

MODULAR PLC - Q

		Type	Outline
CPU Module for Q Mode	Basic Model	Q00JCPU	Program Step : 8K steps CPU integrated with power supply and base
		Q00CPU	Program Step : 8K steps
		Q01CPU	Program Step : 14K steps
	High Performance Model	Q02CPU	Program Step : 28K steps
		Q02HCPU	Program Step : 28K steps
		Q06HCPU	Program Step : 60K steps
		Q12HCPU	Program Step : 124K steps
		Q25HCPU	Program Step : 252K steps
	Process CPU Module		Q12PHCPU
		Q25PHCPU	Program Step : 252K steps
Motion CPU Module		Q172CPU	For 8 axis control
		Q173CPU	For 32 axis control
Battery		Q6BAT	Replacement battery for Q02/Q02H/Q06H/Q12H/Q25H CPU
IC Memory Card		Q2MEM-1MBS	SRAM card : 1 M bytes
		Q2MEM-2MBS	SRAM card : 2 M bytes
		Q2MEM-2MBF	Flash card : 2M bytes (Flash ROM)
		Q2MEM-4MBF	Flash card : 4M bytes (Flash ROM)
		Q2MEM-8MBA	ATA card : 8M bytes (ATA Flash ROM)
		Q2MEM-16MBA	ATA card : 16M bytes (ATA Flash ROM)
		Q2MEM-32MBA	ATA card : 32M bytes (ATA Flash ROM)

SRAM Card Battery		Q2MEM-BAT	Replacement battery for Q2MEM-1MBS
Base Unit	Main	Q33B	Power supply + CPU + 3 I/O Slots for Q series modules
		Q35B	Power supply + CPU + 5 I/O Slots for Q series modules
		Q38B	Power supply + CPU + 8 I/O Slots for Q series modules
		Q312B	Power supply + CPU + 12 I/O Slots for Q series modules
	Extention	Q63B	Power supply + 3 I/O Slots for Q series modules
		Q65B	Power supply + 5 I/O Slots for Q series modules
		Q68B	Power supply + 8 I/O Slots for Q series modules
		Q612B	Power supply + 12 I/O Slots for Q series modules
		Q52B	2 I/O Slots for Q series modules (Power supply module unnecessary)
		Q55B	5 I/O Slots for Q series modules (Power supply module unnecessary)
	Adaptor	Q6DIN1	DIN Rail mounting adaptor for Q38B/Q312B/Q68B/Q612B
		Q6DIN2	DIN Rail mounting adaptor for Q35B/Q65B
		Q6DIN3	DIN Rail mounting adaptor for Q33B/Q63B
Extention Cable		QC05B	0.45m(1.48 feet)
		QC06B	0.6m(1.96 feet)
		QC12B	1.2m(3.93 feet)
		QC30B	3m(9.84 feet)
		QC50B	5m(16.4 feet)
		QC100B	10m(32.8 feet)
Power Supply Module		Q00JCPU	100-240V AC Input / 5V DC 3A Output (Consisting of CPU, Power supply and Base)
		Q61P-A1	100-120V AC Input / 5V DC 6A Output
		Q61P-A2	200-240V AC Input / 5V DC 6A Output
		Q62P	100-240V AC Input / 5V DC 3A, 24V DC 0.6A Output

	Q63P		24V DC Input / 5V DC 6A Output	
	Q64P		100-120 / 200-240V AC Input / 5V DC 8.5A Output	
Input Module	AC	QX10	100-120V AC / 7 to 8mA, 16points, response time : 20msec, Terminal block	
		QX28	240V AC, 8 points, Terminal Block	
	DC <small>(Note1)</small>	QX40	24V DC / 4mA positive common, 16point, response time: 1/5/10/20/70msec, Terminal block	
		QX40-S1	24V DC positive common, 16points terminal block, for high speed Input (response time of 0.1/0.2/0.4/0.6/1msec)	
		QX41	24V DC/4mA positive common, 32points response time : 1/5/10/20/70msec, connector <small>(Note 3)</small>	
		QX42	24V DC/4mA positive common, 64points response time : 1/5/10/20/70msec, connector <small>(Note 3)</small>	
	DC Sensor <small>(Note1)</small>	QX70	5-12V DC Input shared between positive common and negative common, 16 point Terminal block	
		QX71	5-12V DC Input shared between positive common and negative common, 32 point connector. <small>(Note 3)</small>	
		QX72	5-12V DC Input shared between positive common and negative common, 64point connector. <small>(Note 3)</small>	
	DC <small>(Note1)</small>	QX80	24V DC / 4mA negative common, 16point, response time: 1/5/10/20/70msec, Terminal block	
		QX81	24V DC / 4mA negative common, 32 point, response time: 1/5/10/20/70msec, connector <small>(Note 3)</small>	
	Output Module	Contact	QY10	240 V AC / 24V DC, 2A/Point 8A/Common, 16points(16points/common), Output delay: 12msec, without fuse, terminal block
			QY18A	240 V AC / 24V DC, 2A/Point 8 independent contact output points, block, without fuse
		AC Triac	QY22	240V AC / 0.6A, 16 points, terminal block, without fuse
Transistor (Sink)		QY40P	12 / 24V DC 0.1A/point, 1.6A/common, 16points (16points/common,) output delay: 1msec, Terminal block, with short circuit protection function	
		QY41P	12 / 24V DC 0.1A/point, 2A/common, 32 points (32points / common,) output delay: 1msec, connector, with short circuit protection function <small>(Note 3)</small>	
		QY42P	12 / 24V DC 0.1A/point, 2A/common, 64points (32 points/common,) output delay: 1msec, connector, with short circuit protection function <small>(Note 3)</small>	
		QY50	12 / 24V DC 0.5A/point, 4A/common, 16points (16points/common,) output delay: 1msec, with fuse, Terminal block	
Transistor		QY68A	5-24V DC, 2A/point 8A/module, 8 points, all points independent, sink/source, Terminal block, without fuse	
TTL-CMOS(Sink)		QY70	5/12v DC, 16mA/point, 16 points (16points/common) Output delay : 0.3msec, with fuse, Terminal block	

		QY71	5/12v DC, 16mA/point, 32 points (32 points/common) Output delay : 0.3msec, with fuse, connector ^(Note 3)
	Transistor (Source)	QY80	12/ 24V DC, 0.5A/Point 4A/Common, 16points(16points/common), Output delay: 1msec, with fuse, terminal block
		QY81P	12 / 24V DC, 0.1A/Point 2A/Common, 32 points (32 points/common), Output delay: 1msec, connector with short circuit protection function ^(Note 4)
I/O composite Module	DC Input/Transistor Output	QH42P	24V DC positive common Input : 32 points (response time : 1/5/10/20/70msec) 12-24V DC, 0.1A sink output : 32 points, connector, with short circuit protection function ^(Note 3)
		QX48Y57	24V DC positive common Input : 8 points 12 V DC, 0.5A sink output : 7 points, with fuse, Terminal block
I/O Module Connector	A6CON1		Soldering 32 point connector (for QX41/42, QX71/72,QY41P/42P,QY71,QH42P
	A6CON2		Solder less Terminal connection 32 point connector ((for QX41/42, QX71/72,QY41P/42P,QY71,QH42P)
	A6CON3		Flat Cable pressure displacement 32 point connector (for QX41/42, QX71/72,QY41P/42P,QY71,QH42P)
	A6CON1E		Soldering 32 point connector (for QX81,QY81P)
	A6CON2E		Crimp – contact connection 32 point connector (for QX81,QY81P)
	A6CON3E		Flat Cable pressure displacement 32 point connector (for QX81,QY81P)
Terminal Block Adaptor	Q6TE-18S		For 16-point I/O, 0.3 to 1.5m m ² (AWG22 to16)
	Q6TA32		For 32-point I/O, 0.5 m m ² AWG20
Terminal Block Adaptor – Dedicated Tool	Q6TA32-TOL		Tool exclusively used for Q6TA32
Interrupt Module	QI60		16 points, response time : 0.1/0.2/0.4/0.6/1msec
Blank Cover	QG60		Blank cover for I/O slots
Channel – Isolated Analog Module	Q64AD-GH		4 channels, Analog to Digital conversion: Voltage/Current Input
	Q62AD–DGH		2 Channels Digital to Analog conversion with signal conditioning function
	Q62DA-FG		2 Channels Digital to Analog conversion: Voltage/Current output (with output monitor)
Channel – Isolated Thermocouple Input Module	Q64TDV-GH		4 Channels thermocouple Input, micro Voltage Input
	Q64TD		4 Channels thermocouple Input
Analog Module ^(Note6)	Q64AD		4 Channels, Analog to Digital conversion: Voltage/Current Input
	Q68ADV		8 Channels, Analog to Digital conversion : Voltage Input

	Q68ADI	8 Channels, Analog to Digital conversion : Current Input
	Q62DA	2 Channels Digital to Analog conversion: Voltage/Current output
	Q64DA	4 Channels Digital to Analog conversion: Voltage/Current output
	Q68DAV	8 Channels Digital to Analog conversion: Voltage Output
	Q68DAI	8 Channels Digital to Analog conversion: Current output
Temperature Input Module	Q64RD	4 Channels platinum temperature measuring resistor Input (3/4-wire type)
Temperature Control Module <small>(Note6)</small>	Q64TCTT	Thermocouple Input – Transistor Output
	Q64TCTTBW	Thermocouple Input – Transistor Output with wire breakage detection function
	Q64TCRT	Platinum resistance Thermometer Input – Transistor output
	Q64TCRTBW	Platinum resistance Thermometer Input – Transistor output with wire breakage detection function
Channel Isolated Pulse Input Module	QD60P8-G	8 Channels, 5/12 to 24V DC Input, Input filter setting, with pre scale function
High Speed Counter	QD62	2 Channels, 200kpps, 5/12/24VDC Input, sink transistor output <small>(Note 2)</small> ___
	QD62D	2 Channels, 500kpps, differential Input, sink transistor output <small>(Note 2)</small> ___
	QD62E	2 Channels, 200kpps, 5/12/24VDC Input, source transistor output <small>(Note 2)</small> ___
Positioning Module <small>(Note6)</small>	QD75P1	1 axis, open collector output <small>(Note 2)</small> ___
	QD75P2	2 axis, open collector output <small>(Note 2)</small>
	QD75P4	4 axis, open collector output <small>(Note 2)</small>
	QD75D1	1 axis, differential output <small>(Note 2)</small>
	QD75D2	2 axis, differential output <small>(Note 2)</small>
	QD75D4	4 axis, differential output <small>(Note 2)</small>
	QD70P4	4 axis, Pulse output <small>(Note 2)</small>
	QD70P8	8 axis, Pulse output <small>(Note 2)</small>
Ethernet Module	QJ71E71	For 10BASE – 5/10BASE-T
	QJ71E71-B2	For 10BASE – 2

	QJ71E71-100	For 10BASE – T /100BASE-TX
MELSECNET / H Module	QJ71LP21-25	SI/QSI Optical Cable, Duplex loop, for control, ordinary or master station.
	QJ71LP21G	GI Optical Cable, Duplex loop, for control, ordinary or master station.
	QJ72LP25-25	SI/QSI Optical Cable, Duplex loop, for remote I/O station.
	QJ72LP25G	GI Optical Cable, Duplex loop, for remote I/O station.
	QJ71BR11	Coaxial 75 ohms cable, simplex bus
	QJ72BR15	Coaxial 75 ohms cable, simplex bus for remote I/O station
	Q80BD-J71LP21-25	MELSEC NET /H board for personal computer, optical cable specifications, for control or ordinary station
	Q80BD-J71LP21G	MELSEC NET /H board for personal computer, SI/QSI/H-PC optical cable specifications, for control or ordinary station
	Q80BD-J71BR11	MELSEC NET /H board for personal computer, coaxial cable specifications, for control or ordinary station
CC-LINK Module ^(Note6)	QJ61BT11	For master / local
Serial Communication Module ^(Note6)	QJ71C24	RS-232 1 Channel, RS-422/485 1 Channel
	QJ71C24-R2	RS-232 2 Channels
Modem Interface Module	QJ71CMO	Built-in Modem 1 Channel, RS-232 1 Channel
Intelligent Communication Module	QD51	RS-232 2 Channels
	QD51-R24	RS-232 1 Channel, RS-422/485 1 Channel
	SW1IDV-AD51HP ^(Note5)	QD51 Software package (Shared between DOS/V Personal computer and AD51H – S3/A1SD51S)
	SW1NX-AD51HP ^(Note5)	QD51 Software package (Shared between NEC PC 9800 series Personal computer and AD51H – S3/A1SD51S)
AS-i Master Unit	QJ71AS92	Master module : Complies with AS-i standard Version 2.11
Extension Base Unit	QA1S65B	Power supply + 5 I/O Slots for AnS series module
	QA1S68B	Power supply + 8 I/O Slots for AnS series module
	QA65B	Power supply + 5 I/O Slots for large A series module (High performance model only)

Note 1 : "Positive common" indicates that DC power + is connected and used with the common terminal "Negative common" indicates that DC power -is connected and used with the common terminal.

Note 2 : No connector is provided. Please acquire the A6CON1/A6CON2 separately.

Note 3 : No connector is provided Please acquire the A6CON1/A6CON2/A6CON3 separately.

Note 4 : No connector is provided. Please acquire the A6CON1 E/A6CON2E/A6CON3E separately.

Note 5 : These modules require CPU of function version B or later when using the multiple PLC system. Q data book explains more detail.

Note 6 : This software package is designed for use in the MS-DOS mode only.

Note 7 : Setting the response time on this module requires the CPU module's product information "O21122000000000-B" and GX Developer Version 6 or later.

* In addition to the above modules, the AnS series modules can be loaded and used on the QA1S65B/QA1S68B, the A series modules can be loaded and used on the Q65B. Since some modules unusable or have restrictions on functions, check usable modules in the Q series data book.

POSITIONING MODULES

- ▶ Open Collector output / differential output
- ▶ Pulse train output / multi-axis compatibility
- ▶ Temperature Input Modules
- ▶ Temperature Control Modules
- ▶ Channel-isolated Pulse Input Module
- ▶ Personal Computers CPU Modules

POSITIONING MODULES

OPEN COLLECTOR OUTPUT / DIFFERENTIAL OUTPUT

Open collector and differential driver systems are available as command outputs to enable selection according to applications. Many functions, e.g. pre read starting function for reduction of positioning starting time, are available to ensure fast, multi - application positioning.

GX Configurator – QP (positioning module setting/monitoring tool designed for QD75P/D) facilitates positioning parameter setting, positioning data creation and monitoring.

PULSE TRAIN OUTPUT / MULTI-AXIS COMPATIBILITY

The Q series pulse train output / multi-axis compatible positioning modules are fit for multi-axis system that do not need complicated control. They are effective for driving many motors at low costs. There are 4- and 8-axis compatible modules, which can be selected to meet your system.

1. One axis control starts as fast as 0.1 ms.
2. Tact time is reduced because of high speed tracking control using stepping motors has reduced the chance of out-of-synchronization to occur.

3. GX Configurator-QP (positioning module setting/monitoring tool designed for QD70) facilitates positioning parameter setting, positioning data creation and monitoring.

*The QD70P4/P8 is not compatible with the A/A1SD70 (analog output)

TEMPERATURE INPUT MODULES

Connected with thermocouples/platinum temperature measuring resistors, the Q series temperature input module can import temperature data. Using GX Configurator- T1 (temperature input module setting/monitoring tool), you can make initial settings and automatic refresh settings on the screen, reducing programs.

1. The Q64TDV-GH and Q64TD are channel-isolated.

The Q64TDV-GH is a module that supports thermocouple temperature data input and micro voltage input.

2. Detected temperature measurement values can be converted into scaling values (%).
3. Temperature sensors conforming to the JIS Standards are usable.
4. Includes wire break detection for temperature sensor/conductor per channel.

TEMPERATURE CONTROL MODULES

The Q series temperature control modules offer a choice of optimum temperature adjustment control. Using GX Configuration- TC (temperature control module setting /monitoring tool), you can make initial settings and automatic refresh settings on the screen therefore reducing the program.

1. Direct connection of a thermocouple/platinum temperature- measuring resistor achieves the optimum temperature adjustment control (PID control).
2. Max. Four loops temperature adjustment control can be exercised simultaneously.
3. The Q64TCTTBW and Q64TCRTBW can detect the wire disconnection of the heater.

CHANNEL-ISOLATED PULSE INPUT MODULE

The Q series pulse input module realizes precision counting by setting the optimum input filter according to the rise/fall time of the input pulses that are to be counted. Using GX Configurator-CT (counter setting/monitoring tool), you can make initial settings and automatic refresh settings on the screen, reducing sequence programs.

Features

1. Channel-isolated. (Dielectric withstand voltage: 1780V AC for 1 minute)
2. A system can be configured at low cost since a single module includes eight pulse inputs channels.
3. An input pulse count is multiplied by user defined factor to convert the pulse count. (Pre-scale function)

PERSONAL COMPUTERS CPU MODULES

A personal computer CPU module can be loaded on a Q series PLC base (2 Slots occupied) to achieve the PC/AT compatible functions.

Features

1. The module can achieve the personal computer functions on a PLC base, downsizing a device/control box.
2. Environmental resistance and noise resistance are on Factory Automation levels. The use of an ATA flash card and silicon disk drive has resolved the problems of HDD life and vibration resistance. You can replace your FA personal computer or personal computer worry-free.
3. Sequence control can be exercised by the PLC CPU and information processing performed by the personal computer CPU to achieve integration of control and information processing, configuring an optimum system.
4. The introduction of MX Component, Soft GOT, Windows® compatible commercially available software and user application software configures a highly free system.
5. The built-in Ethernet communication port helps you configure a system that utilizes the Internet / intranet technology such as E-mail and Web access.
6. A PC card available on the market can be used for flexible system expansion.
7. The built-in USB port allows you to connect a commercially available USB device easily.
8. Using the bus Interface driver software enables access to almost all I/O and intelligent function modules from a C-written application program. (However, some modules have restrictions.)
9. The personal computer CPU module only operates in a multiple PLC configuration with PLC CPU and motion CPU, but also as a stand alone personal computer.
10. Because of its fan-free structure, the module has improved in maintenance performance, eliminating such problems as whirled dust particles. You can use the module worry-free in a clean room.