



STABLE THREE PHASE POWER CONTROL

Three-Phase Solid State Relays SR(H)2/3 Series

- Two mounting hole types and sizes
- Alarm (overheating) function: alarm output, disconnect output
- High dielectric strength: 4000 VAC (select models)
- High heat dissipation efficiency with ceramic PCB
- Rated input voltage: 4-30 VDC, 24 VAC, 90-240 VAC
- Rated load voltage: 24-240 VAC, 48-480 VAC
- Rated load current: 15 A, 30 A, 40 A, 50 A, 75 A



Two Mounting Hole Types



Alarm Output Function



Low Voltage Input



4000 VAC Dielectric Strength (Select Models)



Removable Heatsink (Integrated Heatsink Types)



Various Mounting Methods

Ordering Information

SR	H	3	-	1	4	15	R
Function							
No mark							
R							
Rate load current (Resistive load)							
15							
30							
40							
50							
75							
Rated load voltage							
2							
4							
Rated input voltage							
1							
2							
4							
Control phase							
2							
3							
Type							
No mark							
H							
Item							
SR							



Specifications

Input

Rated input voltage range	4-30VDC	24VACrms (50/60Hz)	90-240VACrms (50/60Hz)
Input voltage range	4-32VDC	19-26.4VACrms (50/60Hz)	85-264VACrms (50/60Hz)
Max. input current	25mA	15mA	25mA
Pick-up voltage	Min. 4VDC	Min. 19VACrms	Min. 85VACrms
Drop-out voltage	Max. 1VDC	Max. 4VACrms	Max. 10VACrms
Turn-on time	Zero cross turn-on	Max. 0.5 cycle of load source + 1ms	Max. 1.5 cycle of load source + 1ms
	Random turn-on	Max. 1ms	—
Turn-off time	Max. 0.5 cycle of load source + 1ms	Max. 1.5 cycle of load source + 1ms	Max. 1.5 cycle of load source + 1ms

Output

Rated load voltage range	24-240VACrms (50/60Hz)					48-480VACrms (50/60Hz)				
Load voltage range	24-264VACrms (50/60Hz)					48-528VACrms (50/60Hz)				
Rated load current	Resistive load(AC-51) ^{*1}									
	15Arms	30Arms	50Arms	75Arms	15Arms	30Arms	40Arms	50Arms	75Arms	
Min. load current	0.15Arms					0.5Arms				
Max. 1 cycle surge current (60Hz)	250A	400A	1000A		300A	500A	1000A			
Max. non-repetitive surge current (I ² t, t=8.3ms)	340A ² S	1000A ² S	4000A ² S		350A ² S	1000A ² S	4000A ² S			
Peak voltage (non-repetitive)	600V					1200V (Zero cross turn-on), 1000V (Random turn-on)				
Leakage current (Ta=25°C)	Max. 10mArms (240VAC /60Hz)					Max. 10mArms (480VAC /60Hz)				
Output on voltage drop [Vpk] (Max. load current)	Max. 1.6V									
Static off-state dv/dt	500V/μs									

*1: AC-51 is utilization category at IEC 60947-4-3.

Alarm output (Temperature overheat)

Rated input voltage range	4-30VDC	24VACrms (50/60Hz)	90-240VACrms (50/60Hz)
Load input voltage	Max. 30VDC	Max. 30VDC	Max. 30VDC
Load input current	Max. 100mA	Max. 50mA	Max. 50mA
Turn-off time	Max. 20ms	Max. 40ms	Max. 40ms

General specifications

Dielectric strength (Vrms)	<ul style="list-style-type: none"> 24-240VAC rated load current 15A/30A : 2500VAC 50/60Hz 1 min (Input-Output, Input/Output-Case) 24-240VAC rated load current 50A/75A 48-480VAC rated load current 15A/30A/40A/50A/75A: 4000VAC 50/60Hz 1 min (Input-Output, Input/Output-Case) 	
Insulation resistance	Over 100MΩ (at 500VDC megger) (Input-Output, Input/Output-Case)	
Indicator	Input indicator: Green LED / Alarm output indicator: Red LED	
Vibration	Mechanical	0.75mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 1 hour
	Malfuction	0.5mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 10 min
Shock	Mechanical	300m/s ² (approx. 30G) in each X, Y, Z direction for 3 times
	Malfuction	100m/s ² (approx. 30G) in each X, Y, Z direction for 3 times
Environment	Ambient temperature	-30 to 80°C (in case of the rated input voltage 90-240VAC : -30 to 70°C), Storage: -30 to 100°C (The rated load current capacity is different depending on ambient temperature.Refer to ■ SSR Derating Curve.)
	Ambient humidity	45 to 85%RH, Storage: 45 to 85%RH
Input terminal connection	Min. 1×0.5mm ² (1×AWG 20) Max. 1×1.5mm ² (1×AWG 16) or 2×1.5mm ² (2×AWG 16)	
Output terminal connection	Min. 1×1.5mm ² (1×AWG 16) Max. 1×16mm ² (1×AWG 6) or 2×6mm ² (2×AWG 10)	
Input terminal fixed torque	0.75 to 0.95N·m	
Output terminal fixed torque	1.6 to 2.2N·m	
Approval	CE, RoHS, UL	
Weight ^{*1}	<ul style="list-style-type: none"> Detachable heatsink type : approx. 365g (approx. 275g) Integrated heat sink type - Rated load current 15A/30A/40A: approx. 896g (approx. 686g) Rated load current 50A: approx. 1508g (approx. 1268g) Rated load current 75A: approx. 2354g (approx. 2064g) 	

*1: The weight includes packaging. The weight in parenthesis is for unit only.

*Environment resistance is rated at no freezing or condensation.

*For wiring the terminal, an O-ring terminal must be used.