

AC Solid State Relay



S1 SERIES

Solid State Relay

S1 series

Features

- Medium power SSR with 15A, 25A, 45A load current (Max.)
- LED installed
- Dielectric strength between input and output at 3,000V/1 min.
- UL, C-UL, TÜV standard approved
- Optional safety cover available (P83)
- Optional heat-sink available (P83)

Type Information

S 1 C - 2 4 5 L D V

Zero-cross-circuit

C : Built-in
N : Not Built-in(*)

Standard load voltage

2 : 100V, 200V

Max. load current

15 : 15A
25 : 25A
45 : 45A

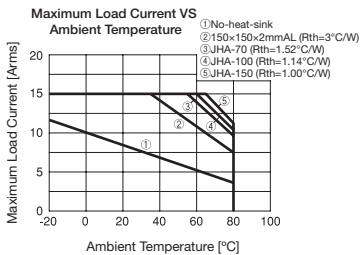
Input voltage range

LDV : DC4 ~ 8V
MDV : DC8 ~ 18V
HDV : DC18 ~ 28V

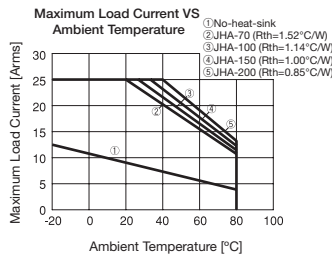
* Manufactured to order

Characteristics

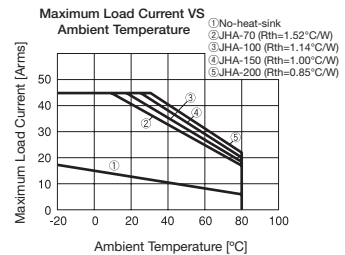
S1C-215



S1C-225

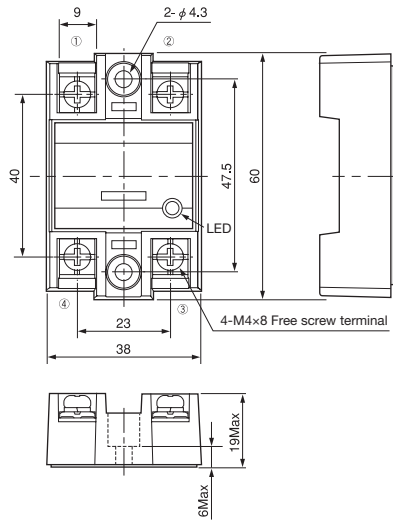


S1C-245



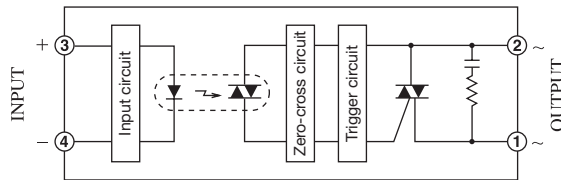
※ Description in the catalogue is subject to change without notice. Please read the specifications thoroughly before using.
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Dimensions (mm)



- ※ Torque range
- Output terminal 1.5 N·m (MAX)
- Input terminal 1.5 N·m (MAX)
- Outer case 1.5 N·m (MAX)

Equivalent Circuit



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■ Ratings

(Ta = 25 °C)

	Item	Symbols	S1C-215LDV	S1C-215MDV	S1C-215HDV	Units
Output	Rated Load Voltage	—	120, 240			V _{ACrms}
	Maximum Load Current	I _{OMAX}	15			A _{ACrms}
	Maximum Load Voltage	V _{OMAX}	264			V _{ACrms}
	Peak Repetitive Off State Voltage	V _{DRM}	600			V
	Peak 1 Cycle Surge Current	I _{SURGE}	150 (50Hz)			A
	Frequency	f	50, 60			Hz
Input	Maximum Input Voltage	V _{IMAX}	8	18	28	V _{DC}
	Input Impedance	R _{IN}	220 ± 20 %	560 ± 20 %	1220 ± 20 %	Ω
General	Dielectric Strength	V _{ISO}	3,000/1 min. (Between input-output-case)			V _{ACrms}
	Isolation Resistance	R _{ISO}	10 ⁸ and above DC500V (Between input-output-case)			Ω
	Operating Temperature Range	T _{OPR}	- 20 ~ + 80			°C
	Storage Temperature Range	T _{STG}	- 30 ~ + 100			°C

■ Electrical Characteristics

(Ta = 25 °C)

	Item	Symbols	S1C-215LDV	S1C-215MDV	S1C-215HDV	Units
Output	Load Voltage Range	V _O	85 ~ 264			V _{ACrms}
	Off State Leakage Current	I _{LEK}	12 and below (V _O = 200V)			mA _{ACrms}
	On State Voltage Drop	V _{SAT}	1.5 and below			V _{ACrms}
	Minimum Load Current	I _{OMIN}	100			mA
Input	Input Voltage Range	V _I	4 ~ 8	8 ~ 18	18 ~ 28	V _{DC}
	Operate Voltage	V _P	4 and below	8 and below	18 and below	V _{DC}
	Release Voltage	V _D	1 and above			V _{DC}
General	Operate Time	T _{ON}	1/2 Cycle + 1ms and below			/
	Release Time	T _{OFF}	1/2 Cycle + 1ms and below			/
	Capacitance	C _{IO}	150 and below			PF
	Zero Cross Turn On		Built In			/
	Approved Standards		UL, C-UL, TÜV			/

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■ Ratings

(Ta = 25 °C)

	Item	Symbols	S1C-225LDV	S1C-225MDV	S1C-225HDV	Units
Output	Rated Load Voltage	—	120、240			V _{ACrms}
	Maximum Load Current	I _{OMAX}	25			A _{ACrms}
	Maximum Load Voltage	V _{OMAX}	264			V _{ACrms}
	Peak Repetitive Off State Voltage	V _{DRM}	600			V
	Peak 1 Cycle Surge Current	I _{SURGE}	225 (50Hz)			A
	Frequency	f	50、60			Hz
Input	Maximum Input Voltage	V _{IMAX}	8	18	28	V _{DC}
	Input Impedance	R _{IN}	220 ± 20 %	560 ± 20 %	1220 ± 20 %	Ω
General	Dielectric Strength	V _{ISO}	3,000/1min.(Between input-output-case)			V _{ACrms}
	Isolation Resistance	R _{ISO}	10 ⁸ and above DC500V(Between input-output-case)			Ω
	Operating Temperature Range	T _{OPR}	- 20 ~ + 80			°C
	Storage Temperature Range	T _{STG}	- 30 ~ + 100			°C

■ Electrical Characteristics

(Ta = 25 °C)

	Item	Symbols	S1C-225LDV	S1C-225MDV	S1C-225HDV	Units
Output	Load Voltage Range	V _O	85 ~ 264			V _{ACrms}
	Off State Leakage Current	I _{LEK}	12 and below (V _O = 200V)			mA _{ACrms}
	On State Voltage Drop	V _{SAT}	1.5 and below			V _{ACrms}
	Minimum Load Current	I _{OMIN}	100			mA
Input	Input Voltage Range	V _I	4 ~ 8	8 ~ 18	18 ~ 28	V _{DC}
	Operate Voltage	V _P	4 and below	8 and below	18 and below	V _{DC}
	Release Voltage	V _D	1 and above			V _{DC}
General	Operate Time	T _{ON}	1/2 Cycle + 1ms and below			/
	Release Time	T _{OFF}	1/2 Cycle + 1ms and below			/
	Capacitance	C _{IO}	150 and below			PF
	Zero Cross Turn On		Built In			/
	Approved Standards		UL、C-UL、TÜV			/

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■ Ratings

(Ta = 25 °C)

	Item	Symbols	S1C-245LDV	S1C-245MDV	S1C-245HDV	Units
Output	Rated Load Voltage	—	120, 240			V _{ACrms}
	Maximum Load Current	I _{OMAX}	45			A _{ACrms}
	Maximum Load Voltage	V _{OMAX}	264			V _{ACrms}
	Peak Repetitive Off State Voltage	V _{DRM}	600			V
	Peak 1 Cycle Surge Current	I _{SURGE}	440 (50Hz)			A
	Frequency	f	50, 60			Hz
Input	Maximum Input Voltage	V _{IMAX}	8	18	28	V _{DC}
	Input Impedance	R _{IN}	220 ± 20 %	560 ± 20 %	1220 ± 20 %	Ω
General	Dielectric Strength	V _{ISO}	3,000/1 min. (Between input-output-case)			V _{ACrms}
	Isolation Resistance	R _{ISO}	10 ⁸ and above DC500V (Between input-output-case)			Ω
	Operating Temperature Range	T _{OPR}	- 20 ~ + 80			°C
	Storage Temperature Range	T _{STG}	- 30 ~ + 100			°C

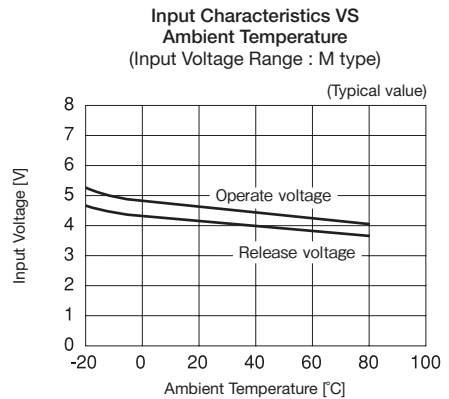
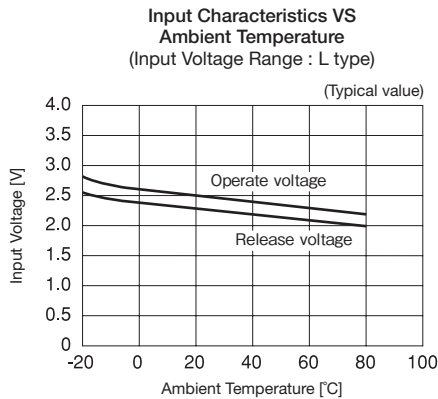
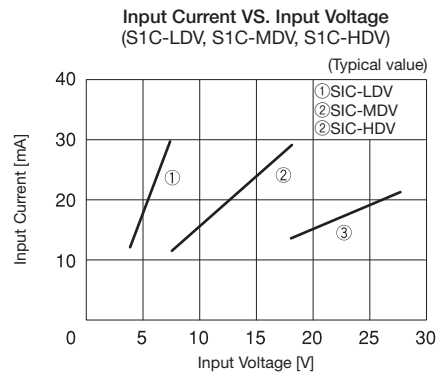
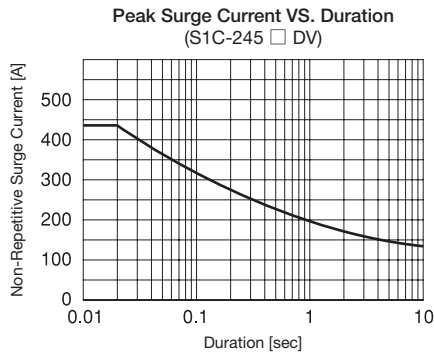
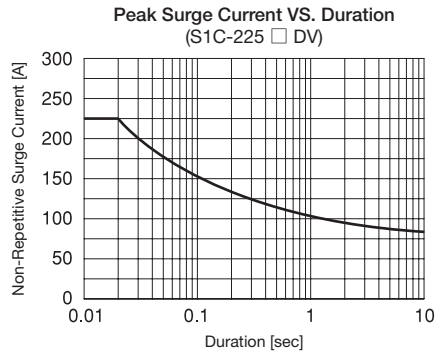
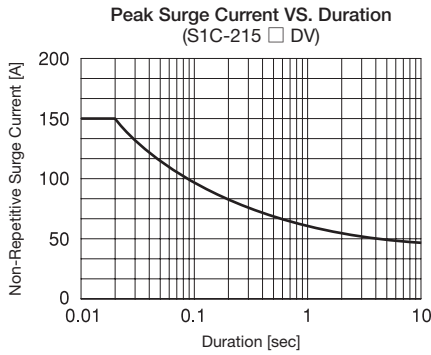
■ Electrical Characteristics

(Ta = 25 °C)

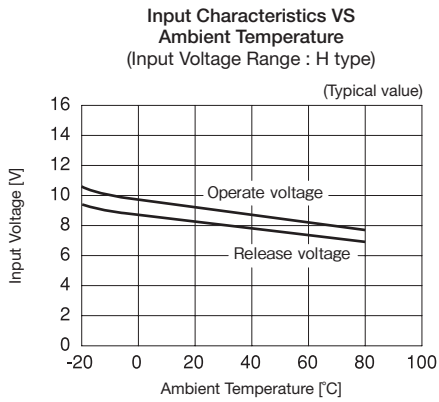
	Item	Symbols	S1C-245LDV	S1C-245MDV	S1C-245HDV	Units
Output	Load Voltage Range	V _O	85 ~ 264			V _{ACrms}
	Off State Leakage Current	I _{LEK}	12 and below (V _O = 200V)			mA _{ACrms}
	On State Voltage Drop	V _{SAT}	1.5 and below			V _{ACrms}
	Minimum Load Current	I _{OMIN}	100			mA
Input	Input Voltage Range	V _I	4 ~ 8	8 ~ 18	18 ~ 28	V _{DC}
	Operate Voltage	V _P	4 and below	8 and below	18 and below	V _{DC}
	Release Voltage	V _D	1 and above			V _{DC}
General	Operate Time	T _{ON}	1/2 Cycle + 1ms and below			/
	Release Time	T _{OFF}	1/2 Cycle + 1ms and below			/
	Capacitance	C _{IO}	150 and below			PF
	Zero Voltage Circuit		Built In			/
	Approved Standards		UL, C-UL, TÜV			/

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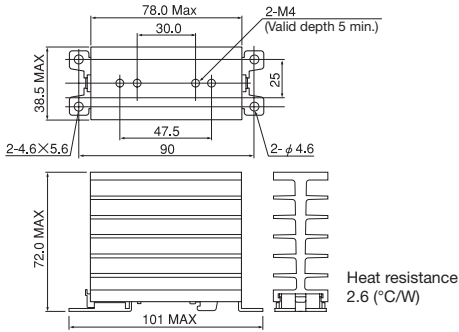
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Option

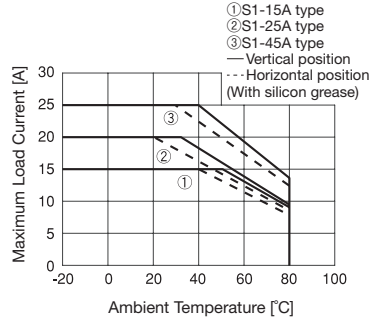
Heat-sink

Model	JHC-38-1
SUITABLE SSR	S1C Series

● Dimensions

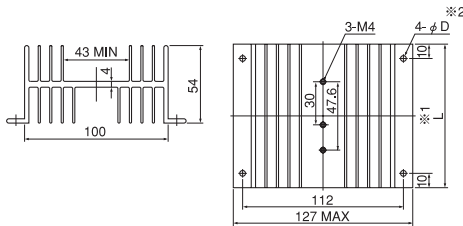


● Maximum Load Current VS Ambient Temperature



Model	JHA-□□□
SUITABLE SSR	S1C Series

● Dimensions

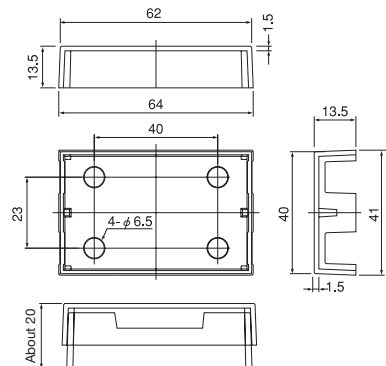


Model	Heat Resistance (°C/W)	※1 L (mm) Dimensions	※2 D (mm) Dimensions
JHA-70	1.52	70	4
JHA-100	1.14	100	4
JHA-150	1.00	150	4.5
JHA-200	0.85	200	4

Safety cover

Model	CV-S101
SUITABLE SSR	S1C Series

● Dimensions



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