

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

Mechanical latch industrial relays

■ Description

Mechanical latch relays are used where operating sequence continuity must be maintained regardless of any outside interruptions, such as power failures or momentary voltage drop.

These relays are provided with two coils.

One is a closing coil (CC) and the other is a trip coil (TC). An interlocking circuit is provided between the CC coil and TC coil. Since no coil voltage is applied during operation it is extremely economical and also quiet.

■ Operating method

● Closing

When the closing coil is energized the latch mechanism interlocks to latch and the NC contact connected in series with the closing coil opens and the coil is de-energized.

Operating notes

- When carrying out a sequence operating check make sure that the load is disconnected.
- The electrical signal time for closing and tripping should be 0.3 sec. or more.
- Both the closing and tripping coils are short time rating.
Closing coil: Max. 30 seconds
Trip coil: Max. 15 seconds
- Since the relay and the latch mechanisms are adjusted at the time of assembly, do not strip nor replace the contacts in the field.
- If current is applied simultaneously to both the closing and tripping circuits, the coils may be heated and damaged. An interlocking circuit is required to prevent this.

■ Types and ordering code

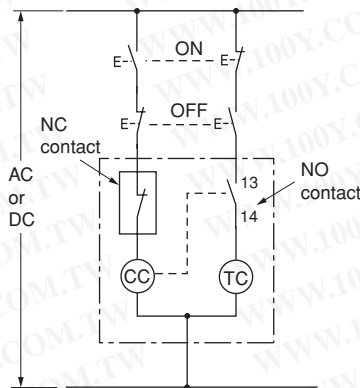
AC operated Type	Ordering code	DC operated Type	Ordering code	Contact arrangement	Rated thermal current (A)	Make/break capacity AC (A)
SH-4/V	SH04AV-■□	SH-4/VG	SH04AD-■□	3NO, 2NO+1NC, 1NO+2NC	10	60
				5NO+2NC, 4NO+3NC 3NO+4NC		30
SH-5/V	SH05AV-■□	SH-5/VG	SH05AD-■□	4NO, 3NO+1NC, 2NO+2NC	10	15
						12

Notes: • Enter the coil voltage code in the ■ mark.
Enter the contact arrangement code in the □ mark.
• Rated operational current: Same as standard type, see page 03/3.

■ Coil ratings

Type	Operating coil Voltage	Code	Power consumption		Minimum energized time	Time rating		Operating voltage range
			AC operated Closing	AC operated Tripping		DC operated Closing	DC operated Tripping	
SH-4/V	100V/100-110V AC 50Hz/60Hz	1	95VA	150VA	0.3 sec.	30 sec.	15 sec.	0.85 to 1.1 times coil rated voltage
SH-5/V	200V/200-220V AC 50Hz/60Hz	2		7W				
SH-4/VG	100V DC	1						
SH-5/VG	110V DC	H						
	200V DC	2						
	220V DC	M						

Note: Coil voltage range from 24V to 220V AC and 24V to 220V DC is available.



● Tripping

When the trip coil is energized the latch is released and tripping is carried out by means of the back spring. At this time the NO contact connected in series with the tripping coil opens.

■ Performance data

- Mechanical durability: 1 million operations
- Electrical durability: 500,000 operations (at AC-15 rated operational current)
- Operating cycles per hour: 1200
- Allowable ambient temp.: -5°C to +50°C

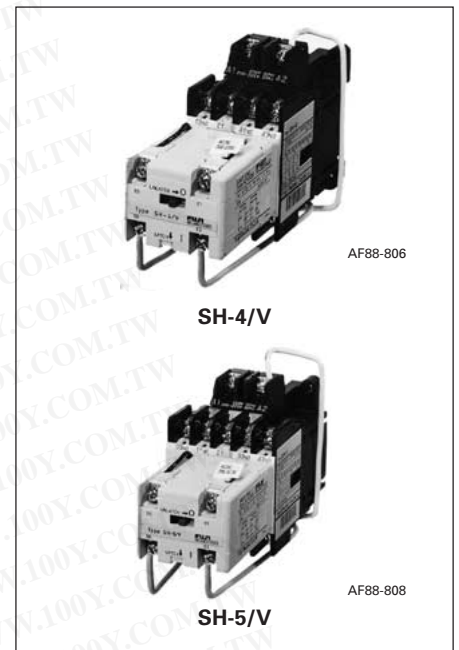
■ Ordering information

Specify the following:

1. Ordering code

Notes:

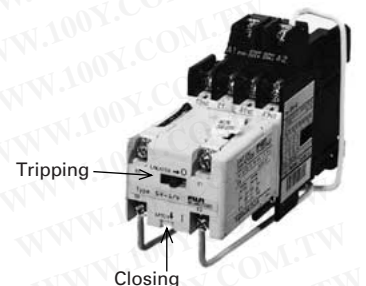
1. Mechanical latch units cannot be sold separately.
2. Do not detach mechanical latch units from relays and do not make modifications such as attaching mechanical latch units to other industrial relays.



■ Manual operating sequence

Closing: Press the button in the direction of the arrow.

Tripping: Push the lever in the direction of the arrow.



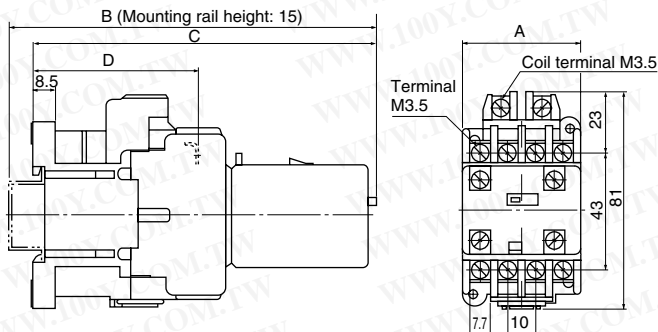
Industrial Relays

SH series

Mechanical latch type

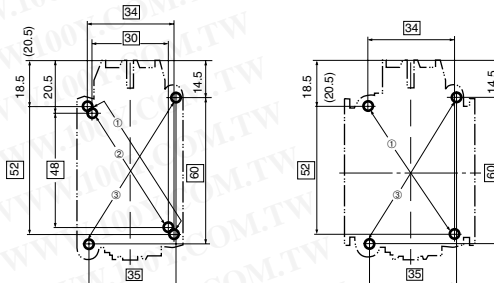
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■ Dimensions, mm



Panel drilling SH-4/V, VG

SH-5/V, VG



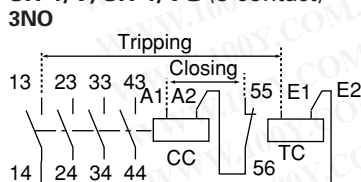
Type	No. of contact	A	B	C	D	Mass (kg)
SH-4/V	3	43	138	128	61	0.42
SH-4/V	7	67	138	128	61	0.47
SH-5/V	4	53	138	128	61	0.44
SH-4/VG	3	43	165	155	88	0.66
SH-4/VG	7	67	165	155	88	0.72
SH-5/VG	4	53	165	155	88	0.69

Note on panel drilling

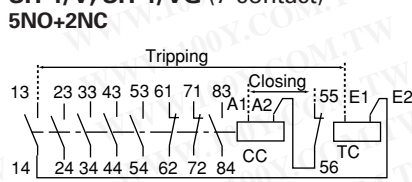
- Use the two mounting holes on a diagonal line to mount a relay.
- Mounting holes indicated by ① and ② are compatible with those of SRC type.
- Mounting holes indicated by ③ conform to IEC Standards.

■ Wiring diagrams

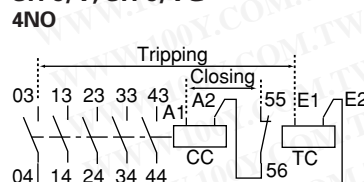
SH-4/V, SH-4/VG (3-contact)



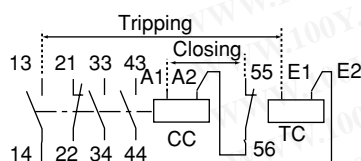
SH-4/V, SH-4/VG (7-contact)



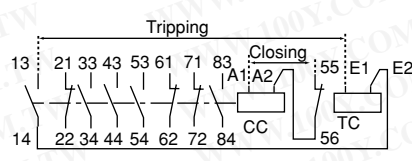
SH-5/V, SH-5/VG



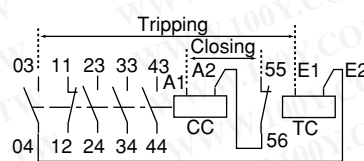
2NO+1NC



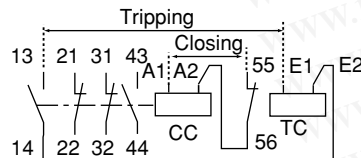
4NO+3NC



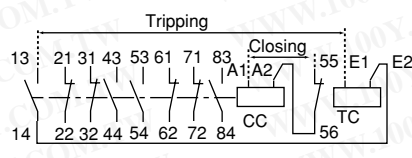
3NO+1NC



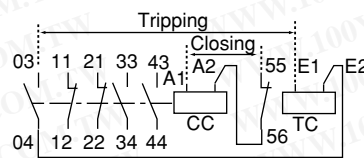
1NO+2NC



3NO+4NC



2NO+2NC



CC: Closing coil
 TC: Tripping coil

■ Combination of industrial relay and auxiliary contact block

The mechanical latch industrial relays can be used according to the combination with the side mounting auxiliary contact blocks as shown on the right.

Mechanical latch industrial relay		Auxiliary contact block (Side mounting)	
Type	Contact arrangement	SZ-AS1Vx2 2NO+2NC	SZ-AS1V 1NO+1NC
SH-4/V SH-4/VG	3NO	5NO+2NC	4NO+1NC
	2NO+1NC	4NO+3NC	3NO+2NC
	1NO+2NC	3NO+4NC	2NO+3NC
	5NO+2NC	-	-
	4NO+3NC	-	-
SH-5/V SH-5/VG	3NO+4NC	-	-
	4NO	6NO+2NC	5NO+1NC
	3NO+1NC	5NO+3NC	4NO+2NC
	2NO+2NC	4NO+4NC	3NO+3NC