screws.



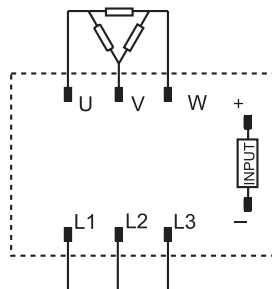
OUTLINE DIMENSIONS, WIRING DIAGRAM AND MOUNTING HOLES

Unit: mm

Outline Dimensions



Wiring Diagram



PRECAUTIONS

1. Before connecting a load that generates a high surge current, such as a lamp load to the SSR, make sure that the SSR can withstand the surge current of the load.
2. The product data sheet shows the non-repetitive peak value of the surge current that flows through the SSR. Normally, use 1/2 of the non-repetitive peak surge current as the standard value. If a surge current exceeding that value is expected, connect a quick-blowing fuse to protect the SSR.
3. When using the HFS24 for an AC load with a peak voltage of more than 750V, connect the load terminals of the relay to an inrush absorber.

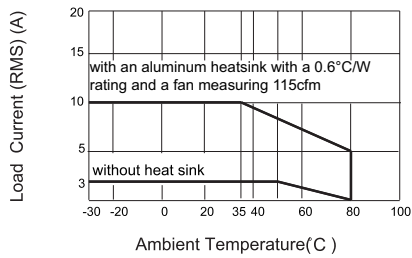
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For recommended applications and more information contact:
USA: Sales Support (888) 882-8689

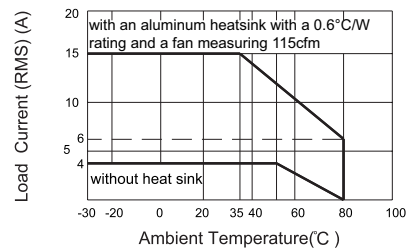
Email: sales@c3semi.com WEB SITE: <http://www.C3semi.com>

CHARACTERISTIC CURVES

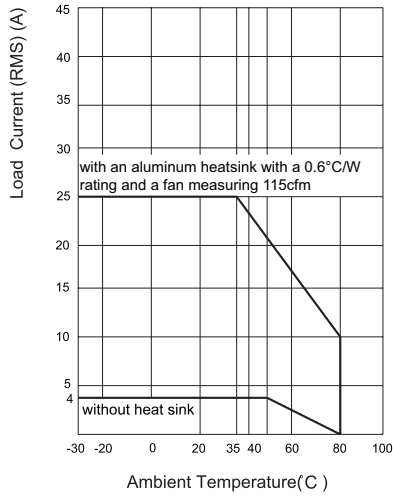
Max. Load Current vs. Ambient Temp. (10A)



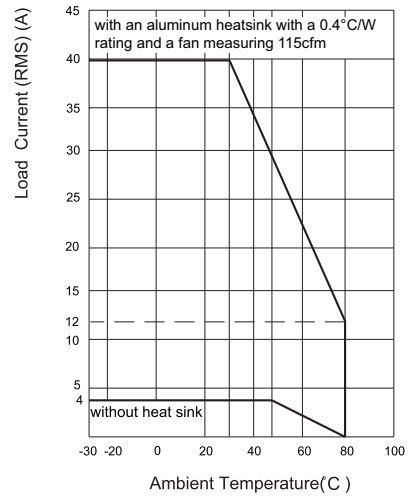
Max. Load Current vs. Ambient Temp. (15A)



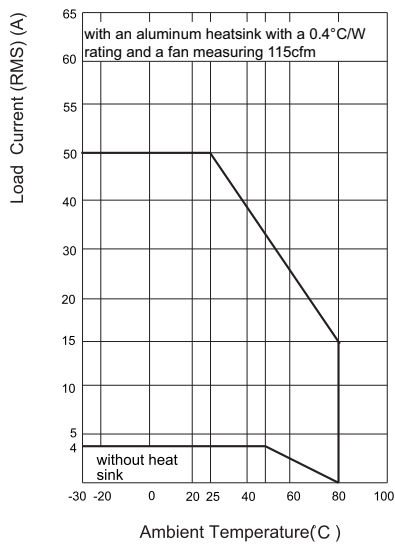
Max. Load Current vs. Ambient Temp. (25A)



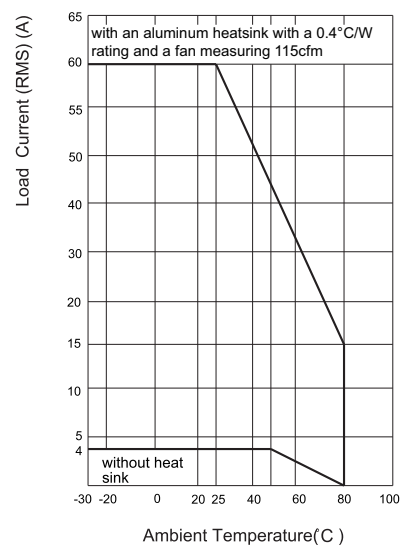
Max. Load Current vs. Ambient Temp. (40A)



Max. Load Current vs. Ambient Temp. (50A)



Max. Load Current vs. Ambient Temp. (60A)



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

