

Series SGDF Compound Solid State Relay is a new type relay product developed independently according to demand of the user. It is a singular module that is comprised by a SSR that has zero tune on-off function connects the load at first an disconnects loads at last and a mechanical relay that has low power waste keeps connection of load at other working time.

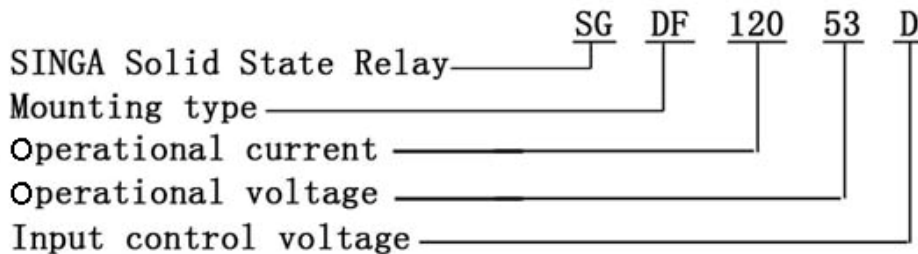
SGDF avoids the disadvantages that mechanical relay make the surge current when it turns on and make arc when it turns off with SSR or thyristor switch will make power waste heat from the voltage drop of silicon during it is on work.

SGDF can be widely used in the power capacitor turning on and off, motor switching on off and temperature controlling of industry furnace etc.

### FEATURE

- Bar structure, convenient for mounting and using.
- High performance/low cost circuit design.
- Dual SCR Power Hybrid technology provides highly efficient thermal management for greatly increased cyclic life.
- High voltage (1400 Vpk) versions for 530 V service.
- Control voltage range: 12 Vdc.
- Switch type: Zero voltage turns on, Zero current turn off, and keep low power west. Especially apply in power capacitor turning on and off.
- LED-indication for control input.

### ORDERING KEY



### TYPE SELECTION

<b>Mounting type</b>	<b>DF: AC Single phase, SCR Output.</b>
<b>Operational current</b>	<b>60: 60Amp, 80: 80Amp, 120: 120Amp, 250: 250Amp,</b>
<b>Operational voltage</b>	<b>48: 480V<sub>AC</sub>, 53: 530V<sub>AC</sub>.</b>
<b>Input Control voltage</b>	<b>D: DC12V</b>

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### SELECTION GUIDE

Voltage	Control voltage	Operational current			
		60 Amp	80 Amp	120 Amp	250 Amp
480 V <sub>AC</sub>	12 Vdc	SGDF6048D	SGDF8048D	SGDF12048D	SGDF25048Z1
530 V <sub>AC</sub>	12Vdc	SGDF6053D	SGDF8053D	SGDF12053D	SGDF25053D
Case type		Case A	Case A	Case B	Case B

### SPECIFICATIONS

PARAMETER	Units	Specification Limits			
Model No. SGDF		60A	80A	120A	250A
<b>Input Parameter</b>					
Control Voltage。	Vdc	12			
Input Current (Max.)	mAdc	95	95	180	180
Display LED		yes			
<b>Output Parameter</b>					
Current Range Max。	Arms	0.05 to 60	0.05 to 80	0.05 to 120	0.05 to 250
Surge Current, 20 mSec (Max.)	Arms	600	1000	1500	2800
Working current of capacitor	Arms	<16	<21	<31	<63
Load Voltage Range (480V)	Vrms	48 to 480			
SCR Over voltage (480V)	Vpk	1200			
Load Voltage Range (530V)	Vrms	53 to 530			
SCR Over voltage (530V)	Vpk	>1400			
Frequency Range	Hz	47 to 63			
Off State dv/dt (Min)	V/μsec	500			
Off State Leakage Current (Max.)	mArms	<8		<10	
On State Voltage Drop (Max.)	Vrms	1.8	1.8	1.6	1.6
Thermal Resistance, (Rthjc)	°C/W	0.65	0.5	0.3	0.2
Turn On Time (Max.)	Cycle	1/2			
Turn off delay-time (Max.)	mSec	40 to 100			
Holding contact connect delay-time	mSec	40 to 100			
Holding contact resistance (Max.)	mΩ	50	50	30	30
<b>Coupling Specifications</b>					
Dielectric (Input/Output)	Vrms	1500			
Dielectric (Input-Output/Base)	Vrms	2500			
Capacitance	pf	10			

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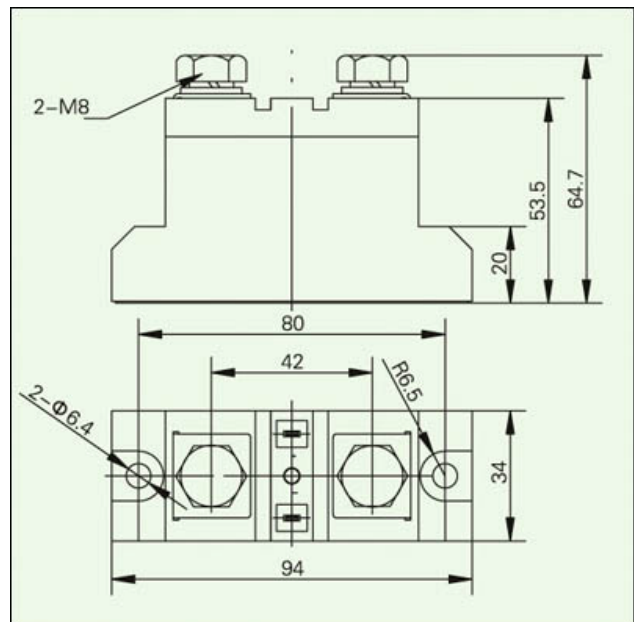
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### General Specifications

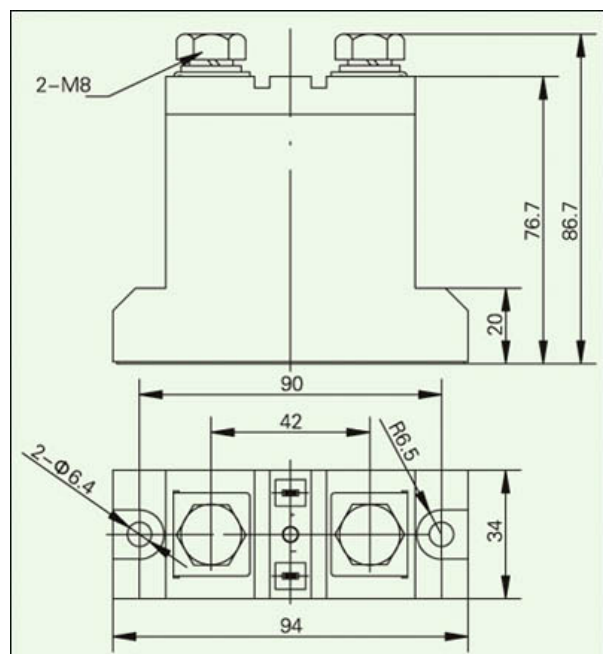
Weight: ( typical)	g	300	390
Mounting Dimensions: L×W×H	mm	94×34×64.7	94×34×87
Ambient temperature range: operating or Storage		-30 to +80℃	
Case Color: Black			



Case A



Case B



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