Optional Unit Specifications

◆ Operating Optional Units

Unit Types	Model Name	Contact Arrangement	Operation of MMP-T32			
			O N	Short Circuit Tripping	Overload/Open-Phase Tripping	OFF
Auxiliary Contact Unit	UT-MAX(LL)	1a	ON	OFF	OFF	OFF
		1b	OFF	ON	ON	ON
Alarm Contact Unit	UT-MAL(LL)	1a	OFF	ON	ON	OFF
		1b	ON	OFF	OFF	ON
Short-circuit Display Unit	UT-TU	—	No Display	Red Display	No Display	No Display

◆ Specifications of Auxiliary Contact Unit and Alarm Contact Unit

Model Name	Contact Arrangement	Rated Insulation Voltage	Durability		Minimum Applicable Load	Rated Operating Current [A]					
						AC-12 (Resistive Load)		DC-12 (Resistive Load)			
			Mechanical	Electrical		125 V	250 V	30 V	48 V	125 V	250 V
UT-MAX	1a, 1b	250 V	0.1 mil. times	10,000 times	5 V/160 mA 24 V/40 mA	5	3	—	—	0.4	0.2
UT-MAL	1a, 1b		1,000 times	1,000 times							
UT-MAXLL	1a, 1b	125 V	0.1 mil. times	10,000 times	5 V/1 mA 24 V/0.25 mA	0.1	—	0.1	0.03	—	—
UT-MALLL	1a, 1b		1,000 times	1,000 times							

◆ Specifications of Power Supply Block and Bus Bar

Model Name	Conventional Free Air Thermal Current Ith [A]	Rated Conditional Short-Circuit Current Iq [kA]	Applicable Electrical Wire
UT-EP3	63	50	Flexible Stranded Wire: 1 x 6: 25 mm² Stranded Wire: 1 x 6: 16 mm² (Cannot be wired with crimp lug)
UT-2B4/3B4/2B5/3B5			1 x R1.25/4: 8-4NS (Cannot be wired with bare wire)

● Parallel Connection Using Bus Bar Unit

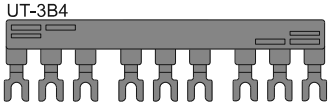
· When connecting four or more MMP-T32 Motor Circuit Breakers in parallel, connect them alternately reversing multiple UT-□B□ Bus Bar Units.

· Meet the following requirement in limiting the number of units when connecting in parallel.
[Rated Current of Bus Bar Unit (63 A)] > [Sum Value of Settling Current (Parallel Connection)]

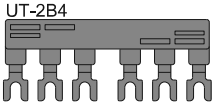
· Application Example: For Connecting 4 Units in Parallel (Close Mounting)

Bus Bar Units to be Used

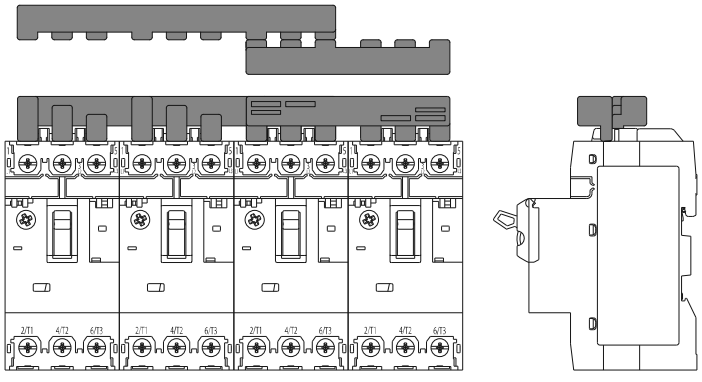
UT-3B4



UT-2B4



· Connection Example ✻ Determine the arrangement of the bus bar unit according to the feed position.



12.6 Applicable Standard

Regulatory/Legal Conformity and Compliance

Standards/Regulations \ Model Name				MMP-T32	UT-MAX UT-MAL	UT-TU	UT-CV3	UT-MT20 UT-MT32 UT-MQ12	UT-2B4/3B4 UT-2B5/3B5	UT-EP3
Overseas Tripping	International		IEC60947-2	○	—	—	—	—	○	○
			IEC60947-4-1	○	—	—	—	○	○	○
			IEC60947-5-1	—	○	—	—	—	—	—
	Europe	CE	EN60947-2	○	—	—	—	—	—	—
			EN60947-4-1	○	—	—	—	—	—	—
			EN60947-5-1	—	○	—	—	—	—	—
		TÜV (Certification Number)	EN60947-2	○ (R50269663 R50269678 R50269688 R50269690)	—	—	—	—	—	—
		RoHS Directive		○	○	○	○	○	○	○
	China	CCC (Certification Number)	GB14048.2	○ (2012010307533513)	—	—				
			GB14048.5	—	○ (2012010304563726)			—		
	North America Canada	UL/CSA (File Number)	UL60947-4-1	○ (Single Unit: E361855 Combination: E319418)	○ (E361855)	○ (E319418)	○ (E319418)	○ (E319418)	—	—
			CSA C22.2 No. 60947-4-1							
Domestic	Japan		JIS C8201-2-1 Ann.1	○	—	—	—	—	○	○
			JIS C8201-4-1	○	—	—	—	○	○	○
			JIS C8201-5-1	—	○	—	—	—	—	—
	Electrical Appliances and Materials Safety Act		Non-Specified Electric Appliances	○	—					

○ : Compliant (or Certified in the Case of Third-Party Authentication); —: Not Applicable or Not Certified

12.7 UL Standards and SCCR

UL Standard Certified Rating (Motor Circuit Breakers)

When UL standards are applied and used, select from the rating table below.

Motor Circuit Breakers UL Standard Certified Ratings

[Certified Rating]

◆ Main Circuit Single-Phase

Motor Circuit Breaker (Current Setting Range)		Certified Rating											
		110 to 120V		200 V		208 V		220 to 240V		440 to 480V		550 to 600V	
		Maximum Rated Capacity [HP]	Maximum Rated Operating Current [A]	Maximum Rated Capacity [HP]	Maximum Rated Operating Current [A]	Maximum Rated Capacity [HP]	Maximum Rated Operating Current [A]	Maximum Rated Capacity [HP]	Maximum Rated Operating Current [A]	Maximum Rated Capacity [HP]	Maximum Rated Operating Current [A]	Maximum Rated Capacity [HP]	Maximum Rated Operating Current [A]
MMP-T32	0.1 to 0.16	—	0.16	—	0.16	—	0.16	—	0.16	—	0.16	—	0.16
	0.16 to 0.25	—	0.25	—	0.25	—	0.25	—	0.25	—	0.25	—	0.25
	0.25 to 0.4	—	0.4	—	0.4	—	0.4	—	0.4	—	0.4	—	0.4
	0.4 to 0.63	—	0.63	—	0.63	—	0.63	—	0.63	—	0.63	—	0.63
	0.63 to 1	—	1	—	1	—	1	—	1	—	1	—	1
	1 to 1.6	—	1.6	—	1.6	—	1.6	1/10	1.5	—	1.6	—	1.6
	1.6 to 2.5	—	2.5	1/6	2.5	1/6	2.4	1/6	2.2	1/2	2.5	1/2	2
	2.5 to 4	1/8	3	1/3	4	1/3	4	1/3	3.6	1	4	1-1/2	4
	4 to 6.3	1/4	5.8	1/2	5.6	1/2	5.4	1/2	4.9	2	6	2	4.8
	5.5 to 8	1/3	7.2	3/4	7.9	3/4	7.6	1	8	2	6	3	6.8
	7 to 10	1/2	9.8	1	9.2	1	8.8	1-1/2	10	3	8.5	—	10
	9 to 13	3/4	13	1-1/2	11.5	1-1/2	11	2	12	5	13	5	11.2
	12 to 18	1	16	2	13.8	2	13.2	3	17	5	14	7-1/2	16
	18 to 25	2	24	3	19.6	3	18.7	—	25	7-1/2	21	10	20
	24 to 32	2	24	5	32	5	30.8	5	28	10	26	15	27

Note 1. Since "—" has no horsepower setting by standard, select the maximum rated operating current [A].

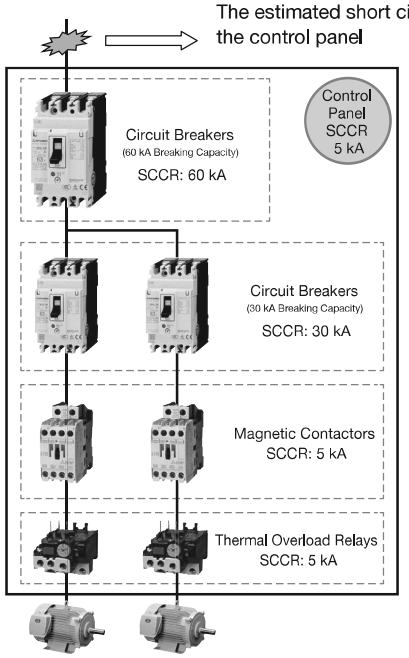
◆ Main Circuit Three-Phase

Motor Circuit Breaker (Current Setting Range)		Certified Rating											
		110 to 120V		200 V		208 V		220 to 240V		440 to 480V		550 to 600V	
		Maximum Rated Capacity [HP]	Maximum Rated Operating Current [A]	Maximum Rated Capacity [HP]	Maximum Rated Operating Current [A]	Maximum Rated Capacity [HP]	Maximum Rated Operating Current [A]	Maximum Rated Capacity [HP]	Maximum Rated Operating Current [A]	Maximum Rated Capacity [HP]	Maximum Rated Operating Current [A]	Maximum Rated Capacity [HP]	Maximum Rated Operating Current [A]
MMP-T32	0.1 to 0.16	—	0.16	—	0.16	—	0.16	—	0.16	—	0.16	—	0.16
	0.16 to 0.25	—	0.25	—	0.25	—	0.25	—	0.25	—	0.25	—	0.25
	0.25 to 0.4	—	0.4	—	0.4	—	0.4	—	0.4	—	0.4	—	0.4
	0.4 to 0.63	—	0.63	—	0.63	—	0.63	—	0.63	—	0.63	—	0.63
	0.63 to 1	—	1	—	1	—	1	—	1	1/2	1	1/2	0.9
	1 to 1.6	—	1.6	—	1.6	—	1.6	—	1.6	3/4	1.6	3/4	1.3
	1.6 to 2.5	—	2.5	1/2	2.5	1/2	2.4	1/2	2.2	1	2.1	1-1/2	2.4
	2.5 to 4	—	4	3/4	3.7	3/4	3.5	1	4	2	3.4	3	3.9
	4 to 6.3	3/4	6.3	1-1/2	6.3	1-1/2	6.3	1-1/2	6	3	4.8	5	6.1
	5.5 to 8	1	8	2	7.8	2	7.5	2	6.8	5	7.6	5	6.1
	7 to 10	1	8.4	—	10	—	10	3	9.6	5	7.6	7-1/2	9
	9 to 13	1-1/2	12	3	11	3	10.6	3	9.6	7-1/2	11	10	11
	12 to 18	2	13.6	5	17.5	5	16.7	5	15.2	10	14	15	17
	18 to 25	3	19.2	7-1/2	25.3	7-1/2	24.2	7-1/2	22	15	21	20	22
	24 to 32	5	30.4	10	32	10	30.8	10	28	20	27	30	32

Note 1. Since "—" has no horsepower setting by standard, select the maximum rated operating current [A].

What is SCCR (Short-Circuit Current Rating)?

Article 409 of NFPA 70 (National Electric Code: NEC), which is the electrical equipment standard of the United States, requires the SCCR value to be displayed on industrial control panels. SCCR is defined as the value of the short-circuit current that various devices connected to the main circuit can withstand; it is stipulated that the SCCR value of the control panel must be greater than the estimated short circuit current at the location where the control panel is installed. The SCCR value for industrial control panels is determined based on supplement SB of UL 508A.



● Determination of SCCR for Control Panel

Basically, the smallest SCCR value among the power circuit components is regarded as SCCR for the control panel.
In the case of the circuit in the figure at left, the SCCR value for the control panel is 5 kA.

● Determination of SCCR Value for Power Circuit Components

The determination method of SCCR for the power circuit components is in accordance with one of the following.
(1) The SCCR value displayed on device rating plates, in instruction manuals, etc.
(2) The estimated SCCR value described in table UL508A, SB4.1.
(3) The value described in the manufacturer's UL procedure and evaluated using a specific combination.

● To increase the SCCR value of the control panel

When adopting the values from (1) or (2) above, the SCCR value of the magnetic contactors/thermal overload relays is 5 kA and the SCCR of the control panel is limited. However, by applying the SCCR value of (3), it is possible to further increase the SCCR value of the control panel.

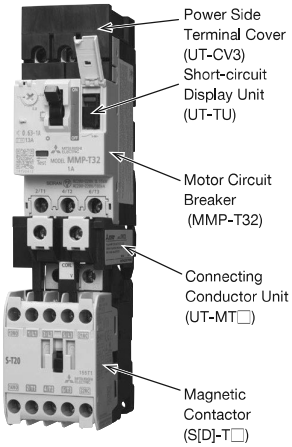
● Examples for Combinations of Specific Devices

The following types of specific combinations can achieve a high SCCR.

(1) Combination Motor Controller Type C
Combination of UL489 Breaker and UL60947-4-1 Contactor or Thermal Overload Relay

(2) Combination Motor Controller Type E
Combination of UL 60947-4-1 Motor Circuit Breaker and Specific Optional Items
＊ Specific Optional Items: Power Side Terminal Cover (UT-CV3) and Short-Circuit Display Unit (UT-TU)

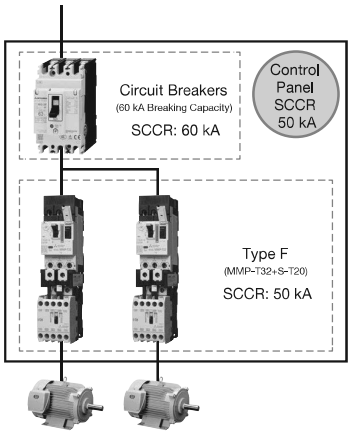
(3) Combination Motor Controller Type F
Combination with Combination Motor Controller Type E and UL60947-4-1 Contactor



Combination Motor Controller Type F

⇒ **MMP-T32 has a high SCCR UL certification with Type E/F**
Refer to page 350 for Type E/F combination table and SCCR values.

● Advantages Seen in Type E/F Circuit Example



By using Type E/F it is possible to display a high SCCR value.
The circuit diagram at left shows an example using Type F, with SCCR value of 50 kA.
Also, by adopting Type E/F combination motor controllers, it is possible to reduce the number of components (breakers). In addition, connecting with connecting conductor units can save space and wiring.

● Increasing the SCCR value by other methods (reference)

The SCCR values can also be increased by using the following methods.
＊ Check UL508A SB for details.
1. Correction for Transformer Capacity and Secondary Side SCCR
2. Correction with Current Limiting Circuit Breaker and Current Limiting Fuse

UL Standard Certification (SCCR) [Type E/F Combination Motor Controllers]

Type E/F combination motor controllers can be configured by applying power side terminal covers and short circuit display units to motor circuit breakers. Increasing the SCCR value contributes to panel miniaturization and reduced wiring.

Type E/F Selection Table

(1) Type E Combination

[Certified Rating]

Combination Arrangements	=	Motor Circuit Breaker MMP-T32	+	Power Side Terminal Cover Kit UT-CV3	+	Short-circuit Display Unit UT-TU

◆ **Main Circuit Three Phase 220 to 240 V**

Type E Combination				Certified Rating			
Motor Circuit Breaker (Current Setting Range)		Power Side Terminal Cover	Short-circuit Display Unit	Maximum Rated Capacity [HP]	Maximum Rated Operating Current [A]	SCCR	
MMP-T32	0.1 to 0.16	UT-CV3	UT-TU	—	0.16	240 V	50 kA
	0.16 to 0.25			—	0.25		
	0.25 to 0.4			—	0.4		
	0.4 to 0.63			—	0.63		
	0.63 to 1			—	1		
	1 to 1.6			—	1.6		
	1.6 to 2.5			1/2	2.2		
	2.5 to 4			1	4		
	4 to 6.3			1-1/2	6		
	5.5 to 8			2	6.8		
	7 to 10			3	9.6		
	9 to 13			3	9.6		
	12 to 18			5	15.2		
	18 to 25			7-1/2	22		25 kA
	24 to 32			10	28		

Note 1. Since "—" has no horsepower setting by standard, select the maximum rated operating current [A].

◆ **Main Circuit Three Phase 440 to 480 V**

Type E Combination				Certified Rating			
Motor Circuit Breaker (Current Setting Range)		Power Side Terminal Cover	Short-circuit Display Unit	Maximum Rated Capacity [HP]	Maximum Rated Operating Current [A]	SCCR	
MMP-T32	0.1 to 0.16	UT-CV3	UT-TU	—	0.16	480Y / 277 V	50 kA
	0.16 to 0.25			—	0.25		
	0.25 to 0.4			—	0.4		
	0.4 to 0.63			—	0.63		
	0.63 to 1			1/2	1		
	1 to 1.6			3/4	1.6		
	1.6 to 2.5			1	2.1		
	2.5 to 4			2	3.4		
	4 to 6.3			3	4.8		
	5.5 to 8			5	7.6		
	7 to 10			5	7.6		
	9 to 13			7-1/2	11		
	12 to 18			10	14		
	18 to 25			15	21		25 kA
	24 to 32			20	27		

Note 1. Since "—" has no horsepower setting by standard, select the maximum rated operating current [A].

(2) Type F Combination

[Certified Rating]

Combination Arrangements	=	Type E Combination (See (1))	+	Connecting Conductor Unit UT-MT □ /UT-MQ12	+	Magnetic Contactor S-T □ /SD-Q □

◆ **Main Circuit Three Phase 220 to 240 V**

Type F Combination						Certified Rating			
Type E Combination (Current Setting Range)		Magnetic Contactors			Connecting Conductor Unit	Maximum Rated Capacity [HP]	Maximum Rated Operating Current [A]	SCCR	
MMP-T32 + UT-CV3 + UT-TU	0.1 to 0.16	S-T10 SD-Q11/ Q12	S-T12 SD-T12	S-T20 SD-T20	S-T32 SD-T32	UT-MT20 (For S-T10/T12/T20)	—	0.16	240 V	50 kA
	0.16 to 0.25						—	0.25		
	0.25 to 0.4					UT-MT20D + UT-BT32D (For SD-T12/T20)	—	0.4		
	0.4 to 0.63						—	0.63		
	0.63 to 1						—	1		
	1 to 1.6						—	1.6		
	1.6 to 2.5					UT-MT32 (For S-T32)	1/2	2.2		
	2.5 to 4						1	4		
	4 to 6.3						1-1/2	6		
	5.5 to 8					UT-MT32D + UT-BT32D (For SD-T32)	2	6.8		
	7 to 10						3	9.6		
	9 to 13						3	9.6		
	12 to 18						5	15.2		
	18 to 25					UT-MQ12 (For SD-Q11/Q12)	7-1/2	22		
	24 to 32						10	28		

Note 1. Since "—" has no horsepower setting by standard, select the maximum rated operating current [A].

◆ **Main Circuit Three Phase 440 to 480 V**

Type F Combination						Certified Rating			
Type E Combination (Current Setting Range)		Magnetic Contactors			Connecting Conductor Unit	Maximum Rated Capacity [HP]	Maximum Rated Operating Current [A]	SCCR	
MMP-T32 + UT-CV3 + UT-TU	0.1 to 0.16	S-T10 SD-Q11/ Q12	S-T12 SD-T12	S-T20 SD-T20	S-T32 SD-T32	UT-MT20 (For S-T10/T12/T20)	—	0.16	480Y / 277 V	50 kA
	0.16 to 0.25						—	0.25		
	0.25 to 0.4					UT-MT20D + UT-BT32D (For SD-T12/T20)	—	0.4		
	0.4 to 0.63						—	0.63		
	0.63 to 1						1/2	1		
	1 to 1.6						3/4	1.6		
	1.6 to 2.5					UT-MT32 (For S-T32)	1	2.1		
	2.5 to 4						2	3.4		
	4 to 6.3						3	4.8		
	5.5 to 8					UT-MT32D + UT-BT32D (For SD-T32)	5	7.6		
	7 to 10						5	7.6		
	9 to 13						7-1/2	11		
	12 to 18						10	14		
	18 to 25					UT-MQ12 (For SD-Q11/Q12)	15	21		
	24 to 32						20	27		

Note 1. Since "—" has no horsepower setting by standard, select the maximum rated operating current [A].

UL Standard Certification (SCCR) [Combination with Servo Amplifier]

The SCCR is acquired by combining a Combination Motor Controller Type E and a Mitsubishi Electric AC servo amplifier.
The applicable combinations and SCCR values are shown in the table below.

Type E Combination Motor Controller (SCPD)		Servo Amplifiers			Main Circuit Voltage (Vac)	SCCR (kA)
Model Name	Heater Designation	Model Name	Input Rating (Vac)	Input Phase		
MMP-T32	1.6A	MR-J4-10#	200 to 240	Three-Phase	240	50
	2.5A	MR-J4-20#				
	4A	MR-J4-40#				
	6.3A	MR-J4-60#				
	6.3A	MR-J4-70#				
	8A	MR-J4-100#				
	18A	MR-J4-200#				
	25A	MR-J4-350#				25
	32A	MR-J4-500#				
	2.5A	MR-J4-60#4	380 to 480	Three-Phase	480Y277	50
	4A	MR-J4-100#4				
	8A	MR-J4-200#4				
	13A	MR-J4-350#4				
	18A	MR-J4-500#4				
	25A	MR-J4-700#4				25
	6.3A	MR-J4W2-22B	200 to 240	Three-Phase	240	50
	8A	MR-J4W2-44B				
	13A	MR-J4W2-77B				
	18A	MR-J4W2-1010B				
	8A	MR-J4W3-222B				
	13A	MR-J4W3-444B				

#: Either A, B, or GF.

UL Standard Certification (SCCR) [Combination with Inverter]

The SCCR is acquired by combining a Combination Motor Controller Type E and a Mitsubishi Electric inverter.
The applicable combinations and SCCR values are shown in the table below.

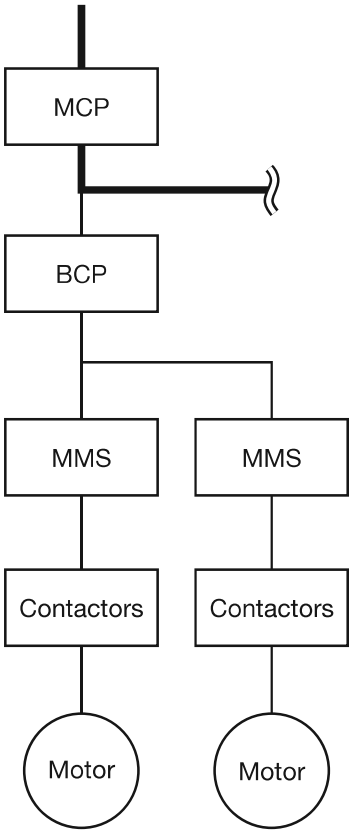
Type E Combination Motor Controller (SCPD)		Inverters		Main Circuit Voltage (Vac)	SCCR (kA)
Model Name	Heater Designation	Model Name	Capacity [kW]		
MMP-T32	1.6A	FR-E720	0.1	480Y277	50
	4A		0.2		
	6.3A		0.4		
	10A		0.75		
	13A		1.5		
	18A		2.2		
	25A		3.7		25
	4A	FR-E740	0.4		50
	6.3A		0.75		
	8A		1.5		
	10A		2.2		
	18A		3.7		
	25A		5.5		25
	32A		7.5		
	1.6A	FR-D720	0.1		50
	4A		0.2		
	6.3A	FR-D720 (FR-F720PJ)	0.4		
	8A		0.75		
	13A		1.5		
	18A		2.2		
	25A		3.7		25
	2.5A	FR-D740 (FR-F740PJ)	0.4		50
	4A		0.75		
	6.3A		1.5		
	10A		2.2		
	18A		3.7		
	25A		5.5		25
	32A		7.5		
MMP-T32	8A	FR-A820	0.4	480Y277	50
	13A		0.75		
	18A		1.5		
	25A		2.2		25
	32A		3.7		
	4A	FR-A840	0.4		50
	6.3A		0.75		
	8A		1.5		
	13A		2.2		
	18A		3.7		
	25A		5.5		25
	32A		7.5		
	8A	FR-F820	0.75		50
	13A		1.5		
	18A		2.2		
	25A		3.7		25
	32A		5.5		
	4A	FR-F840	0.75		50
	6.3A		1.5		
	8A		2.2		
	13A		3.7		
	18A		5.5		
	25A		7.5		25
	32A		11		

UL Standards and Group Installation

Group installation is a short-circuit protection method that protects multiple motor branch circuits with one short-circuit protection device (low voltage circuit breaker or fuse). The MMP-T32 acquires a high SCCR value UL certification for group installations by combining with a specific low voltage circuit breaker.

Group Installation Application Example

Group installation circuit example using a motor circuit breaker

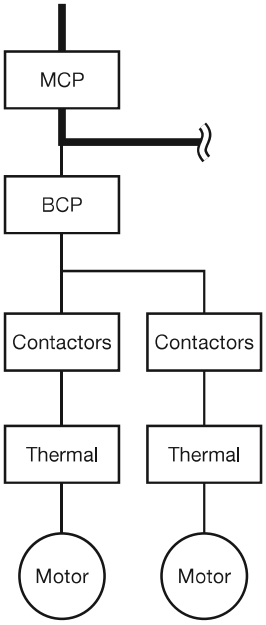


[Definition of Abbreviations]
MCP : Main Circuit Protection device
BCP : Branch Circuit Protection device
MMS: Manual Motor Starter

1. **Combining with a breaker with a maximum rated current of 250 A, group installation certification is acquired.**
   ⇒ Group protection is possible for a larger number of motors.
2. **It is possible to increase the SCCR value.**

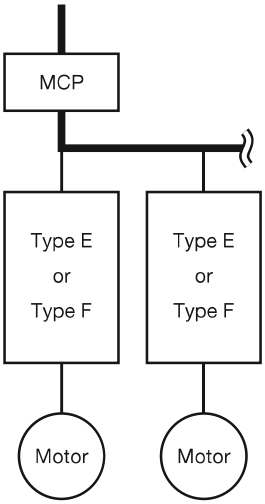
* Refer to page 354 for a list of models with group installation acquired and SCCR values.

When applying general group protection



In the absence of group installation certification, the BCP rating is limited to the value specified by NFPA70 430.52. Relatively few motors can use group protection, and more BCPs are required.

Differences from individual protection using Type E/F



Type E/F is regarded as a device with branch circuit protection functionality, allowing independent protection and enabling BCP reduction.

UL Certification Rating (Group Installation)

The table below shows the UL certification ratings applicable to group installation circuits.

Table 1. Motor Circuit Breaker MMP-T32 Single Unit

Motor Circuit Breaker Model Name	Heater Designation	Short-Circuit Current Rating (SCCR)							
		Main Circuit Voltage: 240 V Maximum				Main Circuit Voltage: 480 V Maximum			
			Low Voltage Circuit Breaker (BCP) Rating				Low Voltage Circuit Breaker (BCP) Rating		
			Maximum Rated Current	Minimum Breaking Current	Recommended Model Name		Maximum Rated Current	Minimum Breaking Current	Recommended Model Name
MMP-T32	0.16A	50 kA	250 A	50 kA	NF250-HVU NV250-HVU	50 kA	250 A	50 kA	NF250-HVU NV250-HVU
	0.25A								
	0.4A								
	0.63A								
	1A								
	1.6A								
	2.5A								
	4A								
	6.3A								
	8A								
	10A								
	13A								
	18A								
	25A	25 kA				25 kA			
	32A								

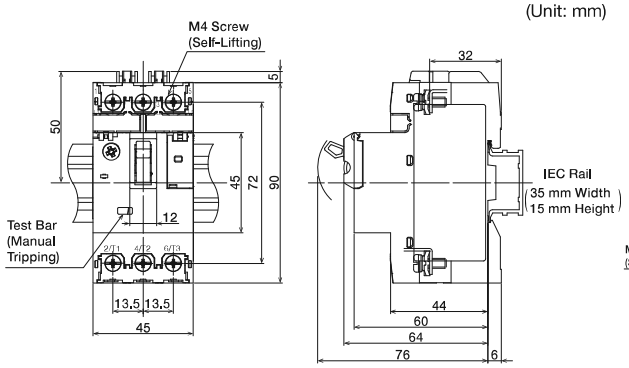
Table 2. Motor Circuit Breaker MMP-T32+S(D)-T □

Motor Circuit Breaker Model Name	Heater Designation	Combination Connecting Unit/Magnetic Contactor				Short-Circuit Current Rating (SCCR)							
						Main Circuit Voltage: 240 V Maximum				Main Circuit Voltage: 480 V Maximum			
							Low Voltage Circuit Breaker (BCP) Rating				Low Voltage Circuit Breaker (BCP) Rating		
							Maximum Rated Current	Minimum Breaking Current	Recommended Model Name		Maximum Rated Current	Minimum Breaking Current	Recommended Model Name
MMP-T32	0.16A	UT-MT20 / S-T10	UT-MT20(D) / S(D)-T12	UT-MT20(D) / S(D)-T20	UT-MT32(D) / S(D)-T32	50 kA	250 A	50 kA	NF250-HVU NV250-HVU	50 kA	250 A	50 kA	NF250-HVU NV250-HVU
	0.25A												
	0.4A												
	0.63A												
	1A												
	1.6A												
	2.5A												
	4A												
	6.3A												
	8A												
	10A												
	13A												
	18A	–	–	–									
	25A												
	32A												

12.8 Outline Drawings

MMP-T32

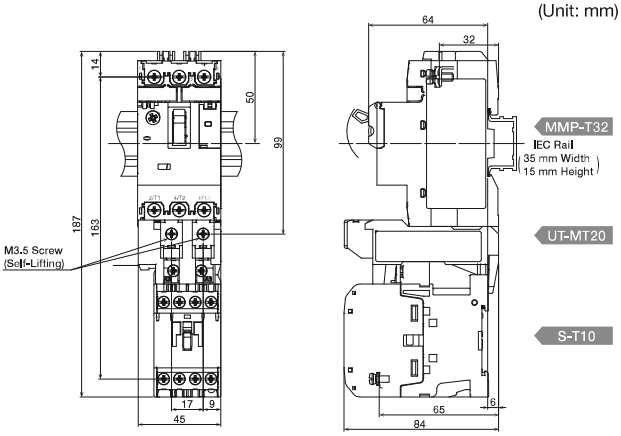
(Unit: mm)



Model Name	Heater Designation
MMP-T32	0.16 to 8
	10 to 18
	25
	32

MMP-T32 + UT-MT20 + S-T10

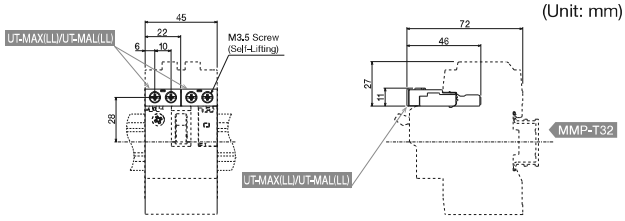
(Unit: mm)



Model Name
UT-MT20

MMP-T32 + UT-MAX(LL)/UT-MAL(LL)

(Unit: mm)

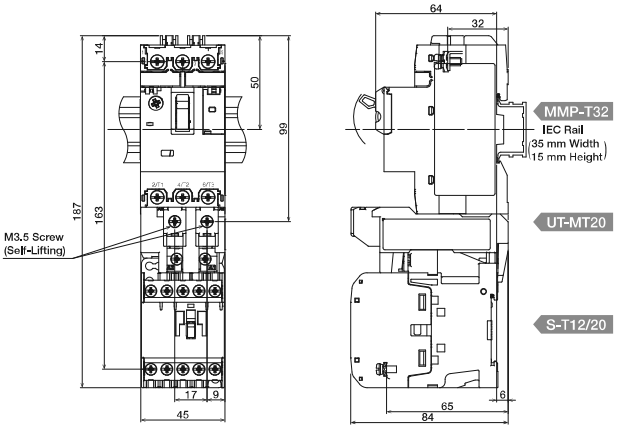


* The above figure shows the state where 2 units [UT-MAX(LL) and/or UT-MAL(LL)] are installed.
Outline drawings of UT-MAX(LL) and UT-MAL(LL) are equivalent.

Model Name
UT-MAX
UT-MAXLL
UT-MAL
UT-MALLL

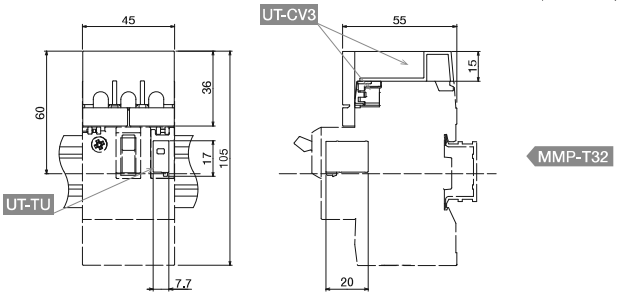
MMP-T32 + UT-MT20 + S-T12/S-T20

(Unit: mm)



MMP-T32 + UT-CV3 + UT-TU (Type E Combination)

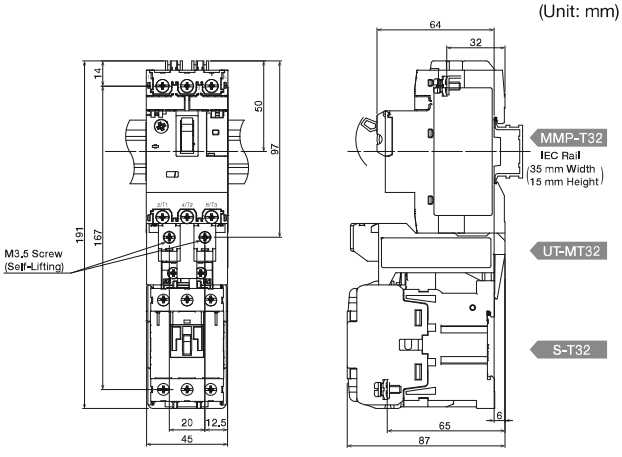
(Unit: mm)



Model Name
UT-CV3
UT-TU

MMP-T32 + UT-MT32 + S-T32

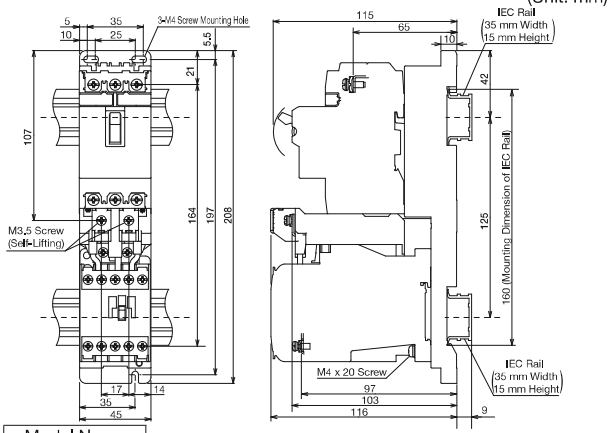
(Unit: mm)



Model Name
UT-MT32

MMP-T32+ UT-MT20D + SD-T12/SD-T20 + UT-BT32D

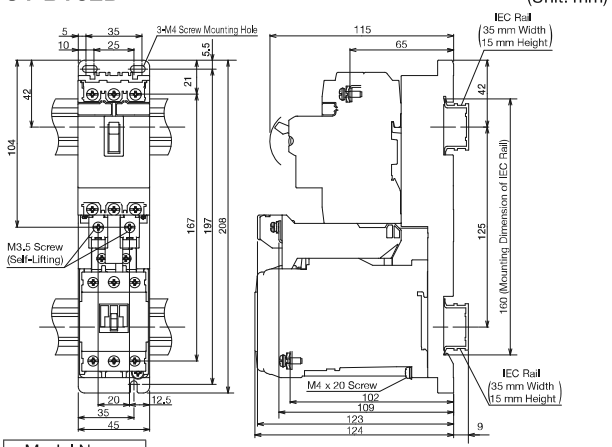
(Unit: mm)



Model Name
UT-MT20D
UT-BT32D

MMP-T32+ UT-MT32D + SD-T32 + UT-BT32D

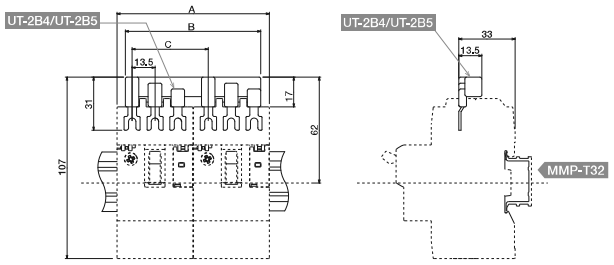
(Unit: mm)



Model Name
UT-MT32D

MMP-T32x2 + UT-2B4/UT-2B5

(Unit: mm)

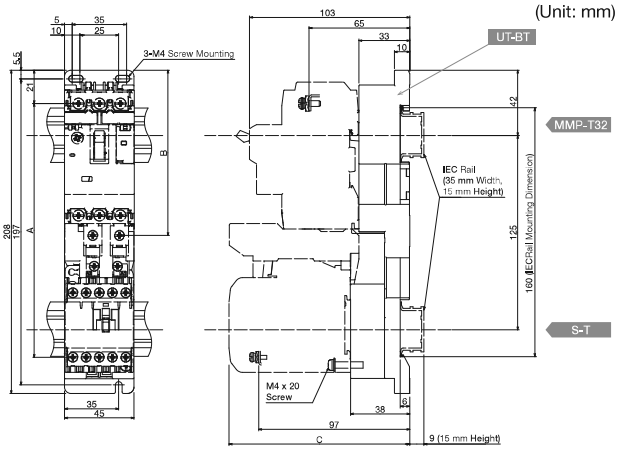


Variable Dimensions	A	B	C
UT-2B4	90	80	45
UT-2B5	102	92	57

Model Name
UT-2B4
UT-2B5

MMP-T32 + UT-MT□ + UT-BT□ + S-T□

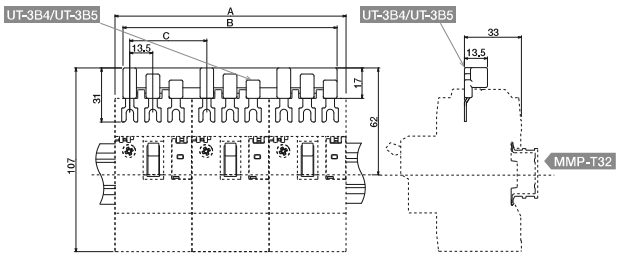
(Unit: mm)



Variable Dimensions	A	B	C	Combination Contactor
UT-BT20	163	106	116	S-T10/T12/T20
UT-BT32	167	104	120	S-T32

MMP-T32x3 + UT-3B4/UT-3B5

(Unit: mm)

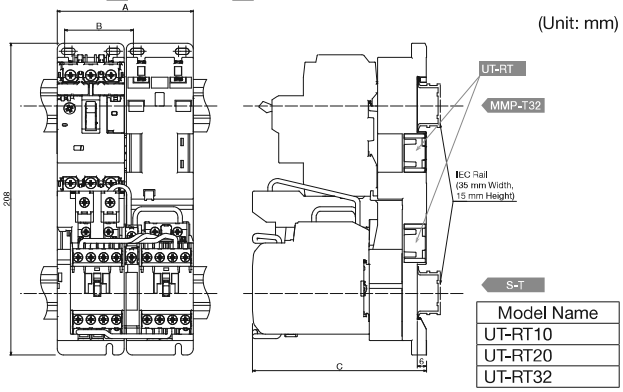


Variable Dimensions	A	B	C
UT-3B4	135	125	45
UT-3B5	159	149	57

Model Name
UT-3B4
UT-3B5

MMP-T32 + UT-MT□ + UT-BT□ + S-2xT□ + UT-RT□

(Unit: mm)



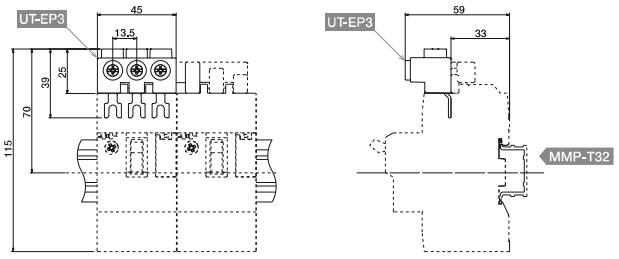
Model Name
UT-RT10
UT-RT20
UT-RT32

Variable Dimensions	A	B	C	Combination Contactor	Combination Connecting Conductor Unit	Combination Mounting Base Unit
UT-RT10	91	46	116	S-2xT10	UT-MT20	UT-BT20
				SD-2xT10	UT-MT20D	UT-BT32D
UT-RT20	99	54	116	S-2xT12/T20	UT-MT20	UT-BT20
				SD-2xT12/T20	UT-MT20D	UT-BT32D
UT-RT32	98	53	150	S-2xT32	UT-MT32	UT-BT32
	98	53	154	SD-2xT32	UT-MT32D	UT-BT32D

Note. The main circuit conductor kit UT/UN-SD□ is also available as a reversible electric wire. When using UN-SD18CX, switch the reversible wire power side and load side for this kit.

MMP-T32x2 + UT-EP3 + UT-□B□

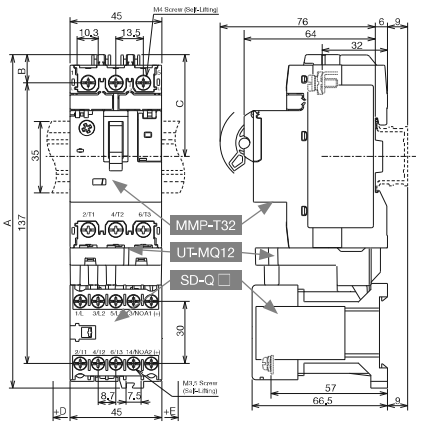
(Unit: mm)



Model Name
UT-EP3

MMP-T32 + UT-MQ12 + SD-Q□

(Unit: mm)



Arrangement			Variable Dimension [mm]					Model Name
Motor Circuit Breakers	Connecting Conductor Unit	Magnetic Contactors	A	B	C	+D	+E	UT-MQ12
MMP-T32	UT-MQ12	SD-Q11	163	14	50	0	0	
MMP-T32	UT-MQ12	SD-Q12	163	14	50	9.5	0	
MMP-T32	UT-MQ12	SD-QR11	166	14	50	0	45	
MMP-T32	UT-MQ12	SD-QR12	166	14	50	9.5	54.5	

List of Combination Models

Motor Circuit Breaker (Type E Optional Unit)	Magnetic Contactors		Connecting Conductor Unit	Mounting Base Unit	Mounting Method	Jointing Block Unit
MMP-T32 (UT-CV3, UT-TU)	S-T10	Non-Reversing	UT-MT20	Configurable without the base unit if screw mounting is not required	IEC Rail (1 pc)	—
	S-T12/T20		UT-MT20		IEC Rail (1 pc)	—
	S-T32		UT-MT32		IEC Rail (1 pc)	—
	S-T10		UT-MT20	UT-BT20	Screw Mounting or IEC Rail (2 pcs)	—
	S-T12/T20		UT-MT20	UT-BT20	Screw Mounting or IEC Rail (2 pcs)	—
	S-T32		UT-MT32	UT-BT32	Screw Mounting or IEC Rail (2 pcs)	—
	S-2xT10	Reversing	UT-MT20	UT-BT20 (2 Units)	Screw Mounting or IEC Rail (2 pcs)	UT-RT10
	S-2xT12/T20		UT-MT20	UT-BT20 (2 Units)	Screw Mounting or IEC Rail (2 pcs)	UT-RT20
	S-2xT32		UT-MT32	UT-BT32 (2 Units)	Screw Mounting or IEC Rail (2 pcs)	UT-RT32
	SD-Q11/Q12	Non-Reversing	UT-MQ12	Not Required (Screw Mounting Not Possible)	IEC Rail (1 pc)	—
	SD-QR11/QR12	Reversing	UT-MQ12		IEC Rail (1 pc)	Not Required
	SD-T12/T20	Non-Reversing	UT-MT20D	UT-BT32D	Screw Mounting or IEC Rail (2 pcs)	—
	SD-T32		UT-MT32D	UT-BT32D	Screw Mounting or IEC Rail (2 pcs)	—
	SD-2xT12/T20	Reversing	UT-MT20D	UT-BT32D (2 Units)	Screw Mounting or IEC Rail (2 pcs)	UT-RT20
	SD-2xT32		UT-MT32D	UT-BT32D (2 Units)	Screw Mounting or IEC Rail (2 pcs)	UT-RT32

12.9 How to Order

How to Order

Follow the steps below when ordering.
(Enter a space in ▲.)

Model Name		Heater Designation
MMP-T32	▲	32A
MMP-T32BC		

How to Order Options

Follow the steps below when ordering.
(Enter a space in ▲.)

	Model Name		Contact Arrangement
Auxiliary Contact Unit	UT-MAX	▲	1a
	UT-MAX	▲	1b
Alarm Contact Unit	UT-MAL	▲	1a
	UT-MAL	▲	1b
Short-circuit Display Unit	UT-TU		