



HD - C3 SERIES SOLID STATE RELAY

Features

- 4000V dielectric strength
- Photo isolation
- Zero cross or random turn-on
- Removable finger proof cover available
- Double SCR AC output
- Panel mount
- DC or AC control
- RoHS compliant

DESCRIPTION

The HD-C3 come in either 3-32VDC or 90-280VAC controls and with outputs ranging from 40-100 Amps. All models come with built-in snubber and 4000V opto-isolation between input and output

INPUT (TA = 25°C)

Control voltage range (DC input)	3 to 32VDC (Without LED) 4 to 32VDC (With LED)
Control voltage range (AC input)	90 to 280VAC
Must operate voltage (DC input)	3VDC
Must operate voltage (AC input)	90VAC
Must release voltage (DC input)	1VDC
Must release voltage (AC input)	10VAC
Max. input current (DC input)	25mA
Max. reverse protection voltage (DC input)	-32VDC

GENERAL (TA = 25°C)

Dielectric strength (at 50/60Hz, 1min)	4000VAC (input to output) 2500VAC (input, output to base)	
Insulation resistance	1000MΩ (at 500VDC)	
Ambient temperature	Operating	-30°C to 80°C
	Storage	-30°C to 100°C
Ambient humidity	45% to 85% RH	
Unit weight	Approx. 88g	

OUTPUT (TA = 25°C)

Type	HD24	HD38	HD48
Load voltage range	48 to 280 VAC	48 to 440 VAC	48 to 530 VAC
Max. transient voltage	600Vpk	800Vpk	1200Vpk
Max. leakage current	5mA	5mA	5mA
Max. on-state voltage drop	1.7Vrms		
Load current	40A, 50A, 60A, 70A, 80A, 100A		
Max. surge current (10ms)	10 times of rated current		
Min. power factor	0.5		
Max. turn-on time	Random turn-on (DC input) : 1ms		
	Zero cross turn-on (DC input) : 1/2 cycle + 1ms		
	AC input type : 20ms		
Max turn-off time	(DC input)	1/2 cycle + 1ms	
	(AC input)	40ms	
Min. off-state dv/dt	500V/μs		

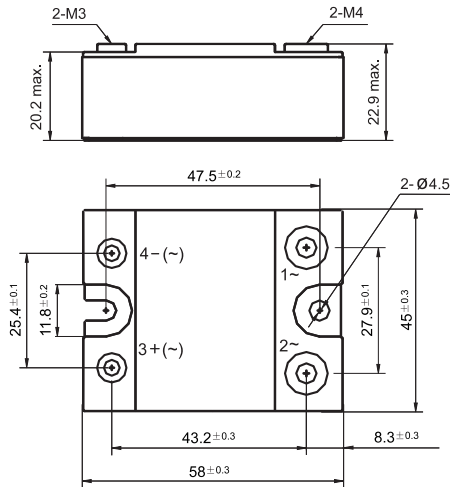
ORDERING INFORMATION

H	D	48	40	-10	C3
Type High Voltage					
Input voltage	D: 3 to 32VDC (Without LED) 4 to 32VDC (With LED) A: 90 to 280VAC				
Load voltage	24 : 48 to 280V 38 : 48 to 400V 48 : 48 to 530V				
Load current	40: 40A 50: 50A 60: 60A 70: 70A 80: 80A 100: 100A				
Zero cross function	Nil: Zero cross turn-on -10: Random turn-on				
C3	C3 Semiconductors				

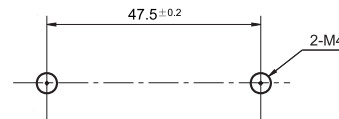
OUTLINE DIMENSIONS, WIRING DIAGRAM AND MOUNTING HOLES

Unit: mm

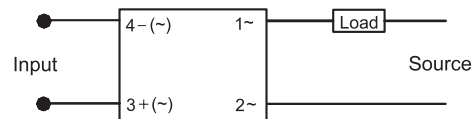
Outline Dimensions



Mounting Hole Layout



Wiring Diagram



PRECAUTIONS

1. When choosing a SSR, please notice the actual load current and working ambient temperature. To use the SSR correctly, please refer to CHARACTERISTIC DATA and make sure the heat sink size when it works in full load current.
2. Apply heat-radiation silicon grease or a heat conductive sheet between the SSR and heat sink. There will be a space between the SSR and heat sink. Attached to the SSR. Therefore, the generated heat of the SSR cannot be radiated properly without the grease. As a result, the SSR may be overheated and damaged or deteriorated.
3. Tighten the SSR terminal screws properly. If the screws are not tight, the SSR will be Damaged by heat generated when the power is ON. Perform wiring using the tightening torque shown in the following table.

Screw size	Recommended tightened torque
M3	0.58 to 0.98 N·m
M4	0.98 to 1.37 N·m

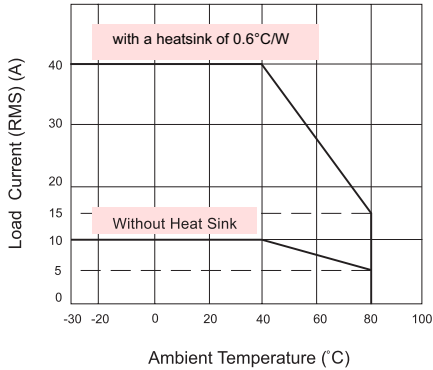
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For recommended applications and more information contact:
USA : Sales Support (888) 882-8689

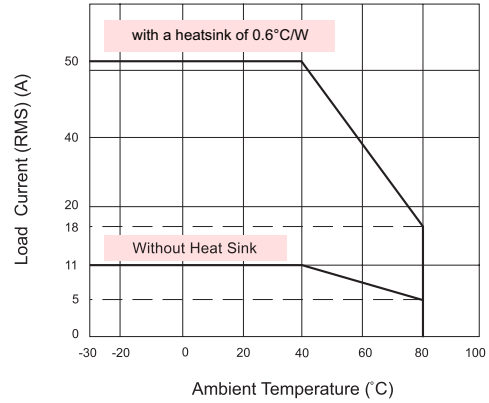
Email : sales@c3semi.com WEB SITE: <http://www.C3semi.com>

CHARACTERISTIC CURVES

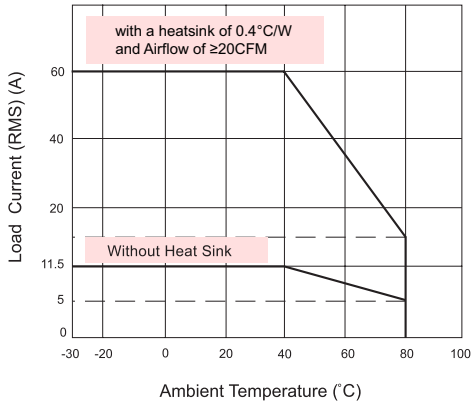
Max. Load Current vs. Ambient Temp. (40A)



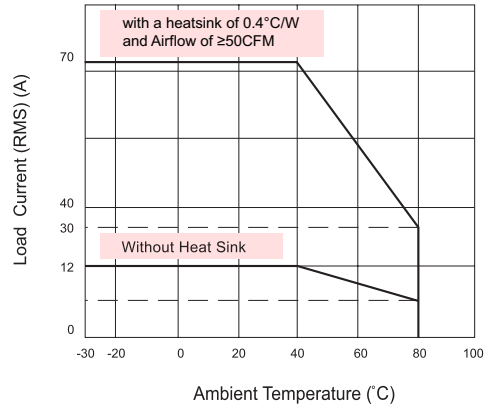
Max. Load Current vs. Ambient Temp. (50A)



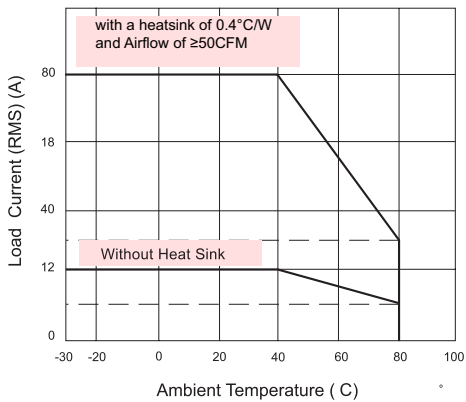
Max. Load Current vs. Ambient Temp. (60A)



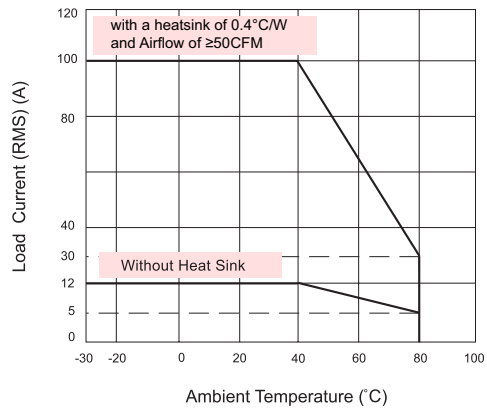
Max. Load Current vs. Ambient Temp. (70A)



Max. Load Current vs. Ambient Temp. (80A)



Max. Load Current vs. Ambient Temp. (100A)



Disclaimer

This datasheet is to be used as a reference only. All the specifications are subject to change without notice. The user should be in position to use the suitable product for their own application. If there are questions, please contact C3 Semiconductors' technical department. It is the user's sole responsibility to determine which product should be used.

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