Mitsubishi Electric Programmable Controller Upgrade Tool

Conversion Adapter

Model

ERNT-2JQ212S

User's Manual

50CM-D180263-C(1811)

MITSUBISHI ELECTRIC ENGINEERING COMPANY LIMITED

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● 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 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 following manuals.
・MELSEC-Q series: QCPU User's Manual (SH-080483ENG)
・MELSEC iQ-R series: Safety Guidelines (IB-0800525E)
If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
In this manual, the safety precautions are ranked as "WARNING" and "CAUTION."

⚠WARNING	Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.
⚠CAUTION	Indicates that incorrect handling may cause hazardous conditions, resulting in medium or minor injury and/or property damage.

Note that failure to observe the ⚠ CAUTION level instructions may lead to a serious consequence according to the circumstances. Always follow the precautions of both levels because they are important to personal safety.
Please keep this manual in an easy-to-access location for future reference, and be sure to provide the manual to the end user.

[Precautions before using]

⚠ CAUTION

- When making a switch to the MELSEC-Q Series or MELSEC iQ-R Series, be sure to consult user's manual supplied with individual module under the MELSEC-Q Series or MELSEC iQ-R Series module to confirm differences in various aspects including performance, function, CPU input/output signals between the two modules.

[Installation Precautions]

⚠ CAUTION

- Use the Conversion Adapter in the environmental conditions that are specified in the general specification in the following manuals. 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 result.
  ・MELSEC-Q series: QCPU User's Manual (SH-080483ENG)
  ・MELSEC iQ-R series: Safety Guidelines (IB-0800525E)
- Do not directly touch any conductive parts of Conversion Adapter. 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, Conversion Adapter, Mounting Bracket, or MELSEC-Q Series or MELSEC iQ-R Series Module, possibly causing the dropping, shorting, and malfunction thereof.
- Always check for correct match between MELSEC-Q Series or MELSEC iQ-R Series and the Conversion Adapter. Incorrect match can cause damage to the MELSEC-Q Series or MELSEC iQ-R 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 or MELSEC iQ-R Series Module complete with a Converter 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.

[Wiring Precautions]

⚠ WARNING

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

[Wiring Precautions]

⚠ CAUTION

- Carry out wiring for the Conversion Adapter correctly after checking the specification and terminal 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 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 or MELSEC iQ-R Series Module. These will be cause for fire, failure or malfunction.

[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 or MELSEC iQ-R 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 or MELSEC iQ-R 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, malfunction, personal injury, or fire.
- Do not drop the Conversion Adapter and Mounting Bracket or do not give a strong impact to it. This will cause damage.

[Disposal Precautions]

⚠ CAUTION

- When disposing of the product, treat it as industrial waste.

● 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，请参阅下述手册。
・MELSEC-Q系列：QCPU用户手册(SH-080501CHN)
・MELSEC iQ-R系列：Safety Guidelines(IB-0800525E)
请勿在所记载内容的范围外使用，否则会损坏产品的保护功能。
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」。

⚠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。
⚠注意	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，请务必遵守。
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。

【使用前的注意事项】

⚠ 注 意

- 替换为MELSEC-Q系列或MELSEC iQ-R系列时，为确认性能，功能，CPU对应的输入输出信号等方面的差异，请务必参阅MELSEC-Q系列或MELSEC iQ-R系列各模块的手册进行使用。

【安装注意事项】

⚠ 注 意

- 应在下述手册记载的一般规格环境下使用转换适配器。如果在一般规格范围以外的环境中使用转换适配器，可能导致触电，火灾，误动作，产品损坏或性能劣化。
  ・ MELSEC-Q系列：QCPU用户手册(SH-080501CHN)
  ・ MELSEC iQ-R系列：Safety Guidelines(IB-0800525E)
- 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。
- 转换适配器及安装配件应通过安装螺钉切实地加以固定，安装螺钉应在规定的扭矩范围内切实地拧紧。如果螺钉拧得过松，有可能因掉落而导致转换适配器及安装配件破损。如果螺钉拧得过紧，有可能造成螺钉，转换适配器，安装配件及MELSEC-Q系列或MELSEC iQ-R系列模块破损，从而导致掉落，短路或误动作。
- 请务必确认MELSEC-Q系列或MELSEC iQ-R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。
- 安装转换适配器时，应注意不要使手等身体部分刮到安装配件。否则可能会导致受伤。
- 在对安装了转换适配器的MELSEC-Q系列或MELSEC iQ-R系列模块进行装卸时，请务必用双手拿住产品。否则会因落下而导致损坏。

【接线注意事项】

⚠ 警 告

- 在进行安装，配线作业等时，必须将系统使用的外部供应电源全部断开后再进行操作。如果未全部断开，有可能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，必须关闭端子排的端子排盖板。如果未关闭端子排盖板，有可能导致触电。

⚠ 注 意

- 请确认所使用模块的规格及端子排列后正确地进行转换适配器的接线。如果输入不符合额定值的电压，连接不符合额定值的电源或接错线，可能会导致火灾或故障。
- 端子排安装螺钉，端子螺钉应在规定的扭矩范围内切实地拧紧。如果螺钉拧得过松，有可能导致短路，火灾或误动作。如果螺钉拧得过紧，有可能造成螺钉及转换适配器破损从而导致掉落，短路或误动作。
- 请注意不要让切屑或接线头等异物进入转换适配器及MELSEC-Q系列或MELSEC iQ-R系列模块内。否则可能会导致火灾，故障，误动作。

【启动和维护注意事项】

⚠ 警 告

- 在通电状态下请勿触摸端子。否则可能导致触电或误动作。
- 在清洁模块或重新紧固端子螺钉时，必须将系统使用的外部供应电源全部断开后再进行操作。如果未全部断开，有可能导致触电或MELSEC-Q系列或MELSEC iQ-R系列模块故障，误动作。如果螺钉拧得过松，有可能导致掉落，短路或误动作。如果螺钉拧得过紧，有可能导致螺钉，转换适配器，安装配件及MELSEC-Q系列或MELSEC iQ-R系列模块破损，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。
- 请勿使转换适配器及安装配件掉落或受到强烈撞击。否则可能导致破损。

【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。

（产品名）Renewal Tool的基于
「电器电子产品有害物质限制使用标识要求」的表示方式

Note: This symbol mark is for China only.

含有有害6物质的名称，含有量，含有部品
本产品中所含有的有害6物质的名称，含有量，含有部品如下表所示。

产品中有害物质的名称及含量

部件名称	有害物质					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
电路板组件（包括印刷电路板及其构成的零部件，如电阻、电容、集成电路、连接器等）	○	○	○	○	○	○
安装金属零件	○	○	○	○	○	○
外壳	×	○	○	○	○	○

本表格依据SJ/T 11364 的规定编制。
○：表示该有害物质在该部件所有均质材料中的含量均在GB/T 26572 规定的限量要求以下。
×：表示该有害物质至少在该部件的某一均质材料中的含量超出GB/T 26572 规定的限量要求。

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 1997.
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.

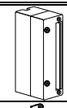
Authorized representative in Europe

Authorized representative in Europe is shown below.
Name: Mitsubishi Electric Europe B.V.
Address: Mitsubishi-Electric-Platz 1, 40882 Ratingen, Germany

1. Overview

This manual describes specifications, handling and other information about the Conversion Adapter "ERNT-2JQ212S" available as Upgrade Tools for the Mitsubishi Electric Programmable Controller.
Before attempting to make a switch to MELSEC-Q Series or MELSEC iQ-R 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.

Product	Shape	Quantity
Conversion Adapter		1
Mounting Bracket		1
Mounting Bracket fixing screws (M3.5 x 6)		2
External power supply connector		1
This manual	–	1

2. General Specifications

Item			Specifications			
Operating ambient temperature	0 to 55℃(Maximum surrounding air temperature 55℃)					
Storage ambient temperature	-25 to 75℃					
Operating ambient humidity	5 to 95%RH, non-condensing					
Storage ambient humidity						
Vibration resistance	Compliant with JIS B 3502 and IEC 61131-2		Frequency	Constant acceleration	Half amplitude	Sweep count
		Under intermittent vibration	5 to 8.4Hz	–	3.5mm	10 times each in X, Y, Z directions
			8.4 to 150Hz	9.8m/s²	–	
		Under continuous vibration	5 to 8.4Hz	–	1.75mm	–
			8.4 to 150Hz	4.9m/s²	–	
Shock resistance	Compliant with JIS B 3502 and IEC 61131-2 (147 m/s², 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					

*1 : Do not use or store under pressure higher than the atmospheric pressure of altitude 0m.
*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 be expected occasionally.

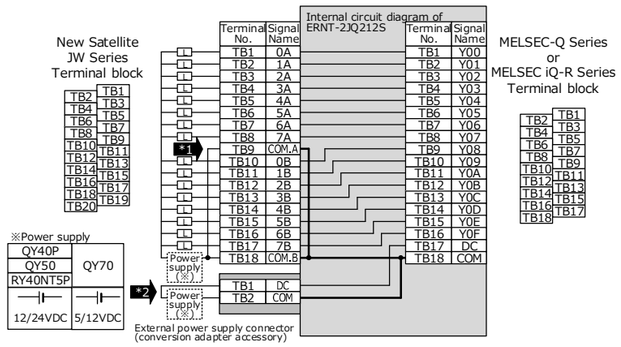
3. Product Specifications

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 or MELSEC iQ-R Series Module you use. Also, check that the specifications of the connected devices meet the specifications of the MELSEC-Q Series or MELSEC iQ-R Series Module.

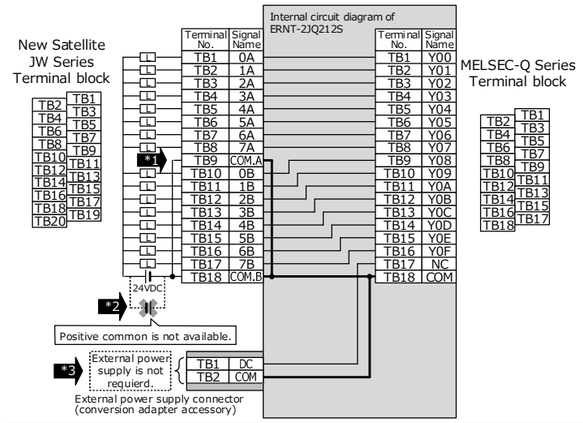
Conversion Adapter Model	Before replacement Module Model	No. of in/output points	After replacement MELSEC-Q Series Module Model	No. of modules	After replacement MELSEC iQ-R Series Module Model	No. of modules	Conversion Adapter Weight (g)
ERNT-2JQ212S	JW-212S/JW-212SA	16	QY40P QY50 QY70	1	RY40NT5P	1	80
	JW-212N/JW-212NA	16	QX80	1	(*1)	–	
	JW-214N/JW-214NA	16		1			

*1 The Conversion Adapter, ERNT-2JQ210NS, allows to replace the current module with the MELSEC iQ-R Series Module, RX40C7.

(1) In the case of JW-212S/JW-212SA → QY40P/QY50/QY70 or RY40NT5P



(2) In the case of JW-212N/JW-212NA/JW-214N/JW-214NA → QX80



Precautions for wiring

*1 Because the switch concerned causes the number of points per common to change from 8 (two circuits) to 16 (one circuit), an alteration to the wiring is required if the commons on the existing modules have been used in separation from each other.

*2 Additional supply of voltages (5/12/24VDC) which are the same as electrical loads to the terminal numbers TB1 and TB2 of the external power supply connector is required.

	[Using the same power supply as the loads]	[Using the power supply different from the loads]
DC (+) side	Wiring required	Wiring required
COM (-) side	Wiring not required*	Wiring required

*There is no problem even if wiring is carried out.

Precautions for wiring

*1 Because the switch concerned causes the number of points per common to change from 8 (two circuits) to 16 (one circuit), an alteration to the wiring is required if the commons on the existing modules have been used in separation from each other.

*2 Negative common is available. (Positive common is not available.)

*3 External power supply to the terminal numbers TB1 and TB2 on the external power supply connector is not required.

< Specification Comparison >

Specifications \ Model	New Satellite JW Series		MELSEC-Q Series			MELSEC iQ-R Series
	JW-212S Sink type	JW-212SA Sink type	QY40P Sink type	QY50 Sink type	QY70 Sink type	RY40NT5P Sink type
No. of output points	16 points	16 points	16 points	16 points	16 points	16 points
Rated load voltage	5/12/24VDC (4.75 to 27VDC)	5/12/24VDC (4.75 to 27VDC)	12/24VDC (+20%/-15%)	12/24VDC (+20%/-15%)	5/12VDC (+25%/-10%)	12/24VDC (10.2 to 28.8VDC)
Maximum load current	0.5A/point 2A/common	0.5A/point 2A/common	0.1A/point 1.6A/common	0.5A/point 4A/common	16mA/point 256mA/common	0.5A/point Pilot Duty 5A/common
Maximum inrush current	1A, 100ms	1A, 100ms	0.7A, 10ms or less	4A, 10ms or less	40mA, 10ms or less	Current is to be limited by the overload protection function
Leakage current at OFF	0.2mA or lower	0.2mA or lower	0.1mA or lower	0.1mA or lower	—	0.1mA or lower
Maximum voltage drop at ON	1.2VDC (MAX.) 0.3A	1.2VDC (MAX.)0.3A	0.2VDC (MAX.)0.1A	0.3VDC (MAX.)0.5A	V_{OL}: 0.3VDC	0.2VDC(TYP.) 0.5A 0.3VDC(MAX.) 0.5A
Response time OFF to ON	1ms or less (resistive load)	1ms or less (resistive load)	1ms or less	1msor less	0.5ms or less	0.5ms or less
Response time ON to OFF	1ms or less (resistive load)	1ms or less (resistive load)	1ms or less (rated load, resistive load)	1ms or less (rated load, resistive load)	0.5ms or less (resistive load)	1ms or less (rated load, resistive load)
Surge suppressor	Zener diode	Zener diode	Zener diode	Zener diode	None	Zener diode
Fuse	3A (unchangeable)	3.15A (unchangeable)	None	6.7A (unchangeable)	1.6A (unchangeable)	None
Isolation method	Photocoupler	Photocoupler	Photocoupler	Photocoupler	Photocoupler	–
Common terminal arrangement	8 points/common (2 circuits)	8 points/common (2 circuits)	16 points /common	16 points /common	16 points /common	16 points /common
External connections	18-point terminal block	18-point terminal block	18-point terminal block	18-point terminal block	18-point terminal block	18-point terminal block

Make sure the ▭ section of the above table meets the specification of the machines and equipment connected to the MELSEC-Q Series Module.

< Specification Comparison >

Specifications \ Model		New Satellite JW Series		MELSEC-Q Series
		JW-212N JW-212NA Positive/Negative shared common type	JW-214N JW-214NA Positive/Negative shared common type	QX80 Negative common type
No. of input points		16 points	16 points	16 points
Rated input voltage		12/24VDC (10.5 to 26.4VDC)	12/24VDC (10.5 to 26.4VDC)	24VDC (+20%/-15%)
Rated input current		Approx. 7.5mA (24VDC) Approx. 3.5mA (12VDC)	Approx. 7.5mA (24VDC) Approx. 3.5mA (12VDC)	Approx. 4mA
Input impedance		Approx. 3.3kΩ	Approx. 3.3kΩ	Approx. 5.6kΩ
Inrush current		—	—	—
Operating voltage/ current	ON	10.5V/3mA	10.5V/3mA	19V/3mA
	OFF	5V/1.5mA	5V/1.5mA	11V/1.7mA
Response time	OFF to ON	10ms or less	0.5ms or less	1/5/10/20/70ms or less
	ON to OFF	10ms or less	1.5ms or less	1/5/10/20/70ms or less
Isolation method		Photocoupler	Photocoupler	Photocoupler
Common terminal arrangement		8 points/common (2 circuits)	8 points/common (2 circuits)	16 points/common
External connections		18-point terminal block	18-point terminal block	18-point terminal block

Make sure the ▭ section of the above table meets the specification of the machines and equipment connected to the MELSEC-Q Series Module.

The following table lists the specifications of wires applicable to the external power supply connector (accessory).

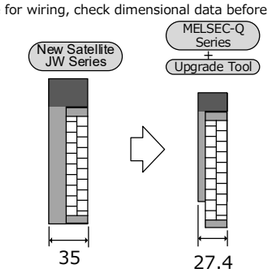
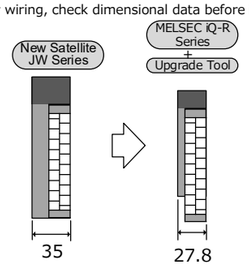
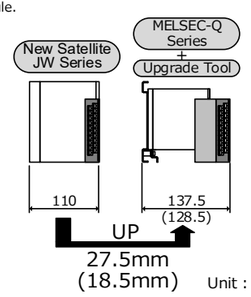
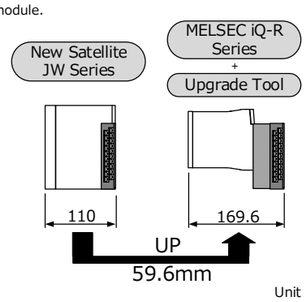
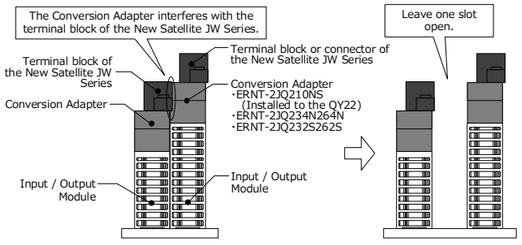
Item	Specifications
Applicable wire size	0.14 to 1.5mm^2 (24 to 16AWG)
Type	Stranded wire/single wire
Material	Copper
Screw tightening torque	0.22 to 0.25N·m

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 Adaptor, Mounting Bracket, or MELSEC-Q Series or MELSEC iQ-R 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 or MELSEC iQ-R Series Module. These will be cause for fire, failure or malfunction.
(7) Do not drop the Conversion Adapter and Mounting Bracket or do not give a strong impact to it. This will cause damage.

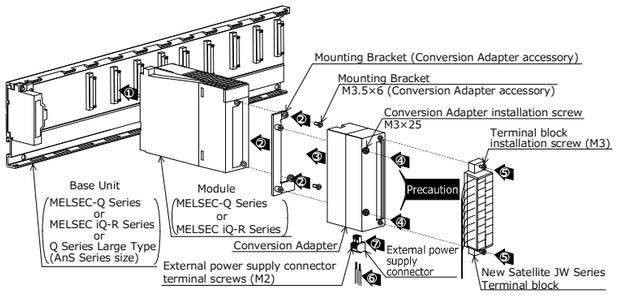
4.2 Use Precautions

Item		New Satellite JW Series → MELSEC-Q Series	New Satellite JW Series → MELSEC iQ-R Series
Use Precautions	Width dimension of module	Because the module is reduced in width dimension (35mm→27.4mm) and thus in area available for wiring, check dimensional data before installing the module. 	Because the module is reduced in width dimension (35mm→27.8mm) and thus in area available for wiring, check dimensional data before installing the module. 
	Depth dimension	Because the module is increased in depth dimension, check dimensional data before installing the module.  *The each depth dimension is measured from the panel surface. The value in parentheses (shorter by 9mm) is the dimension when the AnS-size Q Series Large Type Base Unit is not used. New Satellite JW Series: Base Unit + Input/output Module + Terminal block MELSEC-Q Series + Upgrade Tool: Q Series Large Type Base Unit (AnS Series Size) + Input/output Module + Conversion Adapter + Terminal block	Because the module is increased in depth dimension, check dimensional data before installing the module.  *The each depth dimension is measured from the panel surface. New Satellite JW Series: Base Unit + Input/output Module + Terminal block MELSEC iQ-R Series + Upgrade Tool: Base Unit + Input/output Module + Conversion Adapter + Terminal block
	Interference of the terminal block	When mounting the one of following Conversion Adapter on the right side of the Conversion Adapter, it is recommended to use the AnS-size Q Series Large Type Base Unit (Q□□BLS, Q□□BLS-D) manufactured by Mitsubishi Electric so that the Conversion Adapter does not interfere with the terminal block or connector of the existing module. When using the MELSEC-Q Series Base Unit, leave one slot open between them. Conversion Adapter : ERNT-2JQ210NS (Installed to the QY22), ERNT-2JQ234N264N, ERNT-2JQ232S262S 	No constraint

4.3 Installation Environment

Refer to the manual supplied with the MELSEC-Q Series or MELSEC iQ-R Series module you use.
・MELSEC-Q Series: QCPU User's Manual (SH-080483ENG)
・MELSEC iQ-R Series: Safety Guidelines (IB-0800525E)

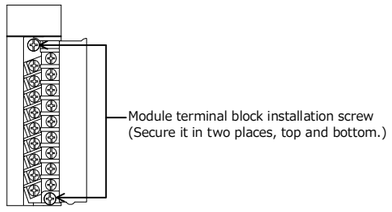
5. Part Names and Installation Method



5.1 Installation Method

Installation with the Control panel	Installation with the DIN rail
Install the Base unit (MELSEC-Q Series or the AnS-size Q Series Large Type or the MELSEC iQ-R Series) on the control panel. When replacing the current module with the MELSEC-Q Series, It is recommended to use the AnS-size Q Series Large Type Base Unit because the Conversion Adapter may interfere with the terminal block of the neighboring module. For how to install the Base Unit on the control panel, refer to the "QCPU User's Manual" or the "Q Series Large Type Base Unit/Blank Cover (AnS Series Size) User's Manual" or the "MELSEC iQ-R Module Configuration Manual".	Install the DIN rail mounting adapter manufactured by Mitsubishi Electric to the Base unit (MELSEC-Q Series or the AnS-size Q Series Large Type or the MELSEC iQ-R Series). When replacing the current module with the MELSEC-Q Series, It is recommended to use the AnS-size Q Series Large Type Base Unit because the Conversion Adapter may interfere with the terminal block of the neighboring module. For how to install the Base Unit on the DIN rail, refer to the "QCPU User's Manual" or the "Q Series Large Type Base Unit/Blank Cover (AnS Series Size) User's Manual" or the "MELSEC iQ-R Module Configuration Manual".

① Install the Module to the Base Unit. In addition, remove the terminal block attached with the Module after loosening the terminal block installation screws (2 places up and down).



② Secure the Mounting Bracket to the 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.

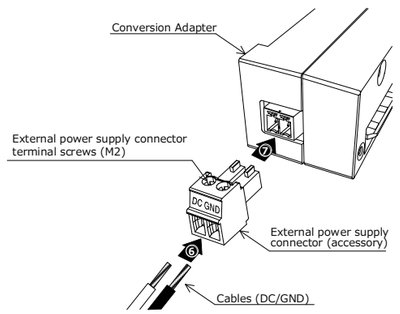
④ Secure the Conversion Adapter using the Conversion Adapter installation screws (M3 × 25; 2 locations).

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.

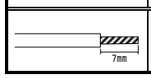
⑤ Secure the terminal block of the New Satellite JW Series to the Conversion Adapter with the terminal block installation screws (M3; two upper/lower locations).

【Perform the following procedure only when replacing JW-212S/JW-212SA with QY40P/QY50/QY70 or RY40NT5P】



⑥ Insert the connection cables to the terminals of the external power supply connector.

・Use connection cables in the applicable wire size.

Cables	Stripping length
	7㎜

Item	Specifications
Applicable wire size	0.14 to 1.5mm² (24 to 16AWG)
Type	Stranded wire/single wire
Material	Copper

・Carry out wiring correctly after checking the terminal arrangement.

Terminal	Signal name
DC	External power supply 5/12/24VDC +
GND	External power supply 5/12/24VDC -

Then, tighten the external power supply connector terminal screws (M2) to secure the connection cables.

⑦ Insert the external power supply connector to the Conversion Adapter securely.

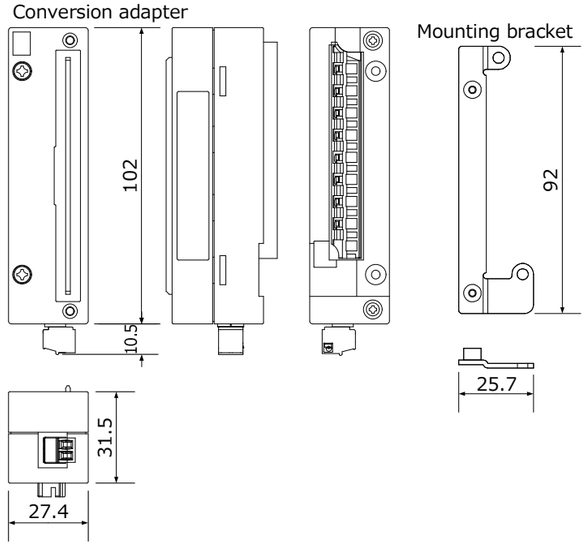
6.2 Tightening Torque

Tighten the 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
Terminal block installation screw (M3)	0.5 to 0.6N·m
External power supply connector terminal screws (M2)	0.22 to 0.25N·m

6. External Dimensions

Unit: mm



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

(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 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 November 2018. Specifications are subject to change without notice.

Developed November 2018
50CM-D180263-C