

## Outline Drawing, Contact Arrangement

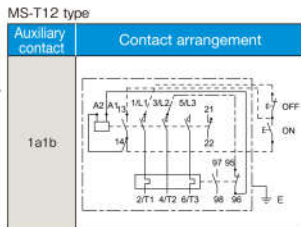
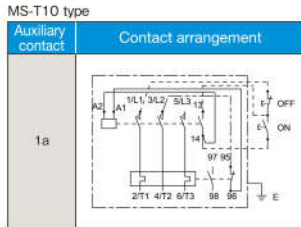
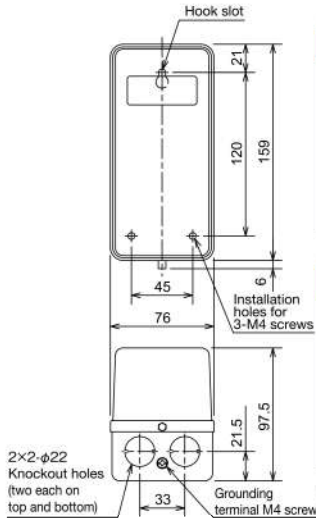
### Magnetic Starters (enclosed)

#### Non-reversing Magnetic Starter (enclosed)

Enclosure (case): Steel  
Paint color: Munsell 5Y7/1  
Protective structure: IP20

- MS-T10 type (0.74kg)
- MS-T12 type (0.76kg)

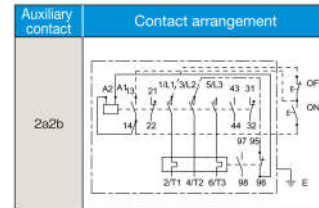
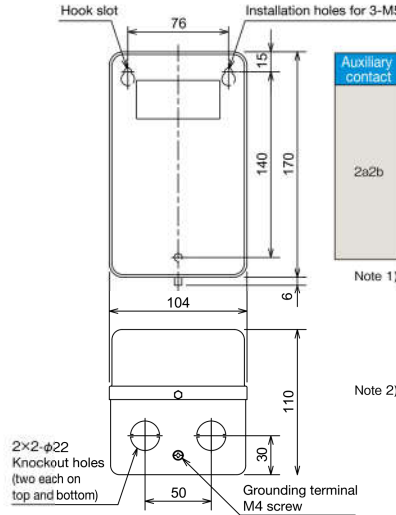
- MS-T21, T25 type (1.12kg)



Note 1) The above figure gives an example of when the main circuit and operating circuit use the same power supply. The solid line is already wired. The dashed line and two-dot chain line sections must be wired. (Use the wires enclosed with the unit to wire the two-dot chain line sections.)

Note 2) If the power supply is different for the main circuit and operating circuit, do not wire between the dashed line 1/L1 and OFF button and between the two-dot chain line 3/L2 and TH95. Wire to the OFF button and TH95 terminal from a different operating circuit power supply.

- When mounting the MS-T10 to T50 types, leave 100mm of space below the box.
- The MS-T10 to T50 types have three rubber bushings enclosed.



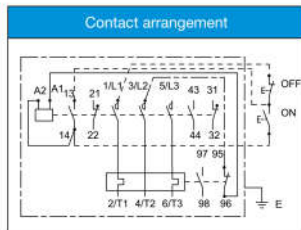
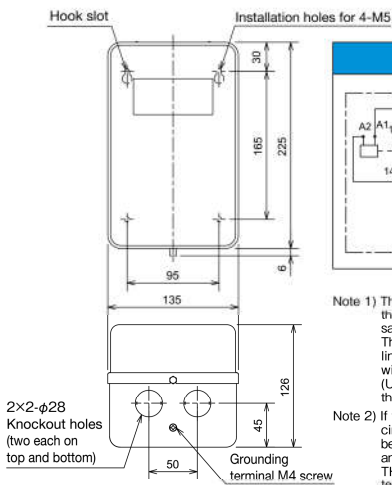
Note 1) The above figure gives an example of when the main circuit and operating circuit use the same power supply. The solid line is already wired. The dashed line and two-dot chain line sections must be wired. (Use the wires enclosed with the unit to wire the two-dot chain line sections.)

Note 2) If the power supply is different for the main circuit and operating circuit, do not wire between the dashed line 1/L1 and OFF button and between the two-dot chain line 3/L2 and TH95. Wire to the OFF button and TH95 terminal from a different operating circuit power supply.

- When mounting the MS-T10 to T21 types, leave 100mm of space below the box.
- The MS-T10 to T21 types have three rubber bushings enclosed.

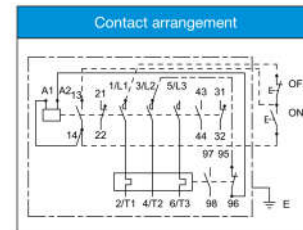
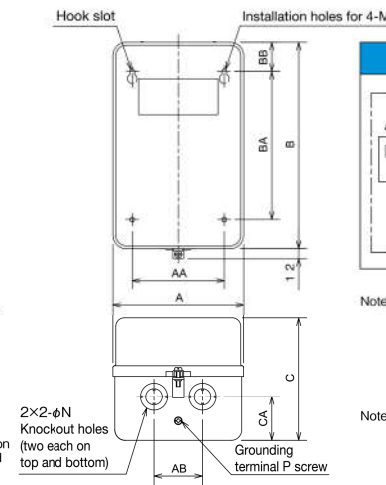
- MS-T35, T50 type (1.8kg)

- MS-T65 to T100 type (1.8kg)



Note 1) The above figure gives an example of when the main circuit and operating circuit use the same power supply. The solid line is already wired. The dashed line and two-dot chain line sections must be wired. (Use the wires enclosed with the unit to wire the two-dot chain line sections.)

Note 2) If the power supply is different for the main circuit and operating circuit, do not wire between the dashed line 1/L1 and OFF button and between the two-dot chain line 3/L2 and TH95. Wire to the OFF button and TH95 terminal from a different operating circuit power supply.



Note 1) The above figure gives an example of when the main circuit and operating circuit use the same power supply. The solid line is already wired. The dashed line and two-dot chain line sections must be wired. (Use the wires enclosed with the unit to wire the two-dot chain line sections.)

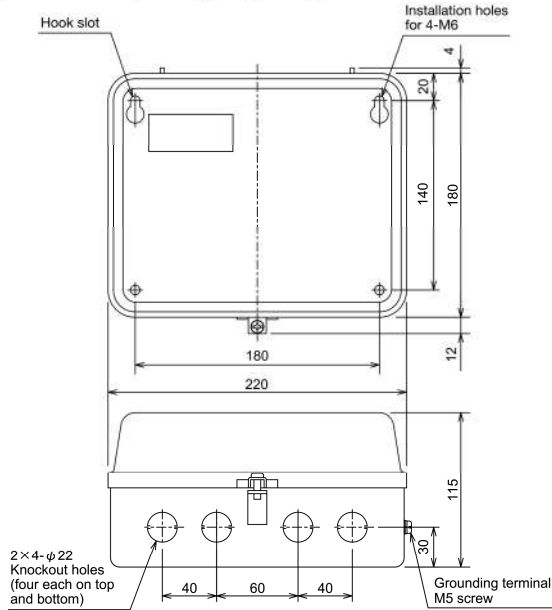
Note 2) If the power supply is different for the main circuit and operating circuit, do not wire between the dashed line 1/L1 and OFF button and between the two-dot chain line 3/L2 and TH95. Wire to the OFF button and TH95 terminal from a different operating circuit power supply.

Model	Dimensions											Weight (kg)
	A	AA	AB	B	BA	BB	C	CA	M	N	P	
MS-T65/T80	160	120	80	270	220	25	145	45	M5	22-35	M4	2.9/2.9
MS-T100	190	150	100	305	260	25	163	67	M6	22-35	M4	4.0/4.0

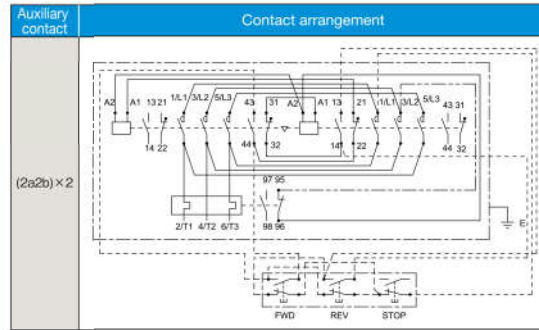
## Reversing Magnetic Starter (enclosed)

Enclosure (case): Steel  
Paint color: Munsell 5Y7/1  
Protective structure: IP20

### MS-2xT21, T25 type (2.0kg)

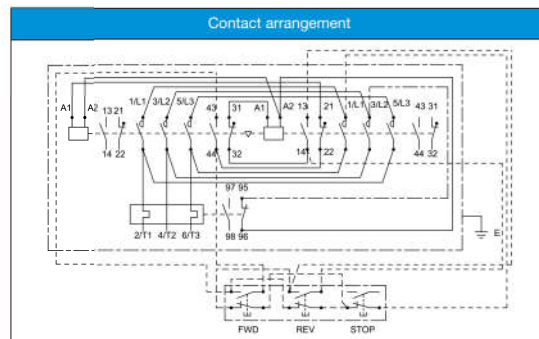
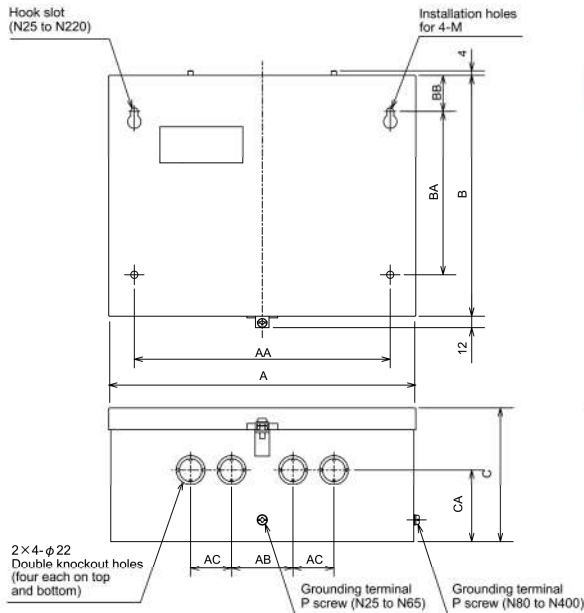


\*1. The MS-2xT21 to T50 type has three rubber bushings enclosed.



- Note 1) The above figure gives an example of when the main circuit and operating circuit use the same power supply. The solid line is already wired. The dashed line and two-dot chain line sections must be wired. (Use the wires enclosed with the unit to wire the two-dot chain line sections.)
- Note 2) If the power supply is different for the main circuit and operating circuit, do not wire between the dashed line 1/L1 and STOP button and between the two-dot chain line 3/L2 and TH95. Wire to the STOP button and TH95 terminal from a different operating circuit power supply.

### MS-2xT35 to T100 type



- Note 1) The above figure gives an example of when the main circuit and operating circuit use the same power supply. The solid line is already wired. The dashed line and two-dot chain line sections must be wired. (Use the wires enclosed with the unit to wire the two-dot chain line sections.)
- Note 2) If the power supply is different for the main circuit and operating circuit, do not wire between the dashed line 1/L1 and OFF button and between the two-dot chain line 3/L2 and TH95. Wire to the OFF button and TH95 terminal from a different operating circuit power supply.

Model	Dimensions													Weight (kg)
	A	AA	AB	AC	B	BA	BB	C	CA	M	N	O	P	
MS-2xT35/T50	300	25	60	40	235	160	35	130	70	M6	22-28	4	M5	4.6/4.6
MS-2xT65/T80	320	270	100	60	270	240	15	140	70	M6	22-35	4	M6	6.6/6.6
MS-2xT100	410	350	140	60	335	270	35	154	87	M6	22-35	4	M6	10/10

Selection and Application

MS-T Series Introduction

Application & Terms

Product Introduction

Overseas Standard

Type Codes

Order Procedure

Outline Drawing

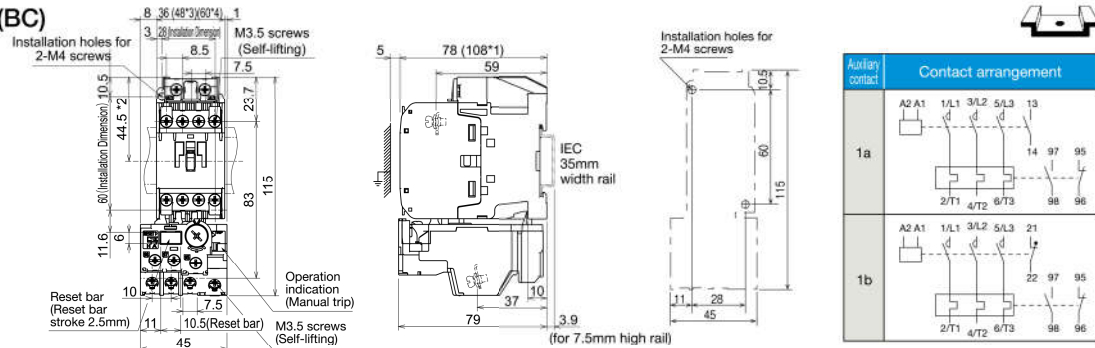
Warranty and Safety

## Outline Drawing, Contact Arrangement

### Magnetic Contactors · Starters (AC operated)

#### MSO-T10(BC)

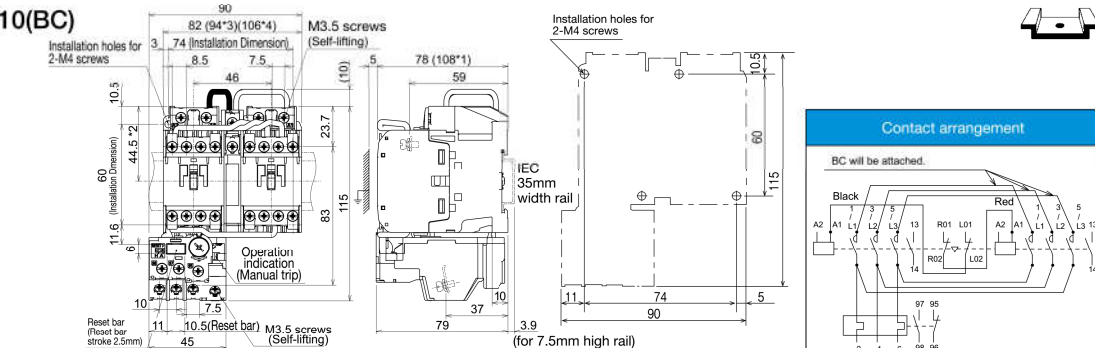
Non-Reversing



\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2(BC), UT-AX4(BC))  
 \*2 dimensions: Dimensions from center of IEC 35mm width rail  
 \*3, \*4 dimensions: With side mounted auxiliary contact unit (UT-AX11(BC)) ... \*3 shows dimension for one unit, and \*4 shows dimensions with two units (both sides).

#### MSO-2xT10(BC)

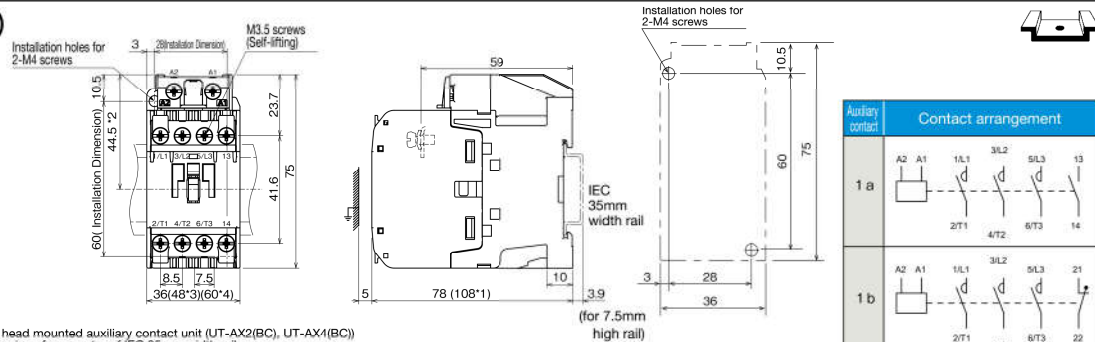
Reversing



\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2(BC), UT-AX4(BC))  
 \*2 dimensions: Dimensions from center of IEC 35mm width rail  
 \*3, \*4 dimensions: With side mounted auxiliary contact unit (UT-AX11(BC)) ... \*3 shows dimension for one unit, and \*4 shows dimensions with two units (both sides).

#### S-T10(BC)

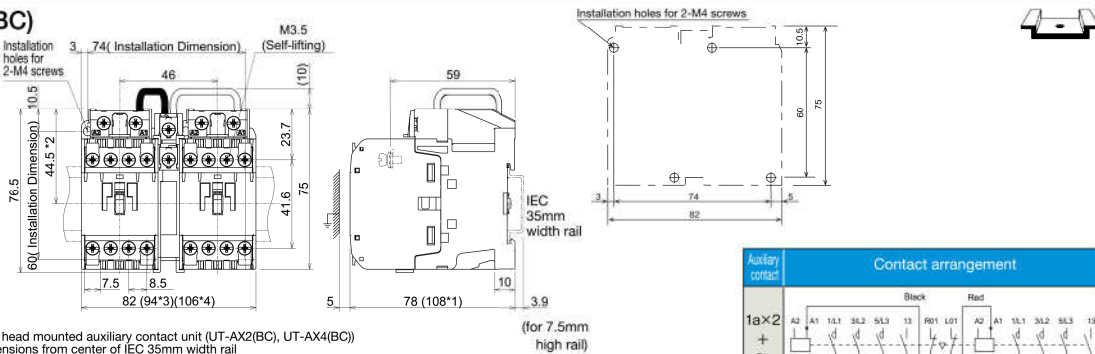
Non-Reversing



\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2(BC), UT-AX4(BC))  
 \*2 dimensions: Dimensions from center of IEC 35mm width rail  
 \*3, \*4 dimensions: With side mounted auxiliary contact unit (UT-AX11(BC)) ... \*3 shows dimension for one unit, and \*4 shows dimensions with two units (both sides).

#### S-2xT10(BC)

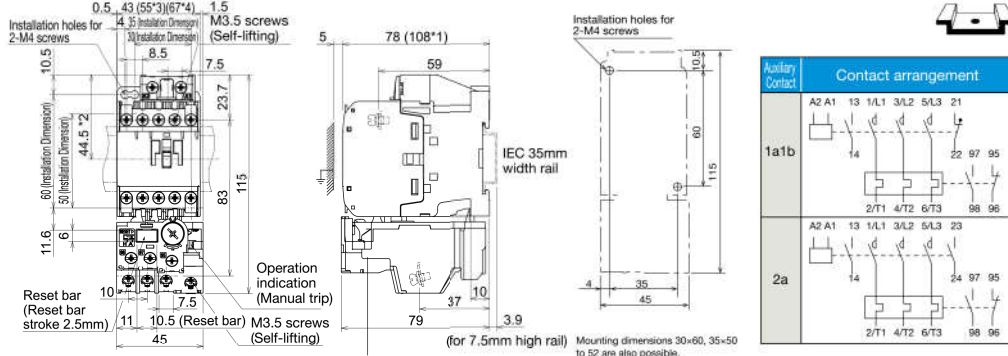
Reversing



\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2(BC), UT-AX4(BC))  
 \*2 dimensions: Dimensions from center of IEC 35mm width rail  
 \*3, \*4 dimensions: With side mounted auxiliary contact unit (UT-AX11(BC)) ... \*3 shows dimension for one unit, and \*4 shows dimensions with two units (both sides).

● MSO-T12(BC)  
● MSO-T20(BC)

non-Reversing

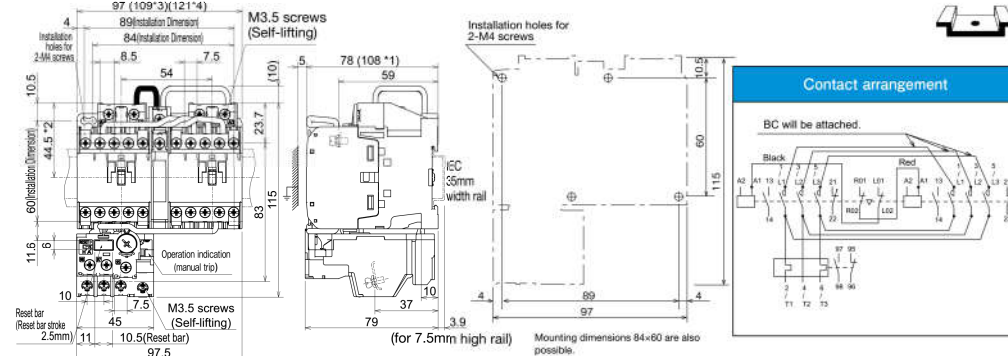


Auxiliary Contact	Contact arrangement
1a1b	
2a	

\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2(BC), UT-AX4(BC))  
\*2 dimensions: Dimensions from center of IEC 35mm width rail  
\*3, \*4 dimensions: With side mounted auxiliary contact unit (UT-AX11(BC)) ... \*3 shows dimension for one unit, and \*4 shows dimensions with two units (both sides).

● MSO-2xT12(BC)  
● MSO-2xT20(BC)

Reversing

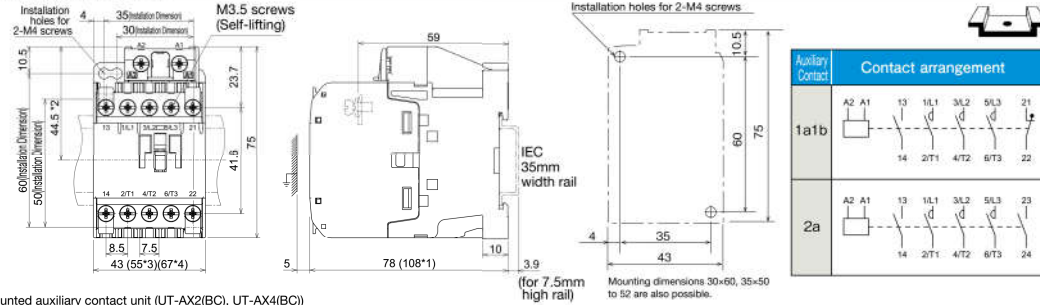


Auxiliary Contact	Contact arrangement
BC will be attached.	

\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2(BC), UT-AX4(BC))  
\*2 dimensions: Dimensions from center of IEC 35mm width rail  
\*3, \*4 dimensions: With side mounted auxiliary contact unit (UT-AX11(BC)) ... \*3 shows dimension for one unit, and \*4 shows dimensions with two units (both sides).

● S-T12(BC)  
● S-T20(BC)

non-Reversing

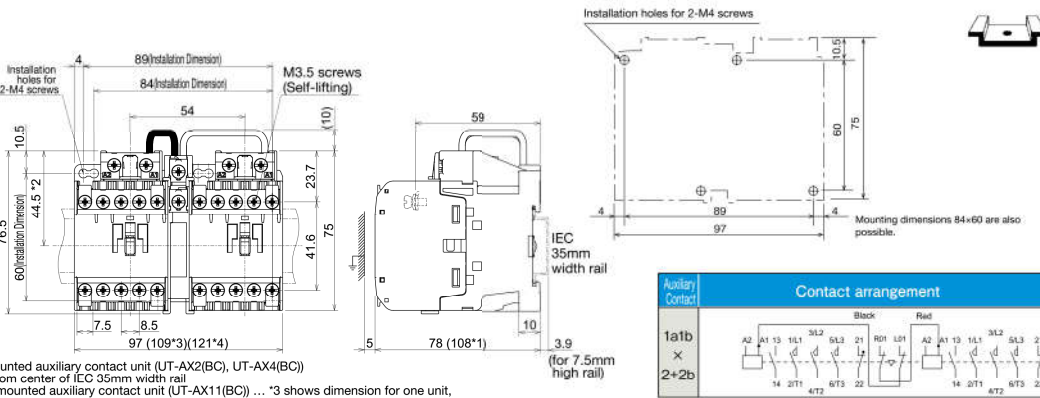


Auxiliary Contact	Contact arrangement
1a1b	
2a	

\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2(BC), UT-AX4(BC))  
\*2 dimensions: Dimensions from center of IEC 35mm width rail  
\*3, \*4 dimensions: With side mounted auxiliary contact unit (UT-AX11(BC)) ... \*3 shows dimension for one unit, and \*4 shows dimensions with two units (both sides).

● S-2xT12(BC)  
● S-2xT20(BC)

Reversing



Auxiliary Contact	Contact arrangement
1a1b x 2+2b	

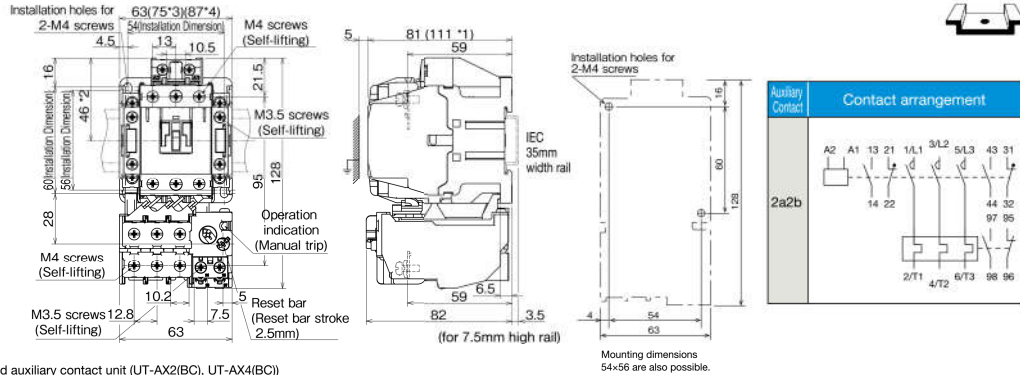
\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2(BC), UT-AX4(BC))  
\*2 dimensions: Dimensions from center of IEC 35mm width rail  
\*3, \*4 dimensions: With side mounted auxiliary contact unit (UT-AX11(BC)) ... \*3 shows dimension for one unit, and \*4 shows dimensions with two units (both sides).

## Outline Drawing, Contact Arrangement

### Magnetic Contactors • Starters (AC operated)

- MSO-T21(BC)
- MSO-T25(BC)

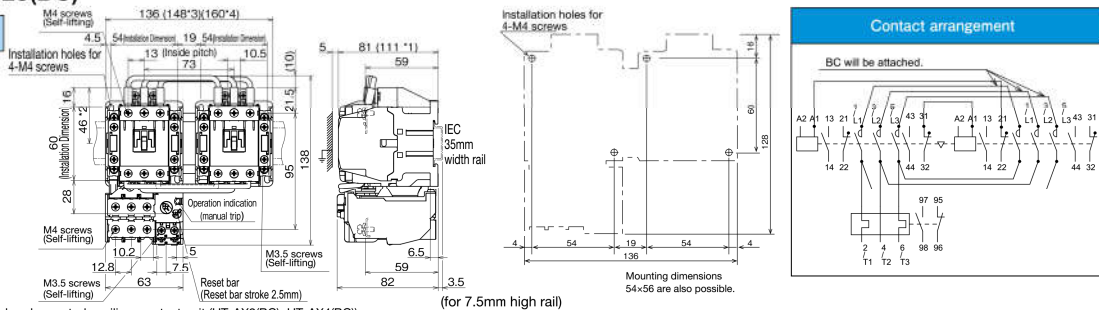
non-Reversing



\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2(BC), UT-AX4(BC))  
 \*2 dimensions: Dimensions from center of IEC 35mm width rail  
 \*3, \*4 dimensions: With side mounted auxiliary contact unit (UT-AX11(BC)) ... \*3 shows dimension for one unit, and \*4 shows dimensions with two units (both sides).

- MSO-2xT21(BC)
- MSO-2xT25(BC)

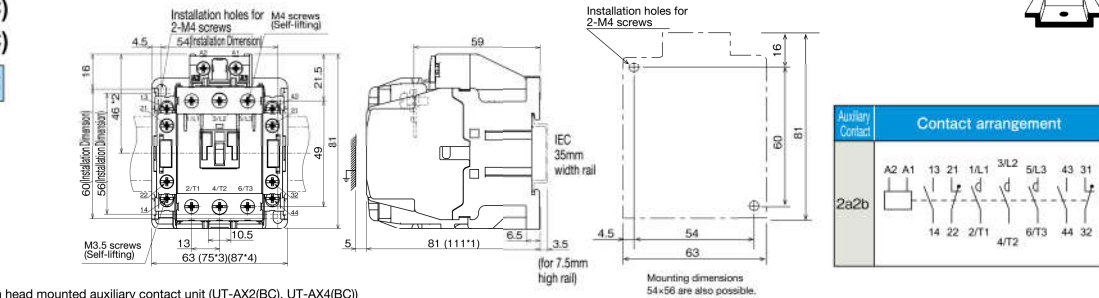
Reversing



\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2(BC), UT-AX4(BC))  
 \*2 dimensions: Dimensions from center of IEC 35mm width rail  
 \*3, \*4 dimensions: With side mounted auxiliary contact unit (UT-AX11(BC)) ... \*3 shows dimension for one unit, and \*4 shows dimensions with two units (both sides).

- S-T21(BC)
- S-T25(BC)

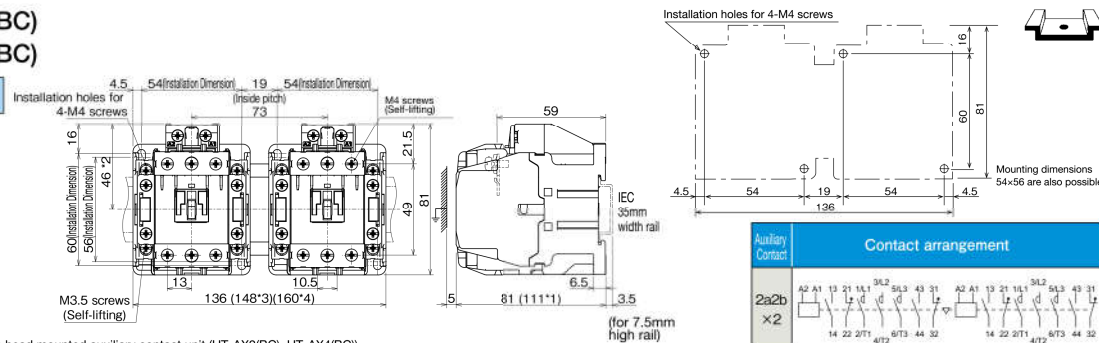
non-Reversing



\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2(BC), UT-AX4(BC))  
 \*2 dimensions: Dimensions from center of IEC 35mm width rail  
 \*3, \*4 dimensions: With side mounted auxiliary contact unit (UT-AX11(BC)) ... \*3 shows dimension for one unit, and \*4 shows dimensions with two units (both sides).

- S-2xT21(BC)
- S-2xT25(BC)

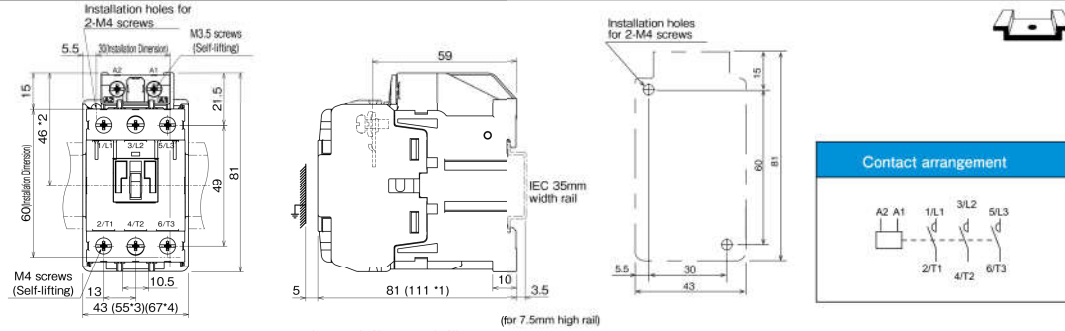
Reversing



\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2(BC), UT-AX4(BC))  
 \*2 dimensions: Dimensions from center of IEC 35mm width rail  
 \*3, \*4 dimensions: With side mounted auxiliary contact unit (UT-AX11(BC)) ... \*3 shows dimension for one unit, and \*4 shows dimensions with two units (both sides).

**S-T32(BC)**

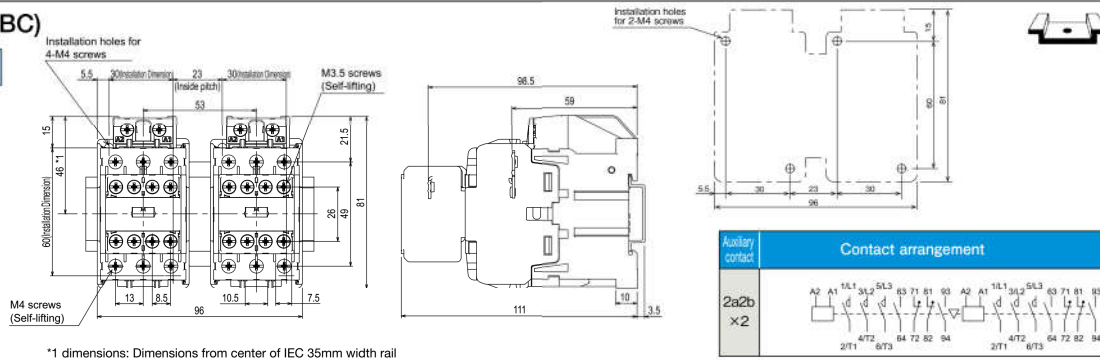
non-Reversing



\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2(BC), UT-AX4(BC))  
 \*2 dimensions: Dimensions from center of IEC 35mm width rail  
 \*3, \*4 dimensions: With side mounted auxiliary contact unit (UT-AX11(BC)) ... \*3 shows dimension for one unit, and \*4 shows dimensions with two units (both sides).

**S-2xT32(BC)**

Reversing

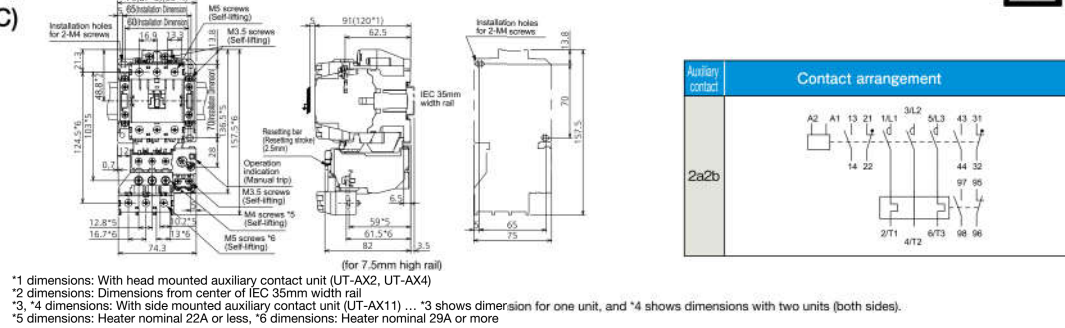


\*1 dimensions: Dimensions from center of IEC 35mm width rail

**MSO-T35(BC)**

**MSO-T50(BC)**

non-Reversing

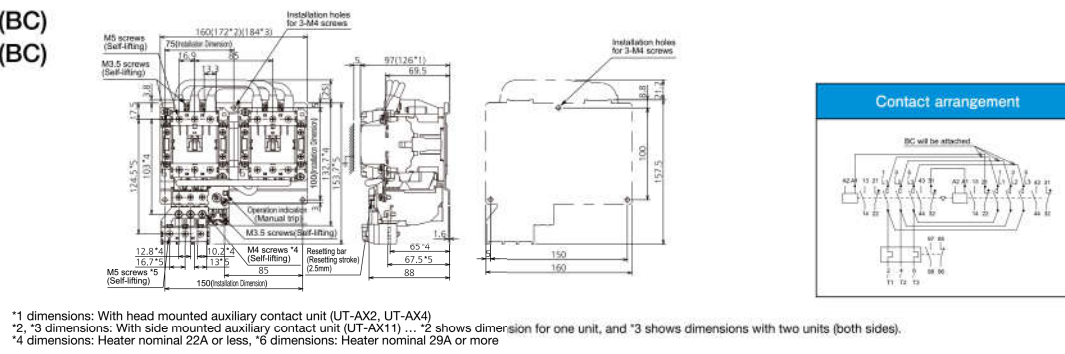


\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2, UT-AX4)  
 \*2 dimensions: Dimensions from center of IEC 35mm width rail  
 \*3, \*4 dimensions: With side mounted auxiliary contact unit (UT-AX11) ... \*3 shows dimension for one unit, and \*4 shows dimensions with two units (both sides).  
 \*5 dimensions: Heater nominal 22A or less, \*6 dimensions: Heater nominal 29A or more

**MSO-2xT35(BC)**

**MSO-2xT50(BC)**

Reversing



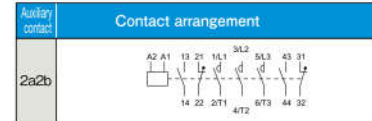
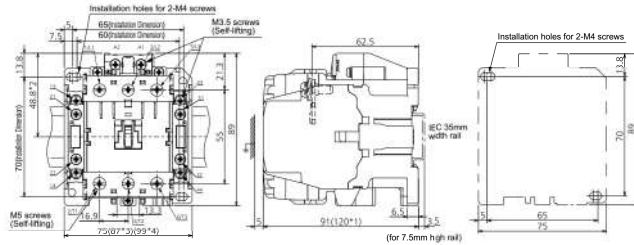
\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2, UT-AX4)  
 \*2, \*3 dimensions: With side mounted auxiliary contact unit (UT-AX11) ... \*2 shows dimension for one unit, and \*3 shows dimensions with two units (both sides).  
 \*4 dimensions: Heater nominal 22A or less, \*6 dimensions: Heater nominal 29A or more

## Outline Drawing, Contact Arrangement

### Magnetic Contactors · Starters (AC operated)

- S-T35(BC)
- S-T50(BC)

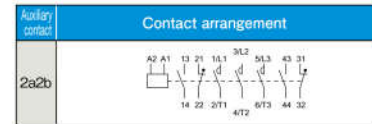
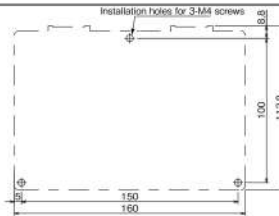
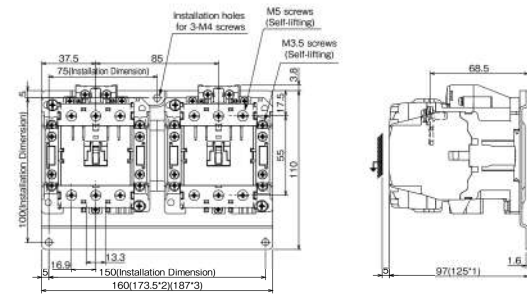
non-Reversing



\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2, UT-AX4)  
 \*2 dimensions: Dimensions from center of IEC 35mm width rail  
 \*3, \*4 dimensions: With side mounted auxiliary contact unit (UT-AX11) ... \*3 shows dimension for one unit, and \*4 shows dimensions with two units (both sides).

- S-2xT35(BC)
- S-2xT50(BC)

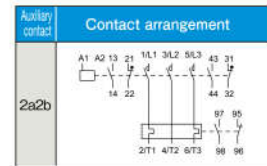
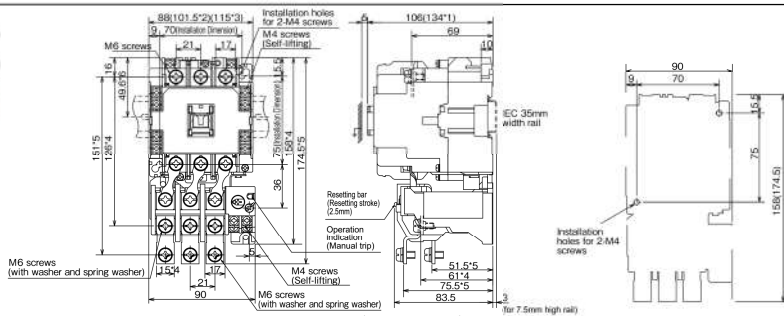
Reversing



\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2, UT-AX4)  
 \*2, \*3 dimensions: With side mounted auxiliary contact unit (UT-AX11) ... \*2 shows dimension for one unit, and \*3 shows dimensions with two units (both sides).

- MSO-T65
- MSO-T80

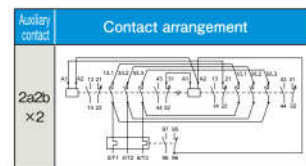
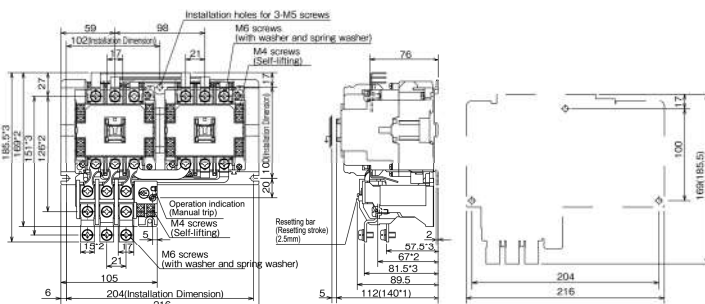
non-Reversing



\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2, UT-AX4)  
 \*2, \*3 dimensions: With side mounted auxiliary contact unit (UT-AX11) ... \*2 shows dimension for one unit, and \*3 shows dimensions with two units (both sides)  
 \*4 dimensions: Dimensions for heater nominal 54A or less  
 \*5 dimensions: Dimensions for heater nominal 67A  
 \*6 dimensions: Dimensions from center of IEC 35mm width rail

- MSO-2xT65
- MSO-2xT80

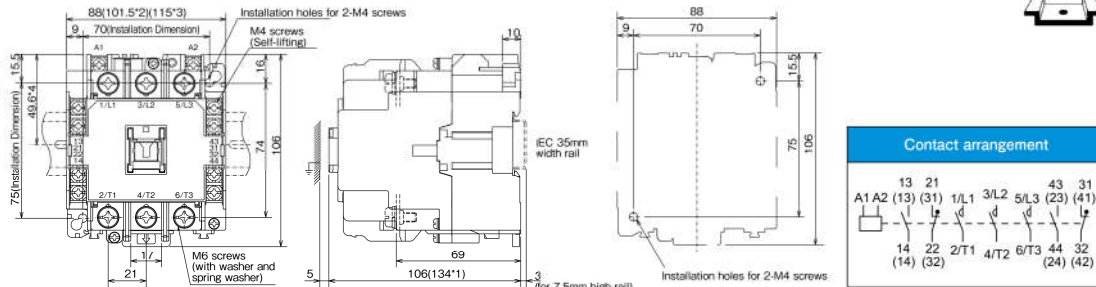
Reversing



\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2, UT-AX4)  
 \*2 dimensions: Dimensions for heater nominal 54A or less  
 \*3 dimensions: Dimensions for heater nominal 67A

● S-T65  
● S-T80

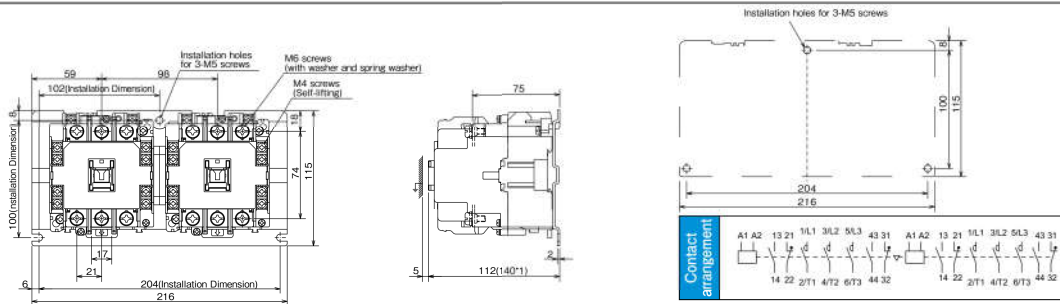
non-Reversing



\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2, UT-AX4)  
\*2, \*3 dimensions: With side mounted auxiliary contact unit (UT-AX11) ... \*2 shows dimension for one unit, and \*3 shows dimensions with two units (both sides).  
\*4 dimensions: Dimensions from center of IEC 35mm width rail

● S-2xT65  
● S-2xT80

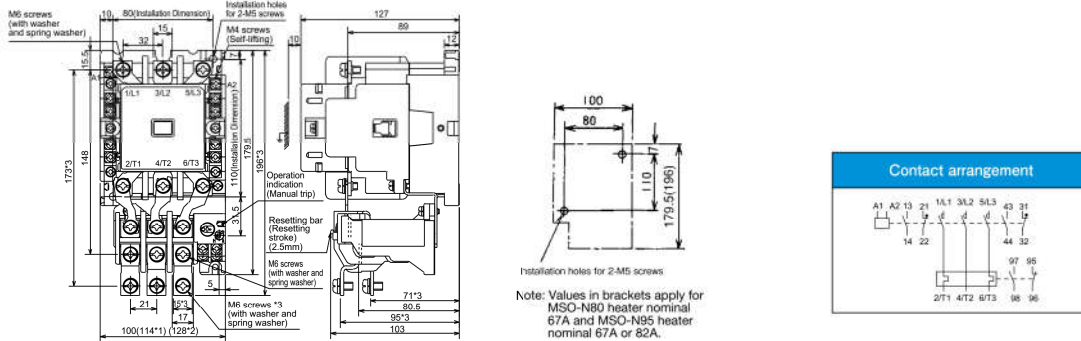
Reversing



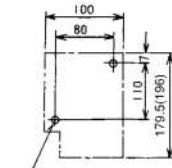
\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2, UT-AX4)

● MSO-T100

non-Reversing



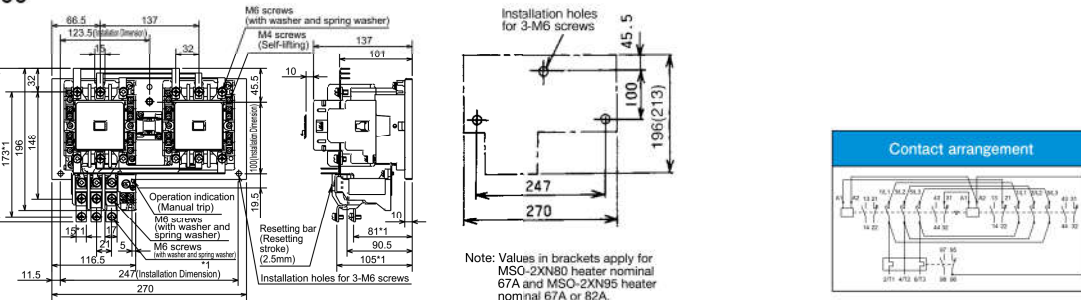
\*1, \*2 dimensions: With side mounted auxiliary contact unit (UT-AX11) ... \*1 shows dimension for one unit, and \*2 shows dimensions with two units (both sides).  
\*3 dimensions: For heater nominal 67A or 82A



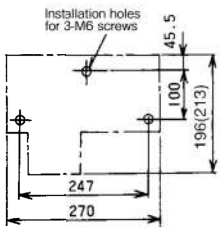
Note: Values in brackets apply for MSO-N80 heater nominal 67A and MSO-N95 heater nominal 67A or 82A.

● MSO-2xT100

Reversing



\*1 dimensions: For heater nominal 67A or 82A



Note: Values in brackets apply for MSO-2XN80 heater nominal 67A and MSO-2XN95 heater nominal 67A or 82A.

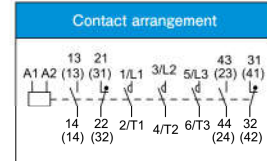
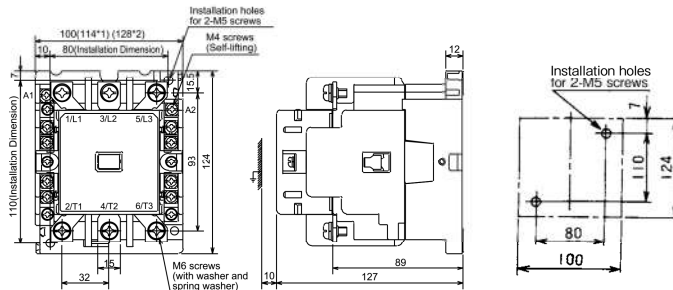


## Outline Drawing, Contact Arrangement

### Magnetic Contactors • Starters (AC operated)

#### ● S-T100

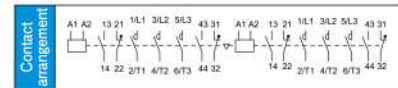
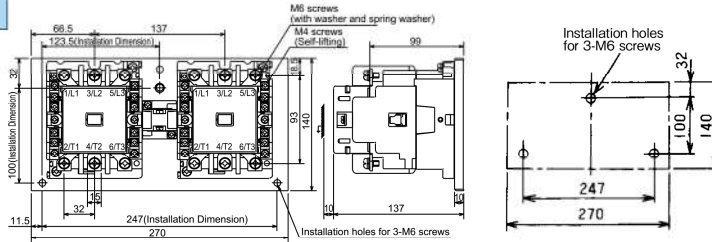
non-Reversing



\*1, \*2 dimensions: With side mounted auxiliary contact unit (UT-AX11) ... \*1 shows dimension for one unit, and \*2 shows dimensions with two units (both sides).

#### ● S-2xT100

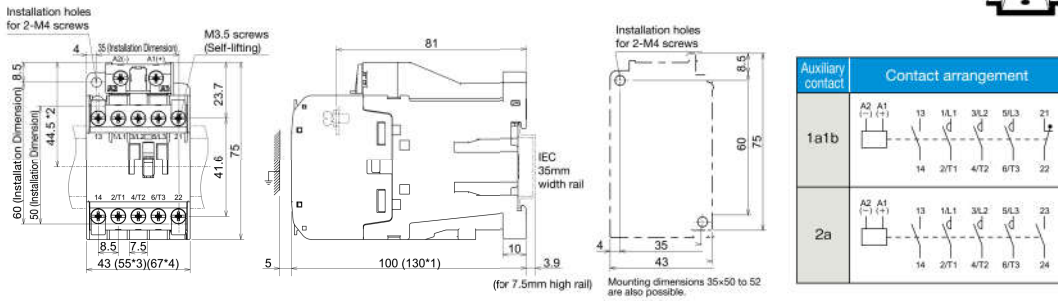
Reversing



## Magnetic Contactor • Starters (DC opteraed)

- SD-T12(BC)
- SD-T20(BC)

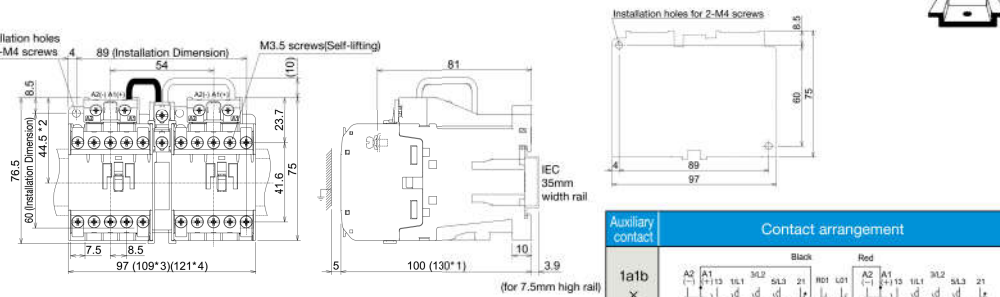
non-Reversing



\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2(BC), UT-AX4(BC))  
 \*2 dimensions: Dimensions from center of IEC 35mm width rail  
 \*3, \*4 dimensions: With side mounted auxiliary contact unit (UT-AX11(BC)) ... \*3 shows dimension for one unit, and \*4 shows dimensions with two units (both sides).

- SD-2xT12(BC)
- SD-2xT20(BC)

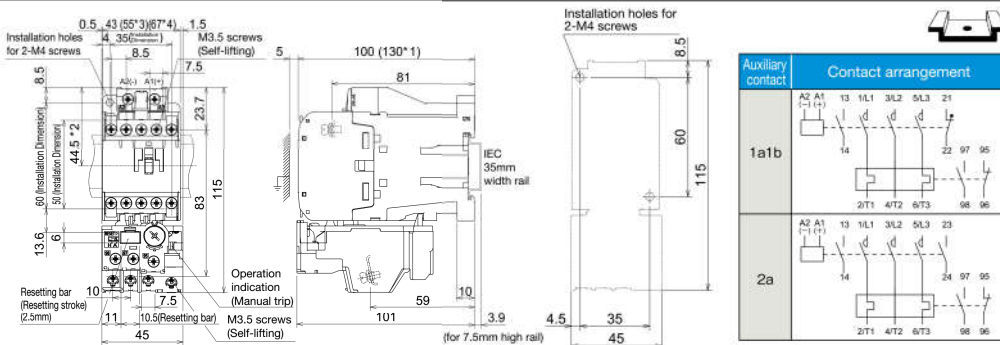
Reversing



\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2(BC), UT-AX4(BC))  
 \*2 dimensions: Dimensions from center of IEC 35mm width rail  
 \*3, \*4 dimensions: With side mounted auxiliary contact unit (UT-AX11(BC)) ... \*3 shows dimension for one unit, and \*4 shows dimensions with two units (both sides).

- MSOD-T12(BC)
- MSOD-T20(BC)

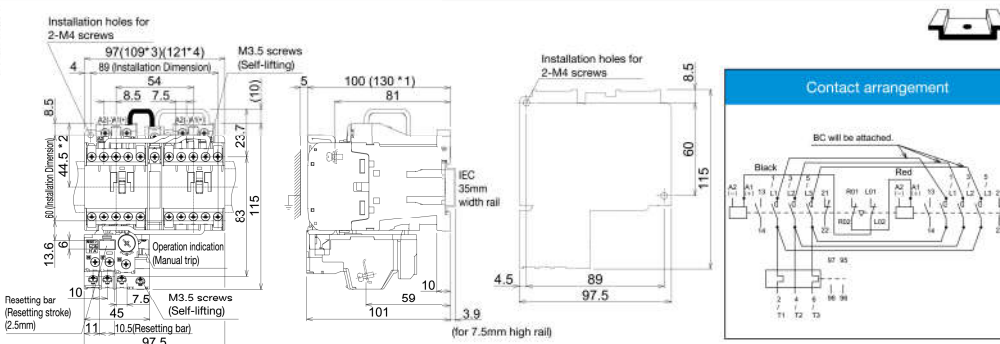
non-Reversing



\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2(BC), UT-AX4(BC))  
 \*2 dimensions: Dimensions from center of IEC 35mm width rail  
 \*3, \*4 dimensions: With side mounted auxiliary contact unit (UT-AX11(BC)) ... \*3 shows dimension for one unit, and \*4 shows dimensions with two units (both sides).

- MSOD-2xT12(BC)
- MSOD-2xT20(BC)

Reversing



\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2(BC), UT-AX4(BC))  
 \*2 dimensions: Dimensions from center of IEC 35mm width rail  
 \*3, \*4 dimensions: With side mounted auxiliary contact unit (UT-AX11(BC)) ... \*3 shows dimension for one unit, and \*4 shows dimensions with two units (both sides).

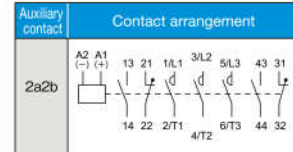
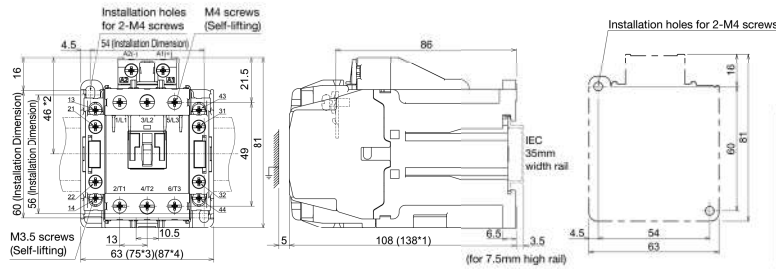
## Outline Drawing, Contact Arrangement

### Magnetic Contactor • Starters (DC opteraed)

#### SD-T21(BC)



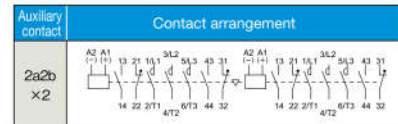
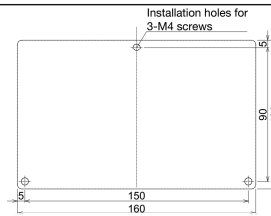
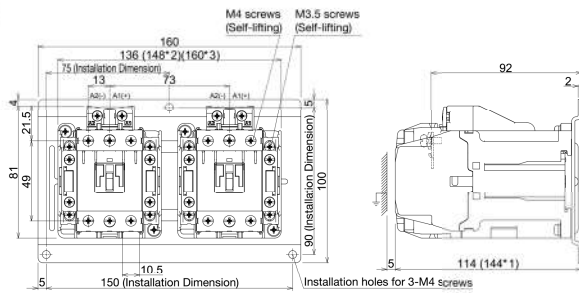
non-Reversing



\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2(BC), UT-AX4(BC))  
 \*2 dimensions: Dimensions from center of IEC 35mm width rail  
 \*3, \*4 dimensions: With side mounted auxiliary contact unit (UT-AX11(BC)) ... \*3 shows dimension for one unit, and \*4 shows dimensions with two units (both sides).

#### SD-2xT21(BC)

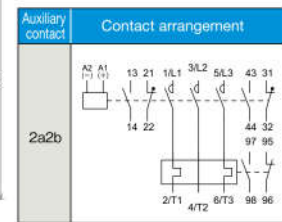
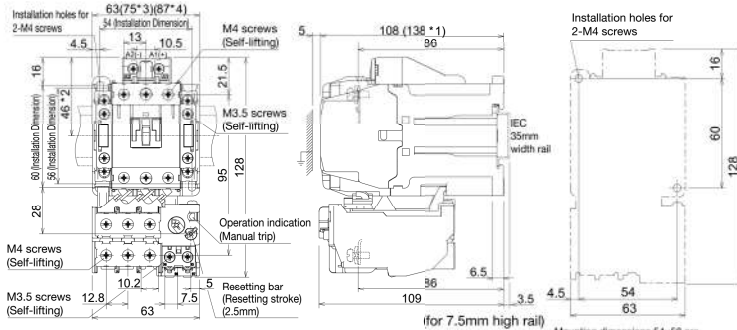
Reversing



\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2(BC), UT-AX4(BC))  
 \*2, \*3 dimensions: With side mounted auxiliary contact unit (UT-AX11(BC)) ... \*2 shows dimension for one unit, and \*3 shows dimensions with two units (both sides).

#### MSOD-T21(BC)

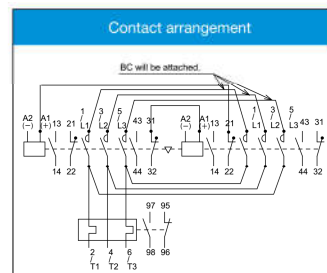
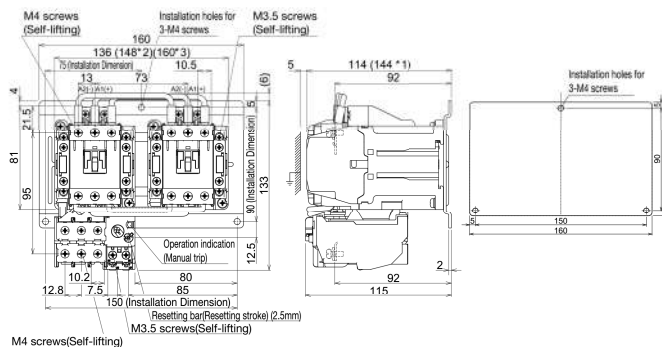
non-Reversing



\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2(BC), UT-AX4(BC))  
 \*2 dimensions: Dimensions from center of IEC 35mm width rail  
 \*3, \*4 dimensions: With side mounted auxiliary contact unit (UT-AX11(BC)) ... \*3 shows dimension for one unit, and \*4 shows dimensions with two units (both sides).

#### MSOD-2xT21(BC)

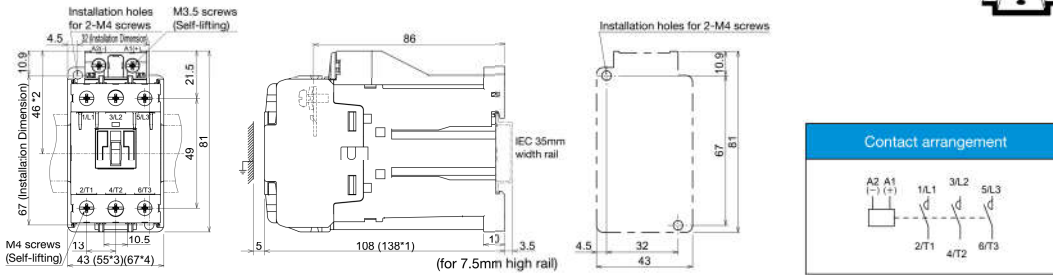
Reversing



\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2(BC), UT-AX4(BC))  
 \*2, \*3 dimensions: With side mounted auxiliary contact unit (UT-AX11(BC)) ... \*2 shows dimension for one unit, and \*3 shows dimensions with two units (both sides).

**SD-T32(BC)**

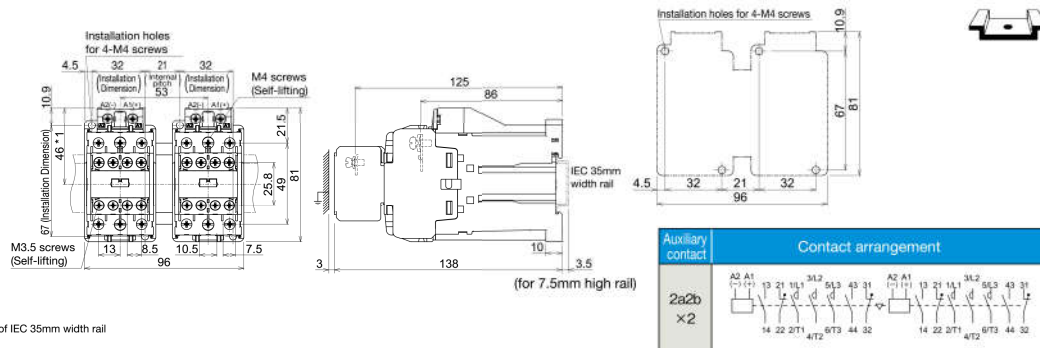
non-Reversing



\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2(BC), UT-AX4(BC))  
 \*2 dimensions: Dimensions from center of IEC 35mm width rail  
 \*3, \*4 dimensions: With side mounted auxiliary contact unit (UT-AX11(BC)) ... \*3 shows dimension for one unit, and \*4 shows dimensions with two units (both sides).

**SD-2xT32(BC)**

Reversing

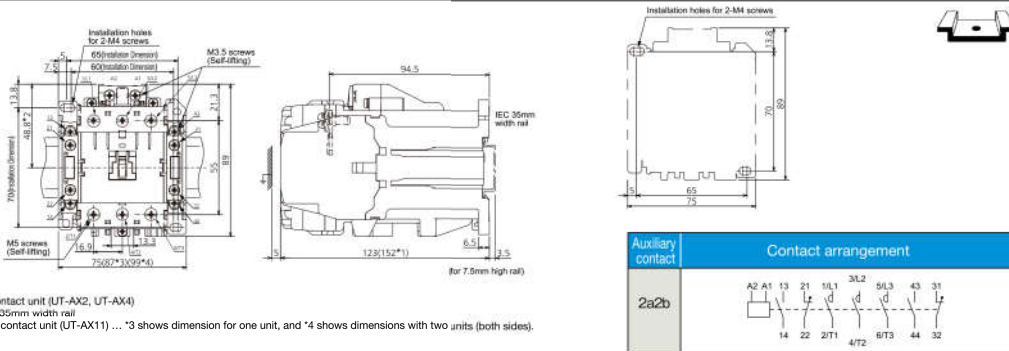


\*1 dimensions: Dimensions from center of IEC 35mm width rail

**SD-T35(BC)**

**SD-T50(BC)**

non-Reversing

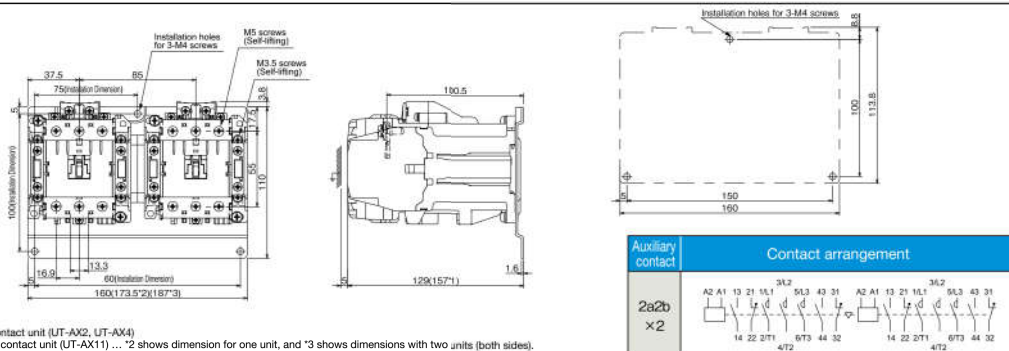


\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2, UT-AX4)  
 \*2 dimensions: Dimensions from center of IEC 35mm width rail  
 \*3, \*4 dimensions: With side mounted auxiliary contact unit (UT-AX11) ... \*3 shows dimension for one unit, and \*4 shows dimensions with two units (both sides).

**SD-2xT35(BC)**

**SD-2xT50(BC)**

Reversing



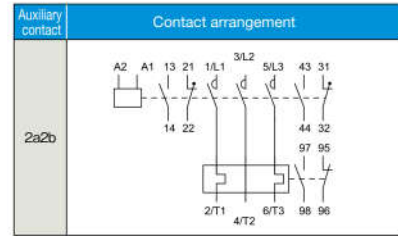
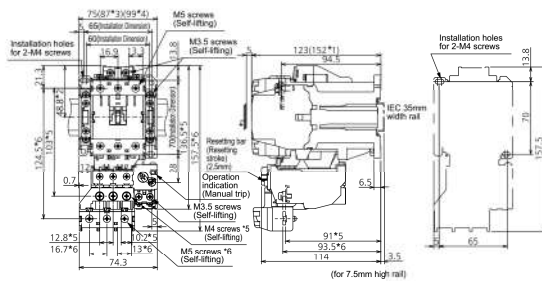
\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2, UT-AX4)  
 \*2, \*3 dimensions: With side mounted auxiliary contact unit (UT-AX11) ... \*2 shows dimension for one unit, and \*3 shows dimensions with two units (both sides).

## Outline Drawing, Contact Arrangement

### Magnetic Contactor • Starters (DC openlead)

- MSOD-T35(BC)
- MSOD-T50(BC)

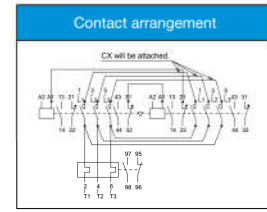
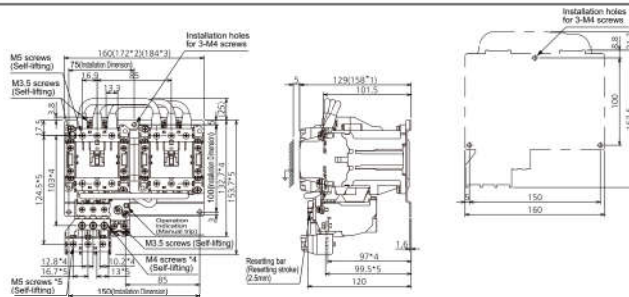
non-Reversing



\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2, UT-AX4)  
 \*2 dimensions: Dimensions from center of IEC 35mm width rail  
 \*3, \*4 dimensions: With side mounted auxiliary contact unit (UT-AX11) ... \*3 shows dimension for one unit, and \*4 shows dimensions with two units (both sides).  
 \*5 dimensions: Heater nominal 22A or less, \*6 dimensions: Heater nominal 29A or more

- MSOD-2×T35(BC)
- MSOD-2×T50(BC)

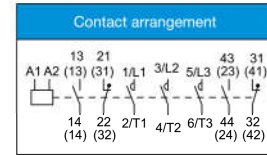
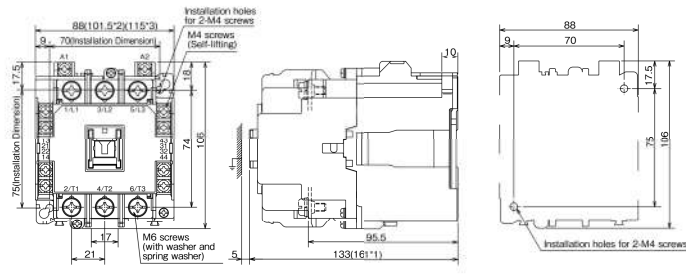
Reversing



\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2, UT-AX4)  
 \*2, \*3 dimensions: With side mounted auxiliary contact unit (UT-AX11) ... \*2 shows dimension for one unit, and \*3 shows dimensions with two units (both sides).  
 \*4 dimensions: Heater nominal 22A or less, \*6 dimensions: Heater nominal 29A or more

- SD-T65
- SD-T80

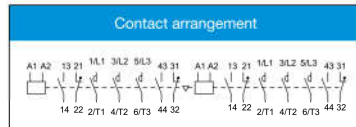
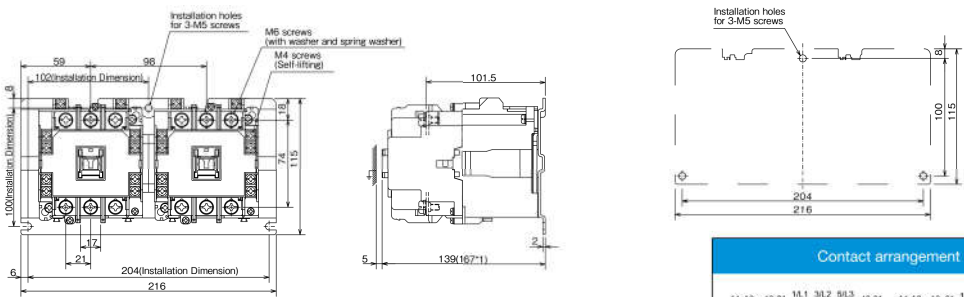
non-Reversing



\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2, UT-AX4)  
 \*2, \*3 dimensions: With side mounted auxiliary contact unit (UT-AX11) ... \*2 shows dimension for one unit, and \*3 shows dimensions with two units (both sides).

- SD-2×T65
- SD-2×T80

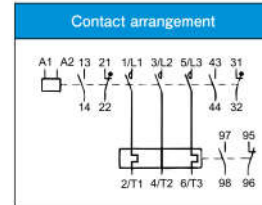
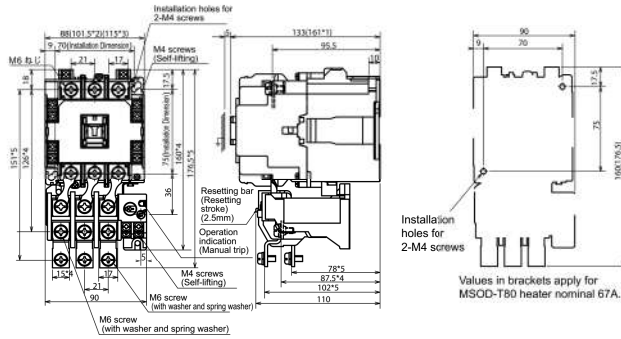
Reversing



\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2, UT-AX4)

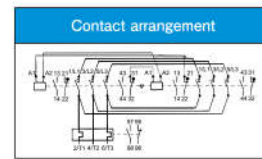
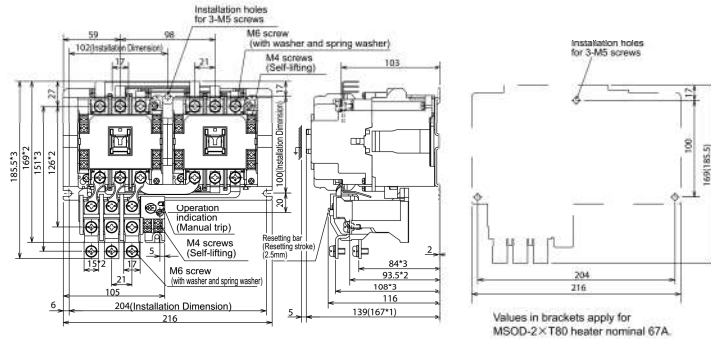
● MSOD-T65  
● MSOD-T80

non-Reversing



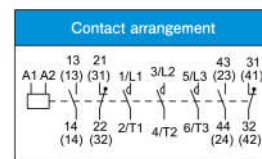
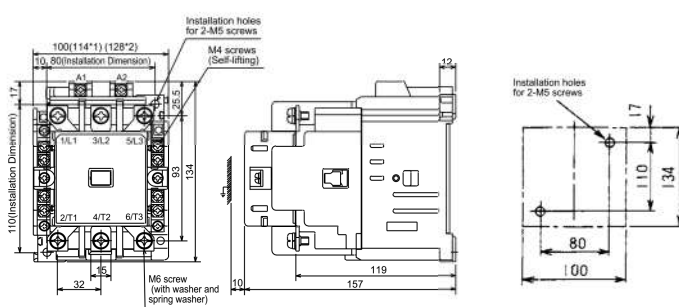
● MSOD-2xT65  
● MSOD-2xT80

Reversing



● SD-T100

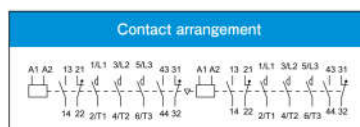
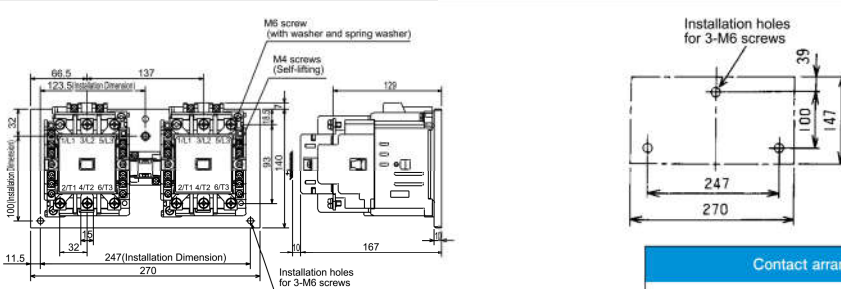
non-Reversing



\*1, \*2 dimensions: With side mounted auxiliary contact unit (UT-AX1) ... \*1 shows dimension for one unit, and \*2 shows dimensions with two units (both sides).

● SD-2xT100

Reversing

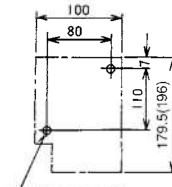
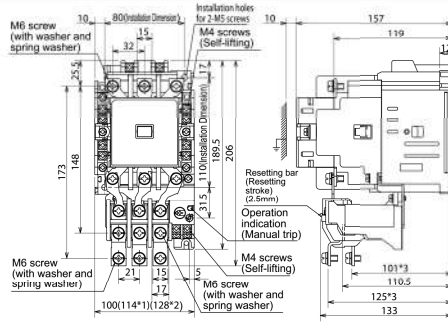


## Outline Drawing, Contact Arrangement

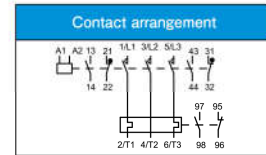
### Magnetic Contactor • Starters (DC operated)

#### MSOD-T100

non-Reversing



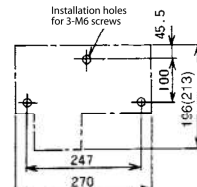
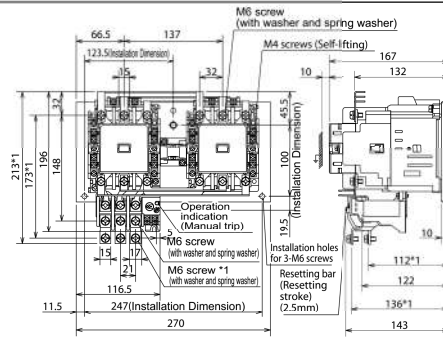
Note: Values in parentheses apply for MSO-N80 heater nominal 67A and MSO-N95 heater nominal 67A or 82A.



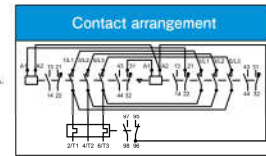
\*1, \*2 dimensions: With side mounted auxiliary contact unit (UT-AX11) ... \*1 shows dimension for one unit, and \*2 shows dimensions with two units (both sides).  
\*3 dimensions: For heater nominal 67A or 82A

#### MSOD-2xT100

Reversing



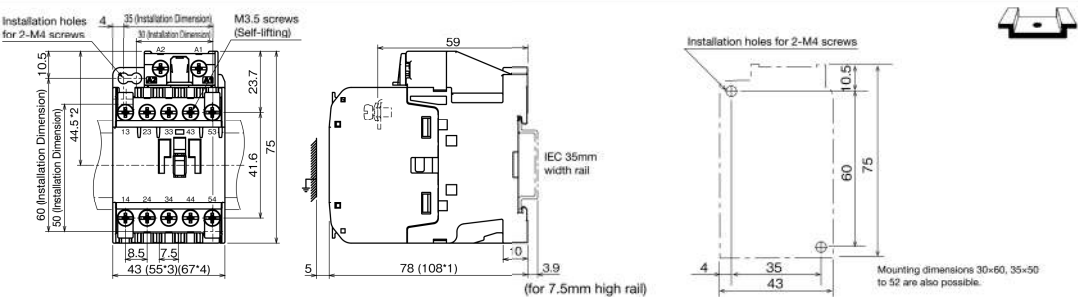
Note: Values in parentheses apply for MSO-2XN80 heater nominal 67A and MSO-2XN95 heater nominal 67A or 82A.



\*1 dimensions: For heater nominal 67A or 82A

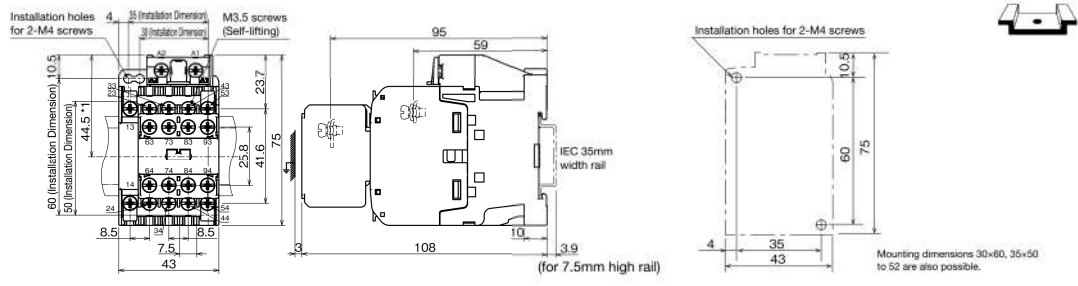
## Contactor Relays (AC operated)

### SR-T5(BC)



\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2(BC), UT-AX4(BC))  
 \*2 dimensions: Dimensions from center of IEC 35mm width rail  
 \*3, \*4 dimensions: With side mounted auxiliary contact unit (UT-AX11(BC)) ... \*3 shows dimension for one unit, and \*4 shows dimensions with two units (both sides).

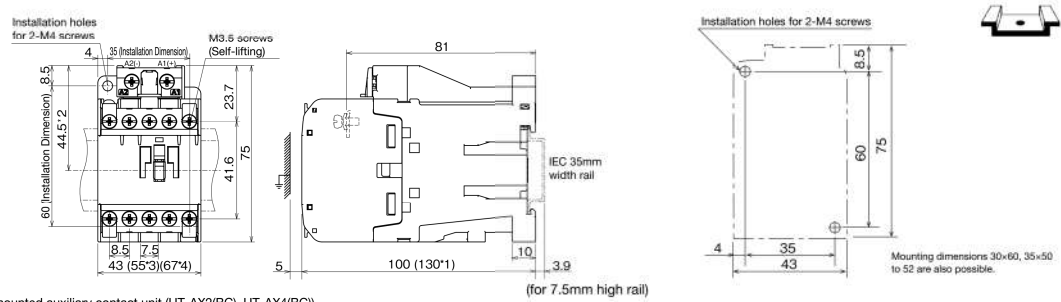
### SR-T9(BC)



\*1 dimensions: Dimensions from center of IEC 35mm width rail

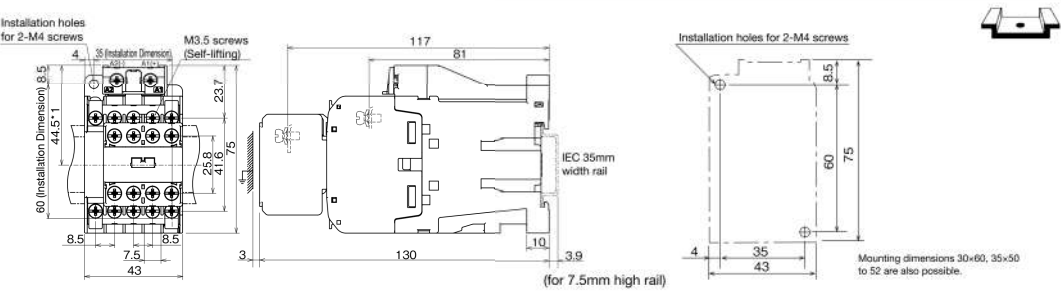
## Contactor Relays (DC operated)

### SRD-T5(BC)



\*1 dimensions: With head mounted auxiliary contact unit (UT-AX2(BC), UT-AX4(BC))  
 \*2 dimensions: Dimensions from center of IEC 35mm width rail  
 \*3, \*4 dimensions: With side mounted auxiliary contact unit (UT-AX11(BC)) ... \*3 shows dimension for one unit, and \*4 shows dimensions with two units (both sides).

### SRD-T9(BC)



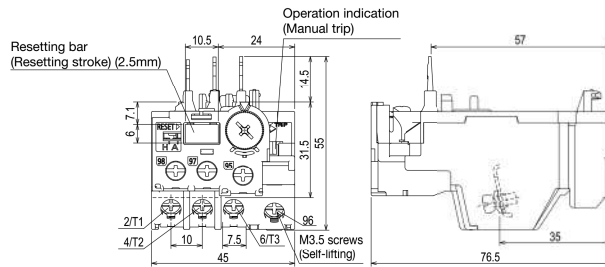
\*1 dimensions: Dimensions from center of IEC 35mm width rail



## Outline Drawing, Contact Arrangement

### Thermal Overload Relays

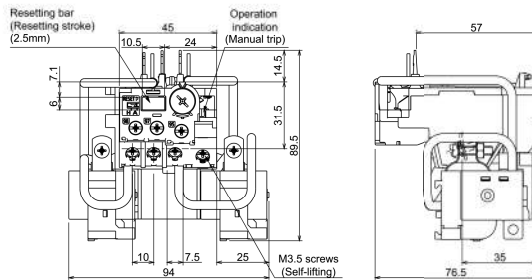
#### ● TH-T18(BC)KP



Model name	Contact arrangement
TH-T18	
TH-T18KP	

For combination with the following magnetic contactors  
 TH-T18: S-T10, T12, T20 SD-T12, T20  
 Independent use is possible by combining with the independent mounting unit UT-HZ18

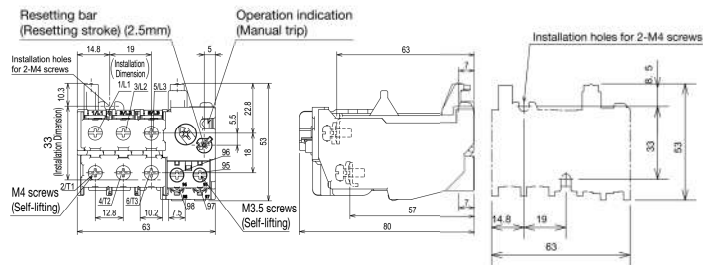
#### ● TH-T18SR



Model name	Contact arrangement
TH-T18SR	

For combination with the following magnetic contactors  
 TH-T18SR: S-T10, T12, T20 SD-T12, T20  
 Independent use is possible by combining with the independent mounting unit UT-HZ18

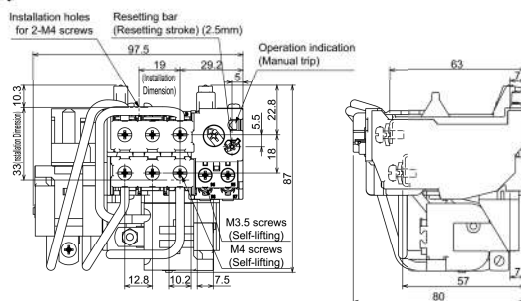
#### ● TH-T25(BC)KP



Model name	Contact arrangement
TH-T25	
TH-T25KP	

Use the following connection conductor (option) when using in combination with the magnetic contactor  
 Combination with S-T35/T50(BC), SD-T35/T50(BC), SL(D)-T35/T50(BC), UT-TH50  
 DIN rail independent mounting possible when used in combination with independent mounting unit UN-RM20

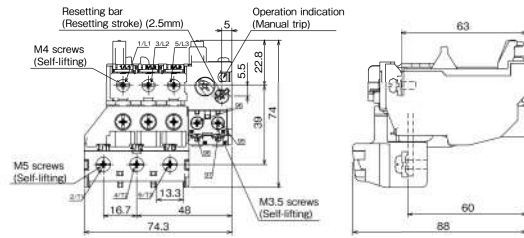
#### ● TH-T25(BC)(KP)SR



Model name	Contact arrangement
TH-T25 (BC)SR	
TH-T25 (BC)KP SR	

Use the following connection conductor (option) when using in combination with the magnetic contactor  
 Combination with S-T35/T50(BC), SD-T35/T50(BC), SL(D)-T35/T50(BC), UT-TH50  
 \* The reversing Magnetic Contactor with wiring streamlining terminal cannot be combined with TH-T25BC(KP)SR.

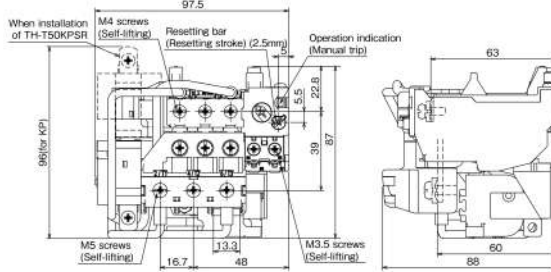
● TH-T50(BC)(KP)



Use as an independent unit is not possible.  
When combining with the Magnetic Contactor, use the following connection conductor kit (optional).  
Combination with S-T35/T50(BC), SD-T35/T50(BC): UT-TH50

Model name	Contact arrangement					
TH-T50(FS)	1/L1	3/L2	5/L3	97	95	
TH-T50BC(FS)	2/T1	4/T2	6/T3	98	96	
TH-T50(FS)KP	1/L1	3/L2	5/L3	97	95	
TH-T50BC(FS)KP	2/T1	4/T2	6/T3	98	96	

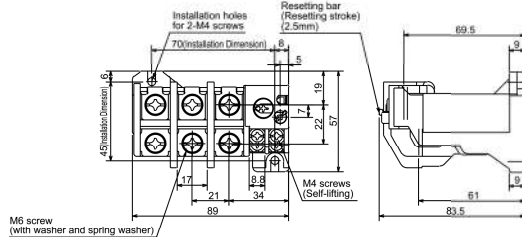
● TH-T50(BC)(KP)SR



Use as an independent unit is not possible.  
When combining with the Magnetic Contactor, use the following connection conductor kit (optional).  
Combination with S-T35/T50(BC), SD-T35/T50(BC): UT-TH50

Model name	Contact arrangement					
TH-T50SR	1/L1	3/L2	5/L3	97	95	
	2/T1	4/T2	6/T3	98	96	
TH-T50KPSR	1/L1	3/L2	5/L3	97	95	
	2/T1	4/T2	6/T3	98	96	

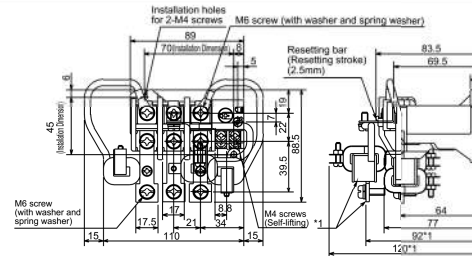
● TH-T65(KP)



When combining with the Magnetic Contactor, use the following connection conductor kit (optional).  
Combination with S(D)-N50/N65, SL(D)-N50/N65: BH559N350  
Combination with S-N80/N95, SL(D)-N80/N95: BH569N350  
Combination with SD-N80/N95: BH569N352  
TH N60 and TH N60KP can be used either for the Magnetic Starter (MSO) or independent mounting.  
Note: With TH-N60CX, the width is 92 and the depth is 87.

Model name	Contact arrangement					
TH-T65(FS)	1/L1	3/L2	5/L3	97	95	
	2/T1	4/T2	6/T3	98	96	
TH-T65(FS)KP	1/L1	3/L2	5/L3	97	95	
	2/T1	4/T2	6/T3	98	96	

● TH-T65(KP)SR



\*1 applies for TH-N60(TA)KPSR.  
When combining with the Magnetic Contactor, use the following connection conductor kit (optional).  
Combination with S(D)-N50/N65, SL(D)-N50/N65: BH559N350  
Combination with S-N80/N95, SL(D)-N80/N95: BH569N350  
Combination with SD-N80/N95: BH569N352  
TH-N60TA(KP)SR cannot be used with independent mounting.

Model name	Contact arrangement					
TH-T65SR	1/L1	3/L2	5/L3	97	95	
	2/T1	4/T2	6/T3	98	96	
TH-T65KPSR	1/L1	3/L2	5/L3	97	95	
	2/T1	4/T2	6/T3	98	96	

MS-T Series Introduction

Selection and Application

Application & Terms (General Info)

Product Introduction

Overseas Standard

Type Codes

Order Procedure

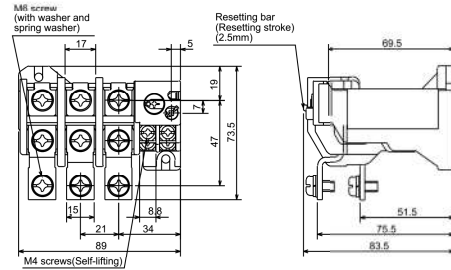
Outline Drawing

Warranty and Safety

## Outline Drawing, Contact Arrangement

### Thermal Overload Relays

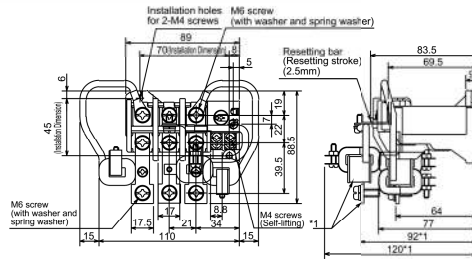
#### ● TH-T100(KP)



Use with independent mounting is not possible.  
 When combining with the Magnetic Contactor, use the following connection conductor kit (optional).  
 Use the connection conductor kit (optional, type: BH569N350)  
 Combination with S-N80/N95, SL(D)-N80/N95: BH569N350  
 Combination with SD-N80/N95: BH569N352

Model name	Contact arrangement
TH-T100(FS)	
TH-T100(FS)KP	

#### ● TH-T100(KP)SR

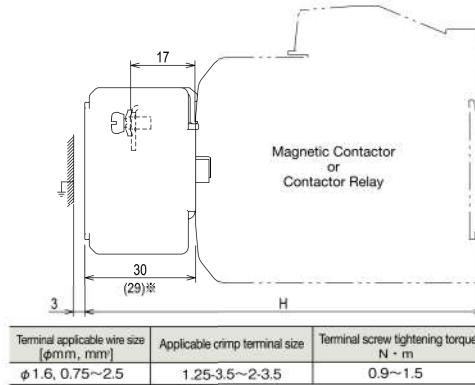
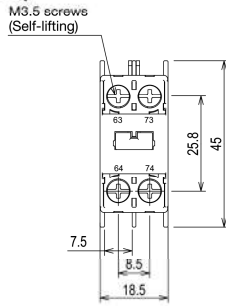


\*1 applies for TH-N60(TA)KPSR.  
 When combining with the Magnetic Contactor, use the following connection conductor kit (optional).  
 Combination with S(D)-N50/N65, SL(D)-N50/N65: BH559N350  
 Combination with S-N80/N95, SL(D)-N80/N95: BH569N350  
 Combination with SD-N80/N95: BH569N352  
 TH-N60TA(KP)SR cannot be used with independent mounting.

Model name	Contact arrangement
TH-T100SR	
TH-T100KPSR	

## Optional Units

### ● UT-AX2(BC)



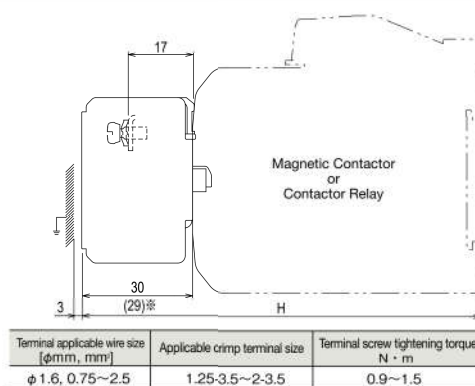
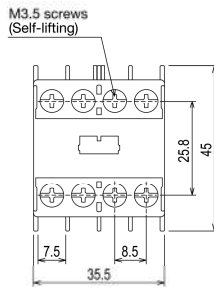
Application		
	Applicable model	Dimension H
Magnetic Contactor	S-T10, T12, T20	108
	S-T21, T25, T32	111
	S-T35, T50 ※	120
	SD-T12/20	130
	SD-T21, T32	138
Contact Relay	SD-T35, T50 ※	152
	SR-T5	108
	SRD-T5	130

Contact arrangement					
2a		1a1b		2b	
63	73	63	71	61	71
64	74	64	72	62	72

Note: The contact arrangement 2a is shown in the figure above.

Terminal applicable wire size [φmm, mm]	Applicable crimp terminal size	Terminal screw tightening torque N · m
φ 1.6, 0.75~2.5	1.25-3.5~2-3.5	0.9~1.5

### ● UT-AX4(BC)



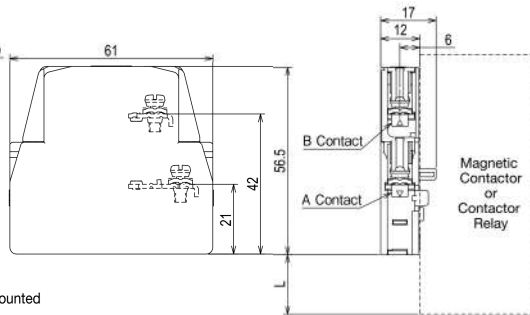
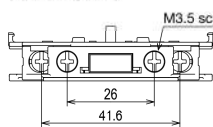
Application		
	Applicable model	Dimension H
Magnetic Contactor	S-T10, T12, T20	108
	S-T21, T25, T32	111
	S-T35, T50 ※	120
	SD-T12/20	130
	SD-T21, T32	138
Contact Relay	SD-T35, T50 ※	152
	SR-T5	108
	SRD-T5	130

Contact arrangement											
4a		3a1b		2a2b							
63	73	83	93	63	71	83	93	63	71	81	93
64	74	84	94	64	72	84	94	64	72	82	94

Note: The contact arrangement 4a is shown in the figure above.

Terminal applicable wire size [φmm, mm]	Applicable crimp terminal size	Terminal screw tightening torque N · m
φ 1.6, 0.75~2.5	1.25-3.5~2-3.5	0.9~1.5

### ● UT-AX11(BC)



Application		
	Applicable model	Dimension L
Magnetic Contactor	S-T10, T12, T20	18
	S-T21, T25	19
	S-T32	22.5
	S-T35, T50	18.8
	SD-T12/20	40
	SD-T21	46
Contact Relay	SD-T32	44
	SD-T35, T50	50.8
	SR-T5	18
	SRD-T5	40

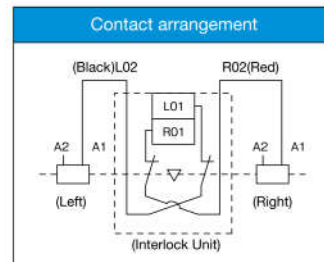
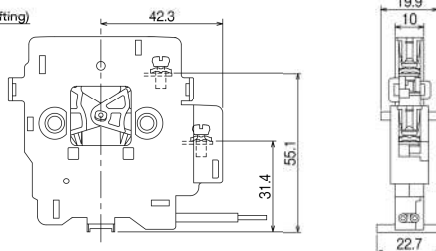
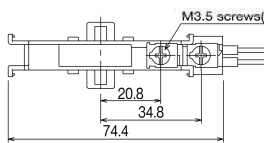
Contact arrangement			
Example of mounting on left side of unit		Example of mounting on right side of unit	
63	71	93	81
64	72	94	82

Note 1: Specifications with both UT-AX2 and UT-AX4 mounted simultaneously are not possible.

Note 2: Mount on one side or both sides of the Magnetic Contactors and Contactor Relays shown on the right.

Terminal applicable wire size [φmm, mm]	Applicable crimp terminal size	Terminal screw tightening torque N · m
φ 1.6, 0.75~2.5	1.25-3.5~2-3.5	0.9~1.5

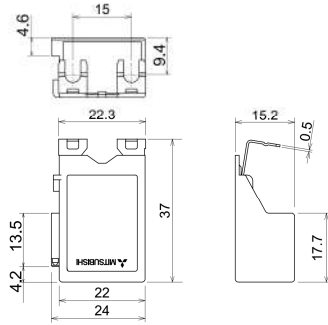
### ● UT-ML11



## Outline Drawing, Contact Arrangement

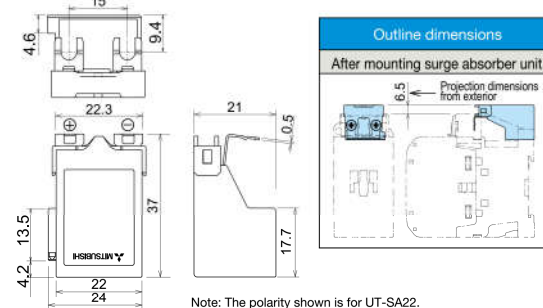
### Optional Units

- UT-SA21
- UT-SA23
- UT-SA13



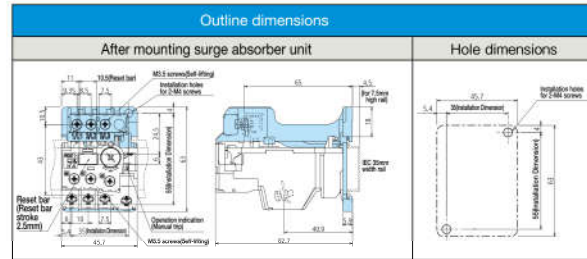
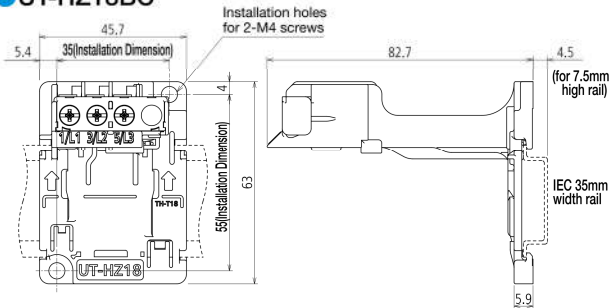
The outline dimensions of the magnetic contactor and magnetic relay do not differ after mounting.

- UT-SA22
- UT-SA25

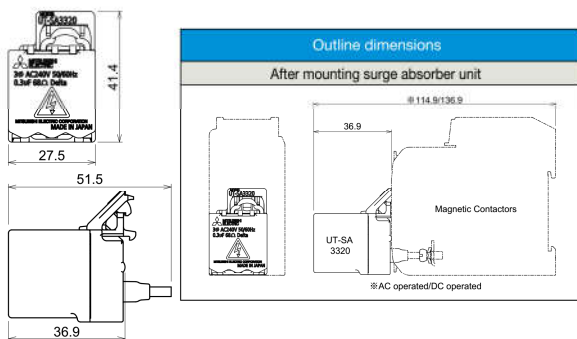


Note: The polarity shown is for UT-SA22.

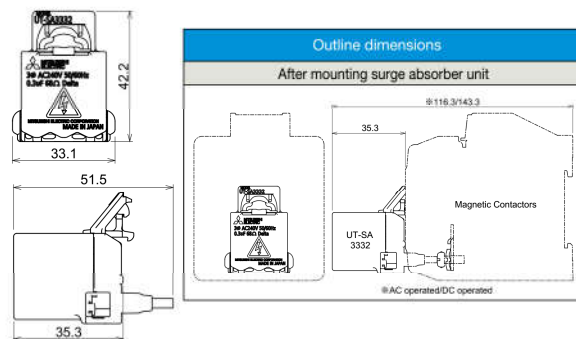
- UT-HZ18
- UT-HZ18BC



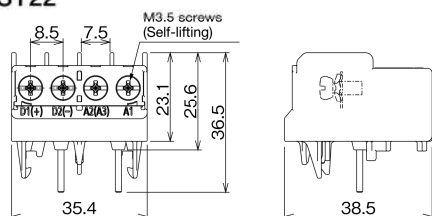
- UT-SA3320



- UT-SA3332



- UT-SY21
- UT-SY22



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