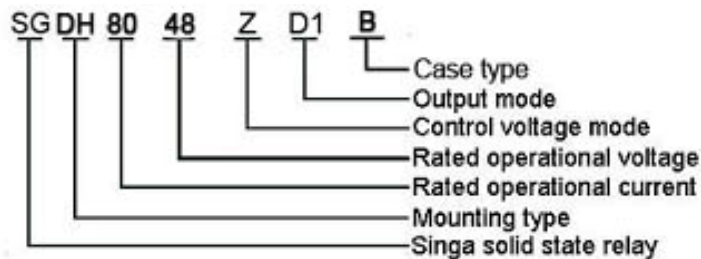


SOLID STATE RELAYS is series SGDH are power line relays allowing 10 to 150 Amps. switching power, with Voltage ratings from 28 to 480 Volts A.C.

SGDH series is Dual SCR Power Hybrid technology provides highly efficient thermal management for greatly increased cyclic life.

- ▲ High power and high current.
- ▲ High performance/low cost circuit design.
- ▲ Logic compatible current regulated input.
- ▲ 4000 Vrms optical isolation.
- ▲ Both “Zero Voltage” & phase controllable “Random Switching” versions.
- ▲ High voltage (1200 Vpk) versions for 480 Vrms service.
- ▲ LED-indication for control input.
- ▲ Control voltage range: 4~16 Vdc or 3 to 32 Vdc
- ▲ Industry standard “SCR Modules” package.

Ordering Key



Type Selection

- Mounting type** DH: AC Single phase, SCR Output.
- Rated operational current** 10: 10Amp, 25: 25Amp, 40: 40Amp, 60: 60Amp, 80: 80Amp, 100:100Amp, 120: 120Amp, 150: 150Amp.
- Rated operational voltage** 28: 280V_{AC}, 48: 480V_{AC}.
- Switched mode** Z: Zero Voltage, R: Random Switching.
- Input Control voltage** D1: DC 4~16V, D3: DC 3~32V.
- Case type** B: bar, Industry standard “SCles” package.

Selection Guide

Voltage	Control voltage	Rated operational current			
		10 Amp	25 Amp	40 Amp	60 Amp
280 V _{AC}	4to16 Vdc	SGDH1028ZD1B	SGDH2528ZD1B	SGDH4028ZD1B	SGDH6028ZD1B
“Zero Voltage”	3to32 Vdc	SGDH1028ZD3B	SDDH2528ZD3B	SGDH4028ZD3B	SDDH6028ZD3B
280 V _{AC}	4to16 Vdc	SGDH1028RD1B	SGDH2528RD1B	SGDH4028RD1B	SGDH6028RD1B
“Random Switching”	3to32 Vdc	SGDH1028RD3B	SDDH2528RD3B	SGDH4028RD3B	SDDH6028RD3B

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480 V _{AC}	4to16 Vdc	SGDH1048ZD1B	SGDH2548ZD1B	SGDH4048ZD1B	SGDH6048ZD1B
"Zero Voltage"	3to32 Vdc	SGDH1048ZD3B	SDDH2548ZD3B	SGDH4048ZD3B	SDDH6048ZD3B
480 V _{AC}	4to16 Vdc	SGDH1048RD1B	SGDH2548RD1B	SGDH4048RD1B	SGDH6048RD1B
"Random Switching"	3to32 Vdc	SGDH1048RD3B	SDDH2548RD3B	SGDH4048RD3B	SDDH6048RD3B
Voltage	Control voltage	Rated operational current			
		80 Amp	100 Amp	120 Amp	150Amp
280 V _{AC}	4to16 Vdc	SGDH8028ZD1B	SGDH10028ZD1B	SGDH12028ZD1B	SGDH15028ZD1
"Zero Voltage"	3to32 Vdc	SGDH8028ZD3B	SGDH10028ZD3B	SDDH12028ZD3B	SDDH15028ZD3
280 V _{AC}	4to16 Vdc	SGDH8028RD1B	SGDH10028RD1B	SGDH12028RD1B	SGDH15028RD1
"Random Switching"	3to32 Vdc	SGDH8028RD3B	SGDH10028RD3B	SDDH12028RD3B	SDDH15028RD3
480 V _{AC}	4to16 Vdc	SGDH8048ZD1B	SGDH10048ZD1B	SGDH12048ZD1B	SGDH15048ZD1
"Zero Voltage"	3to32 Vdc	SGDH8048ZD3B	SGDH10048ZD3B	SDDH12048ZD3B	SDDH15048ZD3
480 V _{AC}	4to16 Vdc	SGDH8048RD1B	SGDH10048RD1B	SGDH12048RD1B	SGDH15048RD1
"Random Switching"	3to32 Vdc	SGDH8048RD3B	SGDH10048RD3B	SDDH12048RD3B	SDDH15048RD3

SPECIFICATION

Input Parameter ①

	D1	D3
Control Voltage Range	4 to 16Vdc	3 to 32Vdc
Input Current (Max.)	13/42 mAdc @=5V/12V	13/16 mAdc @=5V/24V
Must Turn On Voltage	4Vdc	3Vdc
Must Turn Off Voltage	1Vdc	1Vdc
Reverse Voltage (Max.)	32Vdc	32Vdc
Display LED	Yes	Yes

Output Parameter ②

Output Parameter ②	Units	Specification Limits				
		10A	15A	25A	40A	60
Model No. SGD _H		10A	15A	25A	40A	60
Load Current Range	Arms	0.05 to 10	0.05 to 15	0.05 to 25	0.05 to 40	0.05 to 60
Surge Current, 20 mSec (Max.)	Arms		200		300	400
Load Voltage Range (280V)	Vrms			24 to 280		
TRIAC Over voltage (280V)	Vpk					
Load Voltage Range (480V)	Vrms			44 to 480		
TRIAC Over voltage (480V)	Vpk			≥1200		
Frequency Range	Hz			47 to 63		
Min. Off-state dv/dt	V/μsec			500		
Off State Leakage Current (Max.)	mArms			≤8		
On-State Voltage Drop (Max.)	Vrms			1.6		

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Series **SGDH**

10 to 150 Amps AC SSR

Thermal Resistance, (Rthjc)	°C/W	2.5	2.5	2.5	1.3
Turn On Time (Max.) "Z"	Cycle		1/2		
Turn On Time (Max.) "R"	mSec		1		
Turn Off Time (Max.)	Cycle		1/2		
Model No. SGDH		80A	100A	120A	150A
Load Current Range	Arms	0.05 to 80	0.05 to 100	0.05 to 200	0.05 to 150
Surge Current, 20 mSec (Max.)	Arms	200		300	400
Load Voltage Range (280V)	Vrms		24 to 280		
TRIAC Over voltage (280V)	Vpk				
Load Voltage Range (480V)	Vrms		44 to 480		
TRIAC Over voltage (480V)	Vpk		≥1200		
Frequency Range	Hz		47 to 63		
Min. Off-state dv/dt	V/μsec		500		
Off State Leakage Current (Max.)	mArms		≤8		
On-State Voltage Drop (Max.)	Vrms		1.6		
Thermal Resistance, (Rthjc)	°C/W	0.65	0.3	0.3	0.3
Turn On Time (Max.) "Z"	Cycle		1/2		
Turn On Time (Max.) "R"	mSec		1		
Turn Off Time (Max.)	Cycle		1/2		
General Specifications					
Dielectric (Input/Output)	Vrms		2500		
Dielectric (Input-Output/Base)	Vrms		2500		
Capacitance(Max.)	pf		10		
Ambient Operating Temperature Range			-30 to +80 °C		
Ambient Storage Temperature Range			-30 to +80 °C		
Weight: (typical)			125 g.		
Base plate: Aluminum or Copper, nickel-plated					
Case Color: Black					
Mounting Dimensions:	L×W×H		94×25×38 mm, with LED		

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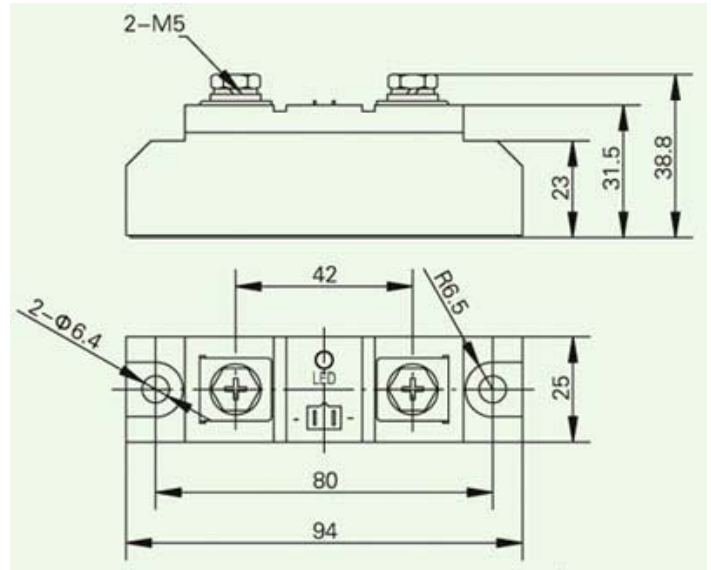
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