

Semiconductor Device Solid state relays

SSR 60 to 150 Amps AC SSR

Ordering Key

S	S	R	200	48	Ζ	D1
	1		2	3	4	5

- 1: Semiconductor type;
- 2: Rated working current (A);
- 3: Rated working voltage (V) (24:240
- V,44:440V,48:480V); 4: Control method Z - Zero, R -Random;
- 5: Control voltage D: 3-8V, D1 -4-16VDC, D3 - 3-32VDC, A2 -90-250VAC.

Voltage ratings from 28 to480 Volts A.C. SSR series is Dual SSR 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
- Industy standard "SCR Modules" package.

Type Selection

- Mounting type
- Rated operational current
- Rated operational voltage
- Switched mode
- Input Control voltage
- Case type

DH: AC Single phase, SCR Output.

- 60: 60Amp, 80: 80Amp, 100:100Amp, 120: 120Amp, 150: 150Amp.
- 28: 280VAC, 48: 480VAC.
- Z: Zero Voltage, R: Random Switching.
- D1: DC 4~16V, D3: DC 3~32V.

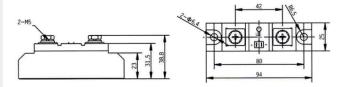
SOLID STATE RELAYS is series SSR are power line relays allowing 10 to 150 Amps. switching power, with

B: bar, Industy standard "SCles" package.

Selection guide

Voltage	Control	Rated operational current						
	voltage	60 Amp	80 Amp	100 Amp	120 Amp	150 Amp		
280 V _{AC} "Zero Voltage"	4to16 Vdc	SSR-6028ZD1B	SSR-8028ZD1B	SSR-10028ZD1B	SSR-12028ZD1B	SSR-15028ZD1B		
	3to32 Vdc	SSR-6028ZD3B	SSR-8028ZD3B	SSR-10028ZD3B	SSR-12028ZD3B	SSR-15028ZD3B		
280 V _{AC} "Random Switching"	4to16 Vdc	SSR-6028RD1B	SSR-8028RD1B	SSR-10028RD1B	SSR-12028RD1B	SSR-15028RD1B		
	3to32 Vdc	SSR-6028RD3B	SSR-8028RD3B	SSR-10028RD3B	SSR-12028RD3B	SSR-15028RD3B		
480 V _{AC}	4to16 Vdc	SSR-6048ZD1B	SSR-8048ZD1B	SSR-10048ZD1B	SSR-12048ZD1B	SSR-15048ZD1B		
"Zero Voltage"	3to32 Vdc	SSR-6048ZD3B	SSR-8048ZD3B	SSR-10048ZD3B	SSR-12048ZD3B	SSR-15048ZD3B		
480 V _{AC} "Random Switching"	4to16 Vdc	SSR-6048RD1B	SSR-8048RD1B	SSR-10048RD1B	SSR-12048RD1B	SSR-15048RD1B		
	3to32 Vdc	SSR-6048RD3B	SSR-8048RD3B	SSR-10048RD3B	SSR-12048RD3B	SSR-15048RD3B		

Dimension





Semiconductor Device Solid state relays

Specifications

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					
Reverse Voltage (Max.)	32Vdc			1Vdc 32Vd	n.	
Display LED	Yes			Yes	0	
Display LED	100			100		
Output Parameter ②	Units	Specification Limit	5			
Model No. SSR		60A			80A	
Load Current Range	Arms	0.05 to 60			0.05 to 80	
Surge Current, 20 mSec (Max.)	Arms	600			1000	
Load Voltage Range (280V)	Vrms	24 to 280				
SCR interdiction voltage (280V)	Vpk	≥800				
Load Voltage Range (480V)	Vrms	44 to 480				
SCR interdiction voltage (480V)	Vpk	≥1200				
Frequency Range	Hz	47 to 63				
Min. Off-state dv/dt	V/µsec	500				
Off State Leakage Current (Max.)	mArms					
On-State Voltage Drop (Max.)	Vrms	1.6				
Thermal Resistance, (Rthjc)	°C/w	0.65			0.5	
Turn On Time (Max.) "Z"	Cycle	1/2			0.0	
()	mSec					
Turn On Time (Max.) "R"		1				
Turn Off Time (Max.)	Cycle	1/2				
Model No. SSR		100A	120A			150A
Load Current Range	Arms	0.05 to 100	0.05 to	0 120		0.05 to 150
Surge Current, 20 mSec (Max.)	Arms	1200	1500			2000
Load Voltage Range (280V)	Vrms	24 to 280				
SCR interdiction voltage (280V)	Vpk	>800				
Load Voltage Range (480V)	Vrms	44 to 480				
SCR interdiction voltage(480V)	Vpk	≥1200				
Frequency Range	Hz	47 to 63				
Min. Off-state dv/dt	V/µsec	500				
Off State Leakage Current (Max.)	mArms					
On-State Voltage Drop (Max.)	Vrms	1.6				
Thermal Resistance, (Rthjc)	°C/w	0.3	0.3			0.3
Turn On Time (Max.) "Z"		1/2	0.5			0.0
Turn On Time (Max.) 2 Turn On Time (Max.) "R"	Cycle mSec	1				
()		1/2				
Turn Off Time (Max.)	Cycle	1/2				
General Specifications						
Dielectric (Input/Output)	Arms	2500				
Dielectric (Input-Output/Base)	Arms	2500				
Capacitance(Max.)	pf	10				
Ambient Operating Temperature Ran	•	−30°C to +80°C				
Ambient Storage Temperature Range	-	-30°C to +80°C				
Weight: (typical)	125 g.					
	kel-nlated	120 g.				
Base plate: Aluminum or Copper, nic Case Color: Black	tor platou					



SSR 200 to 400 Amps AC SSR

Rated operational current 200A to 400Amps.
Rated operational voltage 280V or 480 V

4000 Vrms Optical Isolation.(input/output)

■ Input Voltage Range 4 to 16 Vdc, 3 to 32 Vdc or 90 to 250 Vac.

Series SSR Solid State Relays are AC relays, Triac Output. The triac version of the zero switching relay is an inexpensive solution for resistive loads. The zero switching relay switches on when the AC sine voltage just crosses zero, and switches off when the current crosses zero.

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Ordering Key

 $\frac{S}{1} \quad \frac{S}{1} \quad \frac{R}{2} \quad \frac{200}{2} \quad \frac{48}{3} \quad \frac{Z}{4} \quad \frac{D1}{5}$

- 1: Semiconductor type;
- Rated working current (A);
- 3: Rated working voltage (V) (24:240 V,44:440V,48:480V);
- 4: Control method Z Zero, R -Random;
- 5: Control voltage D: 3-8V, D1 -4-16VDC, D3 - 3-32VDC, A2 -90-250VAC.

- Both "Zero Voltage" & phase controllable "Random Switching" versions.
- LED-indication for control input.

Type Selection

- Mounting type
- Rated operational current
- Rated operational voltage
- Switched mode
- Input Control voltage
- Case type

D:AC Single phase Solid State Relay

200:200Amp,250:250Amp,300:300Amp,350:350Amp,400:400Amp 28:280VAC,48:480VAC.

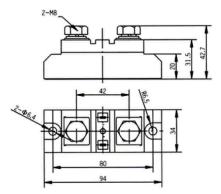
Z:Zero Voltage, R:Random Switching.

- D1:DC 4to16V,D3:DC 3to32V,A2:AC 90to250V.
- Blank:Case A,1:Case B,with LED.

Selection guide

Voltage	Control voltage	Rated operational current						
		200 Amp	250 Amp	300 Amp	350 Amp	400 Amp		
280 V _{AC}	4 to16 Vdc	SSR-20028ZD1	SSR-25028ZD1	SSR-30028ZD1	SSR-35028ZD1	SSR-40028ZD		
"Zero Voltage"	3 to 32 Vdc	SSR-20028ZD3	SSR-25028ZD3	SSR-30028ZD3	SSR-35028ZD3	SSR-40028ZD		
	90 to 250Vac	SSR-20028ZA2	SSR-25028ZA2	SSR-30028ZA2	SSR-35028ZA2	SSR-40028ZA		
280 V _{AC}	4 to16 Vdc	SSR-20028ZD1	SSR-25028ZD1	SSR-30028ZD1	SSR-35028ZD1	SSR-40028ZD		
"Random Switching"	3 to 32 Vdc	SSR-20028ZD3	SSR-25028ZD3	SSR-30028ZD3	SSR-35028ZD3	SSR-40028ZD		
	90 to 250Vac	SSR-20028ZA2	SSR-25028ZA2	SSR-30028ZA2	SSR-35028ZA2	SSR-40028ZA		
480 V _{AC} "Zero Voltage"	4 to 16 Vdc	SSR-20048ZD1	SSR-25048ZD1	SSR-30048ZD1	SSR-35048ZD1	SSR-40048ZD		
	3 to 32 Vdc	SSR-20048ZD3	SSR-25048ZD3	SSR-30048ZD3	SSR-35048ZD3	SSR-40048ZD		
	90 to 250Vac	SSR-20048ZA2	SSR-25048ZA2	SSR-30048ZA2	SSR-35048ZA2	SSR-40048ZA		
480 V _{AC} "Random Switching"	4 to 16 Vdc	SSR-20048RD1	SSR-25048RD1	SSR-30048RD1	SSR-35048RD1	SSR-40048RD		
	3 to 32 Vdc	SSR-20048RD3	SSR-25048RD3	SSR-30048RD3	SSR-35048RD3	SSR-40048RE		
	90 to 250Vac	SSR-20048RA2	SSR-25048RA2	SSR-30048RA2	SSR-35048RA2	SSR-40048RA		

Dimension





Semiconductor Device Solid state relays

Specifications

Parameter-list	Units		Specification Limits					
Input Parameter ① D1	D1		D3		A2			
Control Voltage Range	4 to 16V	4 to 16Vdc		с	90 to250Va	IC		
Input Current (Max.) @=5V/12V	13/42 @:	=5x/12v	13/16 @=	5V/24V				
Must Turn On Voltage	4 Vdc		3 Vdc		90Vac			
Must Turn Off Voltage	1 Vdc		1 Vdc		1Vav	1Vav		
Reverse Voltage (Max.)	32 Vdc		32 Vdc					
Display LED	yes		yes		yes			
Output Parameter 2	Units	Specificati	on Limits					
Model No. SSR		200	250	300	350	400		
Load Current Range	Arms	0.05 to 200	0.05 to 250	0.05 to 300	0.05 to 350	0.05 to 400		
Surge Current, 20 mSec (Max.)	Arms	2500	3400	4500	5000	6000		
Load Voltage Range (280V)	Vrms	24 to 280						
SCR interdiction voltage (280V)	Vpk	≥800						
Load Voltage Range (480V)	Vrms	44 to 480						
SCR interdiction voltage (480V)	Vpk	≥1200						
Frequency Range	Hz	47 to 63						
Off State dv/dt (Min)	V/µsec	500						
Off State Leakage Current (Max.)	mArms	≤10						
On State Voltage Drop (Max.)	Vrms	1.8						
Thermal Resistance, (Rthjc)	°C/w	0.22	0.15	0.14	0.13	0.12		
Turn On Time (Max.) "Z"	Cycle	1/2						
Turn On Time (Max.) "R"	mSec	1						
Turn Off Time (Max.)	Cycle	1/2						
Turn Off Time (Max.) "A2"	mSec	40						
Coupling Specifications								
Dielectric (Input/Output)	Arms		2500					
Dielectric (Input-Output/Base)	Arms	2500						
Capacitance	pf	10						
General Specifications								
Ambient temperature range:	operatino	operating or Storage		−30°C to +80°C				
Weight: (typicro)	g	280						
Base plate: Aluminum or Copper, nick	el-plated							
Case Color: Black								
Mounting Dimensions	LxWxH		Case: 94x34	1x42.7mm				

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