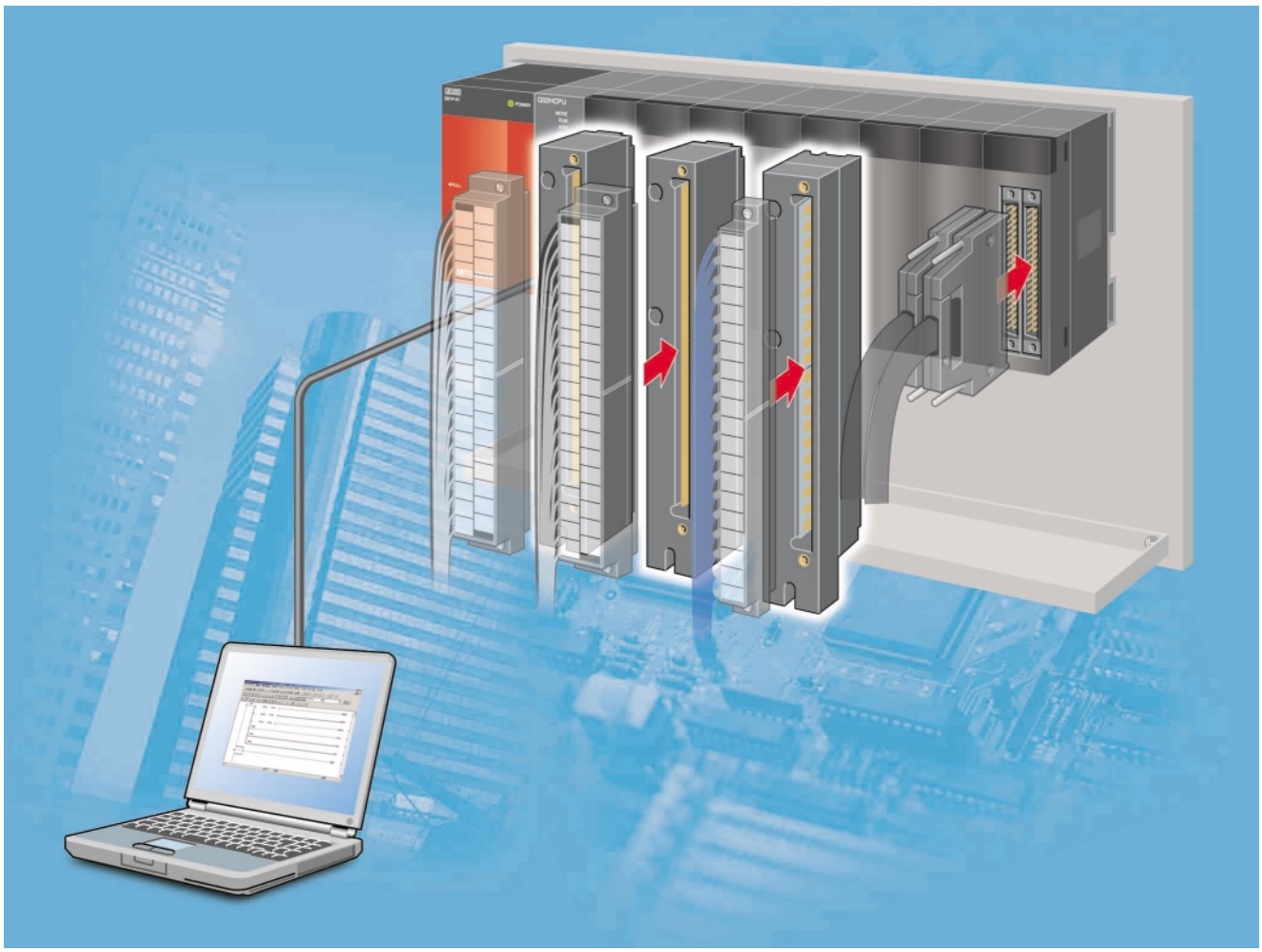
Mitsubishi PLC
Upgrade Tool

Mitsubishi Programmable Logic Controller
Upgrade Tool

Convenient Tool for Upgrading from the MELSEC-A Series to the MELSEC-Q Series



Easy Upgrade to the MESLEC-Q Series

The Mitsubishi PLC MELSEC-A Series can be easily replaced with the MELSEC-Q Series.

Greatly Reduced Time and Cost for Wiring to I/O Modules

- By using the Conversion Adapter, existing wiring for the MELSEC-A series I/O modules can be used for the MELSEC-Q series modules. (Some power and common terminal connection must be changed.)
- The Base Adapter allows the MELSEC-Q series module installation utilizing the MELSEC-A series mounting holes. (No additional drilling is required.)

Re-use of PLC Programs

Existing programs can be re-used by changing the PLC type from the MELSEC-A to the MELSEC-Q series on the Mitsubishi Electric s programming software GX Developer.

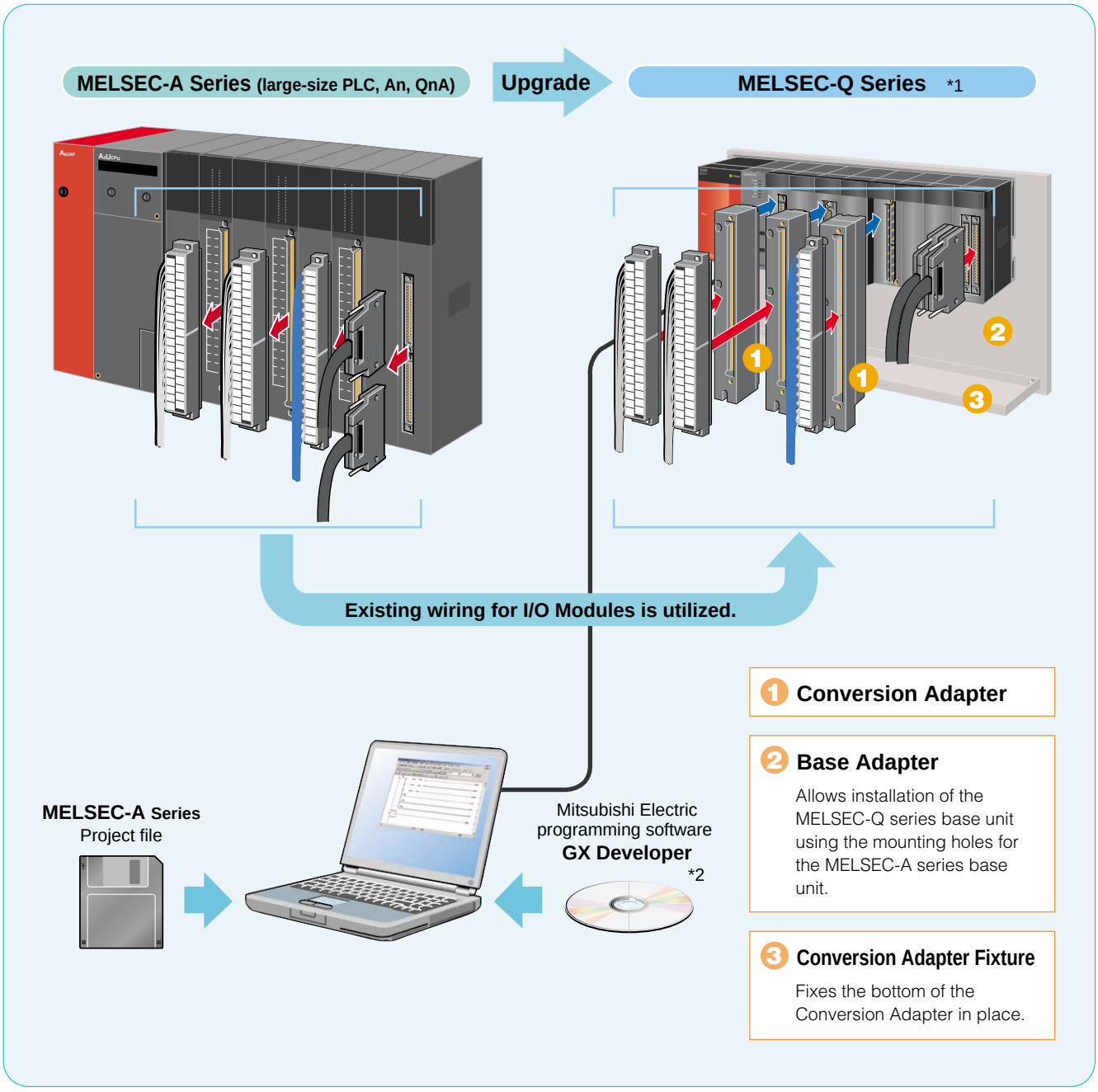
Total System Support

Feel free to consult us as we provide support services for system reconfigurations.

MITSUBISHI ELECTRIC ENGINEERING COMPANY LIMITED

Product Outline

This upgrade tool includes the Conversion Adapter, Conversion Adapter Fixture and Base Adapter. The Conversion Adapter changes the existing wiring for the MELSEC-A series I/O modules to the one applicable to the MELSEC-Q series. The Conversion Adapter Fixture fixes the bottom of the Conversion Adapter in place. The Base Adapter allows installation of the MELSEC-Q series using the mounting holes for the MELSEC-A series base unit.



*1: Confirmation before mounting is required as the width and depth of the modules change when the MELSEC-A Series is replaced with the MELSEC-Q Series. For details, refer to the Precautions (page 4) of this catalog.

*2: Existing programs can be re-used by changing the PLC type from the MELSEC-A to the MELSEC-Q series on the Mitsubishi Electric's programming software GX Developer.

Conversion Adapter

List of Selectable Models

Conversion Adapter

I/O	MELSEC-A Series I/O Module Type	MELSEC-Q Series I/O Module Type	Conversion Adapter			
			Model	Shape		Number of I/O
				MELSEC-A Series	MELSEC-Q Series	
Input	AX10	QX10	ERNT-AQTX10	Terminal block (20 points)	Terminal block (18 points)	16 points
	AX40	QX40	ERNT-AQTX40			
		QX40-S1				
	AX70	QX70				
	AX80	QX80	ERNT-AQTX80			
	AX80E					
	AX41	QX41	ERNT-AQTX41	Terminal block (38 points)	FCN connector (40-pin)	32 points
	AX41-S1	QX41-S1				
	AX71	QX71				
	AX81	QX81	ERNT-AQTX81	Terminal block (38 points)	D-Sub connector (37-pin)	
	AX81-S1					
Output	AY10	QY10	ERNT-AQTY10	Terminal block (20 points)	Terminal block (18 points)	16 points
	AY11					
	AY11E					
	AY11EEU					
	AY22	QY22	ERNT-AQTY22			
	AY40	QY40P	ERNT-AQTY40			
	AY40P					
	AY70	QY70				
	AY50	QY50	ERNT-AQTY50			
	AY60	QY40P				
		QY50				
	AY60S	QY40P				
		QY50				
	AY80	QY80	ERNT-AQTY80			
	AY80EP					
	AY60E					
	AY60EP					
	AY41	QY41P	ERNT-AQTY41	Terminal block (38 points)	FCN connector (40-pin)	32 points
	AY41P					
	AY51					
	AY51-S1					
	AY71	QY71				
	AY81	QY81P	ERNT-AQTY81	Terminal block (38 points)	D-Sub connector (37-pin)	
	AY81EP					

Notes 1) The I/O Modules and all Intelligent Function Modules (Analog Module, Positioning Module, Intelligent Module, Distribution Module, etc.) shown in the table below must be re-wired as they do not support the Conversion Adapter.

I/O	MELSEC-A Series I/O Module Type			MELSEC-Q Series I/O Module Type			
	Model	Specifications	Number of Points	Model	Specifications	Number of Points	Number of Required Units
Input	AX20	AC200-240V	16 points	QX28	AC100-240V	8 points	2 units
	AX11 (EU)	AC100-120V	32 points	QX10	AC100-120V	16 points	2 units
	AX21 (EU)	AC200-240V	32 points	QX28	AC100-240V	8 points	4 units
	AX82	DC12/24V source type	64 points	QX82	DC24V source type	64 points	1 unit
Output	AY10A	AC240V 2A independent	16 points	QY18A	AC240V 2A independent	8 points	2 units
	AY11A	AC240V 2A independent	16 points	QY18A			
	AY11AEU	AC24V 2A independent	16 points	QY18A			
	AY40A	DC12/24V 0.3A independent	16 points	QY68A	DC5-24V 2A independent	8 points	2 units
	AY20EU	AC100-240 0.6A	16 points	QY22	AC100-240 0.6A	16 points	1 unit
	AY15EU	AC240V 2A	24 points	QY10	AC240V 2A	16 points	2 units
	AY13 (E)	AC240V 2A	32 points	QY10			
	AY13EU	AC24V 2A	32 points	QY10			
	AY23	AC100-240V 0.6A	32 points	QY22	AC100-240 0.6A	16 points	2 units
	AY72	DC5/12V 16mA	64 points	QY71	DC5-12V 16mA	32 points	2 units
	AY82EP	DC12/24V 0.1A source type	64 points	QY81P	DC12-24V 0.1A source type	32 points	2 units
Input	AX50 (-S1)	There are no equivalent modules in the MELSEC-Q Series.					
	AX60 (-S1)						
	AX31 (-S1)						
	AX81B						
I/O composite	A42XY						

2) Existing wiring for the following I/O Modules can be used as it is.

I/O	MELSEC-A Series I/O Module Type	MELSEC-Q Series I/O Module Type	Remarks
Input	AX42 (-S1)	QX42 (-S1)	Some wiring must be changed for the AY42-S4.
Output	AY42 (-S1/-S3/-S4)	QY42P	
I/O composite	AH42	QH42	

Base Adapter

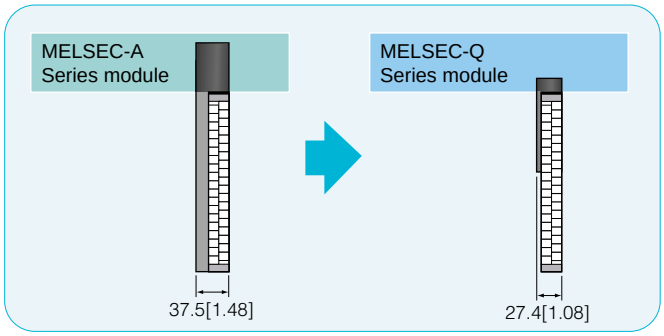
MELSEC-A Series Unit Model	MELSEC-Q Series Unit Model	Base Adapter Model	Remarks
A38B, A38HB	Q312B, Q38B	ERNT-AQB38	Conversion Adapter Fixture ERNT-AQF12 or ERNT-AQF8 can be used.
A68B	Q612B, Q68B	ERNT-AQB68	
A58B	Q68B	ERNT-AQB58	Conversion Adapter Fixture ERNT-AQF8 can be used.
A35B	Q38B, Q35B	ERNT-AQB35	Conversion Adapter Fixture ERNT-AQF8 and ERNT-AQF5 can be used.
A65B	Q68B, Q65B, Q55B	ERNT-AQB65	
A55B	Q65B, Q55B	ERNT-AQB55	Conversion Adapter Fixture ERNT-AQF5 can be used.
A32B	Q33B	ERNT-AQB32	Conversion Adapter Fixture ERNT-AQF3 can be used.
A62B	Q63B, Q52B	ERNT-AQB62	
A52B	Q52B	ERNT-AQB52	

Conversion Adapter Fixture

Conversion Adapter Fixture Model	Description	Remarks
ERNT-AQF12	Conversion Adapter Fixture for 12 slots	The Conversion Adapter Fixture is required to use the Conversion Adapter.
ERNT-AQF8	Conversion Adapter Fixture for 8 slots	
ERNT-AQF5	Conversion Adapter Fixture for 8 slots	
ERNT-AQF3	Conversion Adapter Fixture for 3 slots	

■Precautions for Use

Unit: mm[inch]



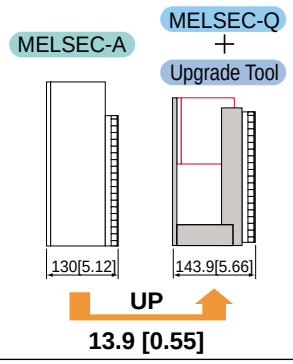
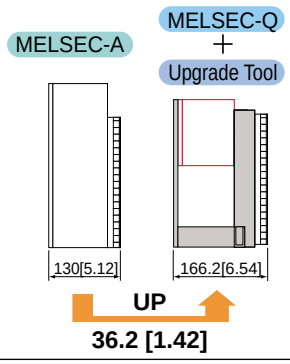
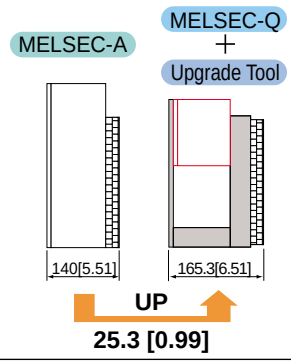
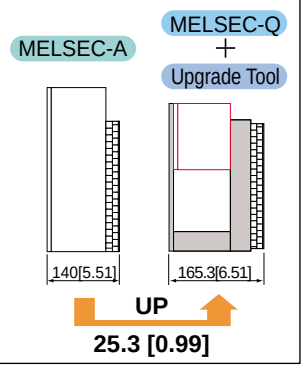
(1) Module width

Since the module width is shortened (37.5mm to 27.4mm [1.48inch to 1.08inch]) and the wiring area becomes smaller, confirmation of the size is required.

(2) Depth

Confirmation before mounting is required as the depth is increased.

MELSEC-A : MELSEC-A series
MELSEC-Q : MELSEC-Q series

Conversion Adapter	ERNT-AQTX10 ERNT-AQTX40 ERNT-AQTX80 ERNT-AQTY10 ERNT-AQTY40 ERNT-AQTY50 ERNT-AQTY80	ERNT-AQTY22	ERNT-AQTX41 ERNT-AQTY41	ERNT-AQTX81 ERNT-AQTY81
Depth	143.9 [5.66]	166.2 [6.54]	165.3 [6.51]	165.3 [6.51]
Drawing				
	UP 13.9 [0.55]	UP 36.2 [1.42]	UP 25.3 [0.99]	UP 25.3 [0.99]

(3) Conversion Adapter Fixture, Base Adapter

The Conversion Adapter Fixture (sold separately) is required to use the Conversion Adapter. We also recommend using the Base Adapter (sold separately) that allows the MELSEC-Q Series installation (without the need to drill additional holes) by using the mounting holes for the MELSEC-A Series.

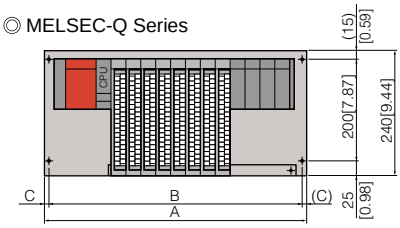
■Mounting Dimensions

Unit: mm[inch]

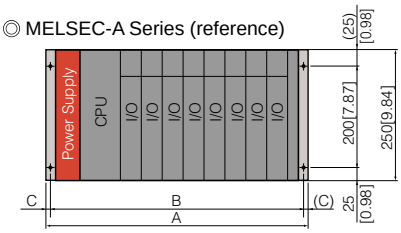
- The vertical dimension is less than that of the MELSEC-A Series. (For details on the width and depth of the modules, see "Precautions For Use" above.)
- Additional drilling of screw holes on the control panel is not required as the mounting holes (4 locations) on the Base Adapter are at the same locations as the MELSEC-A Series Base Unit.

Base Adapter Model	A	B	C	MELSEC-A Series Base Unit Model	A	B	C
ERNT-AQB38	480[18.89]	460[18.11]	10[0.39]	A38B, A38HB	480[18.89]	460[18.11]	10[0.39]
ERNT-AQB68	466[18.35]	446[17.56]	10[0.39]	A68B	466[18.35]	446[17.56]	10[0.39]
ERNT-AQB58	411[16.18]	391[15.39]	10[0.39]	A58B	411[16.18]	391[15.39]	10[0.39]
ERNT-AQB35	382[15.04]	362[14.25]	10[0.39]	A35B	382[15.04]	362[14.25]	10[0.39]
ERNT-AQB65	352[13.86]	332[13.07]	10[0.39]	A65B	352[13.86]	332[13.07]	10[0.39]
ERNT-AQB55	297[11.69]	277[10.90]	10[0.39]	A55B	297[11.69]	277[10.90]	10[0.39]
ERNT-AQB32	247[9.73]	227[8.93]	10[0.39]	A32B	247[9.73]	227[8.93]	10[0.39]
ERNT-AQB62	238[9.37]	218[8.58]	10[0.39]	A62B	238[9.37]	218[8.58]	10[0.39]
ERNT-AQB52	183[7.20]	163[6.42]	10[0.39]	A52B	183[7.20]	163[6.42]	10[0.39]

◎ MELSEC-Q Series



◎ MELSEC-A Series (reference)



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Precautions for Choosing the Products

This catalog explains the typical features and functions of the Mitsubishi PLC Upgrade Tool and does not provide restrictions and other information on usage and module combinations. When using the products, always read the user's manuals and operaing manuals of the products. Mitsubishi will not be held liable for damage caused by factors found not to be the cause of Mitsubishi; machine damage or lost profits caused by faults in the Mitsubishi products; damage, secondary damage, accident compensation caused by special factors unpredictable by Mitsubishi; damages to products other than Mitsubishi products; and to other duties.

⚠ For safe use

- This product has been manufactured as a general-purpose part for general industries, and has not been designed or manufactured to be incorporated in a device or system used in purposes related to human life.
- Before using the product for special purposes such as nuclear power, electric power, aerospace, medicine or passenger movement vehicles, consult with Mitsubishi.
- This product has been manufactured under strict quality control. However, when installing the product where major accidents or losses could occur if the product fails, install appropriate backup or failsafe functions in the system.

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