

Solid State Relay

■ SSR-2 series Single phase solid state relay

■ Specification

■ DC input – AC load

Model	Low	SSR-2D102Z	SSR-2D202Z	SSR-2D302Z	SSR-2D402Z				
	High	SSR-2D104Z	SSR-2D204Z	SSR-2D304Z	SSR-2D404Z				
Appearance		 							
W X H X D (mm)		42 X 64 X 27.3							
L O A D	Rated Load Voltage	Low	90 – 264 V a.c.						
		High	90 – 480 V a.c.						
	Peak Voltage (Non-repetition)	Low	600 V						
		High	800 V	1,200 V					
	Rated load current		10 A	20 A	30 A	40 A			
	Frequency		50/60 Hz (Dual usage)						
	Surge current (8.3 ms No repetition)	Low	170 A	260 A	420 A				
		High	170 A	250 A	370 A				
Leakage current		20 mA max							
Output ON voltage dropping		Less than 1.6 V (R.M.S)							
I N P U T	Rated Voltage		5 – 24 V d.c.						
	Operating Voltage Range		4.6 – 32 V d.c.						
	Impedance		Less than 4 kΩ						
	Operation Voltage		more than 4.6 V d.c.						
	Input Current		Constant-current system : 8 mA (±3)						
Response Time		1/2 Cycle + 1 ms max. ("R" type below 1 ms)							
Insulating Resistance		500 V d.c., 100 MΩ (Between the input / output and case)							
Dielectric strength		2,500 V a.c. (For 1 min at 60 Hz)							
Vibration resistance		10 – 55 Hz, Double amplitude : 1.5 mm, X,Y, and Z direction for 2 hours							
Shock resistance		1,000 %, X,Y,Z each axis 3 times							
Storage Temperature		-30 ~ 90 °C							
Ambient Temperature		-5 ~ 40 °C (But without frostiness)							
Ambient Humidity		45 ~ 85 % RH							
Pollution level grade		2 level pollution							
Usage		Resistive load / Inductive load							
Accepted standard		IEC 62314							
Weight		Approx. 89g							

Solid State Relay

■ AC input – AC load

Model	Low	SSR-2A102Z	SSR-2A202Z	SSR-2A302Z	SSR-2A402Z				
	High	SSR-2A104Z	SSR-2A204Z	SSR-2A304Z	SSR-2A404Z				
Appearance		 				Temperature Controller			
W X H X D (mm)		42 X 64 X 27.3				Recorder			
L O A D	Rated Load Voltage	Low	90 – 264 V a.c.			Digital Counter Timer			
		High	90 – 480 V a.c.						
	Peak Voltage (Non-repetition)	Low	600 V						
		High	800 V	1,200 V	1,200 V	Analog Timer			
	Rated load current		10 A	20 A	30 A	40 A	Panel Meter		
	Frequency		50/60 Hz (Dual usage)				Multi Pulse Meter		
	Surge current (8.3 ms No repetition)	Low	170 A	260 A	420 A		Proximity Sensor		
		High	170 A	250 A	370 A		Photo Sensor		
	Leakage current		20 mA max				Rotary Encoder		
	Output ON voltage dropping		Less than 1.6 V (RMS)				Thyristor Power Regulator		
I N P U T	Rated Voltage		100 – 240 V a.c.				Solid State Relay		
	Operating Voltage Range		70 – 264 V a.c.				Power Supply		
	Impedance		Less than 40 kΩ				Control Switch		
	Operation Voltage		more than 70 V a.c.				Push Button / Main Switch		
	Input Current		220 V a.c. : 8 mA				Cam Switch / Limit Switch		
	Response Time		1/2 Cycle + 1 ms max. ("R" type below 1 ms)				Micro / Hoist Switch		
	Insulating Resistance		500 V d.c., 100 MΩ (Between the input / output and case)				Foot / Mono Lever Switch		
	Dielectric strength		2,500 V a.c. (For 1 min at 60 Hz)				Signal Light		
	Vibration resistance		10 – 55 Hz, Double amplitude : 1.5 mm, X,Y, and Z direction for 2 hours				Terminal Block / Power Buzzer / Fuse Holder / Control Box		
	Shock resistance		1,000 G, X,Y,Z each axis 3 times						
Storage Temperature		-30 ~ 90 °C							
Ambient Temperature		-5 ~ 40 °C (But without frostiness)							
Ambient Humidity		45 ~ 85 % RH							
Pollution level grade		2level pollution							
Usage		Resistive load / Inductive load							
Accepted standard		IEC 62314							
Weight		Approx. 89g							

■ Suffix code

Model	Code					Information
SSR-2	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>					Single phase solid state relay
Input Control Voltage	D	5 – 24 V d.c.				
	A	100 – 240 V a.c.				
Rated load current	10	10 A				
	20	20 A				
	30	30 A				
	40	40 A				
Rated load voltage	2	90 – 264 V a.c. (Low)				
	4	90 – 480 V a.c. (High)				
Operation method	Z	Zero Cross Switching (Standard product)				
	R	Random Switching				

Solid State Relay

■ HSR-2 series Single phase solid state relay

■ Specification

- DC input – AC load (Low voltage : 90 – 264 V a.c.)

Model	HSR-2D102□	HSR-2D202□	HSR-2D302□	HSR-2D402□	HSR-2D502□	HSR-2D702□
Appearance	CE					
W X H X D (mm)			44 X 64 X 29			
Input	Rated voltage		5 – 24 V d.c.			
	Voltage use range		4 – 32 V d.c.			
	Impedance		Less than 4 kΩ			
	Operating voltage		More than 3 V d.c.			
	Release voltage		Less than 1.5 V			
Load	Rated load voltage		100 – 240 V a.c.			
	Load voltage range		90 – 264 V a.c.			
	Rated load current	10 A	20 A	30 A	40 A	50 A
	Input current	170 A	250 A	315 A		580 A
	Output voltage drop	1.3 V	1.6 V		1.8 V	
	Leakage current	10 mA		15 mA		

- AC input – AC load (Low voltage : 90 – 264 V a.c.)

Model	HSR-2A102□	HSR-2A202□	HSR-2A302□	HSR-2A402□	HSR-2A502□	HSR-2A702□
Appearance	CE					
W X H X D (mm)			44 X 64 X 29			
Input	Rated voltage		100 – 240 V d.c.			
	Voltage use range		90 – 264 V d.c.			
	Impedance		Less than 40 kΩ			
	Operating voltage		More than 72 V a.c.			
	Release voltage		Less than 40 V a.c.			
Load	Rated load voltage		100 – 240 V a.c.			
	Load voltage range		90 – 264 V a.c.			
	Rated load current	10 A	20 A	30 A	40 A	50 A
	Input current	170 A	250 A	315 A		580 A
	Output voltage drop	1.3 V	1.6 V		1.8 V	
	Leakage current			15 mA		

- DC input – AC load (High voltage : 90 – 480 V a.c.)

Model	HSR-2D104□	HSR-2D204□	HSR-2D304□	HSR-2D404□	HSR-2D504□	HSR-2D704□
Appearance	CE					
W X H X D (mm)			44 X 64 X 29			
Input	Rated voltage		5 – 24 V d.c.			
	Voltage use range		4 – 32 V d.c.			
	Impedance		Less than 4 kΩ			
	Operating voltage		More than 3 V d.c.			
	Release voltage		Less than 1.4 V d.c.			
Load	Rated load voltage		100 – 440 V a.c.			
	Load voltage range		90 – 480 V a.c.			
	Rated load current	10 A	20 A	30 A	40 A	50 A
	Input current	170 A	250 A	350 A	370 A	580 A
	Output voltage drop	1.3 V	1.6 V		1.8 V	
	Leakage current			20 mA		

Solid State Relay

■ AC input – AC load (High voltage : 90 – 480 V a.c.)

Model	HSR-2A104□	HSR-2A204□	HSR-2A304□	HSR-2A404□	HSR-2A504□	HSR-2A704□
Appearance	CE					
W X H X D (mm)			44 X 64 X 29			
Input	Rated voltage		100 – 240 V a.c.			
	Voltage use range		90 – 264 V a.c.			
	Impedance		Less than 40 kΩ			
	Operating voltage		More than 75 V a.c.			
	Release voltage		Less than 40 V a.c.			
Load	Rated load voltage		100 – 440 V a.c.			
	Load voltage range		90 – 480 V a.c.			
	Rated load current	10 A	20 A	30 A	40 A	50 A
	Input current	170 A	250 A	350 A	370 A	580 A
	Output voltage drop	1.3 V	1.6 V		1.8 V	
	Leakage current		15 mA			20 mA

■ General specification

Insulation resistance	500 V d.c. 100 MΩ(Between I/O and case)	Proximity Sensor
Dielectric strength	2,500 V a.c. (1minute at 60Hz)	
Vibration resistance	10 – 55 Hz Double amplitude width 1.5 mm/ X,Y,Z each direction for 2 hours	Photo Sensor
Shock resistance	1,000 % (Approx100G) X,Y,Z each axis 3 times	
Storage temperature	-30 ~ 90 °C	Rotary Encoder
Ambient temperature	-20 ~ 80 °C	
Ambient humidity	45 ~ 85 % RH	Thyristor Power Regulator
Net weight	Approx. 150 g (Including packing box)	

■ Suffix code

Model	Code					Information	
HSR-2	<input type="checkbox"/>	Single phase solid state relay	Solid State Relay				
Input voltage	D					4 – 32 V d.c.	Power Supply
	A					90 – 264 V a.c.	
Rated load current	10					10 A	Control Switch
	20					20 A	
	30					30 A	
	40					40 A	
	50					50 A	
	70					70 A	
	2					90 – 264 V a.c. (low voltage)	
Load voltage	4					90 – 480 V a.c. (high voltage)	Push Button / Main Switch
	Z					Zero Cross Switching	
Operation method	R					Random Switching	Cam Switch / Limit Switch
	–					No indication (no radiator)	
Radiator attachment state	T					Radiator in one body type (only with 50 A and 70 A)	Micro / Hoist Switch
							Foot / Mono Lever Switch
							Signal Light
							Terminal Block / Power Buzzer / Fuse Holder / Control Box

Solid State Relay

■ SSR-3 series 3-phase solid state relay

■ DC input – AC load

Model	Low	SSR-3D102Z	SSR-3D202Z	SSR-3D302Z	SSR-3D402Z			
	High	SSR-3D104Z	SSR-3D204Z	SSR-3D304Z	SSR-3D404Z			
Appearance		 						
W X H X D (mm)		109 X 60 X 31.25						
L O A D	Rated Load Voltage	Low	90 – 264 V a.c.					
		High	90 – 480 V a.c.					
	Peak Voltage (Non-repetition)	Low	600 V					
		High	800 V	1,200 V				
	Rated load current		10 A	20 A	30 A			
	Frequency		50/60 Hz (Dual usage)					
	Surge current (8.3 ms No repetition)	Low	170 A	260 A	420 A			
		High	170 A	250 A	370 A			
Leakage current		20 mA max						
Output ON voltage dropping		Less than 1.6 V (RMS)						
I N P U T	Rated Voltage		5 – 24 V d.c.					
	Operating Voltage Range		4.6 – 32 V d.c.					
	Impedance		Less than 4 kΩ					
	Operation Voltage		more than 4.6 V d.c.					
	Input Current		Constant-current system : 12 mA (±3)					
	Response Time		1/2 Cycle + 1 ms max. ("R" type below 1 ms)					
	Insulating Resistance		500 V d.c., 100 MΩ (Between the input / output and case)					
	Dielectric strength		2,500 V a.c. (For 1 min at 60 Hz)					
Vibration resistance		10 – 55 Hz, Double amplitude : 1.5 mm, X,Y, and Z direction for 2 hours						
Shock resistance		1,000 G, X,Y,Z each axis 3 times						
Storage Temperature		-30 ~ 90 °C						
Ambient Temperature		-5 ~ 40 °C (But without frostiness)						
Ambient Humidity		45 ~ 85 % RH						
Pollution level grade		2 level pollution						
Usage		Resistive load / Inductive load						
Accepted standard		IEC 62314						
Weight		Approx. 227g						

Solid State Relay

■ AC input – AC load

Model	Low	SSR-3A102Z	SSR-3A202Z	SSR-3A302Z	SSR-3A402Z		
	High	SSR-3A104Z	SSR-3A204Z	SSR-3A304Z	SSR-3A404Z		
Appearance							
W X H X D (mm)		109 X 60 X 31.25					
L	Rated Load Voltage	Low	90 – 264 V a.c.				
		High	90 – 480 V a.c.				
O	Peak Voltage (Non-repetition)	Low	600 V				
		High	800 V 1,200 V				
A	Rated load current		10 A	20 A	30 A	40 A	
	Frequency		50/60 Hz (Dual usage)				
D	Surge current (8.3 ms No repetition)	Low	170 A	260 A	420 A		
		High	170 A	250 A	370 A		
Leakage current		20 mA max					
Output ON voltage dropping		Less than 1.6 V (RMS)					
I	Rated Voltage		100 – 240 V a.c.				
	Operating Voltage Range		70 – 264 V a.c.				
N	Impedance		Less than 40 kΩ				
	Operation Voltage		more than 70 V a.c.				
P	Input Current		220 V a.c. : 8 mA				
	Response Time		1/2 Cycle + 1 ms max, ("R" type below 1 ms)				
Insulating Resistance		500 V d.c., 100 MΩ (Between the input / output and case)					
Dielectric strength		3,000 V a.c. (For 1 min at 60 Hz)					
Vibration resistance		10 – 55 Hz, Double amplitude : 1.5 mm, X,Y, and Z direction for 2 hours					
Shock resistance		1,000 G, X,Y,Z each axis 3 times					
Storage Temperature		–30 ~ 90 °C					
Ambient Temperature		–5 ~ 40 °C (But without frostiness)					
Ambient Humidity		45 ~ 85 % RH					
Pollution level grade		2 Level pollution					
Usage		Resistive load / Inductive load					
Accepted standard		IEC 62314					
Weight		Approx. 227 g					

Suffix code

Model	Code	Information
SSR-3	□ □ □ □ □	3-Phase Solid State Relay
Input Control Voltage	D	5 – 24 V d.c.
	A	100 – 240 V a.c.
Rated load current	10	10 A
	20	20 A
	30	30 A
	40	40 A
Rated load voltage	2	90 – 264 V a.c. (Low)
	4	90 – 480 V a.c. (High)
Operation method	Z	Zero Cross Switching (Standard product)
	R	Random Switching

Temperature Controller

Recorder

Digital Counter Timer

Analog Timer

Panel Meter

Multi Pulse Meter

Proximity Sensor

Photo Sensor

Rotary Encoder

Thyristor Power Regulator

Solid State Relay

Power Supply

Control Switch

Push Button / Main Switch

Cam Switch / Limit Switch

Micro / Hoist Switch

Foot / Mono Lever Switch

Signal Light

Terminal Block / Power Buzzer / Fuse Holder / Control Box

Solid State Relay

■ HSR-3 series 3-phase solid state relay

■ DC input – AC load (Low voltage : 90 – 264 V a.c.)

Model	HSR-3D102□	HSR-3D202□	HSR-3D302□	HSR-3D402□	HSR-3D502□	HSR-3D702□
Appearance	CE					
W X H X D (mm)			109 X 75 X 36			
Input	Rated voltage Voltage use range Impedance Operating voltage Release voltage		5 – 24 V d.c. 4 – 32 V d.c. Less than 4 kΩ More than 3 V d.c. Less than 1.4 V d.c.			
Load	Rated load voltage Load voltage range Rated load current Input current Output voltage drop Leakage current	10 A 125 A	20 A 260 A	30 A 315 A	40 A 580 A	50 A 70 A
	Net weight			below 1.8 mA		15 mA
					Approx. 400 g (Including packing box)	

■ AC input – AC load (Low voltage : 90 – 264 V a.c.)

Model	HSR-3A102□	HSR-3A202□	HSR-3A302□	HSR-3A402□	HSR-3A502□	HSR-3A702□
Appearance	CE					
W X H X D (mm)			109 X 75 X 36			
Input	Rated voltage Voltage use range Impedance Operating voltage Release voltage		100 – 240 V a.c. 90 – 264 V a.c. Less than 40 kΩ More than 72 V a.c. Less than 50 V a.c.			
Load	Rated load voltage Load voltage range Rated load current Input current Output voltage drop Leakage current	10 A 125 A	20 A 260 A	30 A 315 A	40 A 580 A	50 A 70 A
	Net weight			20 mA		15 mA
					Approx. 400 g (Including packing box)	

■ DC input – AC load (High voltage : 90 – 480 V a.c.)

Model	HSR-3D104□	HSR-3D204□	HSR-3D304□	HSR-3D404□	HSR-3D504□	HSR-3D704□
Appearance	CE					
W X H X D (mm)			109 X 75 X 36			
Input	Rated voltage Voltage use range Impedance Operating voltage Release voltage		5 – 24 V d.c. 4 – 32 V d.c. Less than 4 kΩ More than 3 V d.c. Less than 1.4 V d.c.			
Load	Rated load voltage Load voltage range Rated load current Input current Output voltage drop Leakage current	10 A 170 A	20 A 250 A	30 A 315 A	40 A 580 A	50 A 70 A
	Net weight			below 20 mA		approx. 2000 g
						approx. 2600 g

Solid State Relay

■ AC input – AC load (High voltage : 90 – 480 V a.c.)

Model	HSR-3A104□	HSR-3A204□	HSR-3A304□	HSR-3A404□	HSR-3A504□	HSR-3A704□		
Appearance	CE						Temperature Controller	
W X H X D (mm)			109 X 75 X 36				Recorder	
Input	Rated voltage			100 – 240 V d.c.			Digital Counter Timer	
	Voltage use range			90 – 264 V d.c.			Analog Timer	
	Impedance			Less than 72 kΩ				
	Operating voltage			More than 75 V a.c.				
	Release voltage			Less than 40 V a.c.				
Load	Rated load voltage			100 – 440 V a.c.			Panel Meter	
	Load voltage range			90 – 480 V a.c.			Multi Pulse Meter	
	Rated load current	10 A	20 A	30 A	40 A	50 A	70 A	Proximity Sensor
	Input current	170 A	250 A	350 A	370 A	580 A		Photo Sensor
	Output voltage drop	1.95 V			1.8 V			Rotary Encoder
	Leakage current			below 20 mA				Thyristor Power Regulator
	Net weight			Approx. 400 g (Including packing box)		approx. 2000 g (including packing box)	approx. 2600 g (including packing box)	Solid State Relay
■ General specification								
	Insulation resistance			500 V d.c. 100 MΩ (Between I/O and case)				
	Dielectric strength			2,500 V a.c. (1 minute at 60 Hz)				
	Vibration resistance			10 – 55 Hz Double amplitude width 1.5 mm/ X,Y,Z each direction for 2 hours				
	Shock resistance			1,000 % X,Y,Z each axis 3 times				
	Storage temperature			-30 ~ 90 °C				
	Ambient temperature			-20 ~ 80 °C				
	Ambient humidity			45 ~ 85 % RH				

Suffix code

Model	Code					Information	
HSR-2	□	□	□	□	□	3-phase solid state relay	Solid State Relay
Input voltage	D					4 – 32 V d.c.	
	A					90 – 264 V a.c.	Power Supply
	10					10 A	
	20					20 A	Control Switch
	30					30 A	
	40					40 A	
	50					50 A	
	70					70 A	
Load voltage	2					90 – 264 V a.c. (low voltage)	Push Button / Main Switch
	4					90 – 480 V a.c. (High voltage)	Cam Switch / Limit Switch
Operation method	Z					Zero cross switching (standard product)	
	R					Random switching	
Radiator attachment state	–					No indication (no radiator)	Micro / Hoist Switch
	T					Radiator in one body type (only with 50A and 70A)	Foot / Mono Lever Switch

(Note) Operation method Z: zero cross switching, R: random switching

Solid State Relay

■ **HSR-SL series** Slim type Single phase solid state relay

Specification

Model	Low	HSR-SLD102Z	HSR-SLD152Z	HSR-SLD252Z	HSR-SLD402Z			
	High	HSR-SLD104Z	HSR-SLD154Z	HSR-SLD254Z	HSR-SLD404Z			
Appearance		 						
W X H X D (mm)		CE 22,42 X 99 X 74	22,4 X 99 X 98,5		44,4 X 99 X 98,5			
S-MARK		—	22,4 X 99 X 98,5	44,4 X 99 X 98,5	85 X 114 X 118			
L O A D	Rated Load Voltage		Low 90 – 264 V a.c.	90 – 480 V a.c.				
	Peak Voltage (Non-repetition)		Low 600 V	High 800 V				
	Rated load current		10 A	15 A	25 A			
	Frequency		50/60 Hz (Dual usage)					
	Surge current (8.3 ms No repetition)		Low 170 A	High 170 A	260 A			
	Leakage current		250 A					
Output ON voltage dropping		20 mA max						
I N P U T	Rated Voltage		Less than 1.6 V (R.M.S)					
	Operating Voltage Range		5 – 24 V d.c.					
	Impedance		4 – 32 V d.c.					
	Operation Voltage		Less than 4 kΩ					
	Reset Voltage		more than 3 V d.c.					
	Input Current		Less than 1.5 V d.c.					
Response Time		Constant-current system : 8 mA (±3)						
Insulating Resistance		1/2 Cycle + 1 ms max, ("R" type below 1 ms)						
Dielectric strength		500 V d.c., 100 MΩ (Between the input / output and case)						
Vibration resistance		3,000 V a.c. (For 1 min at 60 Hz)						
Shock resistance		10 – 55 Hz, Double amplitude : 1.5 mm, X,Y, and Z direction for 2 hours						
Storage Temperature		1,000 %, X,Y,Z each axis 3 times						
Ambient Temperature		-30 ~ 90 °C						
Ambient Humidity		-5 ~ 40 °C (But without frostiness)						
Pollution level grade		45 ~ 85 % RH						
Usage		2level pollution						
Accepted standard		Resistive load / Inductive load						
Weight		Approx. 190 g	Approx. 230 g	Approx. 372 g				

Suffix code

Model	Code					Information				
HSR-SL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Slim Type Single-Phase Solid State Relay				
Input Control Voltage	D					4 – 32 V d.c.				
Contact	—					1 contact (No mark)				
	2C					2 contact (Only for 15 A)				
Rated load current	10					10 A (Alarm type product on demand)				
	15					15 A				
	25					25 A				
	40					40 A				
Rated load voltage	2					90 – 264 V a.c. (Low)				
	4					90 – 480 V a.c. (High)				
Operation method		Z				Zero Cross Switching (Standard product)				
		R				Random Switching				
Option		AL	Heat sink overheating 80 °C (For 10 A)							
※ 2 contact : Only available for 15 A items (HSR-SLD2C152Z, HSR-SLD2C154Z)										
※ Heat sink overheating (80 °C) alarm type is available for the 10 A product with low/high voltage (HSR-SLD102Z-AL, HSR-SLD104Z-AL)										

Solid State Relay

■ HSR-2SL series Slim type Single phase solid state relay

Specification

Model	Low	HSR-2SE252Z	HSR-2SLD252Z	HSR-2SLD402Z	
	High	HSR-2SE254Z	HSR-2SLD254Z	HSR-2SLD404Z	
Appearance					
W X H X D (mm)		58 X 96.6 X 130		79 X 96.6 X 131.3	
Load	Rated Load Voltage	Low	90 – 264 V a.c.		Temperature Controller
		High	90 – 480 V a.c.		Recorder
	Peak Voltage (Non-repetition)	Low	600 V		Digital Counter
		High	1,200 V		Timer
	Rated load current		25 A		Analog Timer
	Frequency		50/60 Hz (Dual usage)		Panel Meter
	Surge current (8.3 ms No repetition)	Low	260 A		Multi Pulse Meter
		High	250 A		Proximity Sensor
	Leakage current		Less than 10 mA		Photo Sensor
	Output ON voltage dropping		Less than 1.8 V (RMS)		Rotary Encoder
Input	Rated impulse withstand voltage	Low	4 kV		Thyristor Power Regulator
		High	6 kV		Solid State Relay
	Rated Voltage		5 – 24 V d.c.		Power Supply
	Operating Voltage Range		4 – 32 V d.c.		Control Switch
	Impedance		Less than 4 kΩ		Push Button / Main Switch
	Operation Voltage		More than 3 V d.c.		Cam Switch / Limit Switch
	Reset Voltage		Less than 1.5 V d.c.		Micro / Hoist Switch
	Input Current		Constant-current system : 10 mA (±3)		Foot / Mono Lever Switch
	Rated Voltage		24 V d.c.		Signal Light
	Operating Voltage Range		20 – 26 V d.c.		Terminal Block / Power Buzzer / Fuse Holder / Control Box
Detection parts	Power consumption		Max 25 mA, Max 40 mA in case of Alarm output (Base on 24 V d.c.)		
	Collector pressure		Less than 30 V d.c.		
	Maximum rated through current		Less than 50 mA		
	Max. collector power consumption		500 mW		
	Output type		Transistor open collector (Hi at detection of problem)		
	Response Time		1/2 Cycle + 1 ms max, ("R" type below 1 ms)		
	Insulating Resistance		500 V d.c., 100 MΩ (Between the input / output and case)		
	Dielectric strength		2,500 V a.c. (For 1 min at 60 Hz)		
	Vibration resistance		10 – 55 Hz, Double amplitude : 1.5 mm, X,Y, and Z direction for 2 hours		
	Shock resistance		1,000 G, X,Y,Z each axis 3 times		
Storage Temperature		-30 ~ 90 °C			
Ambient Temperature		-20 ~ 80 °C (But without frostiness)			
Ambient Humidity		45 ~ 85 % RH			
Pollution level grade		2level pollution			
Degree of protection		IP20			
Usage		Resistive load / Inductive load			
Accepted standard		IEC 62314			
Weight		Approx. 1,000 g		Approx. 1,300 g	

Suffix code

Model	Code	Information	
HSR-2SL	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	2 wire breaking alarm output contactless relay (Alarm open collector output)	Signal Light
HSR-2SE	1	2-wire isolated low-cost solid state relay (Alarm bimetallic contact output)	Terminal Block / Power Buzzer / Fuse Holder / Control Box
Rated load current	25	25 A	
	40	40 A	
Rated load voltage	2	90 – 264 V a.c. (Low)	
	4	90 – 480 V a.c. (High)	
Operation method		Z Zero Cross Switching (Standard product)	
		R Random Switching	

Solid State Relay

■ HSR-3SL series Slim Type 3-Phase Solid State Relay

Specification

Model	Low	HSR-3SLD152Z	HSR-3SLD252Z	HSR-3SLD402Z	
	High	HSR-3SLD154Z	HSR-3SLD254Z	HSR-3SLD404Z	
Appearance					
W X H X D (mm)		79 X 96.6 X 120		95 X 96.6 X 146	
L O A D	Rated Load Voltage	Low	90 – 264 V a.c.		
		High	90 – 480 V a.c.		
	Peak Voltage (Non-repetition)	Low	600 V		
		High	800 V	1,200 V	
	Rated load current		15 A (40 °C)	25 A (25 °C)	40 A (25 °C)
	Frequency		50/60 Hz (Dual usage)		
	Surge current (8.3 ms No repetition)	Low	170 A	260 A	420 A
		High	170 A	250 A	370 A
	Leakage current		20 mA max		
	Output ON voltage dropping		Less than 1.6 V (RMS)		
I N P U T	Rated Voltage		5 – 24 V d.c.		
	Operating Voltage Range		4 – 32 V d.c.		
	Impedance		Less than 4 kΩ		
	Operation Voltage		More than 3 V d.c.		
	Reset Voltage		Less than 1.5 V d.c.		
	Input Current		Constant-current system : 10 mA (±3)		
	Response Time		1/2 Cycle + 1 ms max. ("R"-type below 1 ms)		
	Insulating Resistance		500 V d.c., 100 MΩ (Between the input / output and case)		
	Dielectric strength		3,000 V a.c. (For 1 min at 60 Hz)		
	Vibration resistance		10 – 55 Hz, Double amplitude : 1.5 mm, X,Y, and Z direction for 2 hours		
R E S T A B L E M E N T	Shock resistance		1,000 G, X,Y,Z each axis 3 times		
	Storage Temperature		-30 ~ 90 °C		
	Ambient Temperature		-20 ~ 80 °C (But without frostiness)		
	Ambient Humidity		45 ~ 85 % RH		
	Weight		Approx. 1,000 g		Approx. 1,300 g

■ Suffix code

Model	Code	Information
HSR-3SL	□ □ □ □	Slim Type 3-Phase Solid State Relay
Input Control Voltage	D	4 – 32 V d.c.
Rated load current	15	15 A
	25	25 A
	40	40 A
Rated load voltage	2	90 – 264 V a.c. (Low voltage)
	4	90 – 480 V a.c. (High voltage)
Operation method		Z Zero Cross Switching (Standard product) R Random Switching

■ HEATSINK (HSP series / HSM series)

Model	HSP-10	HSP-20	HSP-40	HSM-70	HSM-110	HSM-150	HSM-200	HSM-250
	HSR-2□10□□	HSR-2□20□□	HSR-2□30□□	HSR-2□10□□	HSR-2□20□□	HSR-2□40□□	HSR-3□20□□	HSR-3□40□□
			HSR-2□40□□		HSR-2□30□□	HSR-3□10□□	HSR-3□30□□	
Appearance								
Capacity	10 A	20 A	30 A	10 A	20 A	40 A	20 A	40 A
length	48 mm	80 mm	109 mm	70 mm	110 mm	150 mm	200 mm	250 mm