MITSUBISHI ELECTRIC

Changes for the Better

for a greener tomorrow eco Changes

Programmable Controllers
MELSEC-Q series
MELSECWinCPU module

Fitting a highly reliable Windows® PC

into the MELSEC-Q series slot

MELSEC Q series

Powered by CONTEC

with Windows® Embedded Standard 2009

**The highly reliable Windows® PC,
compatible with FA environments,
now fits into just two slots of the MELSEC-Q series module.**

High performance compressed into the compact size body

- High performance PC has been compressed into a minimal 2-slot mounting space thus reducing the installation space of devices.
- Multiple CPU configuration of the MELSEC-Q series PLC enables seamless processing of information and control data.

Reliable and resistant to harsh FA environment

- A high environment resistance to meet FA specifications is realized by eliminating the hard disk and fan.
- Data is securely protected with double write protect function on the built-in SSD.

Use Windows® hardware and software without modifications

- Windows® Embedded Standard 2009 as the operating system ensures the same performance and ease-of-use of a general-purpose PC.
- The Intel® Atom™ processor reduces the power consumption while attaining a high performance.
- The variety of interfaces provided as a standard allows systems to be configured using the web, internet or intranet.

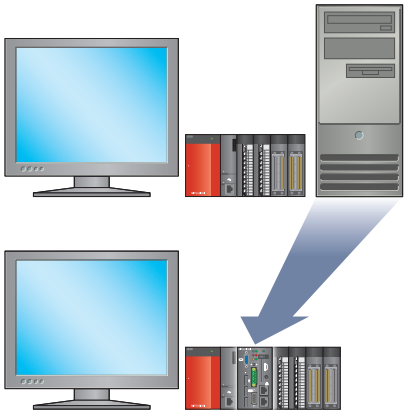
INDEX

Features

Downsized to just the size of two slots

Easily assemble this space-saving module into your system

Since less controller space is required, systems can be designed flexibly.

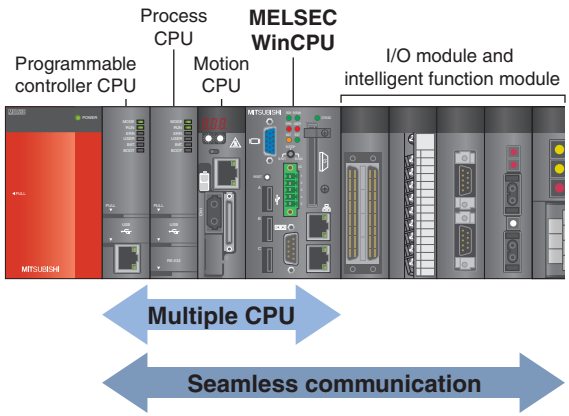


Supporting multiple CPU systems

Seamlessly coordinate between control and computing

The multiple CPU configuration allows between programmable controller CPU, motion CPU and process CPU to coordinate seamlessly. This reduces excess load on the communication processes, ensures independence by dispersing functions, and increases the throughput.
The MELSEC-Q series I/O module and intelligent function modules can be used directly at high speed with bus communication.

* Communication operation using the multiple CPU high-speed area is not possible.



Highly reliable and durable performance for FA environment

HD-less and fanless CPU module

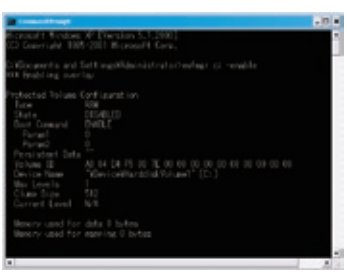
- The hard disk has been replaced with a 4GB SSD for the operating system and a CompactFlash Card as the external memory device.
  This system is perfect for use in areas subject to vibration or impact and for long continuous operation.
  A model which can be booted-up from a CompactFlash Card is also available.
- By eliminating the fan, there will be no noise during cooling.
- Fully functional at ambient temperature of 55°C, where general-purpose PCs cannot be used.

Double write protect function

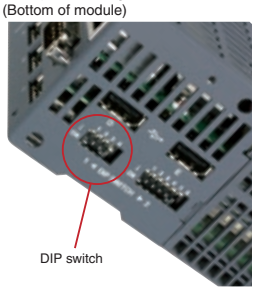
Securely protecting your data on the SSD

The double write protect function protects with both the software and hardware in the SSD from viruses and illegal writing caused by mis-operations.

Write protect by software
Windows® Embedded Standard 2009 EWF function



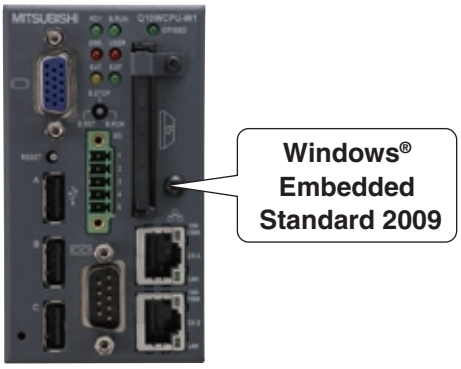
Write protect by hardware
Write protect using DIP switch (Bottom of module)



Windows® Embedded Standard 2009 operating software

Realizing the same performance and ease-of-use as a general-purpose PC

Windows® Embedded Standard 2009, an operating system for embedded systems, supports the same operability and programming languages as general-purpose PCs.



OS customization

Contact CONTEC for more information on adding modules, etc., to customize Windows® Embedded Standard 2009 incorporated in MELSECWinCPU.
CONTEC Co.,Ltd.
URL http://www.contec.com/
Overseas Sales Representative:
TEL +81-6-6477-5219 FAX +81-6-6477-1692

Intel® Atom™ Processor CPU

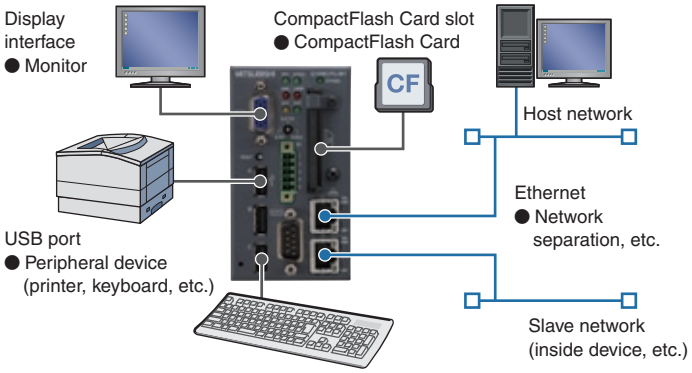
Attaining high performance with low power consumption

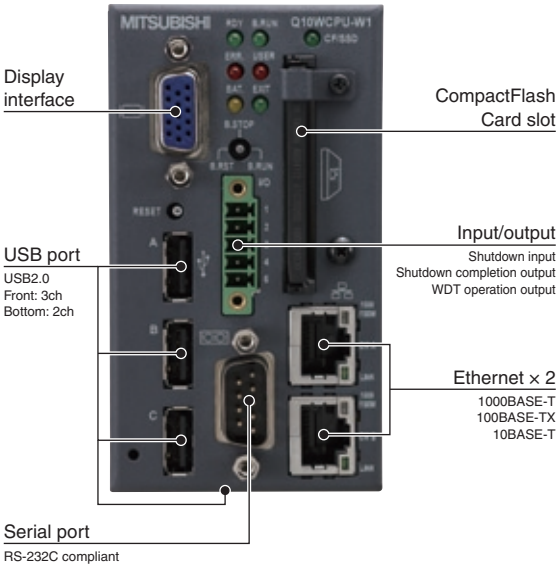
The energy saving platform Intel® Atom™ processor adopted for the CPU ensures a powerful performance with a low power consumption.

Various standard interfaces

Build a system using web, internet or intranet

MELSECWinCPU has two Ethernet (1000BASE-T/100BASE-TX/10BASE-T) channels enabling coordination with host servers to be reinforced and the network to be divided according to applications.
The standard highly universal USB2.0 makes it easy to select peripheral devices, and the standard CompactFlash slot allows a CompactFlash Card to be used for the external storage device.





Product Lineup

MELSECWinCPU module

● **Q10WCPU-W1-E**
(Built-in SSD bootable model)

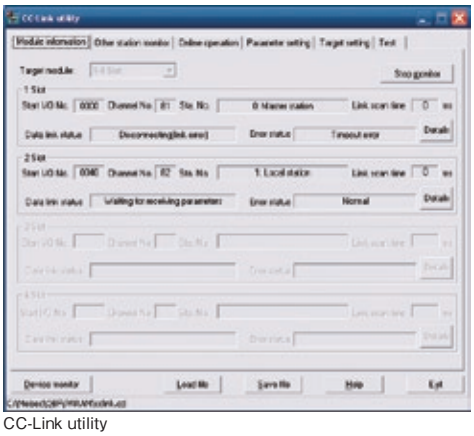
● **Q10WCPU-W1-CFE**
(CompactFlash Card bootable model)
The CompactFlash Card contains the entire system, including the operating system, so even if MELSECWinCPU fails, the system can be restored quickly just be replacing the module.

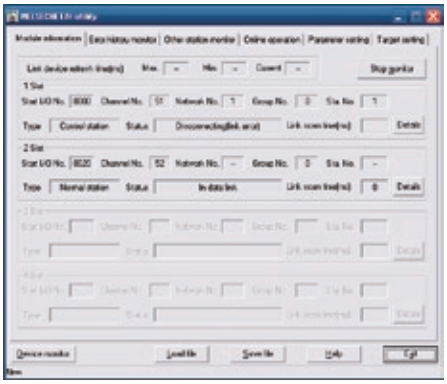
MELSECWinCPU setting utilities

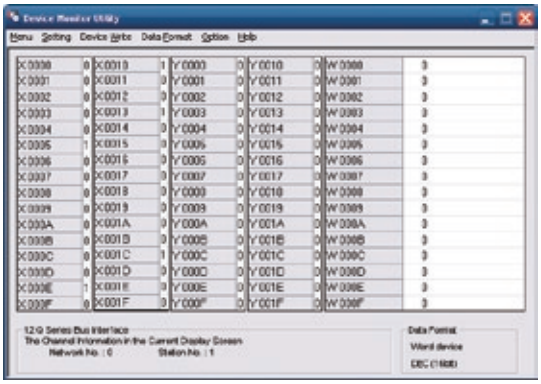
Simple settings with dedicated setting utilities

Various settings including the MELSECWinCPU module I/O assignments and multiple CPU settings can all be completed easily with the MELSECWinCPU setting utilities.
The utilities also allow specifying and executing parameters of CC-Link utility and MELSECNET/H modules and device monitoring of accessing target system.


MELSECWinCPU setting utility


CC-Link utility


MELSECNET/H utility


Device monitor utility

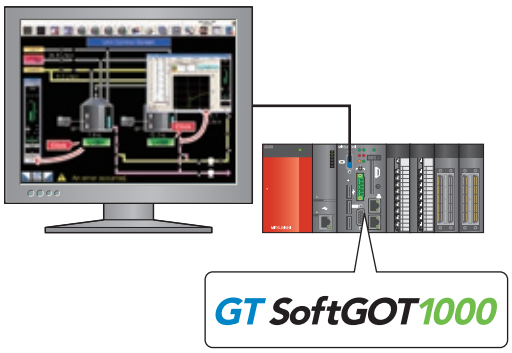
GT SoftGOT1000 Version 3

Coming soon

Condensing the various functions of GOT into GOT1000 for MELSECWinCPU

GT SoftGOT1000 is the HMI software for realizing GOT functions with MELSECWinCPU.
The same monitoring as the GOT1000 series is possible when connected to various devices such as Mitsubishi Electric programmable controllers.
In addition, GOT project data can be used without modification.
Experience high quality convenience with the features of GOT and advantages of MELSECWinCPU.

* GT SoftGOT1000 Version 3 is the software included in GT Works3.
A separate license key is required.



MX Component

Coming soon

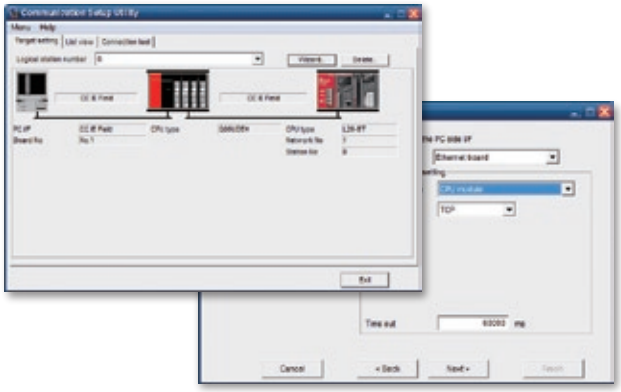
Easily connect MELSECWinCPU and programmable controller

MX component is the Active X® control library which makes it easy to realize the communication process from MELSECWinCPU to programmable controller regardless of protocol.
Complicated programs for serial communication and Ethernet communication can be developed with simple steps by using MX Component.

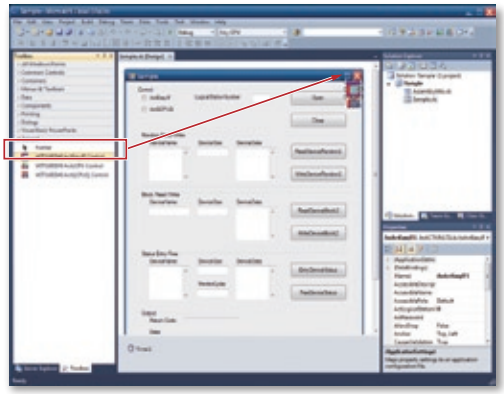
Greatly improve your development efficiency

Settings for accessing the programmable controller CPU for communication can be easily set with the wizard-type configuration utility.
Once configured, the programmable controller CPU can be accessed easily by designating the logical station number registered with the configuration utility.

① Set the communication conditions according to the Wizard.
(Non-wizard type configuration, which is set with a program, is also available.)



② Paste the MX Component control icon in the form, and set the communication path number specified in ① as a property for the control.



③ Then, describe the program for retrieving the device.

④ Completed.

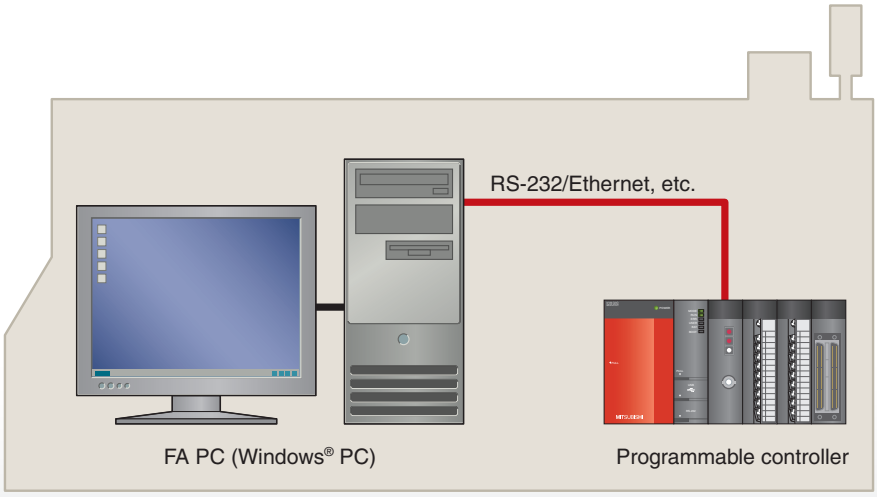
Example of Building Systems

CASE 1

Downsize your system!

Before incorporating MELSECWinCPU

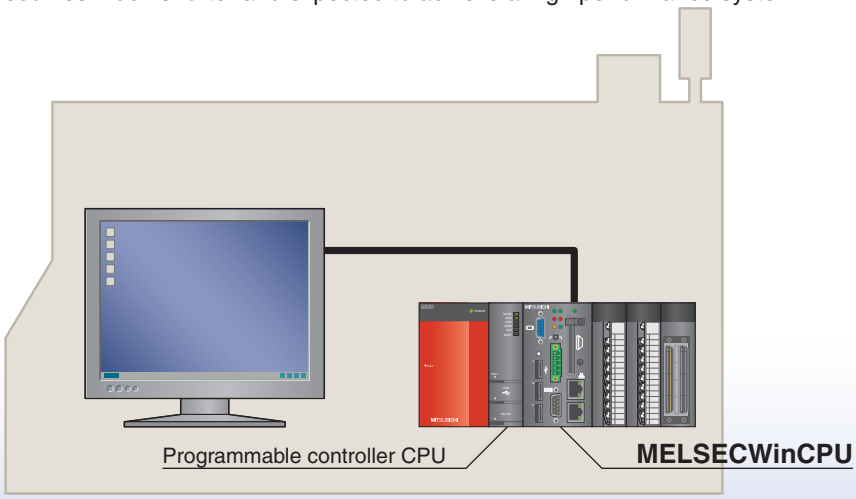
Embedding a Windows® system in an FA PC occupies plenty of space, and made it difficult to downsize the system.



Incorporating MELSECWinCPU

After incorporating MELSECWinCPU

- Less controller space is required.
- MELSECWinCPU can run the programs which are in operation in FA PC (Windows® PC) without modification.
- Since a programmable controller CPU and an MELSECWinCPU are connected with a bus, the data communication time becomes much shorter and expected to achieve a high performance system.

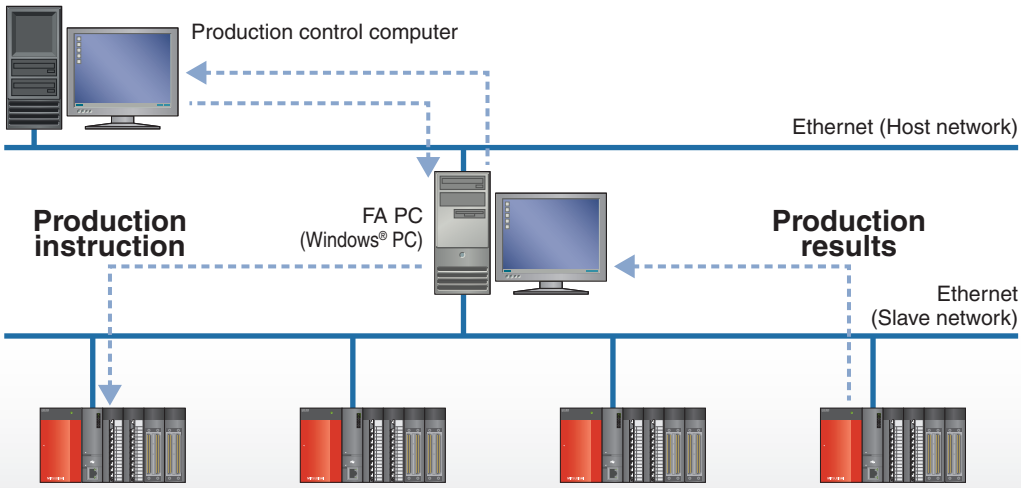


CASE 2

Directly connect with the production control system!

Before incorporating MELSECWinCPU

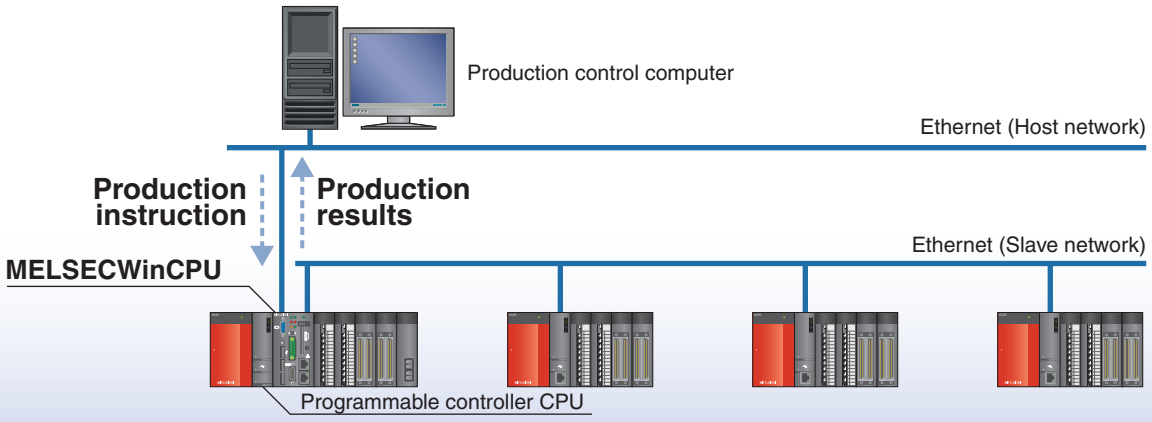
In traditional production lines, a dedicated FA PC had to be installed as an interface between the production control computer and facility programmable controller.
This posed various problems such as a dedicated installation space and extra wiring between the programmable controllers.



Incorporating MELSECWinCPU

After incorporating MELSECWinCPU

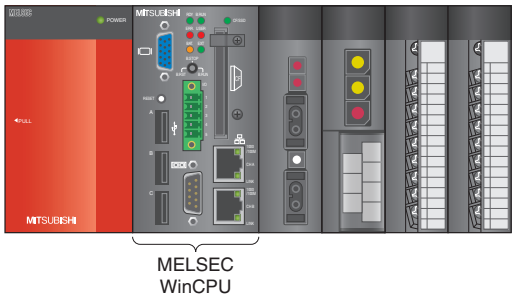
- The functions of the conventional FA PC can be embedded in the programmable controller base by that saving space and reducing wiring.
- MELSECWinCPU can run the data communication programs which are in operation in FA PC (Windows® PC) without modification.
- Since an MELSECWinCPU is connected to the equipment programmable controller with a bus, the data communication time becomes much shorter and expected improvement of line cycle time.



CPU Configuration Diagrams

■ Single-CPU configuration with this product as only one CPU

Module No.1 ····· MELSECWinCPU

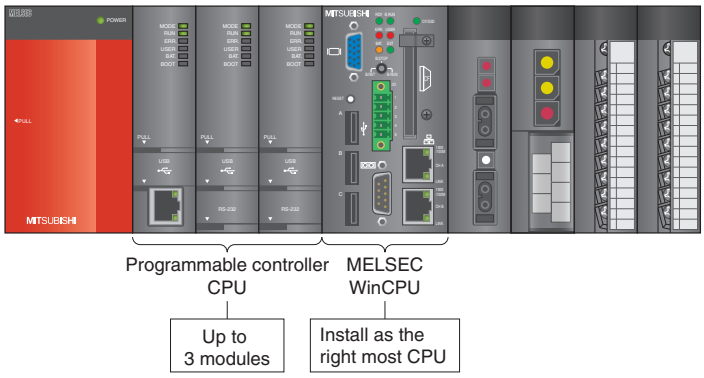


■ Multiple CPU configuration with this product in combination with programmable controller CPUs

Maximum configuration with this product and three programmable controller CPUs

Modules No.1 - 3 ····· Programmable controller CPU

Module No. 4 ····· MELSECWinCPU

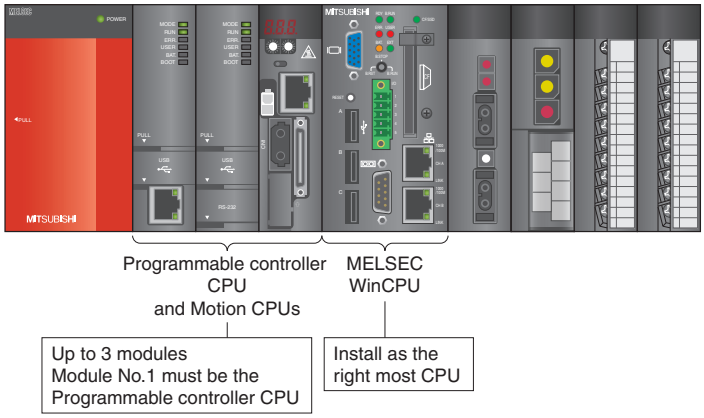


■ Multiple CPU configuration with this module in combination with a programmable controller CPU and motion CPUs

Module No.1 ····· Programmable controller CPU

Modules No.2 - 3 ····· Motion CPU

Module No.4 ····· MELSECWinCPU



Multiple CPU Configuration

■ Multiple CPU Configuration Including this product

This product supports both of the single-CPU configuration with the Module as only one CPU and the multiple CPU configuration with this product combined with other CPUs.
The maximum number of this product to be installed is only one.

■ Combination of CPUs

Main base unit (Q3□B)

— : The combination is impossible.

Module No.1		Number in which CPU module since Module No.2 can be installed							Maximum number of modules to be installed (Module No.1 is contained.)
		High performance model QCPU	Universal model QCPU		Process CPU	Motion CPU		MELSEC WinCPU	
			Q00UCPU Q01UCPU Q02UCPU	Q03UDCPU Q04UDHCPU Q06UDHCPU Q10UDHCPU Q13UDHCPU Q20UDHCPU Q26UDHCPU Q03UDECPU Q04UDEHCPU Q06UDEHCPU Q10UDEHCPU Q13UDEHCPU Q20UDEHCPU Q26UDEHCPU Q50UDEHCPU Q100UDEHCPU		Q172CPUN Q173CPUN Q172CPUN-T Q173CPUN-T Q172HCPU Q173HCPU Q172HCPU-T Q173HCPU-T	Q172DCPU Q173DCPU		
Basic model QCPU		—	—	—	—	1	—	1	3
High performance model QCPU / Process CPU		3		3	3	3	—	1	4
Universal model QCPU	Q00UCPU Q01UCPU Q02UCPU	—	—	—	—	1	—	1	3
	Q03UDCPU Q04UDHCPU Q06UDHCPU Q10UDHCPU Q13UDHCPU Q20UDHCPU Q26UDHCPU Q03UDECPU Q04UDEHCPU Q06UDEHCPU Q10UDEHCPU Q13UDEHCPU Q20UDEHCPU Q26UDEHCPU Q50UDEHCPU Q100UDEHCPU	3	—	3	3	—	—	1	4

Multiple CPU high speed main base unit (Q3□DB)

— : The combination is impossible.

Module No.1		Number in which CPU module since Module No.2 can be installed							Maximum number of modules to be installed (Module No.1 is contained.)
		High performance model QCPU	Universal model QCPU		Process CPU	Motion CPU		MELSEC WinCPU	
			Q00UCPU Q01UCPU Q02UCPU	Q03UDCPU Q04UDHCPU Q06UDHCPU Q10UDHCPU Q13UDHCPU Q20UDHCPU Q26UDHCPU Q03UDECPU Q04UDEHCPU Q06UDEHCPU Q10UDEHCPU Q13UDEHCPU Q20UDEHCPU Q26UDEHCPU Q50UDEHCPU Q100UDEHCPU		Q172CPUN Q173CPUN Q172CPUN-T Q173CPUN-T Q172HCPU Q173HCPU Q172HCPU-T Q173HCPU-T	Q172DCPU Q173DCPU		
Basic model QCPU		—	—	—	—	—	—	1	2
High performance model QCPU / Process CPU		3		3	3	—	—	1	4
Universal model QCPU	Q00UCPU Q01UCPU Q02UCPU	—	—	—	—	—	—	1	2
	Q03UDCPU Q04UDHCPU Q06UDHCPU Q10UDHCPU Q13UDHCPU Q20UDHCPU Q26UDHCPU Q03UDECPU Q04UDEHCPU Q06UDEHCPU Q10UDEHCPU Q13UDEHCPU Q20UDEHCPU Q26UDEHCPU Q50UDEHCPU Q100UDEHCPU	3	—	3	3	—	3	1	4

Notes :
(1) This product cannot be Module No.1 in the multiple CPU configuration. The multiple CPU configuration requires a programmable controller CPU.
(2) For the multiple CPU configuration, place this product at the right end of a series of CPUs.
(3) Although a total of up to three programmable controller CPUs and motion CPUs can be installed, the number of modules installable is restricted by the power capacity of the power supply module (Q61P).

Maximum Number of modules Installed and Maximum Number of I/O Channels

Item	Specifications
Maximum number of stages added	7 stages
Maximum number of I/O modules installed	64 modules
Maximum number of I/O points	4,096 points
Maximum number of MELSECNET/H modules installed	4 modules
Maximum number of CC-Link modules installed	8 modules
Maximum number of interrupt modules installed	1 module
Maximum number of other intelligent function modules installed	64 modules
Notes	(1) Up to seven expansion base units can be added. (2) The total length of extension cables must be 13.2 m. (3) When using an extension cable, do not bundle it or route it near any main circuit (high voltage, large current) line. (4) Set the expansion stage numbers in ascending order without number duplication. (5) Connect each extension cable from the extension cable connector OUT on one base unit to the extension cable connector IN on the expansion base unit at the next stage. (6) Installing 65 modules or more results in an error.

Specifications

■ General Specifications

Item	Specifications					
Surrounding air temperature	0 to 55°C					
Surrounding storage temperature	–25 to 75°C					
Surrounding operating humidity	5 to 95%RH (No condensation)					
Surrounding storage humidity	5 to 95%RH (No condensation)					
Vibration resistance	Confor ming to JIS B 3502 IEC61131-2		Frequency	Acceleration	Amplitude	Sweep count
		With intermittent vibration	5 ≤ f < 8.4Hz	—	3.5mm	Tested 10 times (for 80 minutes) in each of the X, Y, and Z directions
			8.4 ≤ f < 150Hz	9.8m/s²	—	
		With continuous vibration	5 ≤ f < 8.4Hz	—	1.75mm	—
			8.4 ≤ f < 150Hz	4.9m/s²	—	
Shock resistance	Conforming to JIS B 3502, IEC61131-2 (147m/s², 3 times in each of 3 direction)					
Operating ambiance	No corrosive gas					
Operating altitude	0 to 2000m*1					
Installation location	Inside the control panel					
Overvoltage category*2	II or less					
Pollution degree*3	2 or less					
Equipment category	Class I					

*1 The module may fail and cannot be used in an environment in which the air is compressed to over the atmospheric pressure generated at an altitude of around 0m.
*2 The overvoltage category of a device indicates which distributor in the range from public distribution network to.
Machinery the device is assumed to be connected to. Category II applies to devices to which power is supplied from fixed facilities. The surge voltage of those devices is 2500V whose rated voltage is 300V.
*3 The index indicating the degree to which conductive substances are generated in the operating environment.
Pollution level 2 indicates the environment that generates only nonconductive pollutants while allowing accidental condensation to cause temporary conduction.

■ Performance Specifications

Item		Specifications	
		Q10WCPU-W1-E	Q10WCPU-W1-CFE
CPU		Intel® Atom™ Processor N450 1.66GHz	
Chipset		Intel® ICH8M	
Memory	L1 Cache	Instruction 32KB + Data 24KB	
	L2 Cache	512KB	
	Main memory	1GB (3.3V 200-pin DDR2 SO-DIMM DDR667Socket x 1)	
Video	Controller	N450 built-in	
	Video RAM	Main memory shared	
	Display interface	Analog-RGB 15-pin HD-SUB connector	
	Resolution	1,400 x 1,050 @60Hz (16 million colors)	
Serial Interface		RS-232C-compliant: 1ch (9-pin D-SUB connector) baudrate: 50 - 115200bps	
LAN	Interface	1000BASE-T/100BASE-TX/10BASE-T RJ-45 connector × 2	
	Controller	Intel® 82574L	
CompactFlash Card slot		CF CARD Type I (Only for the memory card of IDE connection)*1, Indication: access LED (green) × 1*2	CF CARD Type I (Only for the memory card of IDE connection)*1, Indication: access LED (green) × 1*2, CompactFlash Card 4GB.
Built-in SSD*3		Built-in flash drive 4GB	
USB Interface		USB2.0-complicant 5ch (front 3ch, bottom 2ch) Transfer rate: 480Mbps Supply power: +5V each channel 0.5A Max.*4	
Watch dog timer		2ch Time-up period: system WDT 20msec - 2sec, user WDT 10msec - 10sec	
General I/O *5, *6		Terminal block [1, 2] Input for shutdown (current drive input) Terminal block [3] Output to notify shutdown completion (open collector output) Terminal block [4] Output to notify the start of watch dog timer (open collector output)	
RTC/CMOS		Lithium battery backup life: 10 years or more (when no power input, at 25°C) The real-time clock is accurate within ±3 minutes (at 25°C) per month	
Indication		RDY (green), B.RUN (green), ERR. (red), USER (red), BAT. (orange), EXIT (green), CF/SSD (green)	
Control		Reset PUSH switch, DIP switch 4-pole, DIP switch 6-pole, 3-position toggle switch	
Supported OS		Windows® Embedded Standard 2009 (Pre-installed)	
The number of base unit slots this module occupies		2 slots	
Physical dimensions [mm]		55.2(W) × 115.0(D) × 98.0(H) (Excluding protrusions)	
DC5V internal current consumption		3.0A (Max.) (This does not include the current consumption by any peripheral devices (such as the CompactFlash Card and USB device))	
Acceptable momentary power failure time		Depending on the power supply module	
Weight		440g	450g (Including CompactFlash Card, Fittings and screws to fix a CompactFlash Card)

*1 When power is on, you can not push in / pull out a CompactFlash Card. Memory card is supported but other purposes are not supported.
*2 Access LED shows the access of both a CompactFlash Card and built-in SSD.
*3 Built-in SSD is used as OS space. SSD has rewritable life (1 million times).
*4 Current capacity shows the maximum value the connector supports. But the actual value is limited because the total current cannot exceed the capacity of the power supply module. Therefore the actual available value may be less than 0.5A.
*5 General I/O is not evaluated by UL.
*6 When you want to use it in noisy environments, we recommend you to use the following noise filter.

Name	Type	Maker
Noise filter for general I/O	NAC-06-472	Mfd. By COSEL

Product List

*Always refer to user's manuals for information on usable modules, restrictions, etc. before using.

CPU

[Legend] DB : Double brand product (Note) NEW : Recently released product SOON : Product available soon

Product		Model	Outline
MELSEC WinCPU	Built-in SSD bootable model	Q10WCPU-W1-E DB	No. of I/O points: 4096 points, peripheral connection ports: USB x 5, RS-232, Analog RGB, Ethernet x 2 CompactFlash card: Usable OS:Windows® Embedded Standard 2009 (English edition)
	CompactFlash Card bootable model	Q10WCPU-W1-CFE DB	No. of I/O points: 4096 points, peripheral connection ports: USB x 5, RS-232, Analog RGB, Ethernet x 2 CompactFlash card: Usable (The unit is equipped with a 4GB CompactFlash card for OS booting.) OS:Windows® Embedded Standard 2009 (English edition)
Universal model QCPU		Q00UCPU	No. of I/O points: 1024 points, no. of I/O device points: 8192 points, program capacity: 10 k steps, basic operation processing speed (LD instruction): 0.08 µs, program memory capacity: 40 KB, peripheral connection ports: USB and RS232, no memory card I/F
		Q01UCPU	No. of I/O points: 1024 points, no. of I/O device points: 8192 points, program capacity: 15 k steps, basic operation processing speed (LD instruction): 0.06 µs, program memory capacity: 60 KB, peripheral connection ports: USB and RS232, no memory card I/F
		Q02UCPU	No. of I/O points: 2048 points, no. of I/O device points: 8192 points, program capacity: 20 k steps, basic operation processing speed (LD instruction): 0.04 µs, program memory capacity: 80 KB, peripheral connection ports: USB and RS232, with memory card I/F
		Q03UDCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 30 k steps, basic operation processing speed (LD instruction): 0.02 µs, program memory capacity: 120 KB, multiple CPU high-speed communication, peripheral connection ports: USB and RS232, with memory card I/F
		Q04UDHCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 40 k steps, basic operation processing speed (LD instruction): 0.0095 µs, program memory capacity: 160 KB, multiple CPU high-speed communication, peripheral connection ports: USB and RS232, with memory card I/F
		Q06UDHCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 60 k steps, basic operation processing speed (LD instruction): 0.0095 µs, program memory capacity: 240 KB, multiple CPU high-speed communication, peripheral connection ports: USB and RS232, with memory card I/F
		Q10UDHCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 100 k steps, basic operation processing speed (LD instruction): 0.0095 µs, program memory capacity: 400 KB, multiple CPU high-speed communication, peripheral connection ports: USB and RS232, with memory card I/F
		Q13UDHCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 130 k steps, basic operation processing speed (LD instruction): 0.0095 µs, program memory capacity: 520 KB, multiple CPU high-speed communication, peripheral connection ports: USB and RS232, with memory card I/F
		Q20UDHCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 200 k steps, basic operation processing speed (LD instruction): 0.0095 µs, program memory capacity: 800 KB, multiple CPU high-speed communication, peripheral connection ports: USB and RS232, with memory card I/F
		Q26UDHCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 260 k steps, basic operation processing speed (LD instruction): 0.0095 µs, program memory capacity: 1040 KB, multiple CPU high-speed communication, peripheral connection ports: USB and RS232, with memory card I/F
	Built-in Ethernet type	Q03UDECPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 30 k steps, basic operation processing speed (LD instruction): 0.02 µs, program memory capacity: 120 KB, multiple CPU high-speed communication, peripheral connection ports: USB and Ethernet, with memory card I/F
		Q04UDEHCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 40 k steps, basic operation processing speed (LD instruction): 0.0095 µs, program memory capacity: 160 KB, multiple CPU high-speed communication, peripheral connection ports: USB and Ethernet, with memory card I/F
		Q06UDEHCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 60 k steps, basic operation processing speed (LD instruction): 0.0095 µs, program memory capacity: 240 KB, multiple CPU high-speed communication, peripheral connection ports: USB and Ethernet, with memory card I/F
		Q10UDEHCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 100 k steps, basic operation processing speed (LD instruction): 0.0095 µs, program memory capacity: 400 KB, multiple CPU high-speed communication, peripheral connection ports: USB and Ethernet, with memory card I/F
		Q13UDEHCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 130 k steps, basic operation processing speed (LD instruction): 0.0095 µs, program memory capacity: 520 KB, multiple CPU high-speed communication, peripheral connection ports: USB and Ethernet, with memory card I/F
		Q20UDEHCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 200 k steps, basic operation processing speed (LD instruction): 0.0095 µs, program memory capacity: 800 KB, multiple CPU high-speed communication, peripheral connection ports: USB and Ethernet, with memory card I/F
		Q26UDEHCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 260 k steps, basic operation processing speed (LD instruction): 0.0095 µs, program memory capacity: 1040 KB, multiple CPU high-speed communication, peripheral connection ports: USB and Ethernet, with memory card I/F
		Q50UDEHCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 500 k steps, basic operation processing speed (LD instruction): 0.0095 µs, program memory capacity: 2000 KB, multiple CPU high-speed communication, peripheral connection ports: USB and Ethernet, with memory card I/F
		Q100UDEHCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 1000 k steps, basic operation processing speed (LD instruction): 0.0095 µs, program memory capacity: 4000 KB, multiple CPU high-speed communication, peripheral connection ports: USB and Ethernet, with memory card I/F

Note: General specifications and product guarantee conditions of jointly developed products are different from those of MELSEC products.
For more information, please refer to the product manuals or contact your local Mitsubishi representative for details.

CPU

[Legend] DB : Double brand product NEW : Recently released product SOON : Product available soon

Product	Model	Outline
Basic model QCPU	Q00CPU	No. of I/O points: 1024 points, no. of I/O device points: 2048 points, program capacity: 8 k steps, basic operation processing speed (LD instruction): 0.16 µs, program memory capacity: 94 KB, peripheral connection ports: RS232, no memory card I/F
	Q01CPU	No. of I/O points: 1024 points, no. of I/O device points: 2048 points, program capacity: 14 k steps, basic operation processing speed (LD instruction): 0.1 µs, program memory capacity: 94 KB, peripheral connection ports: RS232, no memory card I/F
High Performance model QCPU	Q02CPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 28 k steps, basic operation processing speed (LD instruction): 0.079 µs, program memory capacity: 112 KB, peripheral connection ports: RS232, with memory card I/F
	Q02HCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 28 k steps, basic operation processing speed (LD instruction): 0.034µs, program memory capacity: 112 KB, peripheral connection ports: USB and RS232, with memory card I/F
	Q06HCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 60 k steps, basic operation processing speed (LD instruction): 0.034µs, program memory capacity: 240 KB, peripheral connection ports: USB and RS232, with memory card I/F
	Q12HCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 124 k steps, basic operation processing speed (LD instruction): 0.034µs, program memory capacity: 496 KB, peripheral connection ports: USB and RS232, with memory card I/F
	Q25HCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 252 k steps, basic operation processing speed (LD instruction): 0.034µs, program memory capacity: 1008 KB, peripheral connection ports: USB and RS232, with memory card I/F
Process CPU	Q02PHCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 28 k steps, basic operation processing speed (LD instruction): 0.034µs, program memory capacity: 112 KB, peripheral connection ports: USB and RS232, with memory card I/F
	Q06PHCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 60 k steps, basic operation processing speed (LD instruction): 0.034µs, program memory capacity: 240 KB, peripheral connection ports: USB and RS232, with memory card I/F
	Q12PHCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 124 k steps, basic operation processing speed (LD instruction): 0.034µs, program memory capacity: 496 KB, peripheral connection ports: USB and RS232, with memory card I/F
	Q25PHCPU	No. of I/O points: 4096 points, no. of I/O device points: 8192 points, program capacity: 252 k steps, basic operation processing speed (LD instruction): 0.034µs, program memory capacity: 1008 KB, peripheral connection ports: USB and RS232, with memory card I/F

Base

Main base	Q33B	3 slots, 1 power supply module required, for Q Series modules
	Q35B	5 slots, 1 power supply module required, for Q Series modules
	Q38B	8 slots, 1 power supply module required, for Q Series modules
	Q312B	12 slots, 1 power supply module required, for Q Series modules
Multiple CPU high speed main base	Q38DB	8 slots, 1 power supply module required, for Q Series modules
	Q312DB	12 slots, 1 power supply module required, for Q Series modules
Extension base	Q63B	3 slots, 1 power supply module required, for Q Series modules
	Q65B	5 slots, 1 power supply module required, for Q Series modules
	Q68B	8 slots, 1 power supply module required, for Q Series modules
	Q612B	12 slots, 1 power supply module required, for Q Series modules

Power supply

Power supply	Q61P	Input voltage: 100 to 240 V AC, output voltage: 5 V DC, output current: 6 A
	Q63P	Input voltage: 24 V DC, output voltage: 5 V DC, output current: 6 A
	Q64PN	Input voltage: 100 to 240 V AC, output voltage: 5 V DC, output current: 8.5 A
Power Supply with Life Detection	Q61P-D	Input voltage: 100 to 240 V AC, output voltage: 5 V DC, output current: 6A

Product List

I/O module

[Legend] DB : Double brand product NEW : Recently released product SOON : Product available soon

Product		Model	Outline
Input	AC	QX10	16 points, 100 to 120 V AC, response time: 20 ms, 16 points/common, 18-point terminal block
		QX10-TS	16 points, 100 to 120 V AC, response time: 20 ms, 16 points/common, 18-point spring clamp terminal block
		QX28	8 points, 100 to 240 V AC, response time: 20 ms, 8 points/common, 18-point terminal block
	DC (Positive common) *1	QX40	16 points, 24 V DC, response time: 1/5/10/20/70 ms, 16 points/common, positive common, 18-point terminal block
		QX40-TS	16 points, 24 V DC, response time: 1/5/10/20/70 ms, 16 points/common, positive common, 18-point spring clamp terminal block
		QX40-S1	16 points, 24 V DC, response time: 0.1/0.2/0.4/0.6/1 ms, 16 points/common, positive common, 18-point terminal block
		QX40H	16 points, 24 V DC, response time: 0/0.1/0.2/0.4/0.6/1 ms, 8 points/common, positive common, 18-point terminal block
		QX41 *2 *3	32 points, 24 V DC, response time: 1/5/10/20/70 ms, 32 points/common, positive common, 40-pin connector
		QX41-S1 *2	32 points, 24 V DC, response time: 0.1/0.2/0.4/0.6/1 ms, 32 points/common, positive common, 40-pin connector
		QX41-S2 *2 *3	32 points, 24 V DC, response time: 1/5/10/20/70 ms, 32 points/common, positive common, 40-pin connector
		QX42 *2	64 points, 24 V DC, response time: 1/5/10/20/70 ms, 32 points/common, positive common, 40-pin connector
		QX42-S1 *2	64 points, 24 V DC, response time: 0.1/0.2/0.4/0.6/1 ms, 32 points/common, positive common, 40-pin connector
	AC/DC	QX50	16 points, 48 V AC/DC, response time: 20 ms, 16 points/common, positive/negative common, 18-point terminal block
	DC sensor	QX70	16 points, 5/12 V DC, response time: 1/5/10/20/70 ms, 16 points/common, positive/negative common, 18-point terminal block
		QX70H	16 points, 5 V DC, response time: 0/0.1/0.2/0.4/0.6/1 ms, 8 points/common, positive common, 18-point terminal block
		QX71 *2	32 points, 5/12 V DC, response time: 1/5/10/20/70 ms, 32 points/common, positive/negative common, 40-pin connector
		QX72 *2	64 points, 5/12 V DC, response time: 1/5/10/20/70 ms, 32 points/common, positive/negative common, 40-pin connector
	DC (Negative common) *1	QX80	16 points, 24 V DC, response time: 1/5/10/20/70 ms, 16 points/common, negative common, 18-point terminal block
		QX80-TS	16 points, 24 V DC, response time: 1/5/10/20/70 ms, 16 points/common, negative common, 18-point spring clamp terminal block
		QX80H	16 points, 24 V DC, response time: 0/0.1/0.2/0.4/0.6/1 ms, 8 points/common, negative common, 18-point terminal block
		QX81 *3 *4	32 points, 24 V DC, response time: 1/5/10/20/70 ms, 32 points/common, negative common, 37-pin D-sub connector
		QX81-S2 *3 *4	32 points, 24 V DC, response time: 1/5/10/20/70 ms, 32 points/common, negative common, 37-pin D-sub connector
		QX82 *2	64 points, 24 V DC, response time: 1/5/10/20/70 ms, 32 points/common, negative common, 40-pin connector
		QX82-S1 *2	64 points, 24 V DC, response time: 0.1/0.2/0.4/0.6/1 ms, 32 points/common, negative common, 40-pin connector
		QX90H	16 points, 5 V DC, response time: 0/0.1/0.2/0.4/0.6/1 ms, 8 points/common, negative common, 18-point terminal block
Output	Relay	QY10	16 points, 24 V DC/240 V AC, 2 A/point, 8 A/common, response time: 12 ms, 16 points/common, 18-point terminal block
		QY10-TS	16 points, 24 V DC/240 V AC, 2 A/point, 8 A/common, response time: 12 ms, 16 points/common, 18-point spring clamp terminal block
		QY18A	8 points, 24 V DC/240 V AC, 2 A/point, response time: 12 ms, 18-point terminal block, all points independent
	Triac	QY22	16 points, 100 to 240 V AC, 0.6 A/point, 4.8 A/common, response time: 1 ms + 0.5 cycle, 16 points/common, 18-point terminal block, with surge suppressor
	Transistor (Sink)	QY40P	16 points, 12 to 24 V DC, 0.1 A/point, 1.6 A/common, response time: 1 ms, 16 points/common, sink type, 18-point terminal block, overload protection function, overheat protection function, surge suppression
		QY40P-TS	16 points, 12 to 24 V DC, 0.1 A/point, 1.6 A/common, response time: 1 ms, 16 points/common, sink type, 18-point spring clamp terminal block, overload protection function, overheat protection function, surge suppression
		QY41P *2	32 points, 12 to 24 V DC, 0.1 A/point, 2 A/common, response time: 1 ms, 32 points/common, sink type, 40-pin connector, overload protection function, overheat protection function, surge suppressionand surge suppression
		QY42P *2	64 points, 12 to 24 V DC, 0.1 A/point, 2 A/common, response time: 1 ms, 32 points/common, sink type, 40-pin connector, overload protection function, overheat protection function, surge suppression
		QY50	16 points, 12 to 24 V DC, 0.5 A/point, 4 A/common, response time: 1 ms, 16 points/common, sink type, 18-point terminal block, with surge suppressor and fuse
	Transistor (Independent)	QY68A	8 points, 5 to 24 V DC, 2 A/point, 8 A/module, response time: 10 ms, sink/source type, 18-point terminal block, with surge suppressor, all points independent
	TTL CMOS	QY70	16 points, 5 to 12 V DC, 16 mA/point, 256 mA/common, response time: 0.5 ms, 16 points/common, sink type, 18-point terminal block, with fuse
		QY71 *2	32 points, 5 to 12 V DC, 16 mA/point, 512 mA/common, response time: 0.5 ms, 32 points/common, sink type, 40-pin connector, with fuse
	Transistor (Source)	QY80	16 points, 12 to 24 V DC, 0.5 A/point, 4 A/common, response time: 1 ms, 16 points/common, source type, 18-point terminal block, with surge suppressor and fuse
		QY80-TS	16 points, 12 to 24 V DC, 0.5 A/point, 4 A/common, response time: 1 ms, 16 points/common, source type, 18-point spring clamp terminal block, with surge suppressor and fuse
		QY81P *4	32 points, 12 to 24 V DC, 0.1 A/point, 2 A/common, response time: 1 ms, 32 points/common, source type, 37-pin D-sub connector, overload protection function, overheat protection function, surge suppression
		QY82P *2	64 points, 12 to 24 V DC, 0.1 A/point, 2 A/common, response time: 1 ms, 32 points/common, source type, 40-pin connector, overload protection function, overheat protection function, surge suppression
I/O	DC input/ transistor output	QH42P *2 *5	Input: 32 points, 24 V DC, response time: 1/5/10/20/70 ms, 32 points/common, positive common, output: 32 points, 12 to 24 V DC, 0.1 A/point, 2 A/common, response time: 1 ms, 32 points/common, sink type, 40-pin connector, overload protection function, overheat protection function, surge suppression
		QX48Y57	Input: 8 points, 24 V DC, response time: 1/5/10/20/70 ms, 8 points/common, positive common, output: 7 points, 12 to 24 V DC, 0.5 A/point, 2 A/common, response time: 1 ms, 7 points/common, sink type, 18-point terminal block, with surge suppressor and fuse
		QX41Y41P *2 *5	Input: 32 points, 24 V DC, response time: 1/5/10/20/70 ms, 32 points/common, positive common, output: 32 points, 12 to 24 V DC, 0.1 A/point, 2 A/common, response time: 1 ms, 32 points/common, sink type, 40-pin connector, overload protection function, overheat protection function, surge suppression
Interrupt module		QI60	16 point, 24 V DC, response time: 0.1/0.2/0.4/0.6/1 ms, 16 points/common, 18-point terminal block

*1 "Positive common" indicates that the positive lead of a DC power supply must be connected to the common terminal. Accordingly, "Negative common" indicates that the negative lead must be connected to the common terminal.
*2 Connector is not provided. Separately order one of the following: A6CON1/A6CON2/A6CON3/A6CON4.
*3 The rated input currents are different. [QX41: approx. 4 mA, QX41-S2: approx. 6 mA, QX81: approx. 4 mA, QX81-S2: approx. 6 mA]
*4 Connector is not provided. Separately order one of the following: A6CON1E/A6CON2E/A6CON3E.
*5 The number of occupied input/output points is different. [QH42P: 32 points; QX41Y41P: 64 points (first 32 points: input / second 32 points: output)]

Analog I/O module

[Legend] DB : Double brand product NEW : Recently released product SOON : Product available soon

Product		Model	Outline
Analog input	Voltage input	Q68ADV	8 channels, input: -10 to 10 V DC, output (resolution): 0 to 4000, -4000 to 4000, 0 to 12000, -12000 to 12000, 0 to 16000, -16000 to 16000, conversion speed: 80 µs/channel, 18-point terminal block
	Current input	Q62AD-DGH	2 channels; input, 4 to 20 mA DC, output (resolution): 0 to 32000, 0 to 64000, conversion speed: 10 ms/2 channels, 18-point terminal block, channel isolated, supplies power to 2-wire transmitter
		Q66AD-DG*1	6 channels, input: 4 to 20 mA DC (when 2-wire transmitter is connected), 0 to 20 mA DC, output (resolution): 0 to 4000, 0 to 12000, conversion speed: 10 ms/channel, 40-pin connector, channel isolated, supplies power to 2-wire transmitter
		Q68ADI	8 channels, input: 0 to 20 mA DC, output (resolution): 0 to 4000, -4000 to 4000, 0 to 12000, -12000 to 12000, 0 to 16000, -16000 to 16000, conversion speed: 80 µs/channel, 18-point terminal block
	Voltage/current input	Q64AD	4 channels; input -10 to 10 V DC, 0 to 20 mA DC, output (resolution): 0 to 4000, -4000 to 4000, 0 to 12000, -12000 to 12000, 0 to 16000, -16000 to 16000, conversion speed: 80 µs/channel, 18-point terminal block
		Q64AD-GH	4 channels, input: -10 to 10 V DC, 0 to 20 mA DC, output (resolution): 0 to 32000, -32000 to 32000, 0 to 64000, -64000 to 64000, conversion speed: 10 ms/4 channels, 18-point terminal block, channel isolated
		Q68AD-G*1	8 channels, input: -10 to 10 V DC, 0 to 20 mA DC, output (resolution): 0 to 4000, -4000 to 4000, 0 to 12000, -12000 to 12000, 0 to 16000, -16000 to 16000, conversion speed: 10 ms/channel, 40-pin connector, channel isolated
Analog output	Voltage output	Q68DAVN	8 channels, input (resolution): 0 to 4000, -4000 to 4000, 0 to 12000, -12000 to 12000, -16000 to 16000, output: -10 to 10 V DC, conversion speed: 80 µs/channel, 18-point terminal block
	Current output	Q68DAIN	8 channels, input (resolution): 0 to 4000, -4000 to 4000, 0 to 12000, -12000 to 12000; output: 0 to 20 mA DC, conversion speed: 80 µs/channel, 18-point terminal block
	Voltage/current output	Q62DAN	2 channels, input (resolution): 0 to 4000, -4000 to 4000, 0 to 12000, -12000 to 12000, -16000 to 16000, output: -10 to 10 V DC, 0 to 20 mA DC, conversion speed: 80 µs/channel, 18-point terminal block
		Q62DA-FG	2 channels, input (resolution): 0 to 12000, -12000 to 12000, -16000 to 16000, output: -12 to 12 V DC, 0 to 22 mA DC, conversion speed: 10 ms/2 channels, 18-point terminal block
		Q64DAN	4 channels, input (resolution): 0 to 4000, -4000 to 4000, 0 to 12000, -12000 to 12000, -16000 to 16000, output: -10 to 10 V DC, 0 to 20 mA DC, conversion speed: 80 µs/channel, 18-point terminal block
		Q66DA-G*1	6 channels, input (resolution): 0 to 4000, -4000 to 4000, 0 to 12000, -12000 to 12000, -16000 to 16000, output: -12 to 12 V DC, 0 to 22 mA DC, conversion speed: 6 ms/channel, 40-pin connector, channel isolated
Analog input/ output	Voltage and current input/ output	Q64AD2DA	Input: 4 channels Input: -10 to 10 V DC, 0 to 20 mA DC Output (resolution): 0 to 4000, -4000 to 4000, 0 to 12000, -12000 to 12000, 0 to 16000, -16000 to 16000 Conversion speed: 500 µs/channel Output: 2 channels Input (resolution): 0 to 4000,-4000 to 4000,0 to 12000,-16000 to 16000 Output: -10 to 10 V DC, 0 to 20 mA DC Conversion speed: 500 µs/channel 18-point terminal block
Load cell input		Q61LD	1 channel, input (load cell output): 0.0 to 3.3 mV/V, output (resolution): 0 to 10000, conversion speed: 10 ms, 18-point terminal block
Temperature input	RTD	Q64RD	4 channels, platinum RTD (Pt100, JPt100), disconnection detection function, conversion speed: 40 ms/channel, 18-point terminal block
		Q64RD-G	4 channels, platinum RTD (Pt100, JPt100), nickel RTD (Ni100), disconnection detection function, conversion speed: 40 ms/channel, disconnection detection function, isolation between channels, 18-point terminal block
		Q68RD3-G*1	8 channels, platinum RTD (Pt100, JPt100), nickel RTD (Ni100), disconnection detection function, conversion speed: 320 ms/8 channels, isolation between channels, 40-pin connector
	Thermocouple	Q64TD	4 channels, thermocouple (B, R, S, K, E, J, T, N), disconnection detection function, conversion speed: 40 ms/channel, isolation between channels, 18-point terminal block
		Q64TDV-GH	4 channels, thermocouple (B, R, S, K, E, J, T, N), disconnection detection function, conversion speed: sampling cycle × 3, sampling cycle: 20 ms/channel, isolation between channels, 18-point terminal block
		Q68TD-G-H01*1 *2	8 channels, thermocouple (B, R, S, K, E, J, T, N), disconnection detection function, conversion speed: 320 ms/8 channels, isolation between channels, 40-pin connector
		Q68TD-G-H02*1	8 channels, thermocouple (B, R, S, K, E, J, T, N), disconnection detection function, conversion speed: 640 ms/8 channels, isolation between channels, 40-pin connector
Temperature control	RTD	Q64TCRT	4 channels, platinum RTD (Pt100, JPt100), heating control/cooling control, sampling cycle: 500 ms/4 channels, isolation between channels, 18-point terminal block
		Q64TCRTBW	4 channels, platinum RTD (Pt100, JPt100), heating control/cooling control, heater disconnection detection function, sampling cycle: 500 ms/4 channels, isolation between channels, two 18-point terminal blocks
	Thermocouple	Q64TCTT	4 channels, thermocouple (K, J, T, B, S, E, R, N, U, L, PLⅡ, W5Re/W26Re), heating control/cooling control, sampling cycle: 500 ms/4 channels, isolation between channels, 18-point terminal block
		Q64TCTTBW	4 channels, thermocouple (K, J, T, B, S, E, R, N, U, L, PLⅡ, W5Re/W26Re), heating control/cooling control, heater disconnection detection function, sampling cycle: 500 ms/4 channels, isolation between channels, two 18-point terminal blocks
Loop control		Q62HLC	2 channels, input: thermocouple/micro voltage/voltage/current, conversion speed (input): 25 ms/2 channels, sampling cycle: 25 ms/2 channels; output: 4 to 20 mA DC, conversion speed (output): 25 ms/2 channels, 18-point terminal block, with 5 PID control modes

*1 A connector is not provided. The A6CON4 connector must be ordered separately.
*2 The number of modules that can be installed is restricted based on the combination of power supply and base unit.

Product List

Pulse I/O and positioning module

[Legend] DB : Double brand product NEW : Recently released product SOON : Product available soon

Product		Model	Outline
Channel isolated pulse input		QD60P8-G	8 channels, 30 kpps/10 kpps/1 kpps/100 pps/50 pps/10 pps/1 pps/0.1 pps, count input signal: 5/12 to 24 V DC
High-Speed Counter		QD62*1	2 channels, 200/100/10 kpps, count input signal: 5/12/24 V DC, external input: 5/12/24 V DC, coincidence output: transistor (sink), 12/24 V DC, 0.5 A/point, 2 A/common, 40-pin connector
		QD62E*1	2 channels, 200/100/10 kpps, count input signal: 5/12/24 V DC, external input: 5/12/24 V DC, coincidence output: transistor (source), 12/24 V DC, 0.1 A/point, 0.4 A/common, 40-pin connector
		QD62D*1	2 channels, 500/200/100/10 kpps, count input signal: EIA standards RS-422-A (differential line driver), external input: 5/12/24 V DC; coincidence output: transistor (sink), 12/24 V DC, 0.5 A/point, 2 A/common, 40-pin connector
		QD63P6*2	6 channels, 200/100/10 kpps, count input signal: 5 V DC, 40-pin connector
		QD64D2*2	2 channels, 4 Mpps, count input signal: EIA standards RS-422-A (differential line driver), external input: 24 V DC, coincidence output: transistor (sink), 12/24 V DC, 0.5 A/point, 2 A/common, 40-pin connector
Positioning	Open collector output	QD75P1*2	1-axis, control unit: mm, inch, degree, pulse, no. of positioning data: 600/axis, max. output pulse: 200 kpps, 40-pin connector
		QD75P2*2	2-axes, 2-axis linear interpolation, 2-axis circular interpolation, control unit: mm, inch, degree, pulse, no. of positioning data: 600/axis, max. output pulse: 200 kpps, 40-pin connector
		QD75P4*2	4-axes, 2-/3-/4-axis linear interpolation, 2-axis circular interpolation, control unit: mm, inch, degree, pulse, no. of positioning data: 600/axis, max. output pulse: 200 kpps, 40-pin connector
		QD70P4*2	4-axes, control unit: pulse, no. of positioning data: 10/axis, max. output pulse: 200 kpps, 40-pin connector
		QD70P8*2	8-axes, control unit: pulse, no. of positioning data: 10/axis, max. output pulse: 200 kpps, 40-pin connector
	Differential output	QD75D1*2	1-axis, control unit: mm, inch, degree, pulse, no. of positioning data: 600/axis, max. output pulse: 1 Mpps, 40-pin connector
		QD75D2*2	2-axes, 2-axis linear interpolation, 2-axis circular interpolation, control unit: mm, inch, degree, pulse, no. of positioning data: 600/axis, max. output pulse: 1 Mpps, 40-pin connector
		QD75D4*2	4-axes, 2-/3-/4-axis linear interpolation, 2-axis circular interpolation, control unit: mm, inch, degree, pulse, no. of positioning data: 600/axis, max. output pulse: 1 Mpps, 40-pin connector
		QD70D4*2	4-axes, control unit: pulse, no. of positioning data: 10/axis, max. output pulse: 4 Mpps, 40-pin connector
		QD70D8*2	8-axes, control unit: pulse, no. of positioning data: 10/axis, max. output pulse: 4 Mpps, 40-pin connector
	With SSCNET connectivity	QD75M1*1	1-axis, control unit: mm, inch, degree, pulse, no. of positioning data: 600/axis, 40-pin connector
		QD75M2*1	2-axes, 2-axis linear interpolation, 2-axis circular interpolation, control unit: mm, inch, degree, pulse, no. of positioning data: 600/axis, 40-pin connector
		QD75M4*1	4-axes, 2-/3-/4-axis linear interpolation, 2-axis circular interpolation, control unit: mm, inch, degree, pulse, no. of positioning data: 600/axis, 40-pin connector
	With SSCNET Ⅲ connectivity	QD75MH1*1	1-axis, control unit: mm, inch, degree, pulse, no. of positioning data: 600/axis, 40-pin connector, with SSCNET Ⅲ connectivity
		QD75MH2*1	2-axes, 2-axis linear interpolation, 2-axis circular interpolation, control unit: mm, inch, degree, pulse, no. of positioning data: 600/axis, 40-pin connector, with SSCNET Ⅲ connectivity
		QD75MH4*1	4-axes, 2-/3-/4-axis linear interpolation, 2-axis circular interpolation, control unit: mm, inch, degree, pulse, no. of positioning data: 600/axis, 40-pin connector, with SSCNET Ⅲ connectivity
		QD74MH8	8-axes, control unit: pulse, no. of positioning data: 32/axis, with SSCNET Ⅲ connectivity
		QD74MH16	16-axes, control unit: pulse, no. of positioning data: 32/axis, with SSCNET Ⅲ connectivity
	Open collector output with built-in counter function	QD72P3C3*2	Positioning: 3-axes, control unit: pulse, no. of positioning data: 1/axis, max. output pulse: 100 kpps, counter: 3 channels, 100 kpps, count input signal: 5/24 V DC, 40-pin connector

*1 A connector is not provided. The A6CON1/A6CON2/A6CON3/A6CON4 connector must be ordered separately.
*2 A connector is not provided. The A6CON1/A6CON2/A6CON4 connector must be ordered separately.

Information module

[Legend] DB : Double brand product NEW : Recently released product SOON : Product available soon

Product	Model	Outline
Serial communication	QJ71C24N	RS-232: 1 channel, RS-422/485: 1 channel, total transmission speed of 2 channels: 230.4 kbps
	QJ71C24N-R2	RS-232: 2 channels, total transmission speed of 2 channels: 230.4 kbps
	QJ71C24N-R4	RS-422/485: 2 channels, total transmission speed of 2 channels: 230.4 kbps

Control network module

MELSECNET/H	Optical loop (SI)	QJ71LP21-25	SI/QSI/H-PCF/ broadband H-PCF fiber optic cable, dual loop, controller network (control/normal station) or remote I/O network (remote mater station)
		QJ71LP21S-25	SI/QSI/H-PCF/ broadband H-PCF fiber optic cable, dual loop, controller network (control/normal station) or remote I/O network (remote mater station), with external power supply function
	Optical loop (GI)	QJ71LP21G	GI-50/125 fiber optic cable, dual loop, controller network (control/normal station) or remote I/O network (remote master station)
	Coaxial bus	QJ71BR11	3C-2V/5C-2V coaxial cable, single bus, controller network (control/normal station) or remote I/O network (remote master station)
CC-Link		QJ61BT11N	Master/local station, CC-Link Ver. 2 compatible
CC-Link/LT		QJ61CL12	Master station
FL-net (OPCN-2)	Ver. 2.00	QJ71FL71-T-F01	10BASE-T, 100BASE-TX
		QJ71FL71-B2-F01	10BASE2
		QJ71FL71-B5-F01	10BASE5
	Ver. 1.00	QJ71FL71-T	10BASE-T
		QJ71FL71-B2	10BASE2
		QJ71FL71-B5	10BASE5
AS-i		QJ71AS92	Master station, AS-Interface Specification Version 2.11 compatible

MELSECWinCPU Options

■ Dedicated options (CONTEC Co., Ltd.)

Type	Name	Model Name	Comment
CompactFlash Card (FIX DISK types)	CompactFlash 1GB	CF-1GB-B	
	CompactFlash 2GB	CF-2GB-B	
	CompactFlash 4GB	CF-4GB-B	
	CompactFlash 8GB	CF-8GB-B	
TFT color liquid-crystal display (Analog RGB types)	15 inch	FPD-H21XT-AC	1024 × 768 dots, Panel mounted type
	12.1 inch	FPD-L21ST-AC	800×600 dots, Panel mounted type
	10.4 inch	FPD-M21VT-AC	640×480 dots, Panel mounted type
Touchpanel cable	RS-232C cable (2m)	IPC-CBL3-2	
	RS-232C cable (5m)	IPC-CBL3-5	

Contact CONTEC for more information on the dedicated options.
CONTEC Co., Ltd. http://www.contec.com/ TEL +81-6-6477-5219 FAX +81-6-6477-1692

■ Recommended Parts

Type	Name	Model Name	Comment
Keyboard	USB keyboard	ANB-00035	Microsoft®
Mouse	USB mouse	D1T-00007	Microsoft®
Switching HUB	USB HUB	UPort 404	MOXA

Operation of the devices in the list has been confirmed by Mitsubishi Electric, but this does not guarantee all operations and specifications of the respective device.
Contact the respective manufacturer for details on the products.

Reaching out to the world using a global network

Global FA center

"Mitsubishi Electric Global FA centers" have been established in various countries around the world to cover the Americas, Europe, and Asia. FA centers help to ensure compliance with the certifications and regulations of different regions, initiate product development in response to local demands, and provide full-time, professional customer service.

UK FA Center

Mitsubishi Electric Europe B.V. UK Branch
Travellers Lane, Hatfield, Hertfordshire, AL10 8XB, UK.
Tel: 44-1707-27-6100 / Fax: 44-1707-27-8695
Area covered: UK, Ireland

European FA Center

Mitsubishi Electric Europe B.V. Polish Branch
ul. Krakowska 50, 32-083 Balice, Poland
Tel: 48-12-630-4700 / Fax: 48-12-630-4701
Area covered: Central and Eastern Europe

German FA Center

Mitsubishi Electric Europe B.V. - German Branch
Gothaer Strasse 8, D-40880 Ratingen, Germany
Tel: 49-2102-486-0 / Fax: 49-2102-486-1120
Area covered: Mainly Western Europe

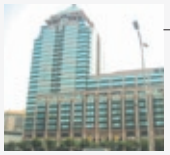
Czech republic FA Center

Mitsubishi Electric Europe B.V. -o.s. Czech office
Avenir Business Park, Radicka 714/113a, 158 00 Praha5, Czech Republic
Tel: 420-251-551-470 / Fax: 420-251-551-471
Area covered: Czech,Slovakia

India FA Center

Mitsubishi Electric India Pvt. Ltd.
India Factory Automation Centre
2nd Floor, Tower A & B, Cyber Greens, DLF Cyber City, DLF Phase-III, Gurgaon-122 002 Haryana, India
Tel: 91-124-463-0300 / Fax: 91-124-463-0399
Area covered: India

Nagoya,Japan



Beijing FA Center

Mitsubishi Electric Automation (CHINA) Ltd.
Beijing Office
Unit904-905, 9F, Office Tower , Henderson Centre, 18 Jianguomennei Avenue, Dongcheng District, Beijing, China
Tel: 86-10-6518-8830 / Fax: 86-10-6518-3907
Area covered: China

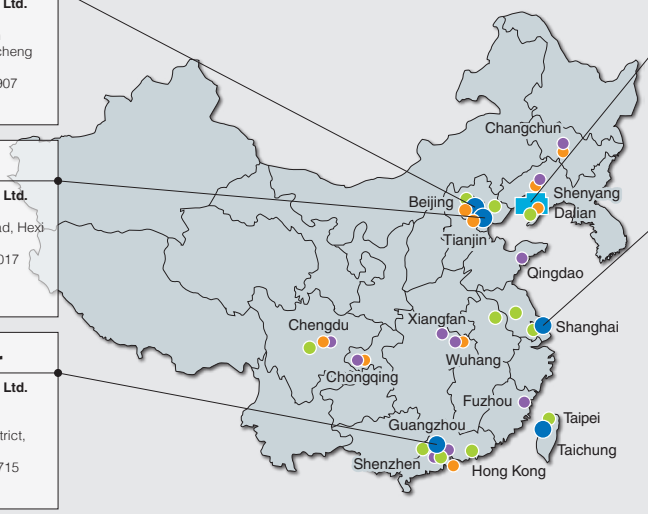
Tianjin FA Center

Mitsubishi Electric Automation (CHINA) Ltd.
Tianjin Office
B-2-801-802, Youyi Building, 50 Youyi Road, Hexi District, Tianjin, China
Tel: 86-22-2813-1015 / Fax: 86-22-2813-1017
Area covered: China

Guangzhou FA Center

Mitsubishi Electric Automation (CHINA) Ltd.
Guangzhou Office
Rm.1609, North Tower, The Hub Center, No.1068, Xin Gang East Road, Haizhu District, Guangzhou,China
Tel: 86-20-8923-6730 / Fax: 86-20-8923-6715
Area covered: China

China (including Hong Kong area)



Local factory in China

Mitsubishi Electric Dalian Industrial Products Co., Ltd.

Shanghai FA Center

Mitsubishi Electric Automation (CHINA) Ltd.
4/F., Zhi Fu Plaza No.80 Xin Chang Road, Shanghai,200003, China
Tel: 86-21-2322-3030 / Fax: 86-21-2322-3000
Area covered: China

to provide comprehensive customer support.

FA center | FA center satellite (China) | Mechatronics service center (China) | Sales and Service office | Factory location | Development center

Russian FA Center

Mitsubishi Electric Europe B.V. Russian Branch St.Petersburg office
Sverdlovskaya emb., bld "Sch", BC "Benua", office 720, 195027, St.Petersburg, Russia
Tel: 7-812-633-3497 / Fax: 7-812-633-3499
Area covered: Russia

Korean FA Center

Mitsubishi Electric Automation Korea Co., Ltd.
B1F,2F, 1480-6, Gayang-Dong, Gangseo-Gu, Seoul, 157-200, Korea
Tel: 82-2-3660-9632 / Fax: 82-2-3663-0475
Area covered: Korea

Taiwan FA Center

L : Setsuyo Enterprise Co., Ltd.
3F., No.105, Wugong 3 rd, Wugu Dist, New Taipei City 24889, Taiwan, R.O.C.
Tel: 886-2-2299-9917 / Fax: 886-2-2299-9963
R : Mitsubishi Electric Taiwan Co.,Ltd.
No.8-1.Industrial 16th Road,Taichung Industrial Park ,Taichung, Taiwan 407, R.O.C.
Tel: 886-(0)4-2359-0688 / Fax: 886-(0)4-2359-0689
Area covered: Taiwan

Thailand FA Center

Mitsubishi Electric Automation (Thailand) Co., Ltd.
Bang-Chan Industrial Estate No.111, Soi Serithai 54, T.Kannayao,A.Kannayao, Bangkok10230, Thailand
Tel: 66-2906-3238 / Fax: 66-2906-3239
Area covered: Thailand

North American FA Center

Mitsubishi Electric Automation, Inc.
500 Corporate Woods Parkway, Vernon Hills, IL 60061, U.S.A
Tel: 1-847-478-2100 / Fax: 1-847-478-2253
Area covered: North America, Mexico, Chile, Brazil

ASEAN FA Center

Mitsubishi Electric Asia Pte. Ltd.
ASEAN Factory Automation Centre
307 Alexandra Road #05-01/02, Mitsubishi Electric Building, Singapore
Tel: 65-6470-2460 / Fax: 65-6476-7439
Area covered: Southeast Asia, India

Brazil FA Center

MELCO-TEC Representacao Comercial e Assessoria Tecnica Ltda.
Av. Paulista, 1439, Cerqueira Cesar - Sao Paulo Brazil - CEP 01311-200
Tel: 55-11-3146-2200 / Fax: 55-11-3146-2217
Area covered: Brazil

Complying with international quality assurance standards.

All of Mitsubishi Electric's FA component products have acquired the international quality assurance "ISO9001" and environment management system standard "ISO14001" certification. Mitsubishi Electric's products also comply with various safety standards, including UL standards.
*For jointly developed and partner products, guaranteed quality standards may differ. Please refer to the product manuals for details.

Safety Standards

CE	CE : Council Directive of the European Communities
c UL us	UL : Underwriters Laboratories Listing

MEMO

Batteries

This product uses a lithium primary battery.
You should treat it according to exportation regulations when you export the product with the battery including lithium.
When we ship it, we packaged it according to exportation regulations. But if you export it after re-packaging or unpacking, you should export it according to IATA Dangerous Goods Regulations,
IMDG Code and other exportation regulations of each country.
For details, consult your transporter.

Mitsubishi Electric Corporation Nagoya Works is a factory certified for ISO14001 (standards for environmental management systems) and ISO9001(standards for quality assurance management systems)

EC97J1113 051

ISO 9001
BUREAU VERITAS
Certification

Mitsubishi Electric
Programmable Controllers
MELSECWinCPU module

Precautions before use

This publication explains the typical features and functions of the products herein and does not provide restrictions and other information related to usage and module combinations. Before using the products, always read the product user manuals. Mitsubishi Electric will not be held liable for damage caused by factors found not to be the cause of Mitsubishi Electric; opportunity loss or lost profits caused by faults in Mitsubishi Electric products; damage, secondary damage, or accident compensation, whether foreseeable or not, caused by special factors; damage to products other than Mitsubishi Electric products; and to other duties.

⚠ For safe use

- To use the products given in this publication properly, always read the relevant manuals before use.
- The products have been manufactured as general-purpose parts for general industries, and have not been designed or manufactured to be incorporated in a device or system used in purposes related to human life.
- Before using the products for special purposes such as nuclear power, electric power, aerospace, medicine or passenger movement vehicles, consult with Mitsubishi.
- The products have been manufactured under strict quality control. However, when installing the products where major accidents or losses could occur if the products fail, install appropriate backup or fail-safe functions in the system.

Country/Region	Sales office	Tel/Fax
USA	Mitsubishi Electric Automation Inc. 500 Corporate Woods Parkway Vernon Hills, IL 60061, USA	Tel : +1-847-478-2100 Fax : +1-847-478-2253
Brazil	MELCO-TEC Rep. Com.e Assessoria Tecnica Ltda. Av Paulista, 1439-Cj. 72 Cerqueira Cesar CEP 01311-200, Sao Paulo, SP, CEP:01311-200, Brazil	Tel : +55-11-3146-2200 Fax : +55-11-3146-2217
Germany	Mitsubishi Electric Europe B.V. German Branch Gothaer Strasse 8 D-40880 Ratingen, Germany	Tel : +49-2102-486-0 Fax : +49-2102-486-1120
UK	Mitsubishi Electric Europe B.V. UK Branch Travellers Lane, Hatfield, Hertfordshire., AL10 8XB, UK	Tel : +44-1707-276100 Fax : +44-1707-278695
Italy	Mitsubishi Electric Europe B.V. Italian Branch Viale Colleoni 7-20041 Agrate Brianza (Milano), Italy	Tel : +39-039-60531 Fax : +39-039-6053312
Spain	Mitsubishi Electric Europe B.V. Spanish Branch Carretera de Rubi 76-80 E-08190 Sant Cugat del Valles (Barcelona), Spain	Tel : +34-93-565-3131 Fax : +34-93-589-2948
France	Mitsubishi Electric Europe B.V. French Branch 25,Boulevard des Bouvets, F-92741 Nanterre Cedex, France	Tel : +33-1-5568-5568 Fax : +33-1-5568-5757
Czech Republic	Mitsubishi Electric Europe B.V.-o.s.-Czech office Avenir Business Park, Radlická 714/113a CZ-158 00 Praha 5	Tel : +420-251-551-470 Fax : +420-251-551-471
Poland	Mitsubishi Electric Europe B.V. Polish Branch ul. Krakowska 50 32-083 Balice, Poland	Tel : +48-12-630-47-00 Fax : +48-12-630-47-01
Russia	Mitsubishi Electric Europe B.V. Russian Branch St.Petersburg office Sverdlovskaya emb., bld "Sch", BC "Benua", office 720; 195027, St.Petersburg, Russia	Tel : +7-812-633-3497 Fax : +7-812-633-3499
South Africa	Circuit Breaker Industries Ltd. 9 Derrick Road, Spartan, Gauteng PO Box 100, Kempton Park 1620, South Africa	Tel : +27-11-977-0770 Fax : +27-11-977-0761
China	Mitsubishi Electric Automaiton (China) Ltd. No.1386 Hongqiao Road,Mitsubishi Electric Automation Center Shanghai China	Tel : +86-21-2322-3030 Fax : +86-21-2322-3000
Taiwan	Setsuyo Enterprise Co., Ltd. 6F., No.105, Wugong 3rd, Wugu Dist, New Taipei City 24889, Taiwan, R.O.C.	Tel : +886-2-2299-2499 Fax : +886-2-2299-2509
Korea	Mitsubishi Electric Automation Korea Co., Ltd. 1480-6, Gayang-dong, Gangseo-ku Seoul 157-200, Korea	Tel : +82-2-3660-9530 Fax : +82-2-3664-8372
Singapore	Mitsubishi Electric Asia Pte, Ltd. 307 Alexandra Road #05-01/02, Mitsubishi Electric Bulding Singapore 159943	Tel : +65-6470-2480 Fax : +65-6476-7439
Thailand	Mitsubishi Electric Automation (Thailand) Co., Ltd. Bang-Chan Industrial Estate No.111 Soi Serithai 54, T.Kannayao, A.Kannayao, Bangkok 10230 Thailand	Tel : +66-2-906-3238 Fax : +66-2-906-3239
Indonesia	P.T. Autoteknindo Sumber Makmur Muara Karang Selatan Block A/Utara No.1 Kav. No.11 Kawasan Industri/Pergudangan Jakarta-Utara 14440, P.O Box5045 Jakarta 11050, Indonesia	Tel : +62-21-663-0833 Fax : +62-21-663-0832
India	Mitsubishi Electric India Pvt. Ltd. 2nd Floor, Tower A & B, Cyber Greens, DLF Cyber City, DLF Phase-III, Gurgaon-122 002 Haryana, India	Tel : +91-124-463-0300 Fax : +91-124-463-0399
Australia	Mitsubishi Electric Australia Pty.Ltd. 348 Victoria Road, Rydalmere, N.S.W 2116, Australia	Tel : +61-2-9684-7777 Fax : +61-2-9684-7245

MITSUBISHI ELECTRIC CORPORATION

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

L(NA)08243E-A 1201(MDOC)

New publication, effective Jan. 2012.
Specifications are subject to change without notice.