Mitsubishi General-Purpose Programmable Controller **Renewal Tool Conversion Adapter**

Model

ERNT-CQTY226

User's Manual

the product is used correctly.

★ WARNING

⚠ CAUTION

to personal safety.

manual to the end user



MITSUBISHI ELECTRIC ENGINEERING COMPANY LIMITED

Model

ERNT-CQTY226

50CM-D180071-C(1604)

■ SAFETY PRECAUTIONS

(Always read these precautions prior to use.)

Before using this product, please read this manual carefully and pay full attention to safety to ensure tha

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

Note that failure to observe the $\underline{\wedge}$ 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

Indicates that incorrect handling may cause hazardous

Indicates that incorrect handling may cause hazardous

conditions, resulting in medium or minor injury and/or property

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

Installation Precautions

- Use the conversion adapter and conversion adapter anchor base in an environment of the general specifications defined in the MELSEC-Q series CPU module user's manual. Failure to do so could lead to electric shock, fire, malfunction or product failure or deterioration.
- Do not come in direct contact with the conductive area of the conversion adapter. Doing so could lead to system malfunction or failure
- Fully secure the conversion adapter and conversion adapter anchor base using the installati screws, and tighten the installation screws securely within the specified torque range. Failure to do so could cause the conversion adapter and anchor base to fall, resulting in conversion adapter and conversion adapter anchor base damage
- Always check for correct match between MELSEC-Q Series and the conversion adapte Incorrect match can cause damage to the MELSEC-Q Series module.

Wiring Precautions

- Be sure to shut off all phases of the external power supply before performing installation or wiring work. Failure to do so could result in electric shock or product damage
- If you want to energize and run the unit after completing the installation and wiring work, be sure to close the terminal block cover attached to the SYSMAC C series terminal block. Failure to do so could result in electric shock.

⚠ CAUTION

- Properly wire the conversion adapter after verifying the rated voltage and terminal layout of the input/output module to be used. Connecting a power supply with a different rating or imprope wiring could lead to fire or product failure.
- Securely tighten the conversion adapter installation screws conversion adapter anchor base installation screws, SYSMAC C series terminal block installation screws and SYSMAC C series connector installation screws within the specified torque range. A loose screw may result in a short circuit, fire or malfunction. An excessively tightened screw may result in screw or conversion adapter damage, causing the conversion adapter to fall, a short circuit or produc malfunction
- module. Doing so could lead to fire, failure or malfunction

Startup and Maintenance Precautions

- Be sure to shut off all phases of the external power supply before cleaning and retightening the terminal screws. Failure to do so could lead to electric shock. Excessively tightened screws could result in conversion adapter or input/output module damage, causing the conversion adapter to fall, a short circuit or product malfunction

⚠ CAUTION

- Do not disassemble or modify the conversion adapter. Doing so could lead to failure,
- The conversion adapter case is made of resin. Do not drop or apply excessive impact to the case. Doing so could lead to conversion adapter damage

Disposal Precautions

When disposing of the product, treat it as industrial waste

- Do not touch the terminals and connector during energization. Doing so could result in electric

♠ CAUTION

● 安全注意事项 ●

(使用前请务必阅读)

使用本产品时,请仔细阅读本手册,并充分注意安全,正确地 使用产品。

本手册中标注的注意事项仅记载了与本产品相关的内容。关于 可编程控制器系统的安全注意事项,请参阅所使用的MELSEC-Q 系列CPU模块的用户手册。

在本●安全注意事项●中,安全注意事项的等级分为「警告| 和「注意」。

<u>⚠</u>警告

表示错误操作可能造成危险后果, 引起死亡 或重伤事故。



表示错误操作可能造成危险后果, 引起中度 伤害、轻伤及财产损失。

另外,根据情况不同,即使是⚠注意中记载的事项,也可能 引发严重后果。不管哪个记载的都是非常重要的内容, 请务必

请妥善保管本手册,以便需要时取阅,并请将本手册交给最终 用户。

● 在通电状态下请勿触摸端子或连接器。可能会导致触电或

⚠ 警告

↑ 注意

SYSMAC C系列端子排安装螺栓、SYSMAC C系列连接器安装

螺栓应在规定的扭矩范围内切实地拧紧。如果螺栓拧得过

松,会导致短路、火灾或误动作。如果螺栓拧得过紧,有

可能造成螺栓及转换适配器破损从而导致掉落、短路或误

● 请注意不要让切屑或接线头等异物进入转换适配器及模

块内。会导致火灾、故障、误动作。

【启动和维护注意事项】

● 转换适配器安装螺栓、转换适配器固定台安装螺栓、

● 在清扫或重新紧固端子螺栓时,必须将外部供应全相断开 断开后再进行。如果未全相断开,可能会导致触电。如果 螺栓拧得过紧,可能会造成转换适配器或输入/输出模块 的破损从而导致掉落、短路或误动作。

↑ 注意

- 请不要拆卸、改造转换适配器。否则可能会导致故障、误 动作、受伤或火灾。
- 转换适配器的外壳由树脂制成,因此请避免掉落或使其受 到剧烈冲击。否则可能会损坏转换适配器。

【废弃注意事项】

⚠ 注 意

● 废弃时请将本产品作为工业废弃物处理。

【安装注意事项】

● 应在MELSEC-Q系列CPU模块用户手册中记载的一般规格环 境下使用转换适配器及转换适配器固定台。如果在一般规 格范围以外的环境中使用,可能导致触电、火灾、误动作、 产品的损坏或劣化。

⚠ 注 意

- 请不要直接触摸转换适配器的导电部分。否则可能会造成 系统误动作、故障。
- 转换适配器及转换适配器固定台应通过安装螺栓切实地 加以固定,安装螺栓应在规定的扭矩范围内切实地拧紧 可能因掉落而导致转换适配器及转换适配器固定台破损
- 请务必确认MELSEC-Q系列模块和转换适配器的组合是否 正确。在错误组合下使用时,可能会导致MELSEC-Q系列 模块损坏。

【接线注意事项】

⚠ 警告

- 必须将外部供应全相断开断开后再进行安装作业等。如果 未全相断开, 可能会导致触电或产品损坏。
- 安装、配线作业完成之后进行通电、运行时,必须关闭 SYSMAC C系列端子排的端子排盖板。如果未关闭端子排盖 板,可能会导致触电。

⚠ 注 意

● 请确认所使用输入/输出模块的额定电压及端子排列后正 确地进行转换适配器的配线。连接不符合额定值的电源或 误配线,会导致火灾或故障。

Related Manuals

Manual Title	Manual No. (Model Code)	Remarks
MELSEC-Q Series Building Block I/O Module User's Manual	SH-080042 (13JL99)	By Mitsubishi Electric Corporation

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 since

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

1. Overview

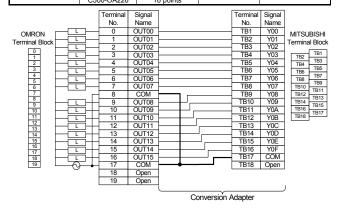
This manual describes the Mitsubishi general-purpose Programmable Controller renewal tool conversion adapter (ERNT-CQTY226). The conversion adapter is a product that converts the differences in SYSMAC C series and MELSEC-Q series pin assignments.

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

Product	Quantity
Conversion adapter	1
Mounting bracket	1
Mounting bracket fixing screw (M3.5 x 6)	2

3. Conversion Adapter Product Specifications

Conversion Adapter Model	SYSMAC C Series Module Model	No. of Output Points	MELSEC-Q Series Module Model	Conversion Adapter Weight (g)
ERNT-CQTY226	C500-OA121	16 points	QY22	134
	C500-OA222	16 points		
	CEOO OA226	16 points	1	



Output Module Specification Comparison Chart

	Model	SYSMAC C Series	MELSEC-Q Series
Specifications		C500-OA121	QY22
No. of output	points	16 points	16 points
Switching cap	pacity	132V AC/1A (4A/common,5A/Unit)	100 to 240V AC/0.6A (4.8A/common)
Deenenee	ON Delay	1ms or less	1ms+0.5 cycles or less
Response time	OFF Delay	1/2 of load frequency max.	1ms+0.5 cycles or less (rated load, resistance load)
External conn	ection system	20-point terminal block	18-point terminal block
No. of points per common		8points (2 circuits)	16points (1 circuit)
Leak current		3mA or less(100V AC)	1.5mA or less(120V AC) 3mA or less(240V AC)
Surge killer		Available	Available
Fuse		Available	None
Internal current consumption		300mA or less	250mA

2. Conversion Adapter Product Configuration

The conversion adapter is comprised of the following constituent products besides the adapter itself.

(1) Conversion Adapter Anchor Base (Sold Separately)

The conversion adapter anchor base secures the bottom of the conversion adapter and is required for conversion adapter use. One anchor base is required per base.

Conversion Adapter	Specifications		
Anchor Base Model	Туре	Weight (g)	
ERNT-QF12	12-slot conversion adapter anchor base	620	
ERNT-QF8	8-slot conversion adapter anchor base	435	
ERNT-QF5	5-slot conversion adapter anchor base	290	

(2) Base Adapter (Sold Separately)

The base adapter enables MELSEC-Q series installation using the installation holes of the SYSMAC C series base unit. (Additional hole machining not required)

	Specifications			
Base Adapter Model	SYSMAC C Series	MELSEC-Q Series	Installable Conversion	Weight
	Compliant Module	Compliant Module	Adapter Anchor Base	(g)
ERNT-CQB081	C500-BC081/082	Q312B	ERNT-QF12	892
	C500-BC091	Q38B	ERNT-QF8	
	C2000-BC061	Q612B		
	C500-BI081	Q68B		
	C2000-BI083			
ERNT-CQB051	C500-BC051/052	Q38B	ERNT-QF8	710
	C500-BC061	Q35B	ERNT-QF5	
	C500-BI051	Q68B		
		Q65B		
		Q55B		
ERNT-CQB031	C500-BC031	Q35B	ERNT-QF5	542
		Q33B		

	Model	SYSMAC C Series	MELSEC-Q Series
Specifications		C500-OA222	QY22
No. of output	t points	16 points	16 points
Switching ca	pacity	250V AC/1A (4A/common,5A/Unit)	100 to 240V AC/0.6A (4.8A/common)
Response	ON Delay	1ms or less	1ms+0.5 cycles or less
time	OFF Delay	1/2 of load frequency max.	1ms+0.5 cycles or less (rated load, resistance load)
External con	nection system	20-point terminal block	18-point terminal block
No. of points	per common	8points (2 circuits)	16points (1 circuit)
Leak current		3mA or less(100V AC) 6mA or less(200V AC)	1.5mA or less(120V AC) 3mA or less(240V AC)
Surge killer		Available	Available
Fuse		Available	None
Internal current consumption		300mA or less	250mA

	Model	SYSMAC C Series	MELSEC-Q Series
Specifications		C500-OA226	QY22
No. of output	p. of output points 16 points 16 points		16 points
Switching cap	pacity	250V AC/1.2A (4A/common,5A/Unit)	100 to 240V AC/0.6A (4.8A/common)
Deenenee	ON Delay	1ms or less	1ms+0.5 cycles or less
Response time OFF Delay		1/2 of load frequency max.	1ms+0.5 cycles or less (rated load, resistance load)
External conn	ection system	20-point terminal block	18-point terminal block
No. of points	per common	8points (2 circuits)	16points (1 circuit)
Leak current		1.5mA or less(120V AC) 3mA or less(240V AC)	1.5mA or less(120V AC) 3mA or less(240V AC)
Surge killer		Available	Available
Fuse		Available	None
Internal current consumption		450mA or less	250mA

- 1. A wiring change is required if the SYSMAC C series terminal numbers 8, 17 have been separated due to a change in the number of points per common from 8 points (2 circuits) to 16 points (1
- 2. For detailed specifications not stated in the Output Module Specification Comparison Chart and for general specifications, refer to the user's manual of the output module to be used.

4. Mounting and Installation

4.1 Handling Precautions

- (1) Do not touch the terminals and connector during energization. Doing so could result in electric shock or malfunction.

 (2) Do not disassemble or modify the conversion adapter. Doing so could result in failure,
- malfunction, injury or fire.
- Do not come in direct contact with the conductive area of the conversion adapter. Doing so could result in system malfunction or failure.

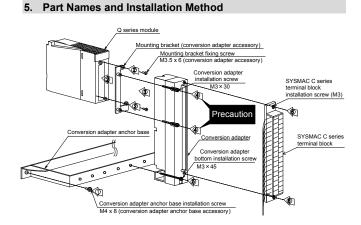
 (4) Fully secure the conversion adapter and conversion adapter anchor base using the
- installation screws, and securely tighten the screws within the specified torque range Failure to do so could cause the conversion adapter and anchor base to fall, resulting in conversion adapter and conversion adapter anchor base damage

4.2 Use Precautions Use Precautions A wiring change is required if the COM terminals have been separated due to a change in the number of points per common from 8 points (2 circuits) to 16 points. Because the module width decreases (from 34.5mm to 27.4mm), the wiring area decreases. Verification prior to installation is required. MELSEC-Q series SYSMAC C series module module |**↔**| 27.4 The depth increases MELSEC-Q Conversion adapter Base adapter Conversion adapte anchor base 173.2 73.2mm(61.4mm)

4.3 Installation Environment

For details of the installation environment, refer to the user's manual of the MELSEC-Q series CPU module to be used.

he value in parentheses is the dimension when the base adapter is not used.



5.1 Installation Method

- [1] Secure the conversion adapter anchor base to the base adapter or control panel using the conversion adapter anchor base installation screws (M4 \times 8) provided as an accessory.
- [2] Secure the mounting bracket to the Q series module using the mounting bracket fixing screws [M3.5 × 6 (conversion adapter accessory); two upper/lower locations].
- [3] Mount the conversion adapter onto the mounting bracket.
- Secure the conversion adapter using the conversion adapter installation screws (M3 \times 30; 2

Precaution

defore tightening the installation screws, check that the Conversion Adapter has been securely installed on the MELSEC-Q Series module. Tightening the screws in floating-of state or tilting state will damage the Conversion Adapter installation screws and the mounting bracket.

- [5] Secure the conversion adapter using the conversion adapter bottom installation screw (M3 \times
- Secure the SYSMAC C series terminal block to the conversion adapter using the terminal block installation screws (M3; two upper/lower locations).

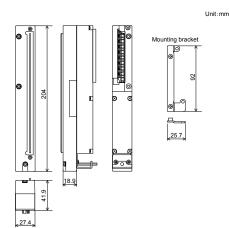
5.2 Tightening Torque

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
Conversion adapter anchor base installation screw (M4 screw)	139 to 189N·cm
Mounting bracket fixing screw (M3.5 screw)	68 to 92 N·cm
Conversion adapter bottom installation screw (M3 screw)	43 to 57 N·cm
Conversion adapter installation screw (M3 screw)	
SYSMAC C series terminal block installation screw (M3 screw)	

6. External Dimensions



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MELSEC is a registered trademark of Mitsubishi Electric Corporatio SYSMAC is a registered trademark of Omron Corporation.

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 waterany 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 o 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. tion for damages to products other than MEE

Changes in Product Specifications

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

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

Developed April 2016 50CM-D180071-C