

勝特力材料 886-3-5753170
勝特力电子(上海) 86-21-34970699
勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

Solid-state contactors General use

■ Description

Solid-state contactors (SSC) are required in cases where contacts must have long life because contacts are frequently made and broken, and where contactor noise must be eliminated. Single- and 3-pole solid-state contactors incorporate thyristors as making and breaking elements in the main circuit.

■ Features

● Operation indicator provided

An operation indicator LED (red) is provided as a standard feature for all models, so you can easily check whether a control voltage is applied to the SSC.

● Long service life, optimum for highly frequent switching

The solid-state contactor utilizes high-performance semiconductor switch elements to include the functions and features of conventional magnetic contactors. The SSC, featuring long life, low-noise, and high-speed response, is suitable for highly frequent switching of various types of loads, such as motors and heaters.

■ Specifications

Single-pole types

● Main circuit 240V AC, SS101 to SS501 AC control voltage

Type		SS101-5Z-A3 SS101-5Z-A4	SS201-5Z-A3 SS201-5Z-A4	SS301-5Z-A3 SS301-5Z-A4	SS401-5Z-A3 SS401-5Z-A4	SS501-5Z-A3 SS501-5Z-A4
Ordering code		SS101-5ZA3 SS101-5ZA4	SS201-5ZA3 SS201-5ZA4	SS301-5ZA3 SS301-5ZA4	SS401-5ZA3 SS401-5ZA4	SS501-5ZA3 SS501-5ZA4
Main circuit	Rated voltage	100 — 240V AC 50/60Hz				
	Rated thermal current (A)*	10	20	30	40	50
	Max. heater capacity (kW) Single phase 200V AC	2	4	6	8	10
	Number of elements	Single-pole, 1-element				
Control circuit	Isolation method	Photocoupler				
	Control voltage Vn	A3: 100 — 120V AC, A4: 200 —240V AC				
	Pick-up voltage Drop-out voltage	85% Vn or less 35% Vn and over				
	Operating time (at 100% Vn) Release time (at 100% Vn)	30ms or less 30ms or less				
Auxiliary circuit		—				

Note: * The values are the maximum ratings of type with cooling fin that apply at an ambient temperature not exceeding 40°C.

Single-pole type



SS101

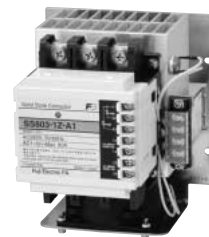


SS1501

3-pole type



SS083



SS803

● Built-in surge suppressor

Varistors and C-R circuits are included so that surge voltage due to SSC switching and lightning can be suppressed to protect the control and main circuits.

● AC and DC operation

The AC and DC operated type SSCs are available, either of which can be selected as required.

● SSC with zero-cross switching function

The SSC is also available with a zero-cross switching function to enable load current switching at the point where the line voltage is near zero to suppress excessive inrush current in the load circuit.

● Built-in auxiliary contact

An auxiliary contact module using semiconductor switches or relay contacts is included. Therefore an auxiliary output signal can easily be obtained without using a separate auxiliary devices.

■ Standards



Solid-state Contactors

SS series

General use

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■ Specifications

Single-pole types

● Main circuit 240V AC, SS701 to SS2001

AC control voltage

Type	SS701-1Z-A3 SS701-1Z-A4	SS1001-1Z-A3 SS1001-1Z-A4	SS1501-1Z-A3 SS1501-1Z-A4	SS2001-1Z-A3 SS2001-1Z-A4
Ordering code	SS701-1ZA3 SS701-1ZA4	SS1A1-1ZA3 SS1A1-1ZA4	SS1F1-1ZA3 SS1F1-1ZA4	SS2A1-1ZA3 SS2A1-1ZA4
Main circuit	Rated voltage 100 — 240V AC 50/60Hz			
	Rated thermal current (A)*	70	100	150
	Max. heater capacity (kW) Single phase 200V AC	14	20	30
	Number of elements	Single-pole, 1-element		
Control circuit	Isolation method	Photocoupler		
	Control voltage Vn	A3: 100 — 120V AC, A4: 200 — 240V AC		
	Pick-up voltage	85% Vn or less		
	Drop-out voltage	35% Vn and over		
	Operating time (at 100% Vn)	30ms or less		
	Release time (at 100% Vn)	30ms or less		
Auxiliary circuit	Output	Thyristor 1NO		
	Rated current and voltage	A3: 50mA, 120V AC A4: 50mA, 240V AC		

Note: * The values are the maximum ratings of type with cooling fin that apply at an ambient temperature not exceeding 40°C.

● Main circuit 240V AC, SS101 to SS2001

DC control voltage

Type		SS101-3Z-D3	SS201-3Z-D3	SS301-3Z-D3	SS401-3Z-D3	SS501-3Z-D3
Ordering code		SS101-3ZD3	SS201-3ZD3	SS301-3ZD3	SS401-3ZD3	SS501-3ZD3
Main circuit	Rated voltage	100 — 240V AC 50/60Hz				
	Rated thermal current (A)*	10	20	30	40	50
	Max. heater capacity (kW) Single phase 200V AC	2	4	6	8	10
	Number of elements	Single-pole, 1-element				
	Control circuit	Isolation method				
Control circuit	Isolation method	Photocoupler				
	Control voltage Vn	5 — 24V DC				
	Pick-up voltage	3.5V or less				
	Drop-out voltage	1V and over				
	Operating time (at 100% Vn)	15ms or less				
Auxiliary circuit	Release time (at 100% Vn)	15ms or less				
	Auxiliary circuit	—				

Type		SS701-3Z-D3	SS1001-3Z-D3	SS1501-3Z-D3	SS2001-3Z-D3
Ordering code		SS701-3ZD3	SS1A1-3ZD3	SS1F1-3ZD3	SS2A1-3ZD3
Main circuit	Rated voltage	100 — 240V AC 50/60Hz			
	Rated thermal current (A)*	70	100	150	200
	Max. heater capacity (kW) Single phase 200V AC	14	20	30	40
	Number of elements	Single-pole, 1-element			
Control circuit	Isolation method	Photocoupler			
	Control voltage Vn	5 — 24V DC			
	Pick-up voltage Drop-out voltage	3.5V or less 1V and over			
	Operating time (at 100% Vn) Release time (at 100% Vn)	15ms or less 15ms or less			
Auxiliary circuit		—			

Note: * The values are the maximum ratings of type with cooling fin that apply at an ambient temperature not exceeding 40°C.

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■ Specifications

Single-pole types

● Main circuit 480V AC, SS701H to SS2001H AC control voltage

Type	SS701H-1Z-A3 SS701H-1Z-A4	SS1001H-1Z-A3 SS1001H-1Z-A4	SS1501H-1Z-A3 SS1501H-1Z-A4	SS2001H-1Z-A3 SS2001H-1Z-A4
Ordering code	SS701H-1ZA3 SS701H-1ZA4	SS1A1H-1ZA3 SS1A1H-1ZA4	SS1F1H-1ZA3 SS1F1H-1ZA4	SS2A1H-1ZA3 SS2A1H-1ZA4
Main circuit	Rated voltage 200 - 480V AC 50/60Hz			
	Rated thermal current (A)*	70	100	150
	Max. heater capacity (kW) Single phase 400V AC	28	40	60
	Number of elements	Single-pole, 1-element		
Control circuit	Isolation method	Photocoupler		
	Control voltage Vn	A3: 100 - 120V AC, A4: 200 - 240V AC		
	Pick-up voltage	85% Vn or less		
	Drop-out voltage	35% Vn and over		
	Operating time (at 100% Vn)	30ms or less		
	Release time (at 100% Vn)	30ms or less		
Auxiliary circuit	Output	Thyristor 1NO		
	Rated current and voltage	A3: 50mA, 120V AC A4: 50mA, 240V AC		

DC control voltage

Type		SS701H-3Z-D3	SS1001H-3Z-D3	SS1501H-3Z-D3	SS2001H-3Z-D3
Ordering code		SS701H-3ZD3	SS1A1H-3ZD3	SS1F1H-3ZD3	SS2A1H-3ZD3
Main circuit	Rated voltage	200 - 480V AC 50/60Hz			
	Rated thermal current (A)*	70	100	150	200
	Max. heater capacity (kW) Single phase 400V AC	28	40	60	80
	Number of elements	Single-pole, 1-element			
Control circuit	Isolation method	Photocoupler			
	Control voltage Vn	5 — 24V DC			
	Pick-up voltage Drop-out voltage	3.5V or less 1V and over			
	Operating time (at 100% Vn) Release time (at 100% Vn)	15ms or less 15ms or less			
Auxiliary circuit		—			

Note: * The values are the maximum ratings of type with cooling fin that apply at an ambient temperature not exceeding 40°C.

3-pole unit type

● Main circuit 240V AC, SS03 to SS120

Type *1	SS □■-1(Z)-A3, A4, D5	SS □■-1(Z)-A1, D2
Ordering code *1	SS □■-1M(Z)A3, A4, D5	SS □■-1M(Z)A1, D2
Main circuit	Rated voltage 100 - 240V AC 50/60Hz	
	Rated thermal current (A)	3 8 20 30 40 50 80 120
	Max. heater capacity (kW)	1.0 2.5 6.9 10.3 13.8 17.3 27.7 41.5
	Max. motor capacity (kW) *2	0.2 0.4 0.75 1.5 2.2 3.7 7.5 7.5
	Motor full load current (A)	1.8 3.2 4.8 8 11.1 17.4 34 34
	3-phase 200V AC	
	Number of elements	3-pole, 2 or 3-element *3
Control circuit	Isolation method	Photocoupler
	Control voltage (Vn)	A3: 100-120V AC 50/60Hz A4: 200-240V AC 50/60Hz D5: 12-24V DC
	Pick-up voltage	85% Vn or less 8V or less(D5)
	Drop-out voltage	30% Vn and over 1V and over(D5)
	Operating time (at 100% Vn)	30ms or less
	Release time (at 100% Vn)	30ms or less
Auxiliary circuit	Output	AC operated Thyristor 1NO DC operated Transistor 1NO
	Rated current and voltage	AC operated 50mA, 240V AC DC operated 0.1A, 24V DC
		0.2A, 240V AC 0.2A, 24V DC
		Thyristor 2NO Transistor 2NO

Note: *1, *2, *3 see page 01/104.

Solid-state Contactors

SS series

General use

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■ Specifications

3-pole unit types

● Main circuit 240V AC, SS03 to SS120

Type *1		SS□■-3(Z)-D5, D6		SS□■-3(Z)-D3					
Ordering code *1		SS□■-3M(Z)D5, D6		SS□■-3M(Z)D3					
Main circuit	Rated voltage	100 - 240V AC 50/60Hz							
	Rated thermal current (A)	3	8	20	30	40	50	80	120
	Max. heater capacity (kW)	1.0	2.5	6.9	10.3	13.8	17.3	27.7	41.5
	Max. motor capacity (kW) *2	0.2	0.4	1.5	2.2	3.7	5.5	7.5	7.5
	Motor full load current (A)	1.8	3.2	8	11.1	17.4	26	34	34
	3-phase 200V AC								
	Number of elements	3-pole, 2 or 3-element *3							
Control circuit	Isolation method	Photocoupler							
	Control voltage (Vn)	D5: 12–24V DC D6: 5V DC		D3: 5–24V DC					
	Pick-up voltage	D5: 8V or less D6: 4V or less		D3: 3.5V or less					
	Drop-out voltage	D5, D6: 1V and over		D3: 1.5V and over					
	Operating time (at 100% Vn) Release time (at 100% Vn)	5ms or less (SS□-3Z: 15ms or less) 15ms or less							
Auxiliary circuit	AC operated type	—							
	DC operated type	—							

Notes: ^{*1} Replace the □ mark by rated thermal current code (03 to 200), and the ■ mark by the number of elements (2 or 3). See page 01/123,124.

^{*2} Maximum ratings when SSC is used with cooling fin (SX1-□) at temperature of 40°C or less.

Motor starting current: 6 times full-load current, Motor starting time: 0.25s or less.

^{*3} 2-element types are supplied in 3-pole with current carrying parts omitted from center pole.

● Main circuit 480V AC, SS30H to SS120H

Type *1		SS□■H-1(Z)-A1, D2				SS□■H-3(Z)-D3			
Ordering code *1		SS□■H-1M(Z)A1, D2				SS□■H-3M(Z)D3			
Main circuit	Rated voltage	200 - 480V AC 50/60Hz				200 - 480V AC 50/60Hz			
	Rated thermal current (A)	30	50	80	120	30	50	80	120
	Max. heater capacity (kW)	20.7	34.6	55.4	83.0	20.7	34.6	55.4	83.0
	Max. motor capacity (kW)*2	7.5	11	22	22	7.5	11	22	22
	Motor full load current (A)	17	24	48	48	17	24	48	48
	3-phase 400V AC								
Number of elements		3-pole, 2 or 3-element *3				3-pole, 2 or 3-element *3			
Control circuit	Isolation method	Photocoupler				Photocoupler			
	Control voltage (Vn)	A1: 100–120/200–240V AC 50/60Hz D2: 12/24V DC				5–24V DC			
	Pick-up voltage	85% Vn or less				3.5V or less			
	Drop-out voltage	30% Vn and over				1.5V and over			
	Operating time (at 100% Vn) Release time (at 100% Vn)	30ms or less 30ms or less				5ms or less (SS□H-3Z: 15ms or less) 15ms or less			
Auxiliary circuit	Output	AC operated DC operated	Thyristor 2NO Transistor 2NO			—			
	Rated current and voltage	AC operated DC operated	0.2A, 240V AC 0.2A, 24V DC			—			

Notes: ^{*1} Replace the □ mark by rated thermal current code (03 to 200), and the ■ mark by the number of elements (2 or 3). See page 01/123,124.

^{*2} Maximum ratings when SSC is used with cooling fin (SX1-□) at temperature of 40°C or less.

Motor starting current: 6 times full-load current, Motor starting time: 0.25s or less.

^{*3} 2-element types are supplied in 3-pole with current carrying parts omitted from center pole.

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■ Specifications

3-pole independent type

● Main circuit 240V AC, SS03-4 to SS120-4

Type *1		SS□■-4(Z)-A3	SS□■-4(Z)-A4	SS□■-4(Z)-D3	SS□■-4(Z)-D5	SS□■-4(Z)-D6					
Ordering code *1		SS□■-4M(Z)A3	SS□■-4M(Z)A4	SS□■-4M(Z)D3	SS□■-4M(Z)D5	SS□■-4M(Z)D6					
Main circuit	Rated voltage	100 - 240V AC 50/60Hz				100 - 240V AC 50/60Hz					
	Rated thermal current (A)	20	30	40	50	80	120	3	8	3	8
	Max. heater capacity (kW)	4	6	8	10	16	24	0.6	1.6	0.6	1.6
	Single phase 200V AC										
	Number of elements	3-pole, 2 or 3-element *3									
Control circuit	Isolation method	Photocoupler									
	Control voltage (Vn)	100-120V AC		200-240V AC		5-24V DC		12-24V DC		5V DC	
	Pick-up voltage	85% Vn or less				3.5V or less		8V or less		4V or less	
	Drop-out voltage	30%Vn and over				1.5V and over		1V and over		1V and over	
	Operating time (at 100% Vn)	30ms or less				5ms or less (D3: SS□■-4Z: 15ms or less)					
Release time (at 100% Vn)		30ms or less				15ms or less					
Auxiliary circuit		—									

● Main circuit 480V AC, SS30H-4 to SS120H-4

Type *1		SS□■H-4(Z)-A3	SS□■H-4(Z)-A4	SS□■H-4(Z)-D3
Ordering code *1		SS□■H-4M(Z)A3	SS□■H-4M(Z)A4	SS□■H-4M(Z)D3
Main circuit	Rated voltage	200 - 480V AC 50/60Hz		
	Rated thermal current (A)	30	50	80
	Max. heater capacity (kW)	12	20	32
	Single phase 400V AC			
Control circuit	Isolation method	Photocoupler		
	Control voltage (Vn)	100-120V AC	200-240V AC	5-24V DC
	Pick-up voltage	85% Vn or less		
	Drop-out voltage	30% Vn and over		
	Operating time (at 100% Vn)	30ms or less		
Auxiliary circuit		—		

Notes: *1 Replace the □ mark by rated thermal current code (03 to 200) and the ■ mark by the number of elements (2 or 3). See page 01/123, 124.

*2 Maximum ratings when SSC is used with cooling fin (SX1-□) at temperature of 40°C or less.

*3 2-element types are supplied in 3-pole with current carrying parts omitted from center pole.

Solid-state Contactors

SS series

General use

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● 3-pole AC operated

Type		Control circuit				3-pole independent type: 4			
Main circuit		3-pole unit type: 1							
240V AC: Blank		Zero-cross function				Provided: Z			
480V AC: H		Not provided: Blank				Not provided: Blank			
3-pole		Control voltage: 100-120V AC/200-220V AC: A1 , 100-120V AC: A3 , 200-240V AC: A4							
2-element		A1 A3 A4				A3 A4 A3 A4			
3-pole		With cooling fin: F				With cooling fin: F			
3-element									
SS032	SS033	●	●			●	●		
SS082	SS083	●	●			●	●		
SS202	SS203	●				●	●	●	●
SS302	SS303	●				●	●	●	●
SS302H	SS303H	●				●	●	●	●
SS402	SS403	●				●	●	●	●
SS502	SS503	●				●	●	●	●
SS502H	SS503H	●				●	●	●	●
SS802	SS803	●				●	●	●	●
SS802H	SS803H	●				●	●	●	●
SS1202	SS1203	●				●	●	●	●
SS1202H	SS1203H	●				●	●	●	●

Note: ● Available

● 3-pole DC operated

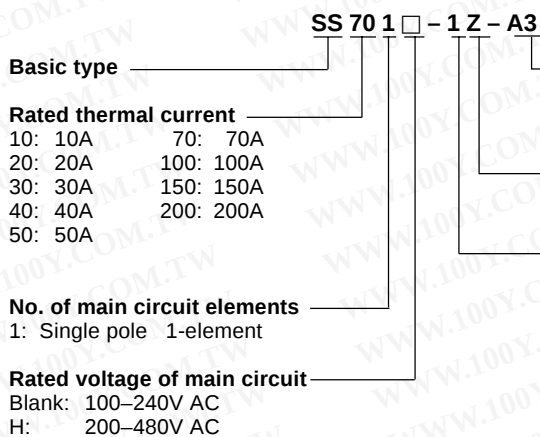
Type		Control circuit				3-pole independent type: 4			
Main circuit		3-pole unit type: 1				3-pole unit type: 3			
240V AC: Blank		Zero-cross function				Not provided: Blank			
480V AC: H		Z				Blank			
3-pole		Control voltage: 12/24V DC: D2 , 5-24V DC: D3 , 12-24V DC: D5 , 5V DC: D6							
2-element		D2 D5 D2 D5 D3 D5 D6 D3 D5 D6 D3 D5 D6 D3 D5 D6							
3-pole		With cooling fin: F				With cooling fin: F			
3-element									
SS032	SS033	●	●			●	●	●	●
SS082	SS083	●	●			●	●	●	●
SS202	SS203	●	●			●	●	●	●
SS302	SS303	●	●			●	●	●	●
SS302H	SS303H	●	●			●	●	●	●
SS402	SS403	●	●			●	●	●	●
SS502	SS503	●	●			●	●	●	●
SS502H	SS503H	●	●			●	●	●	●
SS802	SS803	●	●			●	●	●	●
SS802H	SS803H	●	●			●	●	●	●
SS1202	SS1203	●	●			●	●	●	●
SS1202H	SS1203H	●	●			●	●	●	●

Note: ● Available

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■ Type number nomenclature

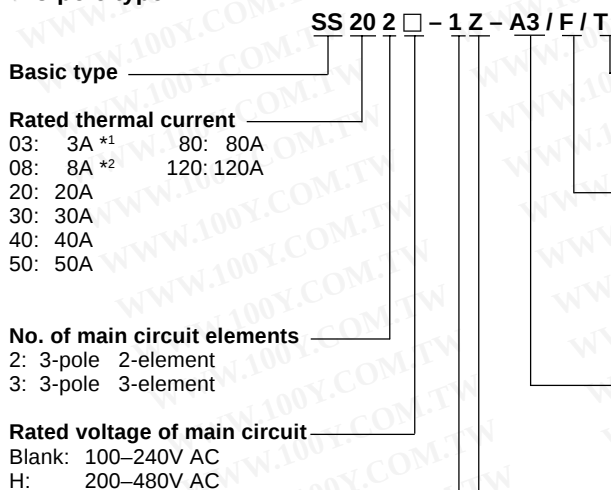
● Single-pole type



Control circuit

	Isolation method	Voltage detector	Auxiliary contact	Applicable contactor	
1	Photocoupler	Provided	Provided	SS701 to 2001	240V AC
				SS701H to 2001H	480V AC
3	Photocoupler	Not provided	Not provided	SS101 to 2001	240V AC
				SS701H to 2001H	480V AC
5	Photocoupler	Not provided	Not provided	SS101 to 501	240V AC

● 3-pole type



Control circuit

	Control method		Isolation method	Voltage detector	Auxiliary contact
	3-pole unit	3-pole independent			
1	○		Photocoupler	Provided	Provided
3	○		Photocoupler	Not provided	Not provided
4		○	Photocoupler	Not provided	Not provided

Notes: *1 Type SS03□ can carry the rated thermal current even if no cooling fin is fitted.
*2 Type SS08□ is shipped with a cooling fin fitted to the main body even if /F is not suffixed to the type number.
*3 Suffix code applicable only to type SS80□ and type SS120□. Fan rated operating voltage: 100–120V AC, 50/60Hz.
*4 Suffix code applicable only to type SS80□ and type SS120□. Fan rated operating voltage: 200–240V AC, 50/60Hz.
*5 Suffix code applicable only to type SS80□ and type SS120□. Fan rated operating voltage: 24V DC.

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SS series

General use

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■ Ordering code system

S S 8 0 3 H — 1 Z A 1 F A 3
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬

① Product category

Description	Code
Contactor	S

② Series category

Description	Code
Solid-state contactor	S

③④ Framesize

Frame size	Code	
	③	④
03	0	3
08	0	8
10	1	0
20	2	0
30	3	0
40	4	0
50	5	0
70	7	0
80	8	0
100	1	A
120	1	C
150	1	F
200	2	A

⑤ No. of main circuit elements

No. of elements	Code
Single pole, 1-element	1
3-pole, 2-element	2
3-pole, 3-element	3

⑥ Rated voltage of main circuit

Rated voltage	Code
100 - 240V AC	Blank
200 - 480V AC	H

⑦ Control circuit

● 3-pole type

Control method	Insolation method	Voltage detector	Auxiliary contact	Code
3-pole unit	Photocoupler	Provided	Provided	1
3-pole unit	Photocoupler	Not provided	Not provided	3
3-pole independent	Photocoupler	Not provided	Not provided	4

● Single-pole type

Control method	Insolation method	Voltage detector	Auxiliary contact	Code
Single-pole	Photocoupler	Provided	Provided	1
	Photocoupler	Not provided	Not provided	3
	Photocoupler	Not provided	Not provided	5

⑧ Zero-cross function

Zero-cross function	Code	
	Single-pole	3-pole
Not provided	Blank	M
Provided	Z	Z

⑪ Shipping form

Description	Code	3-pole
Cooling fin set	Blank	F
Contactor only	Not provided	Blank

⑨⑩ Control voltage

Description	Code	
	⑨	⑩
100-120V/200-240V AC	A	1
100-120V AC	A	3
200-240V AC	A	4
12/24V DC	D	2
5-24 V DC	D	3
12-24V DC	D	5
5V DC	D	6

⑫⑬ Cooling fan voltage

Cooling fan control voltage	Code	
	⑫	⑬
100-120V AC	A	3
200-240V AC	A	4
12-24V DC	D	5

■ Versions

Single-pole type

● Main circuit 240V AC

Control voltage	Voltage detector	Auxiliary contact	Zero-cross function	Rated thermal current				
				10A	20A	30A	40A	50A
100 - 120V AC	—	—	●	SS101-5Z-A3	SS201-5Z-A3	SS301-5Z-A3	SS401-5Z-A3	SS501-5Z-A3
200 - 240V AC	—	—	●	SS101-5Z-A4	SS201-5Z-A4	SS301-5Z-A4	SS401-5Z-A4	SS501-5Z-A4
5 - 24V DC	—	—	●	SS101-3Z-D3	SS201-3Z-D3	SS301-3Z-D3	SS401-3Z-D3	SS501-3Z-D3

Control voltage	Voltage detector	Auxiliary contact	Zero-cross function	Rated thermal current			
				70A	100A	150A	200A
100 - 120V AC	●	●	●	SS701-1Z-A3	SS1A1-1Z-A3	SS1F1-1Z-A3	SS2A1-1Z-A3
200 - 240V AC	●	●	●	SS701-1Z-A4	SS1A1-1Z-A4	SS1F1-1Z-A4	SS2A1-1Z-A4
5 - 24V DC	—	—	●	SS701-3Z-D3	SS1A1-3Z-D3	SS1F1-3Z-D3	SS2A1-3Z-D3

● Main circuit 480V AC

Control voltage	Voltage detector	Auxiliary contact	Zero-cross function	Rated thermal current			
				70A	100A	150A	200A
100 - 120V AC	●	●	●	SS701H-1Z-A3	SS1A1H-1Z-A3	SS1F1H-1Z-A3	SS2A1H-1Z-A3
200 - 240V AC	●	●	●	SS701H-1Z-A4	SS1A1H-1Z-A4	SS1F1H-1Z-A4	SS2A1H-1Z-A4
5 - 24V DC	—	—	●	SS701H-3Z-D3	SS1A1H-3Z-D3	SS1F1H-3Z-D3	SS2A1H-3Z-D3

Note: ● Provided — Not provided

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■ Versions

3-pole type

● Main circuit 240V AC

Rated thermal current		3A	8A	20A	30A	40A	50A	80A	120A
AC control voltage *1	2-element	SS032-1M□	SS082-1M□	SS202-1M□F SS202-4M□F	SS302-1M□F SS302-4M□F	SS402-1M□F SS402-4M□F	SS502-1M□F SS502-4M□F	SS802-1M□F SS802-4M□F	SS1C2-1M□F SS1C2-4M□F
	(With zero-cross function)	SS032-1Z□	SS082-1Z□	SS202-1Z□F SS202-4Z□F	SS302-1Z□F SS302-4Z□F	SS402-1Z□F SS402-4Z□F	SS502-1Z□F SS502-4Z□F	SS802-1Z□F SS802-4Z□F	SS1C2-1Z□F SS1C2-4Z□F
	3-element	SS033-1M□	SS083-1M□	SS203-1M□F SS203-4M□F	SS303-1M□F SS303-4M□F	SS403-1M□F SS403-4M□F	SS503-1M□F SS503-4M□F	SS803-1M□F SS803-4M□F	SS1C3-1M□F SS1C3-4M□F
	(With zero-cross function)	SS033-1Z□	SS083-1Z□	SS203-1Z□F SS203-4Z□F	SS303-1Z□F SS303-4Z□F	SS403-1Z□F SS403-4Z□F	SS503-1Z□F SS503-4Z□F	SS803-1Z□F SS803-4Z□F	SS1C3-1Z□F SS1C3-4Z□F
DC control voltage *2	2-element	SS032-1M□ SS032-3M□ SS032-4M□	SS082-1M□ SS082-3M□ SS082-4M□	SS202-1M□F SS202-3M□F SS202-4M□F	SS302-1M□F SS302-3M□F SS302-4M□F	SS402-1M□F SS402-3M□F SS402-4M□F	SS502-1M□F SS502-3M□F SS502-4M□F	SS802-1M□F SS802-3M□F SS802-4M□F	SS1C2-1M□F SS1C2-3M□F SS1C2-4M□F
	(With zero-cross function)	SS032-1Z□ SS032-3Z□ SS032-4Z□	SS082-1Z□ SS082-3Z□ SS082-4Z□	SS202-1Z□F SS202-3Z□F SS202-4Z□F	SS302-1Z□F SS302-3Z□F SS302-4Z□F	SS402-1Z□F SS402-3Z□F SS402-4Z□F	SS502-1Z□F SS502-3Z□F SS502-4Z□F	SS802-1Z□F SS802-3Z□F SS802-4Z□F	SS1C2-1Z□F SS1C2-3Z□F SS1C2-4Z□F
	3-element	SS033-1M□ SS033-3M□ SS033-4M□	SS083-1M□ SS083-3M□ SS083-4M□	SS203-1M□F SS203-3M□F SS203-4M□F	SS303-1M□F SS303-3M□F SS303-4M□F	SS403-1M□F SS403-3M□F SS403-4M□F	SS503-1M□F SS503-3M□F SS503-4M□F	SS803-1M□F SS803-3M□F SS803-4M□F	SS1C3-1M□F SS1C3-3M□F SS1C3-4M□F
	(With zero-cross function)	SS033-1Z□ SS033-3Z□ SS033-4Z□	SS083-1Z□ SS083-3Z□ SS083-4Z□	SS203-1Z□F SS203-3Z□F SS203-4Z□F	SS303-1Z□F SS303-3Z□F SS303-4Z□F	SS403-1Z□F SS403-3Z□F SS403-4Z□F	SS503-1Z□F SS503-3Z□F SS503-4Z□F	SS803-1Z□F SS803-3Z□F SS803-4Z□F	SS1C3-1Z□F SS1C3-3Z□F SS1C3-4Z□F

Note: Enter the cooling fan voltage code in the ■ mark, see page 01/124.

● Main circuit 480V AC

Rated thermal current		30A	50A	80A	120A
AC control voltage *1	2-element	SS302H-1M□F SS302H-4M□F	SS502H-1M□F SS502H-4M□F	SS802H-1M□F SS802H-4M□F	SS1C2H-1M□F SS1C2H-4M□F
	(With zero-cross function)	SS302H-1Z□F SS302H-4Z□F	SS502H-1Z□F SS502H-4Z□F	SS802H-1Z□F SS802H-4Z□F	SS1C2H-1Z□F SS1C2H-4Z□F
	3-element	SS303H-1M□F SS303H-4M□F	SS503H-1M□F SS503H-4M□F	SS803H-1M□F SS803H-4M□F	SS1C3H-1M□F SS1C3H-4M□F
	(With zero-cross function)	SS303H-1Z□F SS303H-4Z□F	SS503H-1Z□F SS503H-4Z□F	SS803H-1Z□F SS803H-4Z□F	SS1C3H-1Z□F SS1C3H-4Z□F
DC control voltage *2	2-element	SS302H-1M□F SS302H-3M□F SS302H-4M□F	SS502H-1M□F SS502H-3M□F SS502H-4M□F	SS802H-1M□F SS802H-3M□F SS802H-4M□F	SS1C2H-1M□F SS1C2H-3M□F SS1C2H-4M□F
	(With zero-cross function)	SS302H-1Z□F SS302H-3Z□F SS302H-4Z□F	SS502H-1Z□F SS502H-3Z□F SS502H-4Z□F	SS802H-1Z□F SS802H-3Z□F SS802H-4Z□F	SS1C2H-1Z□F SS1C2H-3Z□F SS1C2H-4Z□F
	3-element	SS303H-1M□F SS303H-3M□F SS303H-4M□F	SS503H-1M□F SS503H-3M□F SS503H-4M□F	SS803H-1M□F SS803H-3M□F SS803H-4M□F	SS1C3H-1M□F SS1C3H-3M□F SS1C3H-4M□F
	(With zero-cross function)	SS303H-1Z□F SS303H-3Z□F SS303H-4Z□F	SS503H-1Z□F SS503H-3Z□F SS503H-4Z□F	SS803H-1Z□F SS803H-3Z□F SS803H-4Z□F	SS1C3H-1Z□F SS1C3H-3Z□F SS1C3H-4Z□F

Notes:

Control voltage (Refer to page 01/124, 125.)

*1 Replace the □ mark in the order number by the control voltage codes shown below.

A1	100-120/200-240V AC
A3	100-120V AC
A4	200-240V AC

*2 Replace the □ mark in the order number by the control voltage codes shown below.

D2	12/24V DC
D3	5-24V DC
D5	12-24V DC
D6	5V DC

Note: Enter the cooling fan voltage code in the ■ mark, see page 01/124.

Solid-state Contactors

SS series

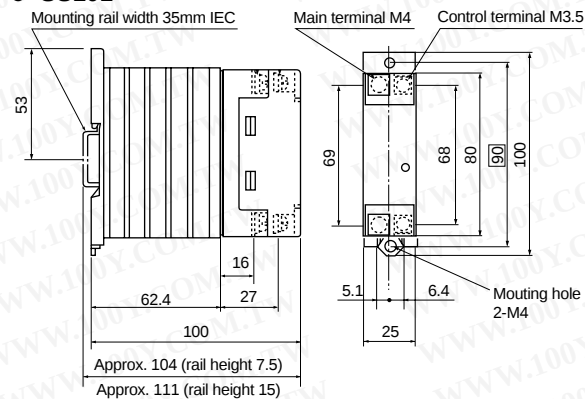
General use

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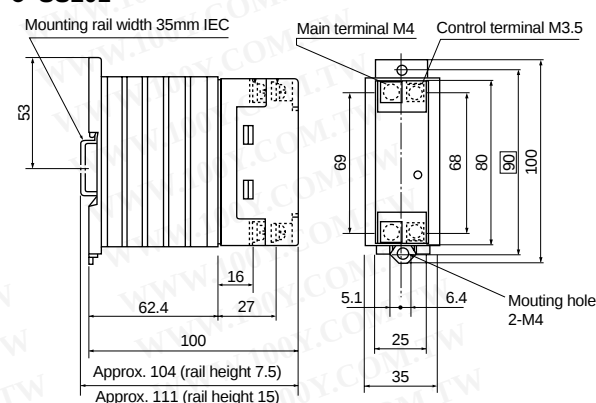
■ Dimensions, mm

Single-pole type

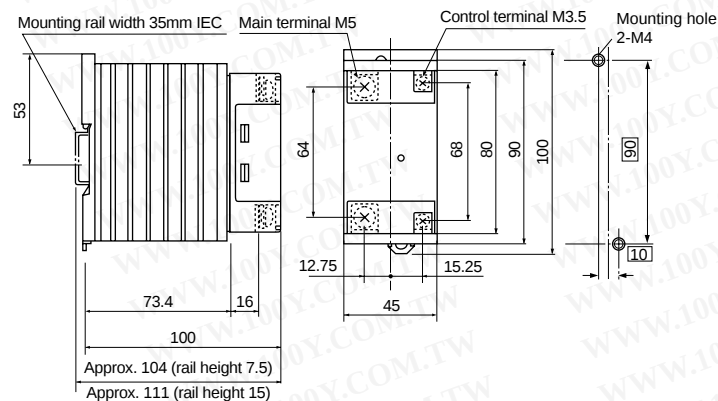
● SS101



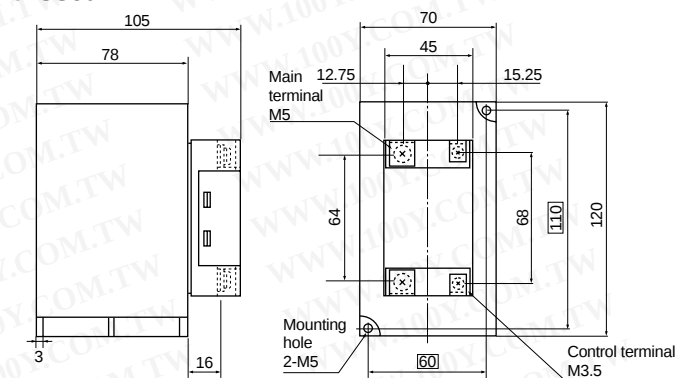
● SS201



● SS301, 401

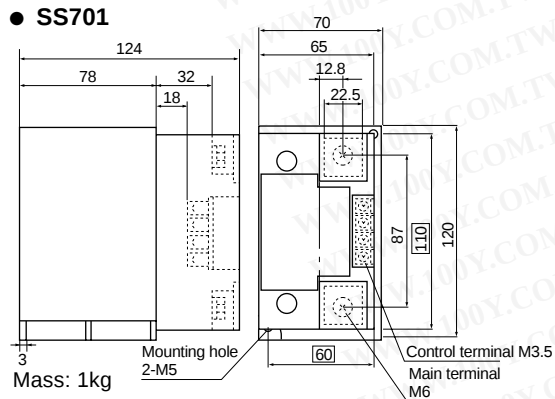


● SS501



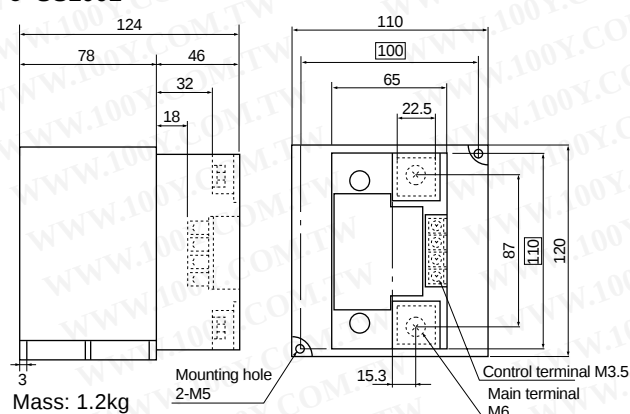
Mass:
 SS101: 0.22kg SS401: 0.36kg
 SS201: 0.24kg SS501: 0.66kg
 SS301: 0.36kg

● SS701



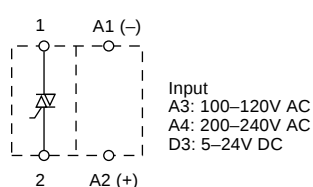
□ Mounting hole dimensions

● SS1001



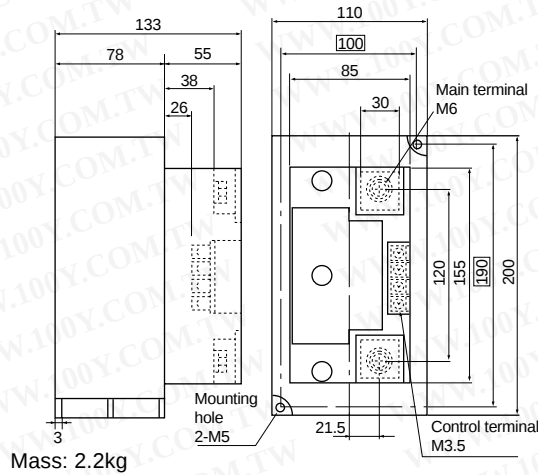
■ Wiring diagram

● SS101 to SS501

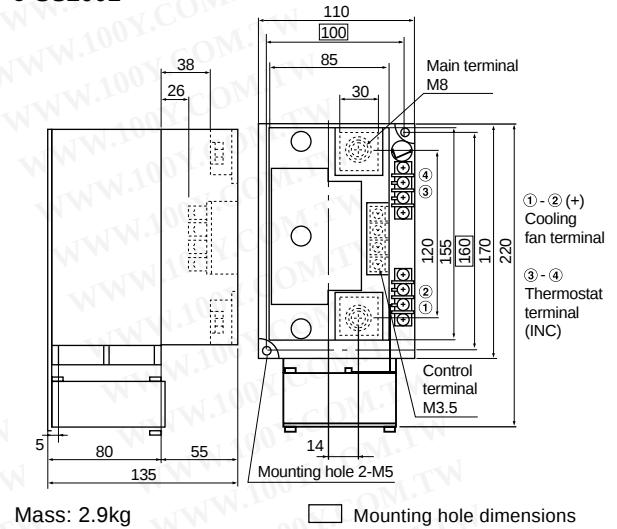


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■ Dimensions, mm
Single-pole type
● SS1501

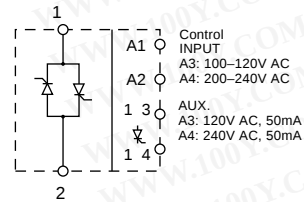


● SS2001

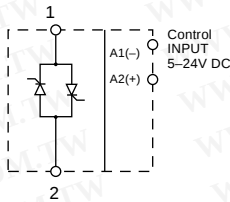


■ Wiring diagrams
● SS701 to SS1501
SS701H to SS1501H

Control input
AC voltage

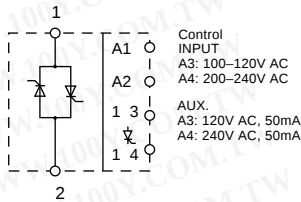


DC voltage

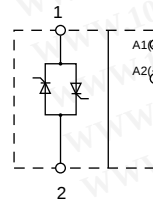


● SS2001, SS2001H

Control input
AC voltage



DC voltage

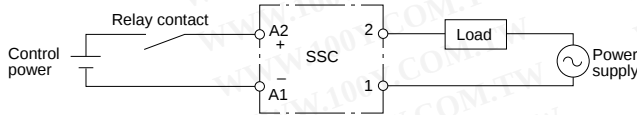


Internal

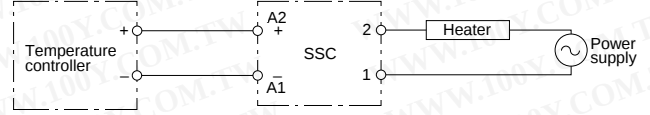
- ④ Thermostat terminal (NC)
- ③ (+) Cooling fan terminal
- ② (+) Cooling fan terminal
- ① Cooling fan terminal

Single pole type solid-state contactor
Application example

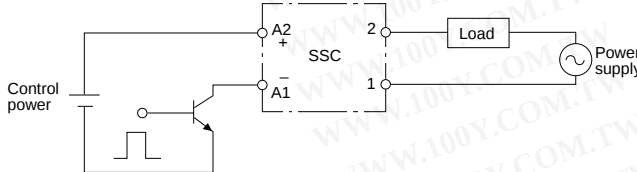
- Drive system
- Driven by relay contact



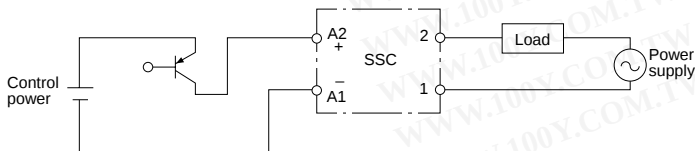
- Connection to load
- Heater control



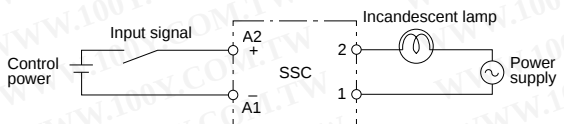
- Driven by NPN transistor



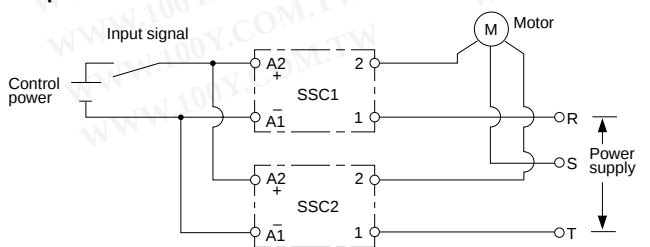
- Driven by PNP transistor



- Incandescent lamp



- 3-phase motor



Solid-state Contactors

SS series

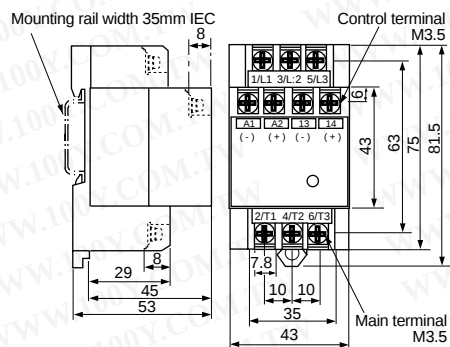
General use

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■ Dimensions, mm

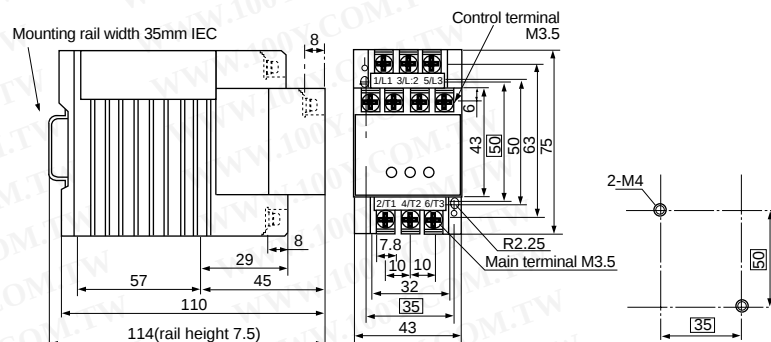
3-pole unit type

● SS03 (Rail mounting only)



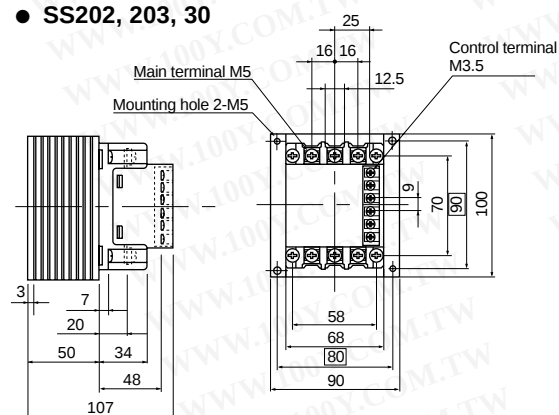
Mass: Approx. 0.18kg

● SS08



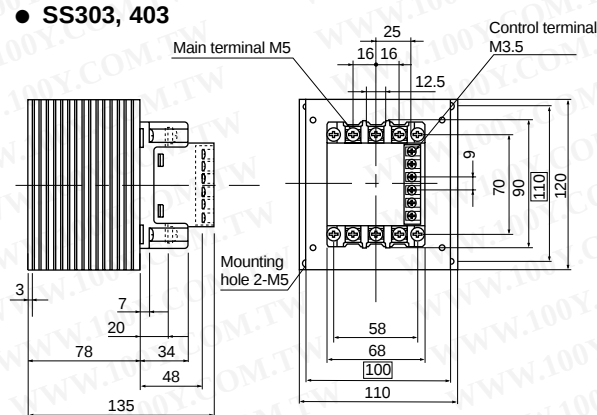
Mass: Approx. 0.3kg

● SS202, 203, 30



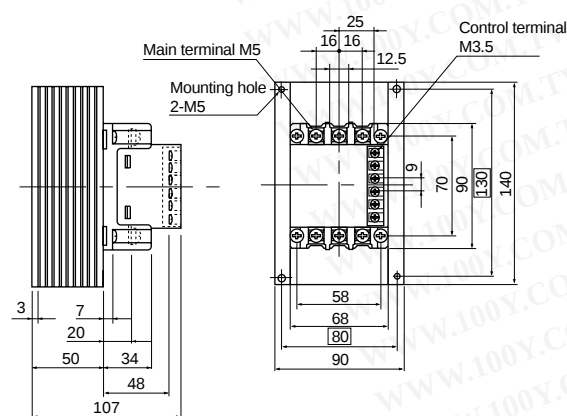
Mass: Approx. 0.77kg

● SS303, 403



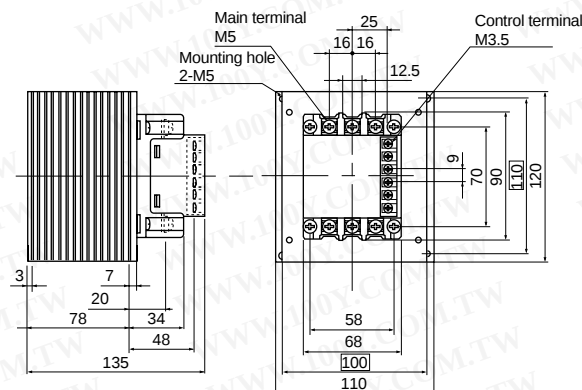
Mass: Approx. 1.1kg

● SS402



Mass: Approx. 0.99kg

● SS502



Mass: Approx. 1.1kg

□ Mounting hole dimensions

- SS503



Main terminal
M6

Control terminal
M3.5

Cooling fan input terminal **M4**

1-2(+)
Cooling fan input terminal

3-4
Thermostat terminal (NC)

4-M5

Mass: Approx. 2.6kg

[illegible]

Technical drawing of the M5-M3.5 converter showing front and side views with dimensions.

Front View Dimensions:

- Overall width: 153
- Distance from left edge to main terminal center: 78
- Distance from left edge to mounting hole center: 3
- Distance from main terminal center to mounting hole center: 27
- Distance from mounting hole center to right edge: 66
- Distance from mounting hole center to right edge (alternative): 75

Side View Dimensions:

- Overall height: 137
- Distance from top edge to main terminal center: 41
- Distance from top edge to mounting hole center: 90
- Distance from top edge to mounting hole center (alternative): 110
- Distance from top edge to mounting hole center (alternative): 111
- Distance from top edge to mounting hole center (alternative): 120
- Distance from top edge to mounting hole center (alternative): 137

Labels:

- Main terminal M5
- Mounting hole 2-M5
- Control terminal M3.5
- Mounting hole 2- $\phi 5.5$

Mass: Approx. 1.8kg

[illegible]

SS503H

Technical drawing of the SS503H terminal block, showing side and front views with dimensions and labels.

Side View Dimensions:

- Overall width: 153
- Distance between main terminal rows: 78
- Distance between mounting holes: 66
- Distance from mounting hole to main terminal row: 27
- Distance from mounting hole to control terminal row: 75
- Distance between control terminal rows: 7

Front View Dimensions and Labels:

- Overall height: 170
- Distance between main terminal rows: 111
- Distance between control terminal rows: 90
- Distance from mounting hole to main terminal row: 41
- Distance from mounting hole to control terminal row: 160
- Distance between mounting holes: 110
- Distance between main terminal rows (center-to-center): 90
- Distance between control terminal rows (center-to-center): 25
- Distance from mounting hole to main terminal row (center-to-center): 25
- Distance from mounting hole to control terminal row (center-to-center): 100

Labels:

- Main terminal M6
- Control terminal M3.5
- Mounting hole 2-M5
- Mounting hole 2- $\varnothing 5.5$

Mass: Approx. 2.2kg

01/113

Solid-state Contactors

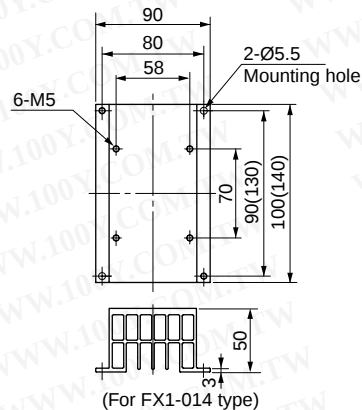
SS series

General use

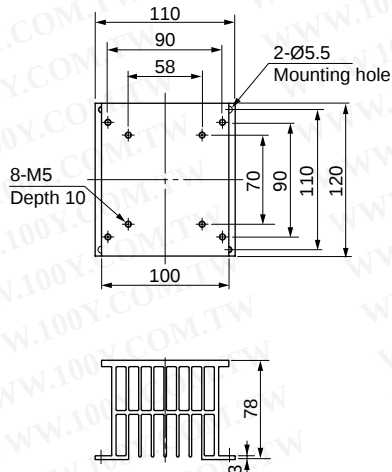
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■ Dimensions, mm/Cooling fins

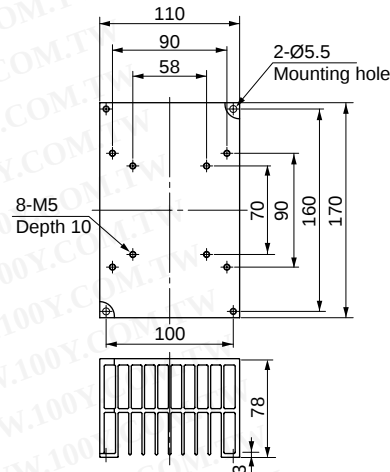
● SX1-D10, SX1-D14



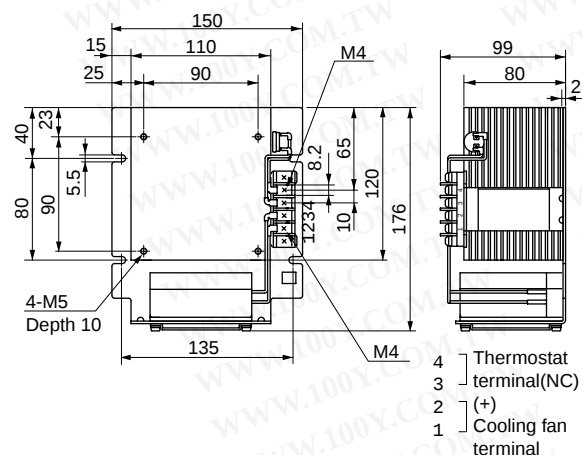
● SX1-E12



● SX1-E17



● SX1-C12

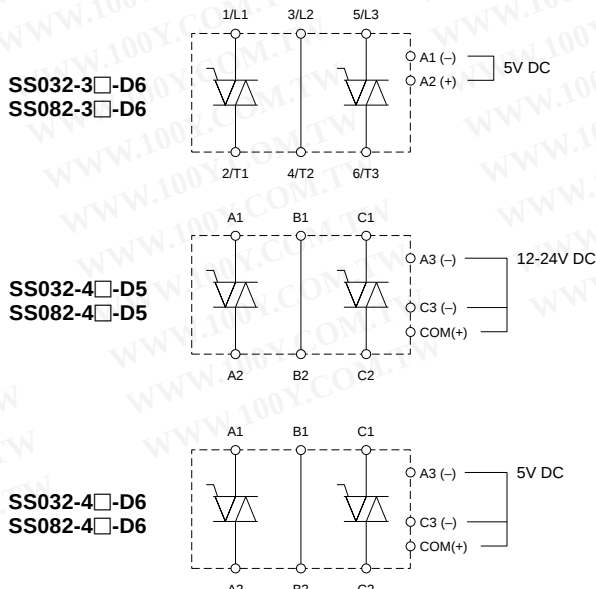
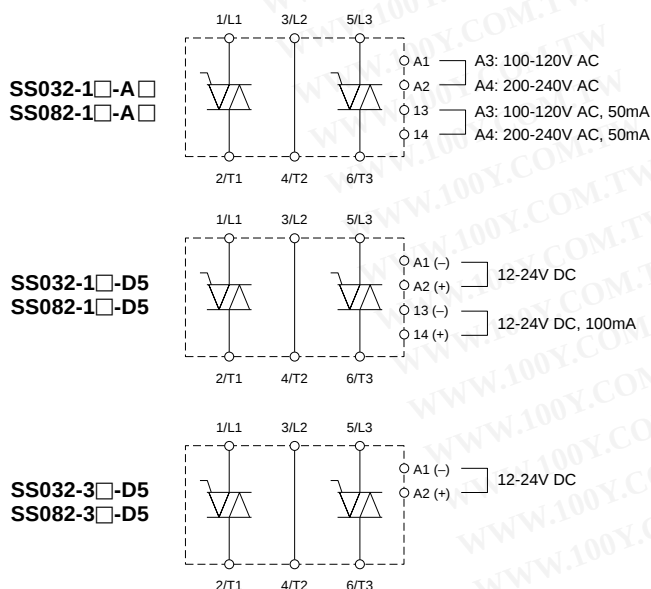


Type	Used with	Mass (kg)
SX1-D10	SS202, SS203, SS302	Approx. 0.36
SX1-D14	SS402	Approx. 0.53
SX1-E12	SS302H, SS303, SS303H SS403, SS502, SS502H	Approx. 0.82
SX1-E17	SS503, SS503H	Approx. 1.16
SX1-C12-A3 100-120V AC 50/60Hz	SS802, SS802H, SS803	Approx. 2.2
SX1-C12-A4 200-240V AC 50/60Hz	SS803H, SS1202, SS1202H	
SX1-C12-D5 24V DC	SS1203, SS1203H	

■ Wiring diagrams

● SS03, SS08/2-element

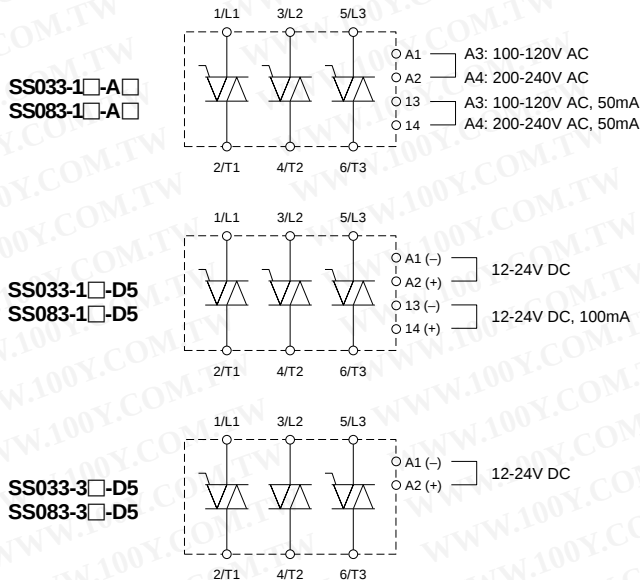
A1, A2, A3, C3, COM: Control terminals
 13, 14: Aux. terminals



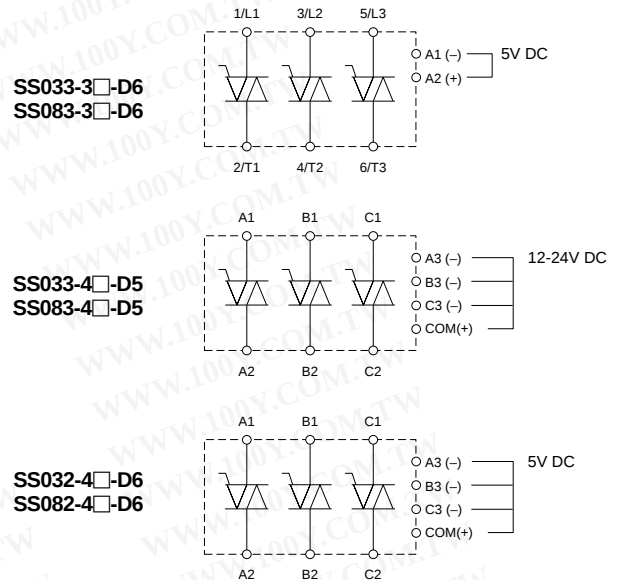
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■ Wiring diagrams

● SS03, SS08/3-element

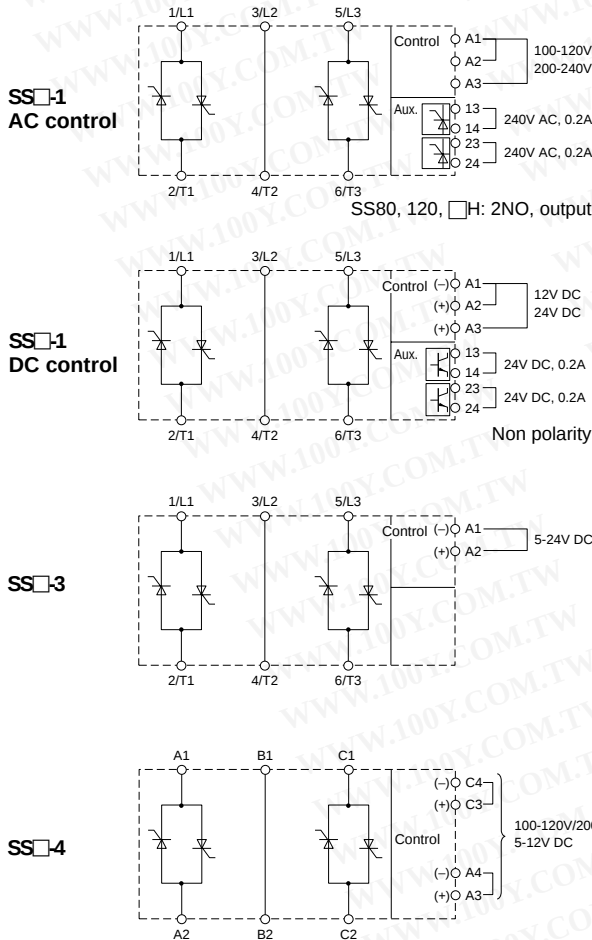


A1, A2, A3, B3, B4, C3, C4: Control terminals
 13, 14, 23, 24: Aux. terminals

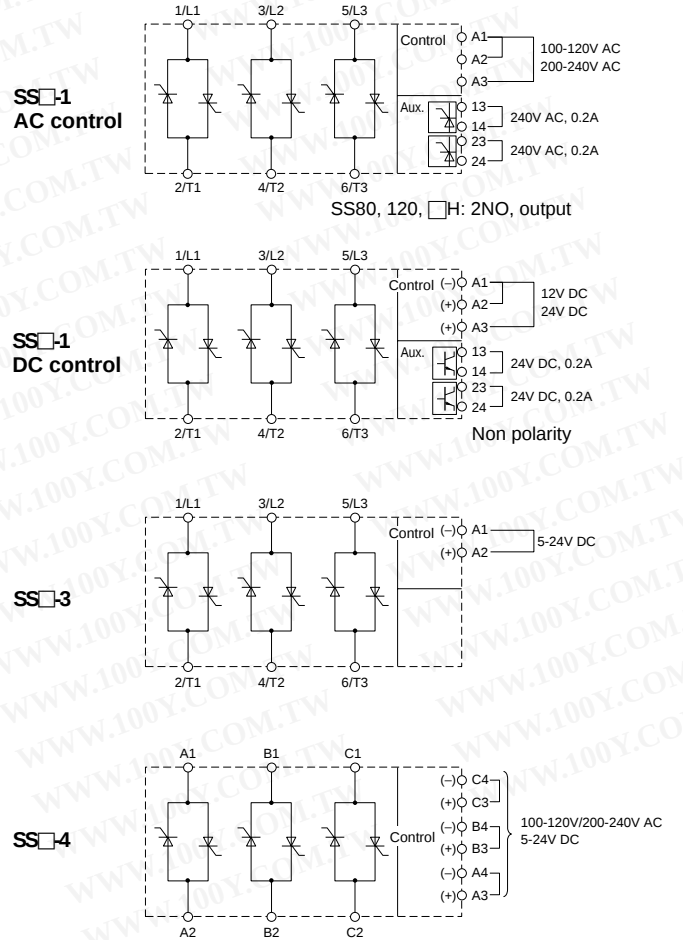


● SS20, SS30, SS40, SS50, SS80, SS120

2-element



3-element



■ Precautions for use

Be sure to read an Instruction Manual enclosed with the solid state relays before using in order to ensure proper operation.