



**MITSUBISHI
ELECTRIC**

Q Series Large Type Base Unit/Blank Cover (AnS Series Size)

User's Manual

Q35BLS Q35BLS-D QG69LS
Q38BLS Q38BLS-D
Q65BLS Q65BLS-D
Q68BLS Q68BLS-D
Q55BLS Q55BLS-D

Thank you for purchasing the Mitsubishi Electric programmable controller MELSEC-Q series.

Prior to use, please read this and relevant manuals thoroughly to fully understand the product.

Programmable
Controller

MELSEC-Q

MODEL	ANS-Q-LARGE-U
MODEL CODE	13J290
IB(NA)-0800495-D(1612)MEE	

● CONDITIONS OF USE FOR THE PRODUCT ●

- (1) Mitsubishi programmable controller ("the PRODUCT") shall be used in conditions;
- i) where any problem, fault or failure occurring in the PRODUCT, if any, shall not lead to any major or serious accident; and
 - ii) where the backup and fail-safe function are systematically or automatically provided outside of the PRODUCT for the case of any problem, fault or failure occurring in the PRODUCT.
- (2) The PRODUCT has been designed and manufactured for the purpose of being used in general industries.
MITSUBISHI SHALL HAVE NO RESPONSIBILITY OR LIABILITY (INCLUDING, BUT NOT LIMITED TO ANY AND ALL RESPONSIBILITY OR LIABILITY BASED ON CONTRACT, WARRANTY, TORT, PRODUCT LIABILITY) FOR ANY INJURY OR DEATH TO PERSONS OR LOSS OR DAMAGE TO PROPERTY CAUSED BY the PRODUCT THAT ARE OPERATED OR USED IN APPLICATION NOT INTENDED OR EXCLUDED BY INSTRUCTIONS, PRECAUTIONS, OR WARNING CONTAINED IN MITSUBISHI'S USER, INSTRUCTION AND/OR SAFETY MANUALS, TECHNICAL BULLETINS AND GUIDELINES FOR the PRODUCT.

("Prohibited Application")

Prohibited Applications include, but not limited to, the use of the PRODUCT in;

- Nuclear Power Plants and any other power plants operated by Power companies, and/or any other cases in which the public could be affected if any problem or fault occurs in the PRODUCT.
- Railway companies or Public service purposes, and/or any other cases in which establishment of a special quality assurance system is required by the Purchaser or End User.
- Aircraft or Aerospace, Medical applications, Train equipment, transport equipment such as Elevator and Escalator, Incineration and Fuel devices, Vehicles, Manned transportation, Equipment for Recreation and Amusement, and Safety devices, handling of Nuclear or Hazardous Materials or Chemicals, Mining and Drilling, and/or other applications where there is a significant risk of injury to the public or property.

Notwithstanding the above, restrictions Mitsubishi may in its sole discretion, authorize use of the PRODUCT in one or more of the Prohibited Applications, provided that the usage of the PRODUCT is limited only for the specific applications agreed to by Mitsubishi and provided further that no special quality assurance or fail-safe, redundant or other safety features which exceed the general specifications of the PRODUCTS are required. For details, please contact the Mitsubishi representative in your region.

REVISIONS

*The manual number is given on the bottom right of the cover.

Print date	*Manual number	Revision
January 2013	IB(NA)-0800495-A	First edition
February 2013	IB(NA)-0800495-B	Change of the external dimension diagram
November 2015	IB(NA)-0800495-C	Descriptions regarding the Q series large type base unit are added.
December 2016	IB(NA)-0800495-D	Descriptions are revised due to compliance with the new China RoHS.

This manual confers no industrial property rights or any rights of any other kind, nor does it confer any patent licenses. Mitsubishi Electric Corporation cannot be held responsible for any problems involving industrial property rights which may occur as a result of using the contents noted in this manual.

CONTENTS

1. OVERVIEW	1
1.1 Overview	1
1.2 Features	1
1.3 Supplied Parts	3
2. SYSTEM CONFIGURATION	5
2.1 System Configuration	5
2.2 Precautions for System Configuration	10
2.3 Modules That Cannot be Mounted on the Q Series Large Type Base Unit (AnS Series Size)	11
3. SPECIFICATIONS	12
3.1 Specifications of the Q Series Large Type Base Unit (AnS Series Size)	12
3.2 Specifications of the Q Series Large Type Blank Cover (AnS Series Size)	14
4. PARTS NAMES	15
4.1 Parts Names	15
5. MOUNTING AND INSTALLATION	18
5.1 Handling Precautions	18
5.2 Precautions for Installing the Q Series Large Type Base Unit (AnS Series Size)	19
5.3 Mounting and Installation of the Q Series Large Type Base Unit (AnS Series Size)	21
5.4 Mounting/Removing the Q Series Module	23
6. EXTERNAL DIMENSIONS	25
6.1 Q Series Large Type Base Unit (AnS Series Size)	25
6.2 Q Series Large Type Blank Cover (AnS Series Size)	29

TERMS

Unless otherwise specified, this manual uses the following generic terms and abbreviations to explain the Q series large type base units (AnS series size) and Q series large type blank cover (AnS series size).

Term	Description
Q series large type base unit (AnS series size)	A generic term for the Q series large type main base unit (AnS series size) and Q series large type extension base units (AnS series size)
Q series large type main base unit (AnS series size)	A generic term for the Q35BLS, Q38BLS, Q35BLS-D, and Q38BLS-D MELSEC-Q series main base units
Q series large type extension base unit (AnS series size)	A generic term for the Q65BLS, Q68BLS, Q55BLS, Q65BLS-D, Q68BLS-D, and Q55BLS-D MELSEC-Q series extension base units
Q series large type blank cover (AnS series size)	The abbreviation for the QG69LS MELSEC-Q series blank cover
Q series	The abbreviation for Mitsubishi MELSEC-Q series programmable controller
AnS series	The abbreviation for compact types of Mitsubishi MELSEC-A series programmable controller
High Performance model QCPU	A generic term for the Q02CPU, Q02HCPU, Q06HCPU, Q12HCPU, and Q25HCPU
Universal model QCPU	A generic term for the Q00UJCPU, Q00UCPU, Q01UCPU, Q02UCPU, Q03UDCPU, Q03UDVCPU, Q03UDECPU, Q04UDHCPU, Q04UDVCPU, Q04UDEHCPU, Q06UDHCPU, Q06UDVCPU, Q06UDEHCPU, Q10UDHCPU, Q10UDEHCPU, Q13UDHCPU, Q13UDVCPU, Q13UDEHCPU, Q20UDHCPU, Q20UDEHCPU, Q26UDHCPU, Q26UDVCPU, Q26UDEHCPU, Q50UDEHCPU, and Q100UDEHCPU
MELSECNET/H remote I/O module	A general term for the QJ72LP25-25, QJ72LP25G, and QJ72BR15
Q3□B	A generic term for the Q33B, Q35B, Q38B, and Q312B main base units
Q3□DB	A generic term for the Q35DB, Q38DB, and Q312DB multiple CPU high speed main base units
Q5□B	A generic term for the Q52B and Q55B extension base units
Q6□B	A generic term for the Q63B, Q65B, Q68B, and Q612B extension base units
QA1S5□B	Another term for the QA1S51B extension base unit
QA1S6□B	A generic term for the QA1S65B and QA1S68B extension base units
QA6□B	A generic term for the QA65B and QA68B extension base units

Term	Description
A5□B	A generic term for the A52B, A55B, and A58B extension base units
A6□B	A generic term for the A62B, A65B, and A68B extension base units
QA6ADP	The abbreviation for the QA6ADP QA conversion adapter module
QA6ADP+A5□B/A6□B	The abbreviation for the A large type extension base unit on which QA6ADP is mounted

1. OVERVIEW

1.1 Overview

The products are used to replace the AnS series with the Q series when the existing installation site and cables are utilized.

This manual explains specifications, component devices, part names, settings, mounting, and installation of the Q series large type base unit (AnS series size) and Q series large type blank cover (AnS series size). For contents not explained in this manual such as SAFETY PRECAUTIONS, EMC and Low Voltage Directives, and general specifications, refer to the following manual:



QCPU User's Manual (Hardware Design, Maintenance and Inspection)

1.2 Features

This section explains features of the Q series large type base unit (AnS series size) and Q series large type blank cover (AnS series size).

- (1) The Q series large type base unit (AnS series size) is available in two types; DIN rail mounting type and panel mounting type. Select the suitable type of a base unit for the operating environment.

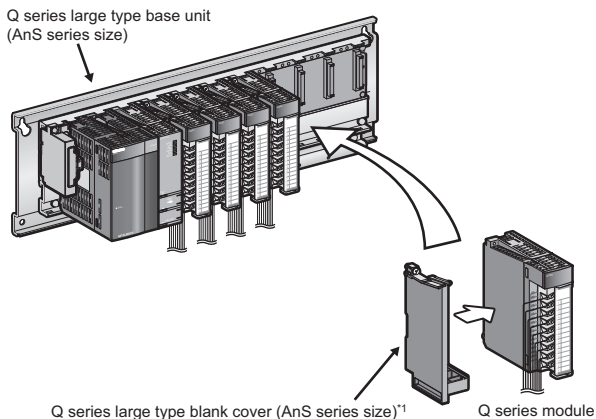
Mounting type	Main base unit	Extension base unit
Panel mounting type	Q35BLS Q38BLS	Q65BLS Q68BLS Q55BLS
DIN rail mounting type	Q35BLS-D Q38BLS-D	Q65BLS-D Q68BLS-D Q55BLS-D

- (2) Since the Q series large type base unit (AnS series size) has the same mounting dimensions with the AnS series base unit, the same mounting holes can be utilized.

The following table shows the corresponding models for replacement.

AnS series base unit	Q series large type base unit (AnS series size)
A1S35B	Q35BLS
A1S38B	Q38BLS
A1S65B	Q65BLS
A1S68B	Q68BLS
A1S55B	Q55BLS

- (3) Mount the Q series module on the Q series large type base unit (AnS series size).



The renewal tool manufactured by MITSUBISHI ELECTRIC ENGINEERING COMPANY LIMITED (hereafter, abbreviated as renewal tool) can be mounted on the module, and a connector and terminal block used with the AnS series can be used without wiring change.

*1 To mount the Q series module on the I/O slot of the Q series large type base unit (AnS series size), always attach the Q series large type blank cover (AnS series size).

1.3 Supplied Parts

- (1) Q series large type main base unit (AnS series size)
(panel mounting type)

Product	Model	Quantity	Remarks
Q series large type main base unit (AnS series size)	Q35BLS	1	-
	Q38BLS		
	Q65BLS		
	Q68BLS		
	Q55BLS		
Base unit mounting screw	-	4	M5 × 25 screw
This manual	IB-0800495	1	-
Safety Guidelines ^{*1}	IB-0800423	1	-

*1 The Q series large type extension base unit (AnS series size) does not include with the guidelines.

- (2) Q series large type main base unit (AnS series size)
(DIN rail mounting type)

Product	Model	Quantity	Remarks
Q series large type main base unit (AnS series size)	Q35BLS-D	1	-
	Q38BLS-D		
	Q65BLS-D		
	Q68BLS-D		
	Q55BLS-D		
DIN rail mounting adapter ^{*1*2}	Q6DIN1 or Q6DIN2	1	Q6DIN1 (Includes 2 adapters (large), 4 adapters (small), 3 square washers, and 3 mounting screws (M5×10))
			Q6DIN2 (Includes 2 adapters (large), 3 adapters (small), 2 square washers, and 2 mounting screws (M5×10))
End fitting L	-	1	-
End fitting R	-	1	-
Fixing bracket for terminal block conversion adapter	-	1	-
Bracket fixing screw	-	6	M4×8 screw

Product	Model	Quantity	Remarks
This manual	IB-0800495	1	-
Safety Guidelines ^{*3}	IB-0800423	1	-

*1 For a combination of the DIN rail mounting adapter, refer to the following:

Q6DIN1: Q38BLS-D and Q68BLS-D

Q6DIN2: Q35BLS-D, Q65BLS-D, and Q55BLS-D

*2 The stopper for DIN rail mounting adapter is not included with this base unit since the end fitting is substitutable.

*3 The Q series large type extension base unit (AnS series size) does not include with the guidelines.

(3) Q series large type blank cover (AnS series size)

Product	Model	Quantity	Remarks
Q series large type blank cover (AnS series size)	QG69LS	1	-

2. SYSTEM CONFIGURATION

2.1 System Configuration

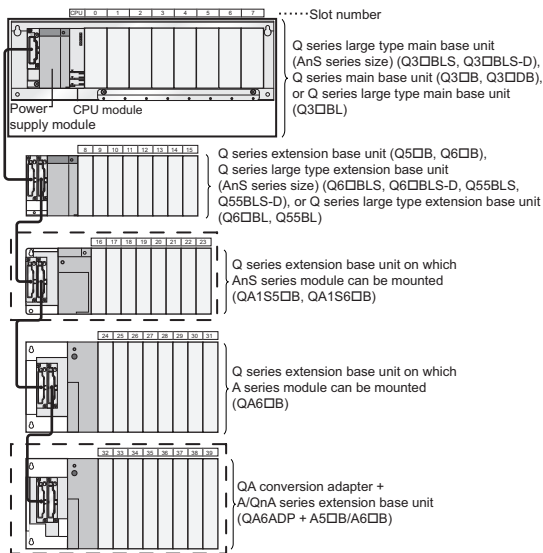
This section explains system configuration when using the Q series large type base unit (AnS series size). The following modules can be mounted on the CPU slot of the Q series large type base unit (AnS series size).

- High Performance model QCPU
- Universal model QCPU (except Q00UJCPU)
- MELSECNET/H remote I/O module

- (1) System configuration using the High Performance model QCPU and Universal model QCPU

■ Main base unit

■ Extension base unit



For a combination of the CPU modules and base units, refer to the "Precautions" section.

The following table shows restrictions on system configuration.

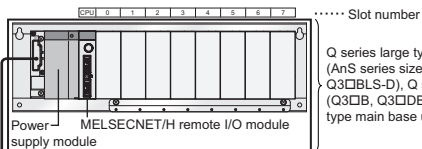
Maximum number of extension stages of extension base units	Q00UCPU, Q01UCPU, and Q02UCPU: 4 extension stages Modules other than the above: 7 extension stages	
Maximum number of mountable I/O modules	<ul style="list-style-type: none"> • Q00UCPU and Q01UCPU: 24 modules • Q02UCPU: 36 modules Modules other than the above: 64 modules	
Applicable main base unit model	Q33B, Q35B, Q38B, Q312B, Q35DB, Q38DB, Q312DB, Q35BLS, Q38BLS, Q35BLS-D, Q38BLS-D, Q35BL, and Q38BL	
Applicable extension base unit model	Model requiring no power supply module	Q52B, Q55B, Q55BLS, Q55BLS-D, Q55BL, and QA6ADP+A5□B
	Model requiring Q series power supply module	Q63B, Q65B, Q68B, Q612B, Q65BLS, Q68BLS, Q65BLS-D, Q68BLS-D, Q65BL, and Q68BL
	Model requiring no AnS series power supply module	QA1S51B
	Model requiring AnS series power supply module	QA1S65B and QA1S68B
	Model requiring A series power supply module	QA65B, QA68B, and QA6ADP+A6□B
Extension cable model	QC05B, QC06B, QC12B, QC30B, QC50B, and QC100B	
Q series power supply module model	Q61P-A1, Q61P-A2, Q61P, Q61P-D, Q62P, Q63P, Q64P, and Q64PN	
AnS series power supply module model	A1S61PN, A1S62PN, and A1S63P	
A series power supply module model	A61P, A61PN, A62P, A63P, A61PEU, and A62PEU	

Precautions

- Use extension cable so that the overall extension length can be within 13.2m.
- Do not install the extension cable together with the main circuit (high voltage and high current) line or bring them close to each other.
Keep a distance of 100mm or more between them.
- Set the number of extension stages so that the number is not duplicated with another.
- When using extension base units on which AnS/A series modules can be mounted together with the other units, follow the instructions described below.
 - Connect the units in order of Q5□B/Q6□B/
Q5□BLS(-D)/Q6□BLS(-D)/Q5□BL/Q6□BL→QA1S5□B/
QA1S6□B→QA6□B→QA6ADP+A5□B/A6□B from the
nearest position of the main base unit.
 - The QA1S6□B and QA6ADP+A5□B/A6□B cannot be
used together.
 - Since the QA1S51B does not have an extension cable
connector (OUT), it cannot be used with the QA6□B and
QA6ADP+A5□B/A6□B.
- Assign module I/O number with putting each series in block so that the order can be "from Q series to A series" or "from A series to Q series". Failure to do so causes an error "SP.UNIT LAY ERR." (error code: 2120). In addition, do not duplicate the I/O number.
- Connect the extension cable from OUT of the extension cable connector on the base unit to IN of the extension base unit on the next stage.
- If the number of mounted modules exceeds the maximum number of mountable I/O modules, an error "SP.UNIT LAY ERR." (error code: 2124) occurs.
- To construct a multiple CPU system, use a main base unit, Q3□B or Q3□DB.
- To use the Universal model QCPU with the extension base units QA1S5□B, QA1S6□B, QA6□B, and QA6ADP+A5□B/A6□B, use the Universal model QCPU whose serial number (first five digits) is "13102" or later.

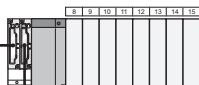
(2) System configuration using the MELSECNET/H remote I/O module

■ Main base unit

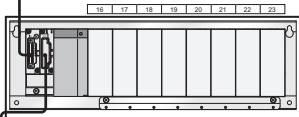


Q series large type main base unit (AnS series size) (Q3□BLS, Q3□BLS-D), Q series main base unit (Q3□B, Q3□DB), or Q series large type main base unit (Q3□BL)

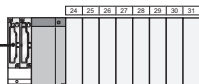
■ Extension base unit



Q series extension base unit (Q5□B, Q6□B), Q series large type extension base unit (AnS series size) (Q6□BLS, Q6□BLS-D, Q55BLS, Q55BLS-D), or Q series large type extension base unit (Q6□BL, Q55BL)



Q series large type extension base unit (AnS series size) (Q6□BLS, Q6□BLS-D, Q55BLS, Q55BLS-D), Q series extension base unit (Q5□B, Q6□B), or Q series large type extension base unit (Q6□BL, Q55BL)



Q series extension base unit (Q5□B, Q6□B), Q series large type extension base unit (AnS series size) (Q6□BLS, Q6□BLS-D, Q55BLS, Q55BLS-D), or Q series large type extension base unit (Q6□BL, Q55BL)

The following table shows restrictions on system configuration.

Maximum number of extension stages of extension base units	7 extension stages	
Maximum number of mountable I/O modules	64 modules	
Applicable main base unit model	Q33B, Q35B, Q38B, Q35BLS, Q38BLS, Q35BLS-D, Q38BLS-D, Q35BL, and Q38BL	
Applicable extension base unit model	Model requiring no power supply module	Q52B, Q55B, Q55BLS, Q55BLS-D, and Q55BL
	Model requiring Q series power supply module	Q63B, Q65B, Q68B, Q612B, Q65BLS, Q68BLS, Q65BLS-D, Q68BLS-D, Q65BL, and Q68BL
Extension cable model	QC05B, QC06B, QC12B, QC30B, QC50B, and QC100B	
Q series power supply module model	Q61P-A1, Q61P-A2, Q61P, Q61P-D, Q62P, Q63P, Q64P, and Q64PN	

Precautions

- Use extension cable so that the overall extension length can be within 13.2m.
- Do not install the extension cable together with the main circuit (high voltage and high current) line or bring them close to each other.
- Keep a distance of 100mm or more between them.
- Set the number of extension stages so that the number is not duplicated with another.
- Connect the extension cable from OUT of the extension cable connector on the base unit to IN of the extension base unit on the next stage.
- If the number of mounted modules exceeds the maximum number of mountable I/O modules, an error "SP.UNIT LAY ERR." (error code: 2124) occurs.

2.2 Precautions for System Configuration

This section explains precautions for using the products.

- (1) A multiple CPU system cannot be constructed using the Q series large type main base unit (AnS series size).
- (2) To construct a multiple CPU system with the Q series large type extension base unit (AnS series size), use a main base unit, Q3□B or Q3□DB.



QCPU User's Manual (Multiple CPU System)

When read the manual, regard the descriptions for the Q5□B/Q6□B as the Q series large type extension base unit (AnS series size) because the handling of the Q series large type extension base unit (AnS series size) is the same as that of the Q5□B/Q6□B.

- (3) To mount the Q series module on Q series large type base unit (AnS series size), always attach the Q series large type blank cover (AnS series size).
(The cover is not necessary for a module mounted on CPU slot and power supply.)
- (4) In Q series large type (AnS series size), the extension cable connector is not on the right side of the base unit. When the extension cable is used, make sure the cable lengths and the way to connect the cable.

2.3 Modules That Cannot be Mounted on the Q Series Large Type Base Unit (AnS Series Size)

This section explains modules that cannot be mounted on the Q series large type base unit (AnS series size).

(1) Two-slot module

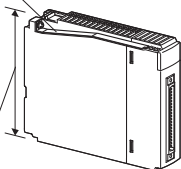
Ex. Q64TCRTBW, Q64TCRTBWN, Q64TCTTBW,
Q64TCTTBWN, QD70D4, QD70D8, QJ71LP21S-25, and
QJ71GP21S-SX

(2) Module on which the Q series large type blank cover (AnS series size) cannot be attached

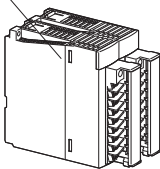
- Module whose height exceeds 98mm
- Module with a bracket on its top
- Module having a projection (such as a connector) on its bottom
- Module on which the Q7BAT-SET has been mounted

Ex. Q66AD-DG, Q66DA-G, Q68AD-G, Q68RD3-G, Q68TD-G-H02,
Q64AD2DA, QD75M1, QD75MH1, QD75M2, QD75MH2, QD75M4,
QD75MH4, and the QJ71WS96 on which the Q7BAT-SET has been
mounted

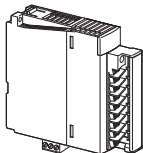
A module with a bracket cannot be mounted.



A two-slot module cannot be mounted.



A module with the height exceeding 98mm cannot be mounted.



A module having a projection (such as a connector) on its bottom cannot be mounted.

3. SPECIFICATIONS

3.1 Specifications of the Q Series Large Type Base Unit (AnS Series Size)

The following tables show performance specifications of the Q series large type base unit (AnS series size).

(1) Q series large type main base unit (AnS series size)

Item	Model				
	Q35BLS	Q38BLS	Q35BLS-D	Q38BLS-D	
Number of mountable I/O modules	5	8	5	8	
Extendability	Extendable				
Applicable module	Q series module				
5 VDC internal current consumption	0.11A	0.12A	0.11A	0.12A	
Size of mounting hole	φ6 hole (for M5 screw)		-		
External dimensions	H	130mm		118mm	
	W	325mm	430mm	311mm	416mm
	D	53mm		48.5mm	
Weight	0.82kg	1.32kg	0.59kg	0.72kg	
Accessory	Section 1.3 (1)		Section 1.3 (2)		
DIN rail installation	Not installable		Installable		

(2) Q series large type extension base unit (AnS series size)

Item	Model				
	Q65BLS	Q68BLS	Q65BLS-D	Q68BLS-D	
Number of mountable I/O modules	5	8	5	8	
Extendability	Extendable				
Applicable module	Q series module				
5 VDC internal current consumption	0.11A	0.12A	0.11A	0.12A	
Size of mounting hole	φ6 hole (for M5 screw)		-		
External dimensions	H	130mm		118mm	
	W	315mm	420mm	304mm	409mm
	D	53mm		48.5mm	
Weight	0.98kg	1.32kg	0.57kg	0.74kg	
Accessory	Section 1.3 (1)		Section 1.3 (2)		
DIN rail installation	Not installable		Installable		

(3) Q series large type extension base unit (Ans series size)
(without power supply)

Item	Model		
	Q55BLS	Q55BLS-D	
Number of mountable I/O modules	5		
Extendability	Extendable		
Applicable module	Q series module		
5 VDC internal current consumption	0.1A		
Size of mounting hole	φ6 hole (for M5 screw)	-	
External dimensions	H	130mm	118mm
	W	260mm	248mm
	D	53mm	48.5mm
Weight	0.82kg	0.51kg	
Accessory	Section 1.3 (1)	Section 1.3 (2)	
DIN rail installation	Not installable	Installable	

3.2 Specifications of the Q Series Large Type Blank Cover (AnS Series Size)

The following tables show performance specifications of the Q series large type blank cover (AnS series size).

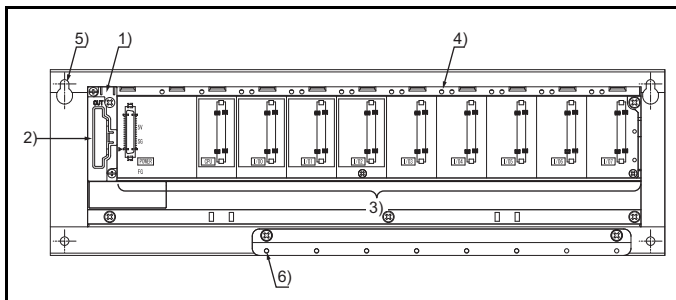
Item		Model
		QG69LS
External dimensions	H	108mm
	W	34.5mm
	D	54mm
Weight		0.03kg

4. PARTS NAMES

4.1 Parts Names

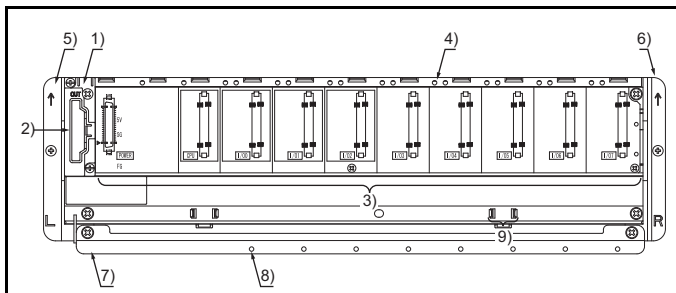
This section explains the part names of the Q series large type base unit (AnS series size) and Q series large type blank cover (AnS series size).

- (1) Q series large type base unit (AnS series size)
(panel mounting type)



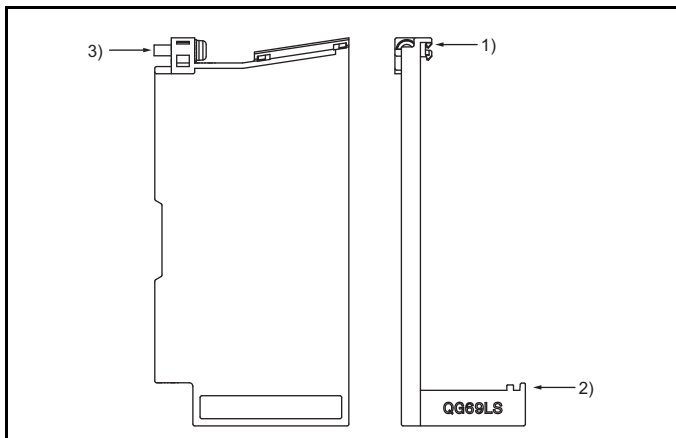
No.	Name	Description
1)	Extension cable connector	Connector for connecting an extension cable (for signal communications with the extension base unit)
2)	Base cover	Protective cover of extension cable connector
3)	Module connector	Connector for mounting power supply module, CPU module, Q series large type I/O module, and MELSEC-Q series module
4)	Module fixing screw hole	Screw hole for fixing a module to the base unit (screw size: M3×12)
5)	Base mounting hole	Hole for installing the base unit on a panel such as control panel (for M5 screw)
6)	Terminal block conversion adapter fixing hole	Screw hole for fixing a terminal block conversion adapter (screw size: M3×8)

(2) Q series large type base unit (AnS series size)
(DIN rail mounting type)



No.	Name	Description
1)	Extension cable	Connector for connecting an extension cable (for signal communications with the extension base unit)
2)	Base cover	Protective cover of extension cable connector
3)	Module connector	Connector for mounting power supply module, CPU module, Q series large type I/O module, and MELSEC-Q series module
4)	Module fixing screw hole	Screw hole for fixing a module to the base unit (screw size: M3×12)
5)	End fitting L	End stop bracket for fixing a module to the base unit. End fitting L is engraved with "L" and end fitting R is engraved with "R".
6)	End fitting R	
7)	Fixing bracket for terminal block conversion adapter	Bracket for fixing a terminal block conversion adapter
8)	Terminal block conversion adapter fixing hole	Screw hole for fixing a terminal block conversion adapter (screw size: M3×8)
9)	DIN rail adapter installation hole	Hole for installing a DIN rail adapter

(3) Part names of the Q series large type blank cover (AnS series size)



No.	Name	Description
1)	Top fixing hook	Hook for fixing the Q series large type blank cover (AnS series size) to the Q series module top
2)	Bottom fixing hook	Hook for fixing the Q series large type blank cover (AnS series size) to the Q series module bottom
3)	Module fixing screw	Screw for fixing a module to the Q series large type base unit (AnS series size). (screw size: M3×12)

5. MOUNTING AND INSTALLATION

5.1 Handling Precautions

This section explains handling precautions for the Q series large type base unit (AnS series size) and Q series large type blank cover (AnS series size).

- (1) Do not disassemble the Q series large type base unit (AnS series size) since it is precision apparatus.
- (2) Always mount the power supply module on the Q series large type extension base unit (AnS series size) excluding the Q55BLS and Q55BLS-D.

When the load of a module used is light, the module may operate without power supply module; however, the operation cannot be guaranteed because of its instability.

- (3) Tighten the module fixing screws and other screws within the following range.

Location of screw	Tightening torque range
Module fixing screw (M3×12 screws)	0.36 to 0.48N·m
Base cover fixing screw	0.36 to 0.48N·m
Bracket fixing screw (M4×8 screws)	1.00 to 1.35N·m
End fitting stopper screw (M4×8 screws)	1.00 to 1.35N·m

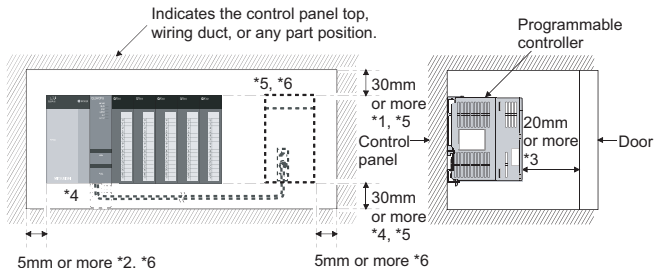
- (4) Do not install the extension cable together with the main circuit (high voltage and high current) line or bring them close to each other.

Keep a distance of 100mm or more between them.

5.2 Precautions for Installing the Q Series Large Type Base Unit (AnS Series Size)

(1) Module installation position

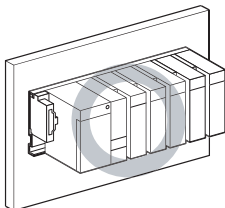
Provide the following distances between the top and bottom of the module and other structure or components to ensure ventilation for heat dissipation and to change the module easily.



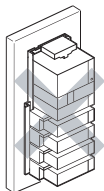
- *1 30mm or more is required when wiring duct is 50mm or less in height. Otherwise, at least 40mm is required.
- *2 20mm or more is required when the extension cable is connected without removing adjacent modules.
- *3 80mm or more is required when the connector type is used. For Q8BAT, 80mm or more is required when the connection cable for Q8BAT is used.
- *4 For Q7BAT, 45mm or more is required.
- *5 For Q8BAT, 30mm or more is required from both top and bottom sides of the module.
- *6 For Q8BAT, 5mm or more is required from both left and right sides of the module.

(2) Module installation direction

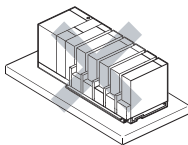
- (a) Install the programmable controller in the direction shown below to ensure ventilation for heat dissipation.



(b) Do not install it in the directions shown below.

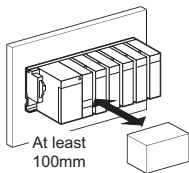


Vertical mounting



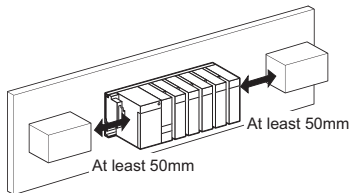
Horizontal installation

- (3) Install the base unit on a flat surface.
When the base unit is installed on an uneven surface, the printed-circuit board may be strained, resulting in a malfunction.
- (4) Do not install the programmable controller together with a vibration source such as a large electromagnetic contactor or non-fuse breaker. Install the programmable controller to the separate panel or isolate it as far as possible.
- (5) Provide the following distances between the programmable controller and devices (contactor and relay) to avoid the influence of radiated noise or heat.
- Device installed in front of the programmable controller: 100mm or more
 - Device installed on either side of the programmable controller: 50mm or more



At least
100mm

Contactor, relay, etc.



At least 50mm

At least 50mm

5.3 Mounting and Installation of the Q Series Large Type Base Unit (AnS Series Size)

The following explains how to mount or install the Q series large type base unit (AnS series size).

(1) Installing a base unit on a panel

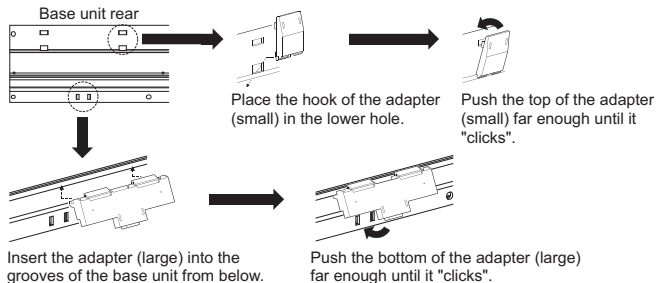
To install a base unit on a panel such as a control panel, tighten the base unit mounting screws.

(2) Mounting a base unit on a DIN rail

The following shows a procedure to mount the base unit on a DIN rail.

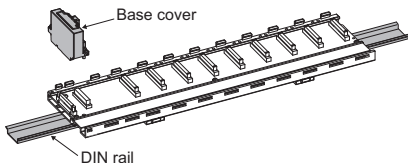
(a) Installing DIN rail mounting adapter

The following figures show how to install the DIN rail mounting adapters on the base unit rear.



(b) Mounting on a DIN rail

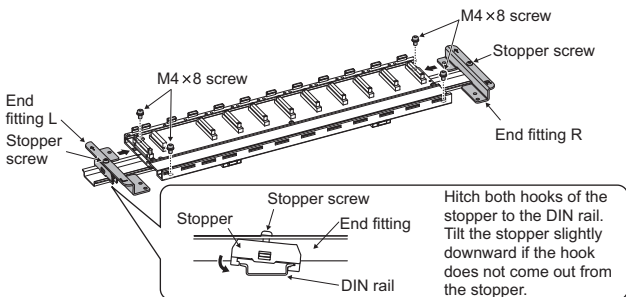
Remove the base cover and mount the base unit on a DIN rail. Put the base cover on after the completion of the next step, (c). When extension bases are used, determine the number of extension stages in this step.



(c) Attaching the end fitting

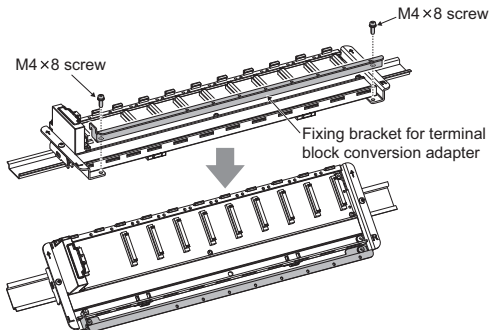
Attach the end fitting L and R on the both ends of a DIN rail. Slide them to the position of the end fitting mounting holes on the base unit. Loosen the stopper screws and hitch the hooks of the stopper to the DIN rail.

Tighten the bracket fixing screws on each corner to firmly lock the end fitting in place.



(d) Fixing bracket for terminal block conversion adapter installation

Hook the fixing bracket for terminal block conversion adapter to the bottom side of a DIN rail. Place the bracket to the mounting hole for the end fitting L and R, then tighten the bracket fixing screws on each side to fix the bracket.

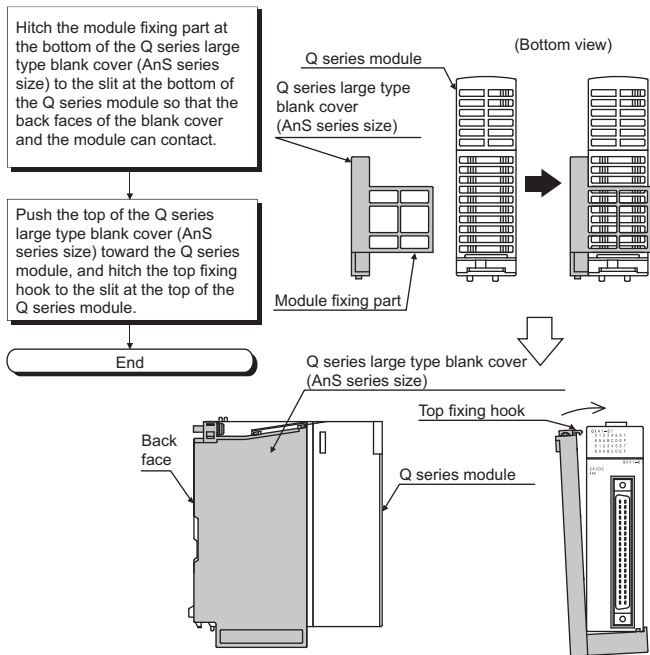


5.4 Mounting/Removing the Q Series Module

The following shows procedures for mounting the Q series module on the Q series large type base unit (AnS series size).


(1) Attaching the Q series large type blank cover

The following shows a procedure for attaching the Q series large type blank cover (AnS series size) to the Q series module.



Point

When mounting the Q series module with Q series large type blank cover (AnS series size) on the Q series large type base unit (AnS series size), always tighten the module fixing screws of the Q series large type blank cover (AnS series size).

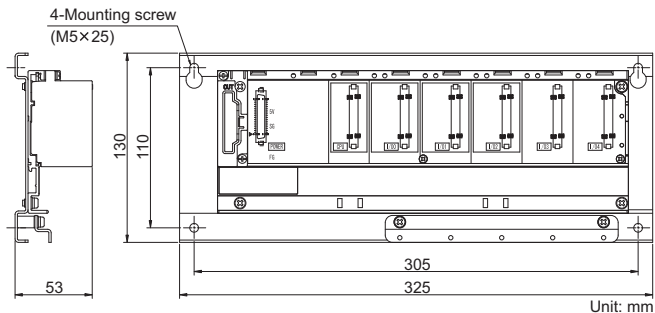
- (2) Removing the Q series large type blank cover (AnS series size)
To remove the Q series large type blank cover (AnS series size) from the Q series module, remove the bottom fixing hook first.
- (3) Mounting to/removal from the Q series large type base unit
For procedures of mounting/removing the Q series module on/from the Q series large type base unit, refer to the following manual.
-  QCPU User's Manual (Hardware Design, Maintenance and Inspection)

6. EXTERNAL DIMENSIONS

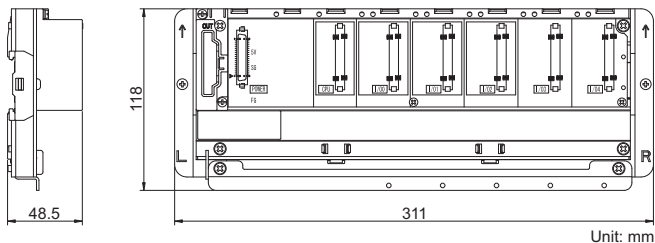
The following shows external dimensions diagrams of the Q series large type base unit (AnS series size) and Q series large type blank cover (AnS series size).

6.1 Q Series Large Type Base Unit (AnS Series Size)

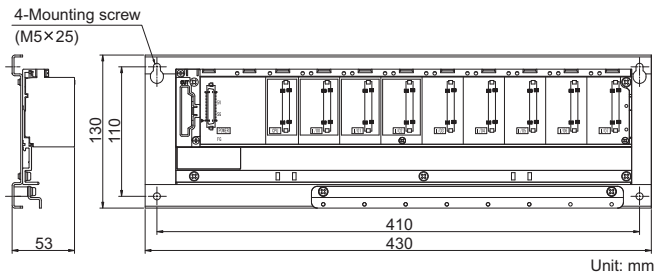
(1) Q35BLS



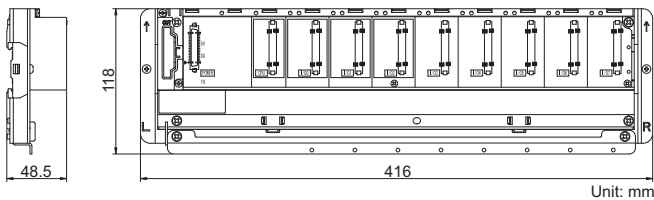
(2) Q35BLS-D



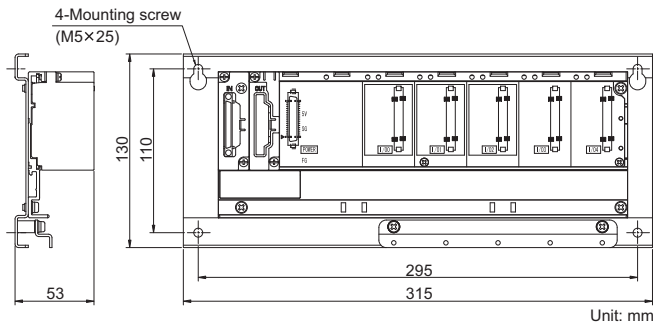
(3) Q38BLS



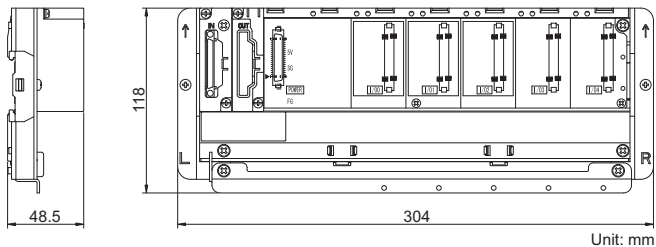
(4) Q38BLS-D



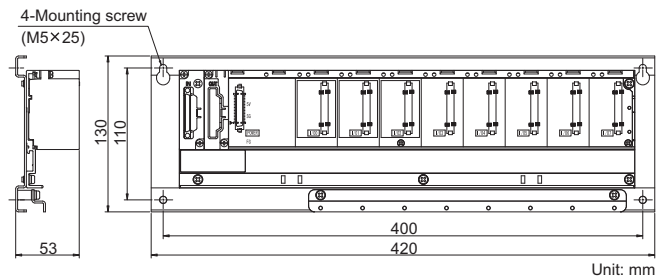
(5) Q65BLS



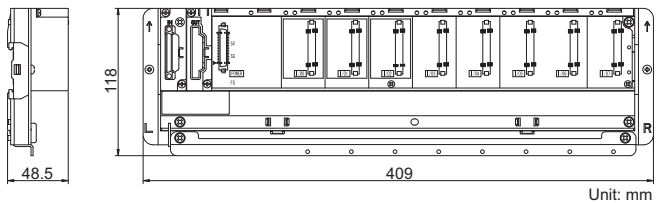
(6) Q65BLS-D



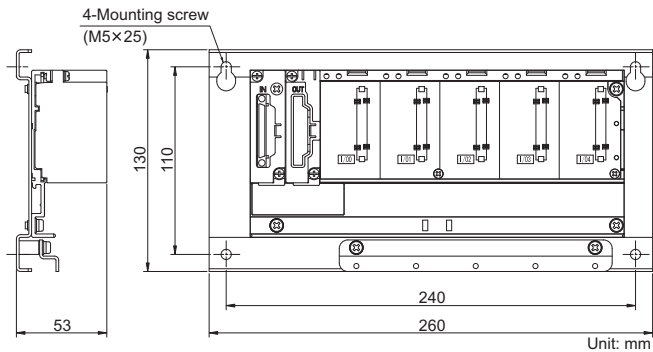
(7) Q68BLS



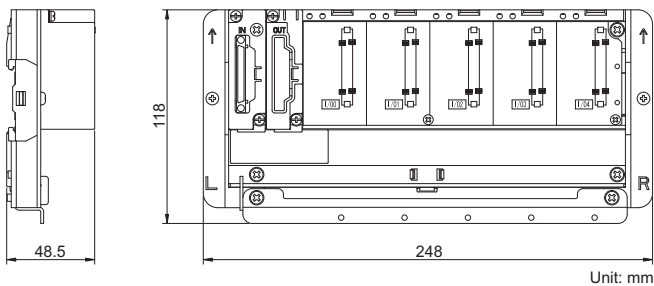
(8) Q68BLS-D



(9) Q55BLS

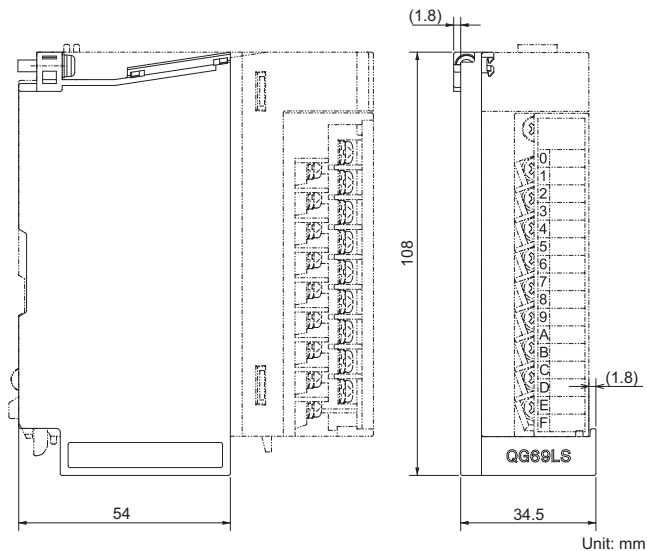


(10) Q55BLS-D



6.2 Q Series Large Type Blank Cover (AnS Series Size)

(1) QG69LS



WARRANTY

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.

Country/ Region	Sales office/ Tel	Country/ Region	Sales office/ Tel
USA	MITSUBISHI ELECTRIC AUTOMATION, INC. 500 Corporate Woods Parkway, Vernon Hills, IL 60061, U.S.A. Tel : +1-847-478-2100	Turkey	MITSUBISHI ELECTRIC TURKEY A.Ş Umraniye Branch Serifali Mahallesi Nutuk Sokak No:5, TR-34775 Umraniye/Istanbul, Turkey Tel : +90-216-526-3990
Mexico	MITSUBISHI ELECTRIC AUTOMATION, INC. Mexico Branch Mariano Escobedo #69, Col. Zona Industrial, Tlalpanpanita Edo. Mexico, C.P.54030 Tel : +52-55-3067-7500	UAE	MITSUBISHI ELECTRIC EUROPE B.V. Dubai Branch Dubai Silicon Oasis, P.O.BOX 341241, Dubai, U.A.E. Tel : +971-4-3724716
Brazil	MITSUBISHI ELECTRIC DO BRASIL COMÉRCIO E SERVIÇOS LTDA. Avenida Adelinor Cardana, 293, 21 andar, Bethaville, Barueri SP, Brazil Tel : +55-11-4689-3000	South Africa	ADROIT TECHNOLOGIES 20 Waterford Office Park, 189 Witkoppen Road, Fourways, South Africa Tel : +27-11-658-8100
Germany	MITSUBISHI ELECTRIC EUROPE B.V. German Branch Mitsubishi-Electric-Platz 1, 40882 Ratingen, Germany Tel : +49-2102-486-0	China	MITSUBISHI ELECTRIC AUTOMATION (CHINA) LTD. No.1386 Hongqiao Road, Mitsubishi Electric Automation Center, Shanghai, China Tel : +86-21-2322-3030
UK	MITSUBISHI ELECTRIC EUROPE B.V. UK Branch Travellers Lane, Hatfield, Hertfordshire, AL10 8XB, U.K. Tel : +44-1707-28-8780	Taiwan	SETSUYO ENTERPRISE CO., LTD. 6F, No.105, Wugong 3rd Road, Wugu District, New Taipei City 24889, Taiwan Tel : +886-2-2299-2499
Ireland	MITSUBISHI ELECTRIC EUROPE B.V. Irish Branch Westgate Business Park, Ballymount, Dublin 24, Ireland Tel : +353-1-4198800	Korea	MITSUBISHI ELECTRIC AUTOMATION KOREA CO., LTD. 7F-9F, Gangseo Hangang Xi-tower A, 401, Yangcheon-ro, Gangseo-Gu, Seoul 07528, Korea Tel : +82-2-3660-9530
Italy	MITSUBISHI ELECTRIC EUROPE B.V. Italian Branch Centro Direzionale Colleoni-Palazzo Sirio Viale Colleoni 7, 20864 Agrate Brianza(Milano) Italy Tel : +39-039-60531	Singapore	MITSUBISHI ELECTRIC ASIA PTE. LTD. 307, Alexandra Road, Mitsubishi Electric Building, Singapore 159943 Tel : +65-6473-2308
Spain	MITSUBISHI ELECTRIC EUROPE, B.V. Spanish Branch Carretera de Rubí, 76-80-Appdo. 420, 08190 Sant Cugat del Vallés (Barcelona), Spain Tel : +34-935-65-3131	Thailand	MITSUBISHI ELECTRIC FACTORY AUTOMATION (THAILAND) CO., LTD. 12th Floor, SV City Building, Office Tower 1, No. 896/19 and 20 Rama 3 Road, Kwaeng Bangpongpanng, Khet Yannawa, Bangkok 10120, Thailand Tel : +66-2682-6522
France	MITSUBISHI ELECTRIC EUROPE B.V. French Branch 25, Boulevard des Bouvets, 92741 Nanterre Cedex, France Tel : +33-1-55-68-55-68	Vietnam	MITSUBISHI ELECTRIC VIETNAM COMPANY LIMITED Hanoi Branch 6th Floor, Detech Tower, 8 Ton That Thuyet Street, My Dinh 2 Ward, Nam Tu Liem District, Hanoi, Vietnam Tel : +84-4-3937-8075
Czech Republic	MITSUBISHI ELECTRIC EUROPE B.V. Czech Branch Avenir Business Park, Radlicka 751/113e, 158 00 Praha5, Czech Republic Tel : +420-251-551-470	Indonesia	PT. MITSUBISHI ELECTRIC INDONESIA Gedung Jaya 11th Floor, J.L. MH. Thamrin No.12, Jakarta Pusat 10340, Indonesia Tel : +62-21-3192-6461
Poland	MITSUBISHI ELECTRIC EUROPE B.V. Polish Branch ul. Krakowska 50, 32-083 Balice, Poland Tel : +48-12-347-65-00	India	MITSUBISHI ELECTRIC INDIA PVT. LTD. Pune Branch Emerald House, EL-3, J Block, M.I.D.C., Bhosari, Pune-411026, Maharashtra, India Tel : +91-20-2710-2000
Sweden	MITSUBISHI ELECTRIC EUROPE B.V. (Scandinavia) Fjellievägen 8, SE-22736 Lund, Sweden Tel : +46-8-625-10-00	Australia	MITSUBISHI ELECTRIC AUSTRALIA PTY. LTD. 348 Victoria Road, P.O. Box 11, Rydalmere, N.S.W 2116, Australia Tel : +61-2-9684-7777
Russia	MITSUBISHI ELECTRIC (RUSSIA) LLC St. Petersburg Branch Piskarevsky pr. 2, bld 2, lit "Sch", BC "Benua", office 720; 195027 St. Petersburg, Russia Tel : +7-812-633-3497		

MITSUBISHI ELECTRIC CORPORATION

HEAD OFFICE : TOKYO BUILDING, 2-7-3 MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN
NAGOYA WORKS : 1-14, YADA-MINAMI 5-CHOME, HIGASHI-KU, NAGOYA, JAPAN

When exported from Japan, this manual does not require application to the Ministry of Economy,
Trade and Industry for service transaction permission.

Specifications subject to change without notice.