



Thermocouple type	Temperature measurement range	Resolution	Effect from wiring resistance of 1Ω			Temperature measurement range	Resolution	Effect from wiring resistance of 1Ω			
			A1S64TCTT-S1 A1S64TCTTBW-S1	A1S64TCTRT A1S64TCTRTBW	Q64TCTTN Q64TCTTBWN			A1S64TCTT-S1 A1S64TCTTBW-S1	A1S64TCTRT A1S64TCTRTBW	Q64TCTTN Q64TCTTBWN	
R	0 to 1700	1			0.030(°C/Ω)	0 to 3000	1			0.054(°F/Ω)	
K	0 to 500.0, 0 to 800.0, 0 to 1300	1			0.005(°C/Ω)	0 to 1000.0, 0 to 2400	1			0.008(°F/Ω)	
	-200.0 to 400.0, 0.0 to 400.0, 0.0 to 500.0, 0.0 to 800.0	0.1				0.0 to 1000.0	0.1				
J	0 to 500.0, 0 to 800.0, 0 to 1200	1			0.003(°C/Ω)	0 to 1000.0, 0 to 1600, 0 to 2100	1			0.006(°F/Ω)	
	0 to 400.0, 0.0 to 500.0, 0.0 to 800.0	0.1				0.0 to 1000.0	0.1				
T	-200 to 400, -200 to 200, 0 to 200, 0 to 400	1			0.004(°C/Ω)	0 to 700, -300 to 400	1			0.008(°F/Ω)	
	-200.0 to 400.0, 0.0 to 400.0	0.1				0.0 to 700.0	0.1				
S	0 to 1700	1			0.030(°C/Ω)	0 to 3000	1			0.054(°F/Ω)	
B (*4)	MELSEC-AnS Series module, 400 to 1800	1	0.35 μV/Ω	0.15 μV/Ω	MELSEC-AnS Series module, 800 to 3000	1	0.35 μV/Ω	0.15 μV/Ω	MELSEC-Q Series module, 0 to 3000	1	0.068(°F/Ω)
	MELSEC-Q Series module, 0 to 1800				MELSEC-Q Series module, 0 to 3000				0.005(°F/Ω)		
E	0 to 400.0, 0 to 1000, 0.0 to 700.0	0.1			0.003(°C/Ω)	0 to 1800	1			0.005(°F/Ω)	
N	0 to 1300	1			0.006(°C/Ω)	0 to 2300	1			0.011(°F/Ω)	
U	0 to 400, -200 to 200, 0.0 to 600.0	1			0.004(°C/Ω)	0 to 700, -300 to 400	1			0.009(°F/Ω)	
	0.0 to 600.0	0.1									
L	0 to 400, 0 to 900, 0.0 to 400.0, 0.0 to 900.0	1			0.003(°C/Ω)	0 to 800.0, 0 to 1600	1			0.006(°F/Ω)	
	0.0 to 400.0, 0.0 to 900.0	0.1									
PL II	0 to 1200	1			0.005(°C/Ω)	0 to 2300	1			0.010(°F/Ω)	
W5Re/W26Re	0 to 2300	1			0.017(°C/Ω)	0 to 3000	1			0.021(°F/Ω)	

\*4: The temperature measurement ranges are different between the MELSEC-AnS series and MELSEC-Q series modules. While temperature can be measured within less than 400°C/800°F using the MELSEC-Q series, the accuracy cannot be guaranteed.

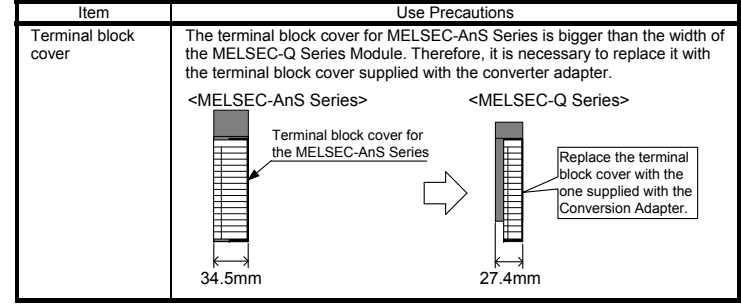
## 4. Mounting and Installation

### 4.1 Handling Precautions

- Before attempting to install the Unit or carry out the necessary wiring, make certain that the external power supply, used in the system, is shut off on all three phases. Failure to do so may result in electric shock or damage to the product.
- Do not touch live terminals. There is a danger of electric shock or malfunction.
- Do not modify the Conversion Adapter or take it apart. Doing so will cause failure, malfunction, personal injury, or fire.
- Do not touch the energized part of the Conversion Adapter directly. Contact will cause malfunction or failure in the system.
- Fasten the Conversion Adapter and the Mounting Bracket securely with retaining screws, and tighten the screws by applying torque within specified limits. Loose screws can lead to the dropping of the Conversion Adapter or Mounting Bracket, possibly causing breakage thereof. Excessive tightness of the screws can lead to breakage of the screws, Converter Adapter, Mounting bracket, or MELSEC-Q Series Module, possibly causing the dropping, shorting, and malfunction thereof.
- Use care to prevent foreign materials including cuttings and wiring debris from entering the Conversion Adapter or the MELSEC-Q Series Module. These will be cause for fire, failure or malfunction.
- Do not drop the Conversion Adapter and Mounting Bracket or do not give a strong impact to it. This will cause damage.

### 4.2 Use Precautions

Item	Use Precautions
Width dimension of module	Because the module is reduced in width dimension (34.5mm→27.4mm) and thus in area available for wiring, check dimensional data before installing the module. 
Depth and Height dimension	Installation with the Base Adapter Because the module is increased in depth and height dimension, check dimensional data before installing the module. 
	Installation with the DIN rail Because the module is increased in depth and height dimension, check dimensional data before installing the module. 



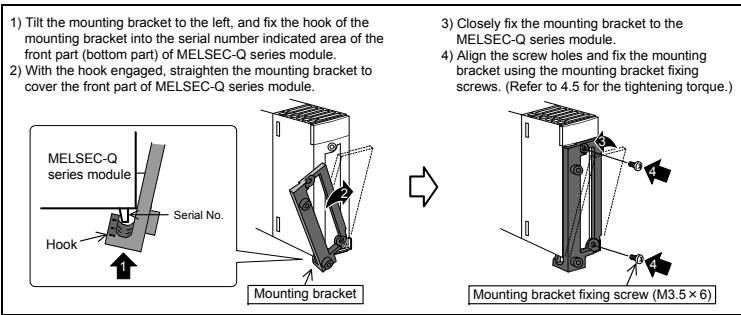
### 4.3 Installation Environment

The installation environment is the same as MELSEC-Q series CPU Module to use. Refer to the user's manual of the MELSEC-Q Series CPU Module to be used.

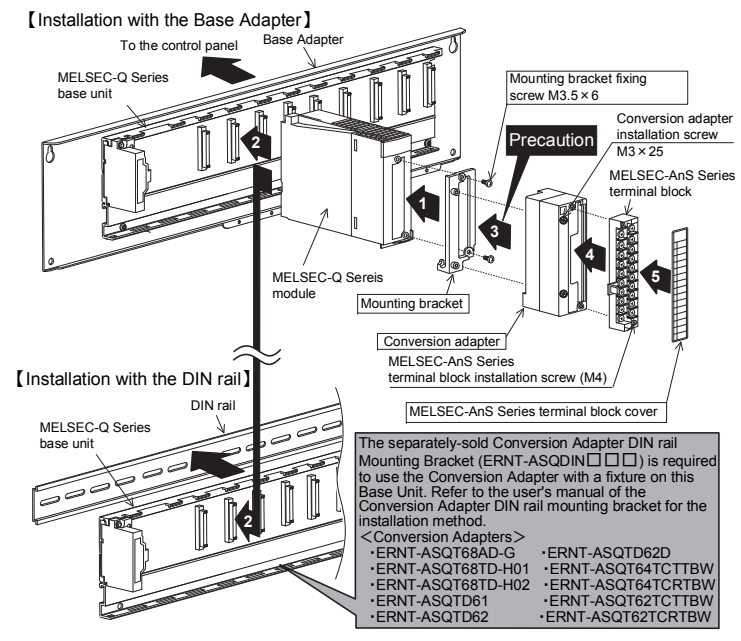
## 5. Part Names and Installation Method

### 5.1 Mounting Bracket Installation Method

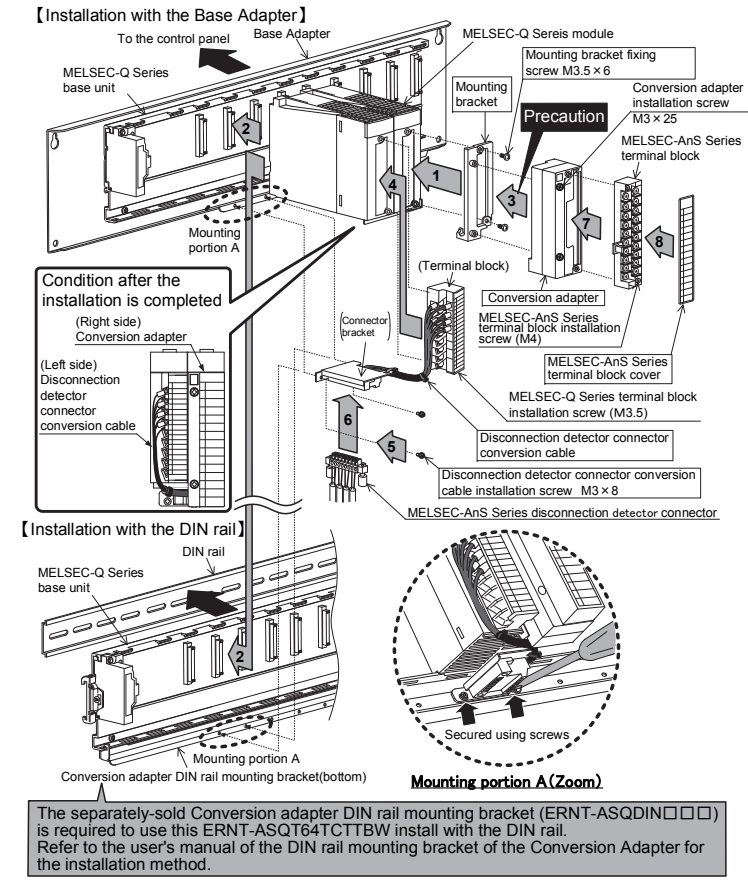
It is necessary to fix the hook of the mounting bracket into the front part (bottom part) of MELSEC-Q series module. Install the mounting bracket before installing the MELSEC-Q series module to the base unit.



### 5.2 ERNT-ASQT64TCTT Installation Procedure



### 5.3 ERNT-ASQT64TCTTBW Installation Procedure



### 5.4 Installation Method

- | Installation with the Base Adapter  | Installation with the DIN rail  |
|---|---|
| Mount the MELSEC-Q Series Base Unit to the Base Adapter. Refer to the Base Adapter's manual for how to install them to the control panel. | Mount the DIN rail mounting adapter manufactured by Mitsubishi Electric to the MELSEC-Q Series Base Unit. For how to install the adapter to the MELSEC-Q Series Base Unit, refer to the QCPU User's Manual. |

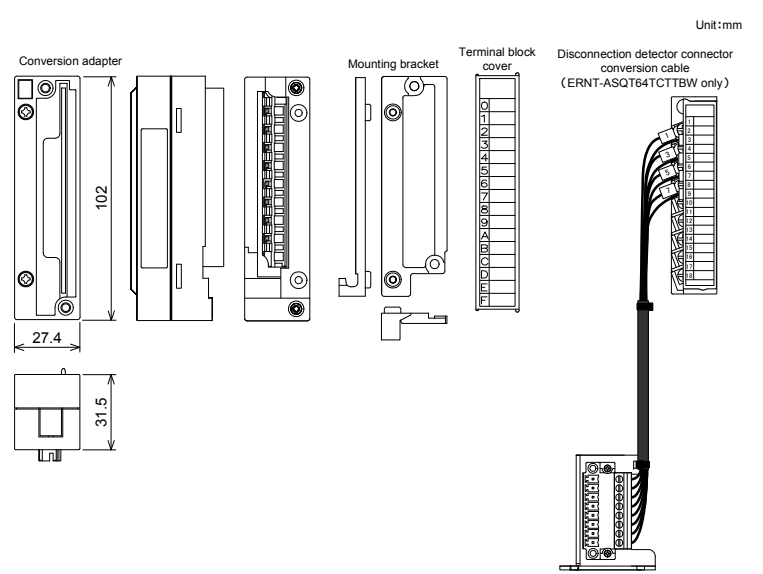
5.2 ERNT-ASQT64TCTT Installation Procedure	5.3 ERNT-ASQT64TCTTBW Installation Procedure	Description
1	1	Remove the terminal block attached with the MELSEC-Q Series module after loosening the terminal block installation screws (2 places up and down). (When using Q64TCTTBWN, remove the terminal blocks from both right and left slots.) The MELSEC-Q series terminal block (including the cold junction temperature compensation resistor) is not used. 
2	2	Install the MELSEC-Q Series module to the MELSEC-Q Series Base Unit. MELSEC-Q Series terminal block installation screw (Secure it in two places, top and bottom.) 
3	3	Secure the mounting bracket to the MELSEC-Q Series module (to the right slot when using Q64TCTTBWN) using the mounting bracket fixing screws (M3.5 × 6). (2 places) Refer to "5.1 Mounting Bracket Installation Method".
	4	Install the Conversion Adapter to the mounting bracket, and secure it using the Conversion Adapter installation screws (M3 × 25). (2 places) Precaution: Before tightening the installation screws, check that the Conversion Adapter has been securely installed on the MELSEC-Q Series module. Tightening the screws in floating-off state or tilting state will damage the Conversion Adapter installation screws and the mounting bracket.
	5	Fix the terminal block for the disconnection detector connector conversion cable to the target MELSEC-Q series module (left slot) using the MELSEC-Q series terminal block installation screws (M3.5) (2 places, top and bottom).
	6	Fix the connector bracket of the disconnection detector connector conversion cable to the base adapter or the conversion adapter DIN rail mounting bracket (bottom) using the disconnection detector connector conversion cable installation screws (M3 × 8) (2 places).
	7	Connect the MELSEC-AnS series disconnection detector connector to the disconnection detector connector conversion cable.
	8	Secure the MELSEC-AnS Series terminal block to the Conversion Adapter with the supplied terminal block installation screw (M4). (2 places, top and bottom.)
		Remove the terminal block cover from the MELSEC-AnS Series terminal block and fit the terminal block cover supplied with the Conversion Adapter in place.

### 5.5 Tightening Torque

Tighten the module installation screws to the specified torque below. An inappropriate tightening torque could cause the product to fall or result in a short circuit, product failure or malfunction.

Screw Location	Tightening Torque Range
Mounting bracket fixing screw (M3.5×6)	0.68 to 0.92N·m
Conversion Adapter installation screw (M3×25)	0.43 to 0.57N·m
MELSEC-AnS Series terminal block installation screw (M4 screw)	0.78 to 1.18N·m
MELSEC-AnS Series terminal block terminal screw (M3.5 screw)	0.59 to 0.88N·m
MELSEC-Q Series terminal block installation screw (M3.5 screw)	0.66 to 0.89N·m
Disconnection detector connector conversion cable installation screw (M3×8)	0.61 to 0.82N·m

## 6. External Dimensions



## Product Warranty Details

Please confirm the following product warranty details prior to product use.

### Gratis Warranty Terms and Gratis Warranty Range

If any fault or defect (hereinafter referred to as "Failure") attributable to Mitsubishi Electric Engineering Company Limited (hereinafter referred to as "MEE") should occur within the gratis warranty period, MEE shall repair the product free of charge via the distributor from whom you made your purchase.

#### ■ Gratis Warranty Period

The gratis warranty period of this product shall be one (1) year from the date of purchase or delivery to the designated place. Note that after manufacture and shipment from MEE, the maximum distribution period shall be six (6) months, and the gratis warranty period after manufacturing shall be limited to eighteen (18) months. In addition, the gratis warranty period for repaired products shall not exceed the gratis warranty period established prior to repair.

#### ■ Gratis Warranty Range

The gratis warranty range shall be limited to normal use based on the usage conditions, methods and environment, etc., defined by the terms and precautions, etc., given in the instruction manual, user's manual and caution labels on the product.

### Warranty Period after Discontinuation of Production

- MEE shall offer product repair services (fee applied) for seven (7) years after production of the product has been discontinued. Discontinuation of production shall be reported via distributors.
- Product supply (including spare parts) is not possible after production has been discontinued.

### Exclusion of Opportunity Loss and Secondary Loss from Warranty Liability

Regardless of the gratis warranty period, MEE shall not be liable for compensation for damages arising from causes not attributable to MEE, opportunity losses or lost profits incurred by the user due to Failures of MEE products, damages or secondary damages arising from special circumstances, whether foreseen or unforeseen by MEE, compensation for accidents, compensation for damages to products other than MEE products, or compensation for other work carried out by the user.

### Changes in Product Specifications

The specifications given in the catalogs, manuals and technical documents are subject to change without notice.

This document is a new publication, effective April 2016. Specifications are subject to change without notice.