### Mitsubishi General-Purpose Programmable Controller Renewal Tool

**Conversion Adapter** Model **ERNT-ASQT64TCTT** ERNT-ASQT64TCTTBW





50CM-D180149-D(1604)

### MITSUBISHI ELECTRIC ENGINEERING COMPANY LIMITED

HEAD OFFICE: Hulic KUDAN BLDG.1-13-5, KUDANKITA CHIYODA-KU, TOKYO 102-0073, JAPAN NAGOYA ENGINEERING OFFICE:139 SHIMOYASHIKICHO-SHIMOYASHIKI, KASUGAI, AICHI 486-0906, JAPAN



(Always read these precautions prior to use.)

Before using this product, please read this manual carefully and pay full attention to safety to ensure that the product is used correctly

The precautions presented in this manual are concerned with this product only. For Programmable Controller system safety precautions, refer to the user's manual of the MELSEC-Q series CPU module to

In this manual, the safety precautions are ranked as "WARNING" and "CAUTION."



Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.

Indicates that incorrect handling may cause hazardous conditions. resulting in medium or minor injury and/or property damage.

Note that failure to observe the  $\bigwedge$  CAUTION level instructions may lead to a serious consequence according to the circumstances. Always follow the precautions of both levels because they are important

Please keep this manual in an easy-to-access location for future reference, and be sure to provide the

### [Precautions before using]

### ♠ CAUTION

● When making a switch from the MELSEC-AnS Series to the MELSEC-Q Series, be sure to consult user's manual supplied with individual module under the MELSEC-Q Series to confirm differences in various aspects including performance, function, CPU input/output signals and buffer memory addresses between the two series

### [Installation Precautions]

### ↑ CAUTION

- Use the Conversion Adapter in the environmental conditions that are specified in the general specification. If the Products are used in any environment beyond the bounds of the general specification, electric shock, fire, malfunction, or damage to or degradation of the Products will
- Do not directly touch any conductive parts of Conversion Adapter. Contact will cause malfunction or failure in the system.
- Before attempting to replace the cold junction temperature compensation resistor, always discharge static electricity accumulated in the human body, etc. by touching a grounded (earthed) metal etc. Do not directly touch the conductive area. Failing to do so may cause failure or malfunction.
- 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, Conversion Adapter, Mounting Bracket, or MELSEC-Q Series Module, possibly causing the dropping, shorting, and
- Always check for correct match between MELSEC-Q Series and the Conversion Adapter Incorrect match can cause damage to the MELSEC-Q Series Module.
- When installing the Conversion Adapter, take care not to get your hand snagged on the Mounting Bracket or the like. Injury may result.
- When installing or removing the MELSEC-Q Series Module complete with a Converte Adapter, be sure to hold it with both hands. Dropping may lead to breakage

### [Wiring Precautions]

### ♠ WARNING

- 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.
- After installation and wiring, close the terminal block cover before turning on the module fo operation. Failure to do so may result in electric shock

### A CAUTION

- Carry out wiring for the Conversion Adapter correctly after checking the specification and inal arrangement for the module used. Connecting a power supply with a different voltage rating or incorrect wiring may cause a fire or failure.
- Tighten the MELSEC-AnS Series terminal installation screws and terminal screw securely by applying torque within the specified limits. Loose screws will cause short circuit, fire or malfunction. Excessive tightening will damage the screws or the Conversion Adapter which in turn will cause dropping of parts, short circuit or malfunction.
- 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

### [Startup and Maintenance Precautions]

### ↑ WARNING

Do not touch live terminals. There is a danger of electric shock or malfunction Shut off the external power supply for the system in all phases before cleaning or retightening the terminal screws. Failure to do so may result in electric shock or cause the MELSEC-Q Series module to fail or malfunction. Loose screws can lead to dropping shorting, and malfunction. Excessive tightness of the screws can lead to breakage of the screws, Conversion Adapter, Mounting Bracket, or MELSEC-Q Series Module, possibly causing the dropping, shorting, and malfunction thereof.

#### / CAUTION

- Do not modify the Conversion Adapter or take it apart. Doing so will cause failure.
- Do not drop the Conversion Adapter and Mounting Bracket or do not give a strong impact

#### [Disposal Precautions]

# CAUTION

#### **EMC AND LOW VOLTAGE DIRECTIVES**

Compliance to the EMC Directive, which is one of the EU Directives, has been a legal obligation for the products sold in European countries since 1996 as well as the Low Voltage Directive

Manufacturers who recognize their products are compliant to the EMC and Low Voltage Directives are required to declare that print a "CE mark" on their products

#### Authorized representative in Europe

Authorized representative in Europe is shown below Name: Mitsubishi Electric Europe BV

Address: Mitsubishi-Electric-Platz 1, 40882 Ratingen, Germany

#### Overview

This manual describes specifications, handling and other information about the Conversion Adapter "ERNT-ASQT64TCTT, ERNT-ASQT64TCTTBW" available as Renewal Tools for the Mitsubishi neral-Purpose Programmable Controlle

The Conversion Adapter is a product for effecting conversion to transcend difference in pin assignment between the MELSEC-AnS Series and the MELSEC-Q Series.

Before attempting to make a switch from MELSEC-AnS Series to MELSEC-Q Series in your installation, consult the user's manual supplied with individual module under the latter series to learn about how they differ in various aspects including performance and function.

Once you have opened the packaging, verify that it contains the following products.

	Quantity			
Product	ERNT-ASQT64 TCTT	ERNT-ASQT64 TCTTBW (*1)		
Conversion Adapter (ERNT-ASQT64TCTT)	1	1		
Mounting bracket	1	1		
Mounting bracket fixing screw (M3.5×6)	2	2		
Terminal block cover	1	1		
Cold junction temperature compensation resistor	1	1		
Disconnection detector connector conversion cable	-	1		
Disconnection detector connector conversion cable installation screw (M3×8)	-	2		
This manual	1	1		

1:ERNT-ASQT64TCTTBW is a model (product) name of a set of ERNT-ASQT64TCTT

### 2. General Specifications

Item	Specifications							
Operating ambient temperature	0 to 55°C(Maximum surrounding air temperature 55°C)							
Storage ambient temperature	-25 to 75°C							
Operating ambient humidity	5 to 95%RH, non-condensing							
Storage ambient humidity								
	Compliant with JIS B 3502 and IEC 61131-2		Frequency	Constant acceleration	Half amplitude	Sweep count		
		Under intermittent vibration	5 to 8.4Hz	I	3.5mm	10 times each in		
Vibration resistance			8.4 to 150Hz	9.8m/s <sup>2</sup>	ı	X, Y, Z directions		
		Under	5 to 8.4Hz	ı	1.75mm			
		continuous vibration	8.4 to 150Hz	4.9m/s <sup>2</sup>	ı	-		
Shock resistance	Compliant with JIS B 3502 and IEC 61131-2 (147 m/s <sup>2</sup> , 3 times each in 3 directions X, Y, Z)							
Operating atmosphere	No corrosive gases							
Operating altitude *1	0 to 2000m							
Installation location	Inside a control panel							
Overvoltage category *2	II or less							
Pollution degree *3	2							

- \*2 : This indicates the section of the power supply to which the equipment is assumed to be connected between the public electrical power distribution network and the machinery within premises
- Category II applies to equipment for which electrical power is supplied from fixed facilities.

  \*3: This index indicates the degree to which conductive material is generated in terms of the environment in which the

equipment is used.

Pollution level 2 is when only non-conductive pollution occurs. A temporary conductivity caused by condensing must

### 3. Product Specifications

For detail specifications which do not appear in the specification comparison charts contained herein, see the user's manual supplied with the MELSEC-Q Series module you use. Those parts of the specification that differ between the MFLSEC-Ans Series and the MFLSEC-Q Series are where a switch from the first series to the second is subjected to specification-related restrictions. Check the specification of the devices to be connected for more details.

Furthermore, it is recommended to refer to the "Transition from MELSEC-AnS/QnAS (Small Type) Series to Q Series Handbook (Intelligent Function Modules): L (NA)-08220ENG" issued by Mitsubishi Electric.

The Q64TCTTBWN module cannot be installed to the MELSEC-Q series large type base unit (AnS series size). For replacement using the ERNT-ASQT64TCTTBW conversion adapter, install the Q64TCTTBWN

Model	Before replacement MELSEC-AnS Series Model	No. of channels	After replacement MELSEC-Q Series Model	Use of the MELSEC-Q series large type base unit (AnS series size)	Weight (g)
ERNT-ASQT64TCTT	A1S64TCTT-S1 A1S64TCTRT (Standard control)	4 channels	Q64TCTTN (Standard control)	Possible	70
ERNT-ASQT64TCTTBW (*2)	A1S64TCTTBW-S1 A1S64TCTRTBW(Standard control)	4 channels	Q64TCTTBWN (Standard control)	Impossible (*3)	160

\*2:It is necessary to fix the disconnection detector connector conversion cable that comes with the product using the separately-sold "base adapter (for panel surface installation)" or "conversion adapter DIN rail mounting bracket (for DIN rail installation)". Refer to "5.3 ERNT-ASQT64TCTTBW Installation Procedure"

《Disconnection detector connector conversion cable》

\*3: The MELSEC-Q series module cannot be installed to the MELSEC-Q series large type base unit (AnS series size).

#### nternal circuit diagram of ERNT-ASQT64TCTT A1S64TCTTBW-S1 Q64TCTTN A1S64TCTRTBW(Standard control Disconnection detector connector A1S64TCTT-S1 Q64TCTTBWN (Right slot side) Terminal block A1S64TCTRT( A1S64TCTTBW-S1 1 2 3 4 5 6 7 8 O64TCTTRWN A1S64TCTRTBW( Terminal block

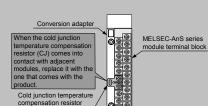
## Precaution for wiring



《Conversion adapter》

When the cold junction temperature compensation resistor (CJ) connected to the MELSEC-AnS series module terminal block (TB12 or TB14) comes into contact with adjacent modules, replace the cold junction temperature compensation resistor (CJ) with the one that comes with the product.

When the cold junction temperature compensation resistor (CJ) does not come into contact with adjacent modules, replacement is not required.



### \*2 When using ERNT-ASQT64TCTT BWN, always install the disconnection detector connector conversion cable to the left side and the conversion adapter to the right side. Installing them the other the MELSEC-Q series module.

(Left side)

Specification comparison

Specifica	ation comparison >												
			Model		MELSEC-A	MELSEC-Q Series							
Specificati	on		Woder	A1S64TCTT-S1	A1S64TCTTBW-S1	A1S64TCTRT (Standard control)	A1S64TCTRTBW (Standard control)	Q64TCTTN (Standard control)	Q64TCTTBWN (Standard control)				
Control ou							Transistor output						
	temperature input points						channels/module						
Supported	thermocouples					Refer t	o the table on the back						
		Ambient te	emperature 23°C±5°C	Full-scale	Full-scale×(±0.3%)±1digit — —								
	Indication accuracy	Ambient te	emperature 25°C±5°C			Full-scale	×(±0.3%)±1digit	Full-scale×(±0.3%)					
	ŕ	Ambient te	emperature 0 to 55°C		Full-scale×(±0	).7%)±1diait	, , ,	Full-scale×(±0.7%)					
Accuracy	Cold junction	-100 <sup>8</sup> C or i			Within ±1.0℃								
	température compensation accuracy (ambient temperature :	-150 to -10											
	0°C to 55°C)	Temperature -200 to -15	ire process value: 50°C	Within ±3.0°C									
Sampling	cycle	•			500ms/4	channels (constant in	ndependently of the number	of channels used)					
Control ou						,	1 to 100s	,					
Effect from	n wiring resistance of 1Ω					Refer t	o the table on the back						
Input impe							1ΜΩ						
Input filter						0 to 10	00s (0:Input filter OFF)						
				Software versi	on A:-5.00 to 5.00%								
	rrection value setting at sensor input disconnecti	ion			or least:-50.00 to 50.00%		0 to 50.00% pscale processing	-50.	00 to 50.00%				
	are control method	1011					pulse or two-position contro						
PID constants setting			tants setting	Can be se	t by auto tuning	Can be set by auto tuning							
PID consta	ants range	Proportion	nal band (P)										
		Integral ti			1 to 36	0 to 3600s (0:P control and PD control)							
Derivative time (D)				0 to 3600s (0	0 to 3600s (0:P control and PD control)								
Set value	setting range	Bonvative	5 time (B)			nsor to be used							
Dead band setting range				0.1	to 10.0%		to 10.0%		1 to 10.0%				
Dead Dank	a setting range	Output sid	anal	0.1	10 10.070	0.0	ON/OFF pulse	0.	1 10 10:070				
			ad voltage	10.2 to 30VDC 10 to 30VDC									
		Max. load			10.2 to 3		7 (0 30 VDC						
Transista	autaut					U.1A	point, 0.4A/common 0.4A 10ms						
Transistor	ουιραι		sh current										
			current at OFF										
			age drop at ON	1.0VDC(TYP)at 0.1A 2.5VDC(MAX) at 0.1A									
		Response	e ume			OFF→ON:2ms	or less ON→OFF:2ms or	iess					
Insulation method				Between inp Transfor Between in Transfor	y:Transformer insulation tion								
Heater disconnection detection specification		fications	Current sensor	-	U.R.D.co.,LTD. CTL-12-S36-8 (0.0 to 100.0A) CTL-6-P(-H) (0.00 to 20.00A)	-	U.R.D.co.,LTD. CTL-12-S36-8 (0.0 to 100.0A) CTL-6-P(-H) (0.00 to20.00A)	-	U.R.D.co.,LTD. CTL-12-S36-8 (0.0 to 100.0A) CTL-12-S36-10 (0.0 to 100.0A) CTL-12-S56-10 (0.0 to 100.0A) CTL-6-P(-H) (0.00 to 20.00A)				
		Input method		_	Multiplexor method A/D conversion	_	Multiplexor method A/D conversion	_	_				
		ľ	Input accuracy	ı		I	Full scale×(±1.0%)	_	Full scale×(±1.0%)				
		Alarm delay count		-	3 to 255	1	3 to 255	_	3 to 255				
I/O occupied points				32 po	16 points	32 points							
Connection method			20-point terminal block	20-point terminal block and 8-point connector	20-point terminal block	20-point terminal block and 8-point connector	18-point terminal block	Two 18-point terminal blocks					
Internal cu	rrent consumption (5VDC)			0.33A	0.42A	0.33A	0.39A	0.29A	0.33A				
ciriai co				3.30/1	S. ILI	3.30/1	0.00/(	3.20/1	0.00/1				

### Precautions for the program

(1) AnS series module and Q series module differ from each other in the way input/output signals (X, Y) and buffer memory addresses are allocated. Therefore, you need make necessary changes to the sequence inal Block)" in the "Cold junction temperature compensation selection (address 182)" of the buffer memory of the MELSEC-Q series module

#### Point

(1) When the measured temperature has a margin of error, the sensor compensation function of Q64TCTTN/Q64TCTTBWN can compensate the error

Supported trieffit	ocouples and effect from wiring r	esistance of	102					-		
		1	°C		a of 10	F Effect from wiring resistance of				
Thermocouple type	Temperature measurement range	Resolution	A1S64TCTT-S1 A1S64TCTTBW-S1	n wiring resistance A1S64TCTRT A1S64TCTRTBW	Q64TCTTN	Temperature measurement range	Resolution	A1S64TCTT-S1 A1S64TCTTBW-S1	A1S64TCTRT	Q64TCTTN
R	0 to 1700	1			0.030(°C/Ω)	0 to 3000	1			0.054(°F/Ω)
	0 to 500, 0 to 800, 0 to 1300	1			`	0 to 1000, 0 to 2400	1			` 1
K	-200.0 to 400.0, 0.0 to 400.0, 0.0 to 500.0, 0.0 to 800.0	0.1			0.005(°C/Ω)	0.0 to 1000.0	0.1			0.008(°F/Ω)
	0 to 500, 0 to 800, 0 to 1200	1				0 to 1000, 0 to 1600, 0 to 2100	1			
J	0.0 to 400.0, 0.0 to 500.0 0.0 to 800.0	0.1			0.003(°C/Ω)	0.0 to 1000.0	0.1			0.006(°F/Ω)
Т	-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			0.000/00/00	0.0 to 700.0	0.1			0.054/25/02
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 μ V/Ω	0.15 <i>μ</i> V/Ω	0.038(°C/Ω)	MELSEC-AnS Series module 800 to 3000	1	0.35 μ V/Ω	0.15 μ V/Ω	0.068(°F/Ω)
D(4)	MELSEC-Q Series module 0 to 1800	'				MELSEC-Q Series module 0 to 3000	Ī '			
E	0 to 400, 0 to 1000	1			0.003(°C/Ω)	0 to 1800	1			0.005(°F/Ω)
_	0.0 to 700.0	0.1			0.003( C/12)	_	_			_
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	0.1			0.004(°C/Ω)	0 to 700, -300 to 400 —	1 -	1		0.009(°F/Ω) —
L	0 to 400, 0 to 900	1			0.003(°C/Ω)	0 to 800, 0 to 1600	1			0.006(°F/Ω)
	0.0 to 400.0, 0.0 to 900.0	0.1			, ,	-	_			- 0.040(°F(0)
PL II W5Re/W26Re	0 to 1200 0 to 2300	1			0.005(°C/Ω) 0.017(°C/Ω)	0 to 2300 0 to 3000	1 1			0.010(°F/Ω) 0.021(°F/Ω)
Worke/WZorke	0 to 2300				0.017 ( C/\(\Omega\))	0 10 3000				0.021( F/\(\Omega\))

\*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

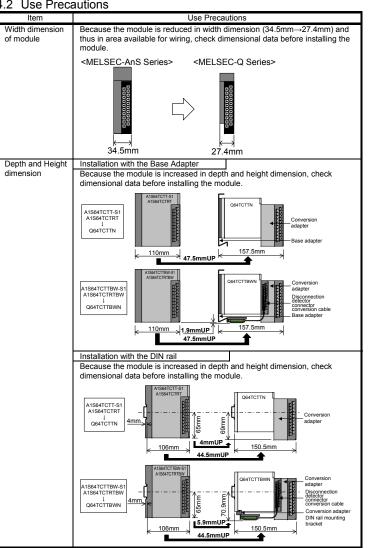
### 4. Mounting and Installation

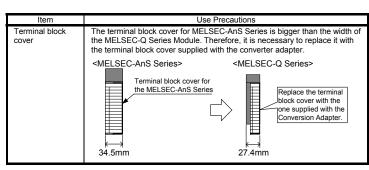
#### 4.1 Handling Precautions

- (1) 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.

  (2) Do not touch live terminals. There is a danger of electric shock or malfunction.
- (3) Do not modify the Conversion Adapter or take it apart. Doing so will cause failure, malfunction, personal injury, or fire.
- (4) Do not touch the energized part of the Conversion Adaptor directly. Contact will cause malfunction or failure in the system.
- (5) 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
- (6) 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
- (7) 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





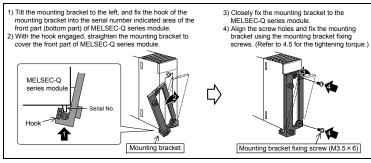
#### 4.3 Installation Environment

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.

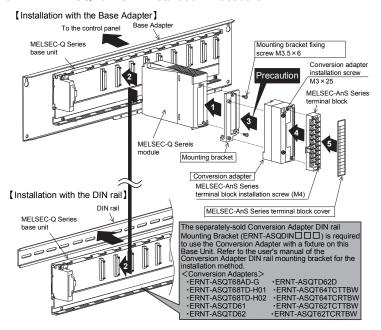
### 5. Part Names and Installation Method

### 5.1 Mounting Bracket Installation Method

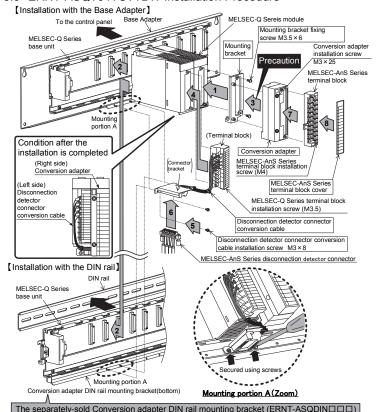
It is necessary to fix the hook of the mounting bracket into the front part (bottom part) of MELSEC-Q series module. Install the mounting bracket before installing the MELSEC-Q series module to the base



### 5.2 ERNT-ASQT64TCTT Installation Procedure



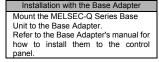
### 5.3 ERNT-ASQT64TCTTBW Installation Procedure



The separately-sold Conversion adapter DIN rail mounting bracket (ERNT-ASQDINDD) s required to use this ERNT-ASQT64TCTTBW install with the DIN rail.

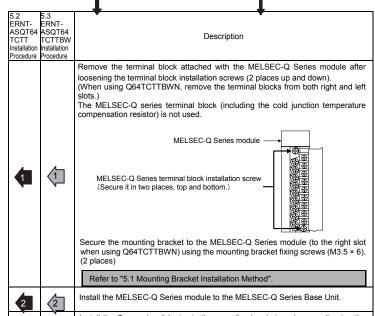
Refer to the user's manual of the DIN rail mounting bracket of the Conversion Adapter for the installation method.

#### 5.4 Installation Method



Installation with the DIN rail 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.

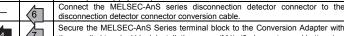


Install the Conversion Adapter to the mounting bracket, and secure it using the sion Adapter installation screws (M3 × 25). (2 places)

## 3 3

#### 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. 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). 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).



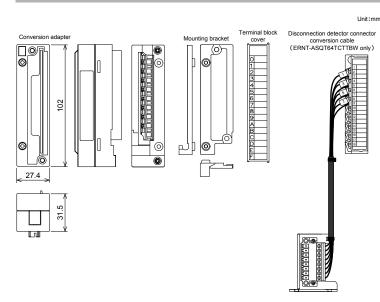
the supplied terminal block installation screw (M4). (2 places, top and bottom.) Remove the terminal block cover from the MELSEC-AnS Series terminal block and fit the terminal block cover supplied with the Conversion Adaptor in place.

### 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 (M3x8)	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 Engineer 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.

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**

(1) 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. (2) Product supply (including spare parts) is not possible after production has been discontinued.

## Exclusion of Opportunity Loss and Secondary Loss from Warrant

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

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