iQ-F Series Programmable Controllers

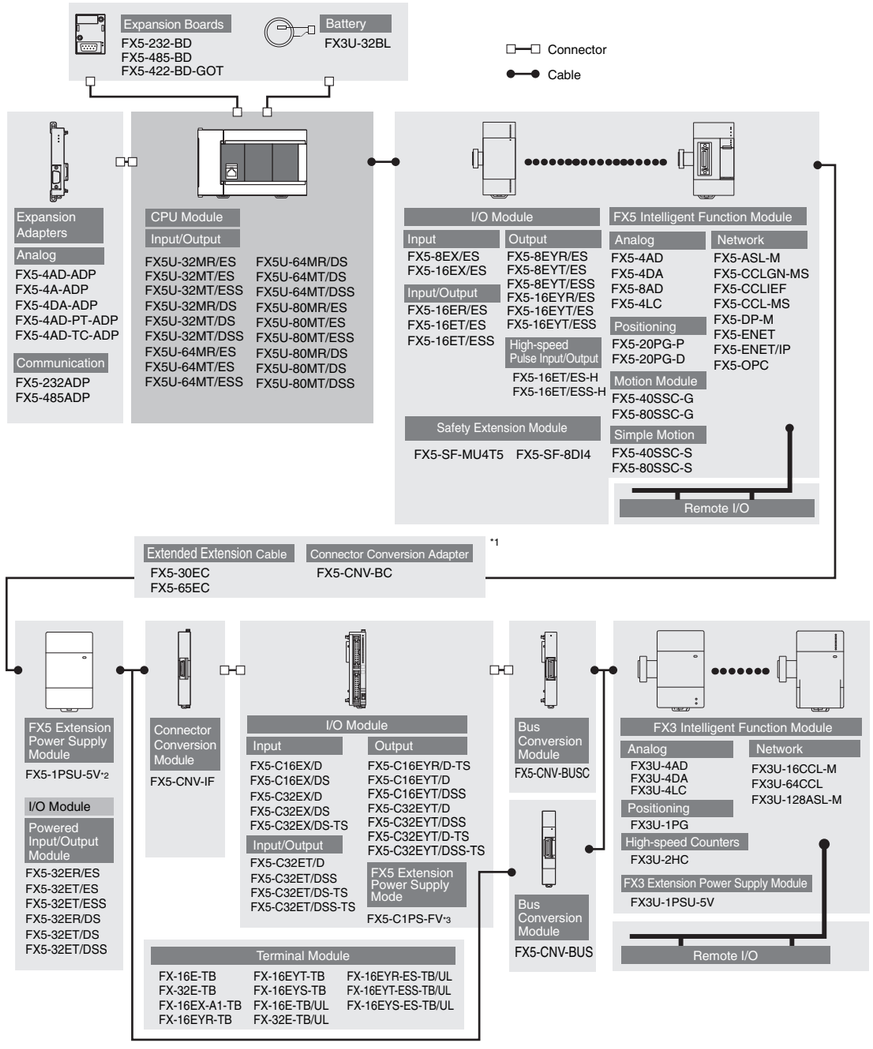
iQ-F Series

The iQ-F Series is a completely new controller with an elegant design that does not waver from the familiar look-and-feel of Mitsubishi Electric's compact controllers. We took the same control capabilities that have been running industry applications reliably for decades, and further refined them for an even better user experience. We also developed powerful new capabilities to elevate the iQ-F Series compact controller to be on par with the iQ-Platform, delivering intuitive programming, maximized performance, and seamless integration with all Mitsubishi Electric and e-f@ctory alliance products. The iQ-F is here to help you build the next generation of industrial solutions in even more efficient ways.

Overview

Model	FX5UJ	FX5U	FX5UC
Power Supply	100-240VAC	100-240VAC, 24VDC	24VDC
Max. Local I/O	256	384	384
Device/label Memory	120 KB	120 KB	120 KB
Program Memory	48k steps (96 KB)	64k steps / 128k steps (128 KB / 256 KB)	64k steps / 128k steps (128 KB / 256 KB)
Built-in Ethernet	Yes	Yes	Yes
Built-in Webserver	System	System, Custom	System, Custom
Built-in CC-Link IE Basic	8 stations	16 stations	16 stations
Built-in RS-485	-	Yes	Yes
Built-in Analog	-	2 in, 1 out (0 to 10V)	-
Built-in USB	Yes	-	-

FX5U Configuration

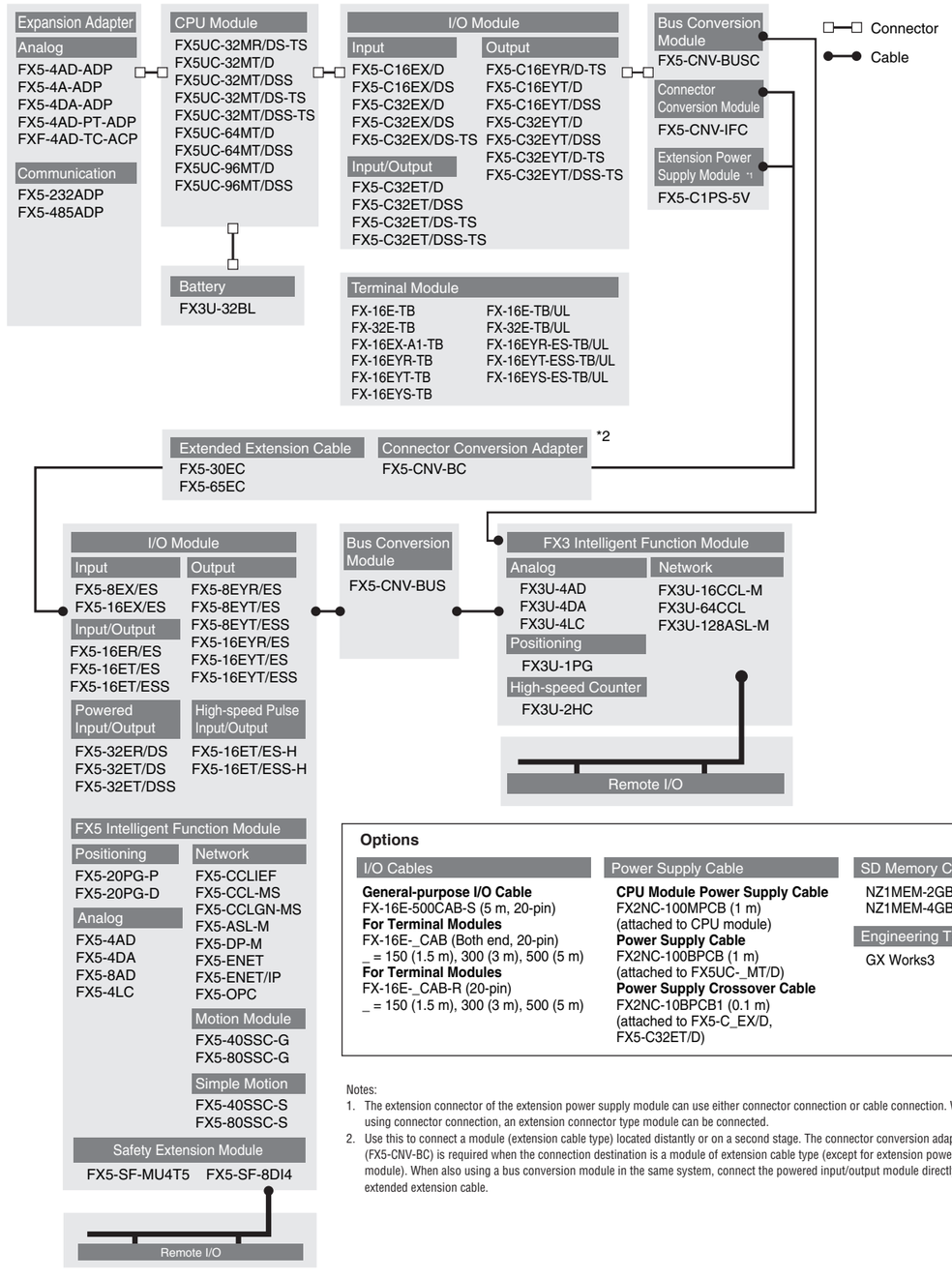


Options

I/O Cables	Power Supply Cable	SD Memory Card
General-purpose I/O Cable FX-16E-500CAB-S (5 m, 20-pin) **For Terminal Modules** FX-16E-_CAB (Both end, 20-pin) _ = 150 (1.5 m), 300 (3 m), 500 (5 m) **For Terminal Modules** FX-16E-_CAB-R (20-pin) _ = 150 (1.5 m), 300 (3 m), 500 (5 m)	**Power Supply Cable** FX2NC-100BPCB (1 m) **Power Crossover Cable** FX2NC-10BPCB1 (0.1 m)	NZ1MEM-2GBSD (2 GB) NZ1MEM-4GBSD (4 GB) **Engineering Tool** GX Works3

Notes:
1. Use this to connect a module (extension cable type) located distantly or on a second stage. The connector conversion adapter (FX5-CNV-BC) is required when the connection destination is a module of extension cable type (except for FX5-1PSU-5V and extension power supply module). When also using a bus conversion module in the same system, connect the FX5-1PSU-5V or powered input/output module directly after the extended extension cable.
2. Can connect to only the AC power supply type system.
3. Can connect to only the DC power supply type system.

FX5UC Configuration

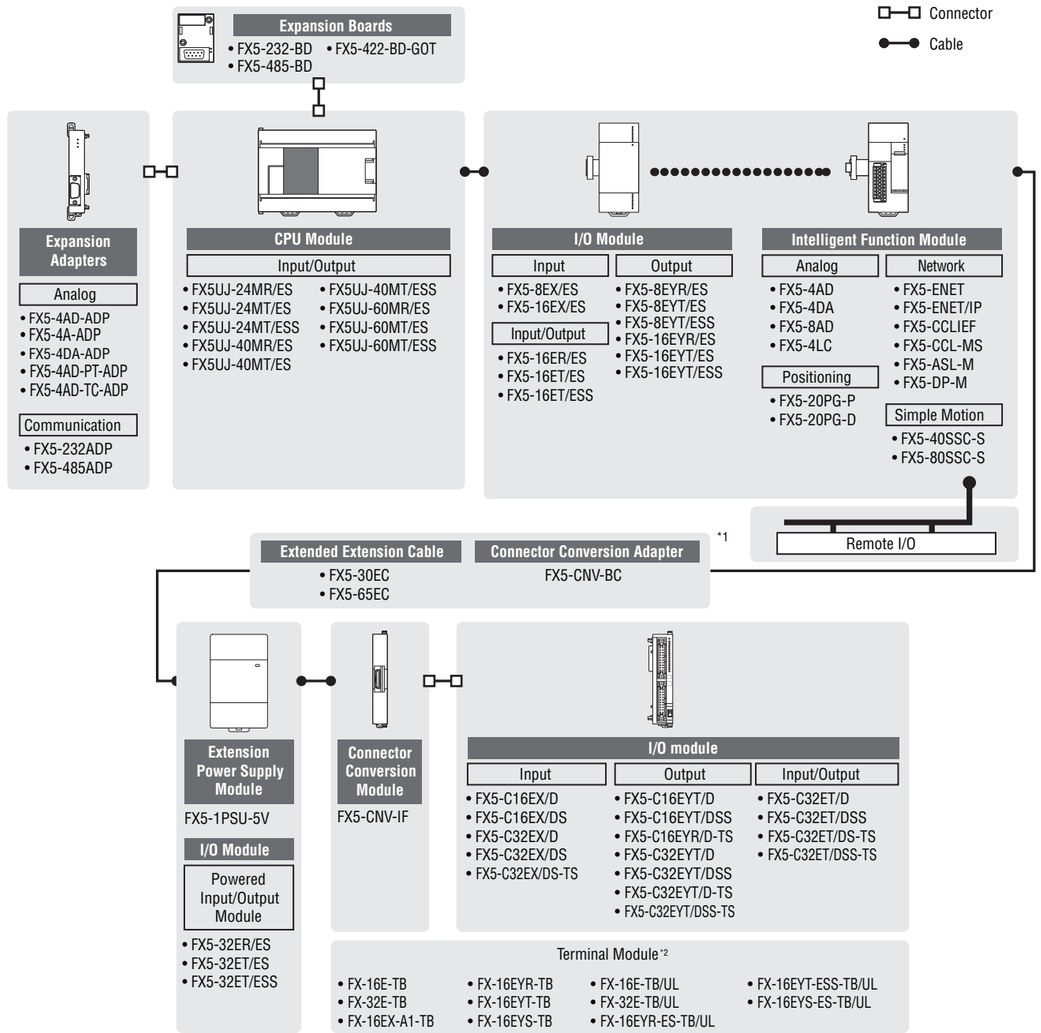


Options

I/O Cables	Power Supply Cable	SD Memory Card
General-purpose I/O Cable FX-16E-500CAB-S (5 m, 20-pin) **For Terminal Modules** FX-16E-_CAB (Both end, 20-pin) _ = 150 (1.5 m), 300 (3 m), 500 (5 m) **For Terminal Modules** FX-16E-_CAB-R (20-pin) _ = 150 (1.5 m), 300 (3 m), 500 (5 m)	**CPU Module Power Supply Cable** FX2NC-100MPCB (1 m) (attached to CPU module) **Power Supply Cable** FX2NC-100BPCB (1 m) (attached to FX5UC-_MT/D) **Power Supply Crossover Cable** FX2NC-10BPCB1 (0.1 m) (attached to FX5-C_EX/D, FX5-C32ET/D)	NZ1MEM-2GBSD (2 GB) NZ1MEM-4GBSD (4 GB) **Engineering Tool** GX Works3

Notes:
1. The extension connector of the extension power supply module can use either connector connection or cable connection. When using connector connection, an extension connector type module can be connected.
2. Use this to connect a module (extension cable type) located distantly or on a second stage. The connector conversion adapter (FX5-CNV-BC) is required when the connection destination is a module of extension cable type (except for extension power supply module). When also using a bus conversion module in the same system, connect the powered input/output module directly after the extended extension cable.

FX5UJ Configuration



Options

I/O Cables

General-purpose I/O Cable
FX-16E-500CAB-S (5 m, 20-pin)
For Terminal Modules
FX-16E-_CAB (Both end, 20-pin)
_ = 150 (1.5 m), 300 (3 m), 500 (5 m)
For Terminal Modules
FX-16E-_CAB-R (20-pin)
_ = 150 (1.5 m), 300 (3 m), 500 (5 m)

Power Supply Cable

CPU Module Power Supply Cable
FX2NC-100MPCB (1 m)
(attached to CPU module)
Power Supply Cable
FX2NC-100BPCB (1 m)
(attached to FX5UC-_MT/D)
Power Supply Crossover Cable
FX2NC-10BPCB1 (0.1 m)
(attached to FX5-C_EX/D, FX5-C32ET/D)

SD Memory Card

NZ1MEM-2GBSD (2 GB)
NZ1MEM-4GBSD (4 GB)

Engineering Tool

GX Works3

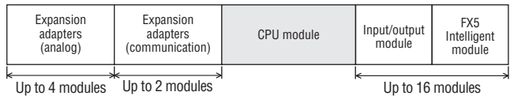
Notes:
1. Use this to connect a module (extension cable type) located distantly or on a second stage. The connector conversion adapter (FX5-CNV-BC) is required when the connection destination is a module of extension cable type (except for FX5-1PSU-5V and extension power supply module).
2. Terminal module is used when the input/output connection type of a I/O module is a connector.

Configuration Rules

CAUTION: For full configuration details please refer to the respective hardware manuals.

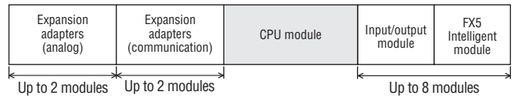
Number of connected extension device:

FX5U/FX5UC



Up to 384 local I/O

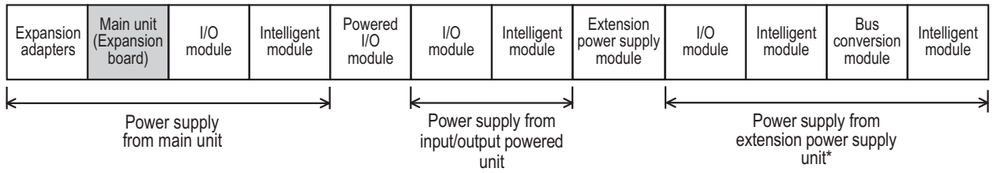
FX5UJ



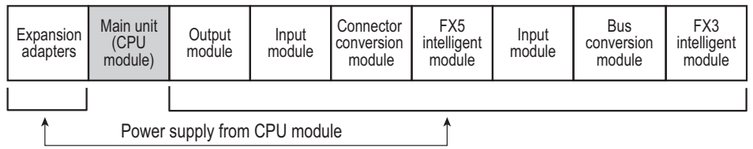
Up to 256 local I/O

Calculation of current consumption:
The power is supplied to each connected device from the built-in power supply of the CPU module, powered input/output modules, or extension power supply modules. The power consumed varies depending on the type of product added.

FX5U / FX5UJ



FX5UC



Limitations when using FX3 Series extension devices

- Use a bus conversion module to connect FX3 Series extension modules to a FX5 system. The FX3 Series extension modules can only be connected to the right side of the bus conversion module. Please review the manuals for limitations regarding the number of connectible modules.
- Some FX3 intelligent function modules have limitations on the number of connectible modules and the order in which they are connected.

Environmental Specifications

Model Number	FX5U / FX5UC / FX5UJ				
Operating Ambient Temperature	FX5U/ FX5UC: -20 to 55°C (-4 to 131°F), non-freezing (*1) FX5UJ: 0 to 55°C (32 to 131°F), non-freezing				
Storage Ambient Temperature	-25 to 75°C (-13 to 167°F)				
Ambient Humidity	5 to 95%RH (non-condensation)				
Ambient Relative Humidity	5 to 95% RH (non-condensing)				
Vibration Resistance	–	Frequency	Acceleration	Half amplitude	Sweep count
	Installed on DIN rail	5 to 8.4 Hz	-	1.75 mm	10 times each in X, Y, Z direction (80 min in each direction)
		8.4 to 150 Hz	4.9 m/s²	-	
	Direct installing	5 to 8.4 Hz	-	3.5 mm	
		8.4 to 150 Hz	9.8 m/s²	-	
Shock Resistance	147 m/s², Action time: 11 ms, 3 times by half-sine pulse in each direction X, Y, and Z				
Noise Durability	By noise simulator at noise voltage of 1000 Vp-p, noise width of 1 µs and period of 30 to 100 Hz				
Grounding	Class D grounding (grounding resistance: 100 Ω or less) Common grounding with a heavy electrical system is not allowed				
Working Atmosphere	Free from corrosive or flammable gas and excessive conductive dust				
Operating Altitude	0 to 2000 m				
Installation Location	Inside a control panel				
Overvoltage Category	II or less				
Pollution Degree	2 or less				
Equipment Class	Class 2				

Note 1: The operating ambient temperature is 0 to 55°C (32 to 131°F) for products manufactured before June 2016. Please check manual for precautions when ambient operating temperature is lower than 0C.

AC Power Supply Specifications

Model Number		FX5U-32M	FX5U-64M	FX5U-80M	FX5UJ-24M	FX5UJ-40M	FX5UJ-60M
Rated Voltage		100 to 240 VAC					
Allowable Supply Voltage Range		85 to 264 VAC					
Frequency Rating		50/60 Hz					
Allowable Instantaneous Power Failure Time		Operation can be continued upon occurrence of instantaneous power failure for 10 ms or less					
Power Fuse		250 V, 3.15 A time-lag fuse	250 V, 5 A time-lag fuse		250 V, 3.15 A Time-lag fuse		
Rush Current		25 A max. 5 ms or less/100 VAC; 50 A max. 5 ms or less/200 VAC	30 A max. 5 ms or less/100 VAC 60 A max. 5 ms or less/200 VAC		25 A max. 5 ms or less/100 V AC 50 A max. 5 ms or less/200 V AC	30 A max. 5 ms or less/100 V AC 50 A max. 5 ms or less/200 V AC	
Power Consumption (*1)		30 W	40 W	45 W	30W	32W	35W
5 VDC Power Supply Capacity		900 mA	1100 mA	1100 mA	Not used in power calculation		
24 VDC Service Power Supply Capacity (*2)	When Service Power Supply is Used for Input Circuits	400 mA	600 mA	600 mA	400 mA	400 mA	400 mA
	When External Power Supply is Used for Input Circuits	480 mA	740 mA	770 mA	460 mA	500 mA	550 mA

Notes:
1. This value is for when all 24 VDC service power supplies are used in the maximum configuration in which they can be connected to the CPU module. The input current is included.
2. When I/O modules are connected, they consume current from the 24 VDC service power.

DC Power Supply Specifications

Item	FX5U-32M	FX5U-64M	FX5U-80M	FX5UC-32MT	FX5UC-64MT	FX5UC-96MT
Rated Voltage	24 VDC					
Allowable Supply Voltage Range	16.8 to 28.8 VDC			20.4 to 28.8 VDC		
Allowable Instantaneous Power Failure Time	Operation can be continued upon occurrence of instantaneous power failure for 5 ms or less.					
Power Fuse	250V, 3.15 A time-lag fuse	250V, 5A time-lag fuse		125 V, 3.15 A time-lag fuse		
Rush Current	50A max. 0.5 ms or less / 24 VDC	65A max. 2.0 ms or less/24 VDC		30 A max. 0.5 ms or less/24 VDC	40 A max. 0.5 ms or less/24 VDC	
Power Consumption (*1)	30W	40W	45W	5W / 24VDC [30W / 24VDC +20%, -15%]	8W / 24VDC [33W / 24VDC +20%, -15%]	11W / 24VDC [36W / 24VDC +20%, -15%]
24 VDC Built-in Power Supply Capacity	480 mA (360 mA) (*2)	740 mA (530 mA) (*2)	770 mA (560 mA) (*2)	720 mA		
5 VDC Built-in Power Supply Capacity	900 mA (775 mA) (*2)	1100 mA (975 mA) (*2)		500 mA		

Notes:
1. Maximum consumption value when using the maximum configuration connectable to the CPU module.
2. The value in ( ) is capacity of power supply when the supply voltage is 16.8 to 19.2 VDC.

CPU Modules

FX5U

FX5U Main Units with 32 I/O

Model Number	FX5U-32MR/ES	FX5U-32MT/ES	FX5U-32MT/ESS	FX5U-32MR/DS	FX5U-32MT/DS	FX5U-32MT/DSS
Stocked Item	S	S	S	S	S	S
Certification	UL • cUL • CE					
Power Supply	100 to 240VAC			24 VDC		
Built-In Digital Inputs/Output Points	32	32	32	32	32	32
Built-In Digital Input Points	16	16	16	16	16	16
Built-In Digital Output Points	16	16	16	16	16	16
Digital Input Type	24 VDC (Sink/Source)	24 VDC (Sink/Source)	24 VDC (Sink/Source)	24 VDC (Sink/Source)	24 VDC (Sink/Source)	24 VDC (Sink/Source)
Digital Output Type	Relay	Transistor (Sink)	Transistor (Source)	Relay	Transistor (Sink)	Transistor (Source)
Built-In Analog Inputs	2					
Built-In Analog Outputs	1					
Analog Input Type	0 to 10 VDC (input resistance 115.7 kΩ)					
Analog Output Type	0 to 10 VDC (external resistance 2kΩ to 1MΩ)					
Built-In Communication	RS-485/RS-422 & Ethernet (100/10 Mbps) Full/Half Duplex					
Connection Type	Terminal block					
5 VDC Power Supply	900 mA (775 mA)	900 mA (775 mA)	900 mA (775 mA)	900 mA (775 mA)	900 mA (775 mA)	900 mA (775 mA)
24 VDC Power Supply (*1)	400 mA (480 mA	400 mA (480 mA	400 mA (480 mA	480 mA; (360 mA)	480 mA; (360 mA)	480 mA; (360 mA)
Weight (kg)	0.65	0.65	0.65	0.65	0.65	0.65
Dimensions (W x H x D) mm	150 x 90 x 83	150 x 90 x 83	150 x 90 x 83	150 x 90 x 83	150 x 90 x 83	150 x 90 x 83

Note 1: Power supply capacity when the power supply voltage is 16.8 to 19.2 VDC.

FX5U Main Units with 64 I/O

Model Number	FX5U-64MR/ES	FX5U-64MT/ES	FX5U-64MT/ESS	FX5U-64MR/DS	FX5U-64MT/DS	FX5U-64MT/DSS
Stocked Item	S	S	S	S	S	S
Certification	UL • cUL • CE					
Built-In Digital Inputs/Outputs	64	64	64	64	64	64
Built-In Digital Inputs	32	32	32	32	32	32
Built-In Digital Outputs	32	32	32	32	32	32
Digital Input Type	24 VDC (Sink/Source)					
Digital Output Type	Relay	Transistor (Sink)	Transistor (Source)	Relay	Transistor (Sink)	Transistor (Source)
Built-In Analog Inputs	2					
Built-In Analog Outputs	1					
Analog Input Type	0 to 10 VDC (input resistance 115.7 kΩ)					
Analog Output Type	0 to 10 VDC (external resistance 2kΩ to 1MΩ)					
Built-In Communication	RS-485/RS-422 & Ethernet (100/10 Mbps) Full/Half Duplex					
Connection Type	Terminal block					
5 VDC Power Supply	1100 mA			1100 mA (975 mA) (*2)		
24 VDC Service Power Supply	600 mA; (740 mA) (*1)			740 mA (530 mA) (*2)		
Weight (kg)	1.0					
Dimensions (W x H x D) mm	220 x 90 x 83	220 x 90 x 83	220 x 90 x 83	220 x 90 x 83	220 x 90 x 83	220 x 90 x 83

Notes:
1. Power supply capacity when external power supply is used for input circuit
2. The value in ( ) is capacity of power supply when the supply voltage is 16.8 to 19.2 VDC.

FX5U Main Units with 80 I/O

Model Number	FX5U-80MR/ES	FX5U-80MT/ES	FX5U-80MT/ESS	FX5U-80MR/DS	FX5U-80MT/DS	FX5U-80MT/DSS
Stocked Item	S	S	S	S	-	S
Certification	UL • cUL • CE					
Built-In Digital Inputs/Outputs	80	80	80	80	80	80
Built-In Digital Inputs	40	40	40	40	40	40
Built-In Digital Outputs	40	40	40	40	40	40
Digital Input Type	24VDC (Sink/Source)					
Digital Output Type	Relay	Transistor (Sink)	Transistor (Source)	Relay	Transistor (Sink)	Transistor (Source)
Built-In Analog Inputs	2					
Built-In Analog Outputs	1					
Analog Input Type	0 to 10 VDC (input resistance 115.7 kΩ)					
Analog Output Type	0 to 10 VDC (external resistance 2kΩ to 1MΩ)					
Built-In Communication	RS-485/RS-422 & Ethernet (100/10 Mbps) Full/Half Duplex					
Connection Type	Terminal block					
5 VDC Power Supply	1100 mA			1100 mA (975 mA) (*2)		
24 VDC Service Power Supply	600 mA; (770 mA) (*1)			770 mA (560 mA) (*2)		
Weight (kg)	1.2	1.2	1.2	1.2	1.2	1.2
Dimensions (W x H x D) mm	285 x 90 x 83	285 x 90 x 83	285 x 90 x 83	285 x 90 x 83	285 x 90 x 83	285 x 90 x 83

Notes:
1. Power supply capacity when external power supply is used for input circuit
2. The value in ( ) is capacity of power supply when the supply voltage is 16.8 to 19.2 VDC.

FX5UC

FX5UC Main Units with 32 I/O

Model Number	FX5UC-32MT/D	FX5UC-32MT/DSS	FX5UC-32MT/DS-TS	FX5UC-32MT/DSS-TS	FX5UC-32MR/DS-TS
Stocked Item	S	S	S	S	S
Certification	UL • cUL • CE				
Built-In Digital Inputs/Outputs	32	32	32	32	32
Built-In Digital Inputs	16	16	16	16	16
Built-In Digital Outputs	16	16	16	16	16
Digital Input Type	24 VDC (Sink)	24 VDC (Sink/Source)	24 VDC (Sink/Source)	24 VDC (Sink/Source)	24 VDC (Sink/Source)
Digital Output Type	Transistor (Sink)	Transistor (Source)	Transistor (Sink)	Transistor (Source)	Relay
Built-In Communication	RS-485/RS-422 & Ethernet (100/10 Mbps) Full/Half Duplex				
Connection Type	Connector		Spring clamp		
5 VDC Power Supply	720 mA	720 mA	720 mA	720 mA	720 mA
24 VDC Service Power Supply	500 mA	500 mA	500 mA	500 mA	500 mA
Weight (kg)	0.2	0.2	0.2	0.2	0.35
Dimensions (W x H x D) mm	42.1 x 90 x 89.1	42.1 x 90 x 89.1	48.1 x 90 x93.7	48.1 x 90 x93.7	68.2 x 90 x 93.7

FX5UC Main Units with 64 I/O

Model Number	FX5UC-64MT/D	FX5UC-64MT/DSS
Stocked Item	S	S
Certification	UL • cUL • CE	
Built-In Digital Inputs/Outputs	64	64
Built-In Digital Inputs	32	32
Built-In Digital Outputs	32	32
Digital Input Type	24 VDC (Sink)	24 VDC (Sink/Source)
Digital Output Type	Transistor (Sink)	Transistor (Source)
Built-In Communication	RS-485/RS-422 & Ethernet (100/10 Mbps) Full/Half Duplex	
Connection Type	Connector	
5 VDC Power Supply	720 mA	720 mA
24 VDC Service Power Supply	500 mA	500 mA
Weight (kg)	0.3	0.3
Dimensions (W x H x D) mm	62.2 x 90 x 89.1	62.2 x 90 x 89.1

FX5UC Main Units with 96 I/O

Model Number	FX5UC-96MT/D	FX5UC-96MT/DSS
Stocked Item	S	S
Certification	UL • cUL • CE	
Built-In Digital Inputs/Outputs	96	96
Built-In Digital Inputs	48	48
Built-In Digital Outputs	48	48
Digital Input Type	24 VDC (Sink)	24 VDC (Sink/Source)
Digital Output Type	Transistor (Sink)	Transistor (Source)
Built-In Communication	RS-485/RS-422 & Ethernet (100/10 Mbps) Full/Half Duplex	
Connection Type	Connector	
5 VDC Power Supply	720 mA	720 mA
24 VDC Service Power Supply	500 mA	500 mA
Weight (kg)	0.35	0.35
Dimensions (W x H x D) mm	82.3 x 90 x 89.1	82.3 x 90 x 89.1

FX5UJ

FX5UJ Main Units with 24 I/O

Model Number	FX5UJ-24MR/ES	FX5UJ-24MT/ES	FX5UJ-24MT/ESS
Stocked Item	S	S	S
Certification	UL • cUL • CE		
Power Supply	100 to 240VAC		
Built-in Digital Inputs/Output Points	24	24	24
Built-In Digital Input Points	14	14	14
Built-In Digital Output Points	10	10	10
Digital Input Type	24 VDC (Sink/Source)	24 VDC (Sink/Source)	24 VDC (Sink/Source)
Digital Output Type	Relay	Transistor (Sink)	Transistor (Source)
Built-In Communication	USB & Ethernet (100/10 Mbps) Full/Half Duplex		
Connection Type	Terminal block	Terminal block	Terminal block
24 VDC Power Supply	400 mA (460 mA)	400 mA (460 mA)	400 mA (460 mA)
Weight (kg)	0.55	0.55	0.55
Dimensions (W x H x D) mm	95 x 90 x 83	95 x 90 x 83	95 x 90 x 83

FX5UJ Main Units with 40 I/O

Model Number	FX5UJ-40MR/ES	FX5UJ-40MT/ES	FX5UJ-40MT/ESS
Stocked Item	S	S	S
Certification	UL • cUL • CE		
Power Supply	100 to 240VAC		
Built-in Digital Inputs/Output Points	40	40	40
Built-In Digital Input Points	24	24	24
Built-In Digital Output Points	16	16	16
Digital Input Type	24 VDC (Sink/Source)	24 VDC (Sink/Source)	24 VDC (Sink/Source)
Digital Output Type	Relay	Transistor (Sink)	Transistor (Source)
Built-In Communication	USB & Ethernet (100/10 Mbps) Full/Half Duplex		
Connection Type	Terminal block	Terminal block	Terminal block
24 VDC Power Supply	400 mA (500 mA)	400 mA (500 mA)	400 mA (500 mA)
Weight (kg)	0.65	0.65	0.65
Dimensions (W x H x D) mm	130 x 90 x 83	130 x 90 x 83	130 x 90 x 83

FX5UJ Main Units with 60 I/O

Model Number	FX5UJ-60MR/ES	FX5UJ-60MT/ES	FX5UJ-60MT/ESS
Stocked Item	S	S	S
Certification	UL • cUL • CE		
Power Supply	100 to 240VAC		
Built-in Digital Inputs/Output Points	60	60	60
Built-In Digital Input Points	36	36	36
Built-In Digital Output Points	24	24	24
Digital Input Type	24 VDC (Sink/Source)	24 VDC (Sink/Source)	24 VDC (Sink/Source)
Digital Output Type	Relay	Transistor (Sink)	Transistor (Source)
Built-In Communication	USB & Ethernet (100/10 Mbps) Full/Half Duplex		
Connection Type	Terminal block	Terminal block	Terminal block
24 VDC Power Supply	400 mA (550 mA)	400 mA (550 mA)	400 mA (550 mA)
Weight (kg)	0.8	0.8	0.8
Dimensions (W x H x D) mm	175 x 90 x 83	175 x 90 x 83	175 x 90 x 83

I/O Modules

Unpowered I/O Modules

Model Number	FX5-8EX/ES	FX5-8EYT/ESS	FX5-8EYR/ES	FX5-8EYT/ES	FX5-16ER/ES	FX5-16ET/ES	FX5-16ET/ESS
Stocked Item	S	S	S	S	S	S	S
Certification	UL • cUL • CE						
Applicable PLCs	FX5U/FX5UC/FX5UJ						
Total No. of Points	8	8	8	8	16	16	16
No. of Input Points	8	-	-	-	8	8	8
No. of Output Points	-	8	8	8	8	8	8
Input Type	24 VDC (Sink/ Source)	-	-	-	24V DC (sink/source)		
Output Type	-	Transistor (Source)	Relay	Transistor (Sink)	Relay	Transistor (sink)	Transistor (source)
Connection Type	Terminal block						
5 VDC Power Supply	75 mA	75 mA	75 mA	75 mA	100mA		
24 VDC Power Supply	50 mA	75 mA	75 mA	75 mA	125 mA	125 mA	125 mA
Weight (kg)	0.2	0.2	0.2	0.2	0.25	0.25	0.25
Dimensions (W x H x D) mm	40 x 90 x 83	40 x 90 x 83	40 x 90 x 83	40 x 90 x 83	40 x 90 x 83	40 x 90 x 83	40 x 90 x 83

Model Number	FX5-16EX/ES	FX5-16EYR/ES	FX5-16EYT/ES	FX5-16EYT/ESS
Stocked Item	S	S	S	S
Certification	UL • cUL • CE			
Applicable PLCs	FX5U/FX5UC/FX5UJ			
Total No. of Points	16	16	16	16
No. of Input Points	16	-	-	-
No. of Output Points	-	16	16	16
Input Type	24 VDC (Sink/Source)	-	-	-
Output Type	-	Relay	Transistor (Sink)	Transistor (Source)
Connection Type	Terminal block			
5 VDC Power Supply	100 mA	100 mA	100 mA	100 mA
24 VDC Power Supply	85 mA	125 mA	125 mA	125 mA
Weight (kg)	0.25	0.25	0.25	0.25
Dimensions (W x H x D) mm	40 x 90 x 83	40 x 90 x 83	40 x 90 x 83	40 x 90 x 83

Model Number	FX5-C16EX/D	FX5-C16EX/DS	FX5-C16EYT/D	FX5-C16EYT/DSS	FX5-C16EYR/D-TS
Stocked Item	S	S	S	S	S
Certification	UL • cUL • CE				
Applicable PLCs	FX5U/FX5UC/FX5UJ				
Integrated Inputs/Outputs	16	16	16	16	16
Integrated Inputs	16	16	-	-	-
Integrated Outputs	-	-	16	16	16
Input Type	24 VDC (Sink)	24 VDC (Sink/Source)	-	-	-
Output Type	-	-	Transistor (Sink)	Transistor (Source)	Relay
Connection Type	Connector				Spring clamp
5 VDC Power Supply	100 mA	100mA	100mA	100 mA	100 mA
24 VDC Service Power Supply	-	-	100 mA	100 mA	100 mA
External 24 VDC Power Supply (For Input Circuits)	65 mA	65 mA	-	-	-
Weight (kg)	0.1	0.1	0.1	0.1	0.2
Dimensions (W x H x D) mm	14.6 x 90 x 87	14.6 x 90 x 87	14.6 x 90 x 87	14.6 x 90 x 87	30.7 x 90 x 93.7

Model Number	FX5-C32EX/DS-TS	FX5-C32EYT/D-TS	FX5-C32EYT/DSS-TS	FX5-C32ET/DS-TS	FX5-C32ET/DSS-TS
Stocked Item	S	S	S	S	S
Certification	UL • cUL • CE				
Applicable PLCs	FX5U/FX5UC/FX5UJ				
Integrated Inputs/Outputs	32	32	32	32	32
Integrated Inputs	32	-	-	16	16
Integrated Outputs	-	32	32	16	16
Input Type	24 VDC (Sink/Source)	-	-	24 VDC (Sink/Source)	24 VDC (Sink/Source)
Output Type	-	Transistor (Sink)	Transistor (Source)	Transistor (Sink)	Transistor (Source)
Connection Type	Spring clamp				
5 VDC Power Supply	120 mA	120 mA	120 mA	120 mA	120 mA
24 VDC Service Power Supply	-	200 mA	200 mA	100 mA	100 mA
External 24 VDC Power Supply (For Input Circuits)	130 mA	-	-	65 mA	65 mA
Weight (kg)	0.15	0.15	0.15	0.15	0.15
Dimensions (W x H x D) mm	20.1 x 90 x 93.7	20.1 x 90 x 93.7	20.1 x 90 x 93.7	20.1 x 90 x 93.7	20.1 x 90 x 93.7

Model Number	FX5-C32EX/D	FX5-C32EX/DS	FX5-C32EYT/D	FX5-C32EYT/DSS	FX5-C32ET/D	FX5-C32ET/DSS
Stocked Item	S	S	S	S	S	S
Certification	UL • cUL • CE					
Applicable PLCs	FX5U/FX5UC/FX5UJ					
Integrated Inputs/Outputs	32	32	32	32	32	32
Integrated Inputs	32	32	-	-	16	16
Integrated Outputs	-	-	32	32	16	16
Input Type	24 VDC (Sink)	24 VDC (Sink/Source)	-	-	24 VDC (Sink)	24 VDC (Sink/Source)
Output Type	-	-	Transistor (Sink)	Transistor (Source)	Transistor (Sink)	Transistor (Source)
Connection Type	Connector					
5 VDC Power Supply	120 mA	120 mA	120 mA	120 mA	120 mA	120 mA
24 VDC Service Power Supply	-	-	200 mA	200 mA	100 mA	100 mA
External 24 VDC Power Supply (For Input Circuits)	130 mA	130 mA	-	-	65 mA	65 mA
Weight (kg)	0.15	0.15	0.15	0.15	0.15	0.15
Dimensions (W x H x D) mm	20.1 x 90 x 87	20.1 x 90 x 87	20.1 x 90 x 87	20.1 x 90 x 87	20.1 x 90 x 87	20.1 x 90 x 87

Powered I/O Modules

Model Number	FX5-32ER/ES	FX5-32ET/ES	FX5-32ET/ESS	FX5-32ER/DS	FX5-32ET/DS	FX5-32ET/DSS
Stocked Item	S	S	S	S	S	S
Certification	UL • cUL • CE					
Power Supply	100 to 240VAC			24VDC		
Applicable PLCs	FX5U/FX5UJ			FX5U/FX5UC		
Total No. of Points	32	32	32	32	32	32
No. of Input Points	16	16	16	16	16	16
No. of Output Points	16	16	16	16	16	16
Input Type	24 VDC (Sink/Source)					
Output Type	Relay	Transistor (Sink)	Transistor (Source)	Relay	Transistor (Sink)	Transistor (Source)
Connection Type	Terminal block					
5 VDC Power Supply	965 mA	965 mA	965 mA	965 mA	965 mA	965 mA
24 VDC Power Supply	250 mA (310 mA) (*1)	250 mA (310 mA) (*1)	250 mA (310 mA) (*1)	310 mA	310 mA	310 mA
Weight (kg)	0.65	0.65	0.65	0.65	0.65	0.65
Dimensions (W x H x D) mm	150 x 90 x 83	150 x 90 x 83	150 x 90 x 83	150 x 90 x 83	150 x 90 x 83	150 x 90 x 83

Note 1: Power supply capacity when external power supply is used for input circuit.

High-Speed Pulse Input/Output Modules

High-Speed Pulse Input/Output modules connect to the FX5 CPU module and include high-speed counter, pulse width measurement, input interrupt and PWM output functions. They can be used as general input/output.

Model Number	FX5-16ET/ES-H	FX5-16ET/ESS-H
Stock	S	S
Certification	UL • cUL • CE	
Applicable CPU	FX5U/FX5UC (FX5-CNV-IFC or FX5-C1PS-5V is needed when using FX5UC)	
Rated Voltage	5 VDC (internal power), 24 VDC (service power supply or external power supply)	
Current Consumption	100 mA/5 VDC, 125 mA/24 VDC (current of the input circuit is included)	
Number of Input Points	8 points (sink/source)	
Input Signal Voltage	24 VDC +20%, -15%	
Input Signal Current	5.3 mA/24 VDC	
Input Impedance	4.3 kΩ	
Input Response Time	None, 10 µs, 50 µs, 0.1 ms, 0.2 ms, 0.4 ms, 0.6 ms, 1 ms, 5 ms, 10 ms (initial values), 20 ms, 70 ms	
Number of Output Points	8 points	
Output Type	Sink	Source
External Power Supply	5 to 30 V DC	
Maximum Load	1.6A/8 points common	
Open Circuit Leakage Current	0.1 mA or less/30 V DC	
Connection Type	Terminal Block (M3 Screw)	
Weight (kg)	0.25	
Dimensions (W x H x D) mm	40 x 90 x 83	40 x 90 x 83

Analog Modules

Analog Input Modules

Model Number	FX5-4AD-ADP				FX5-4AD			
Stocked Item	S				S			
Certification	UL • cUL • CE (EMC)							
Applicable PLCs	FX5U/FX5UC/FX5UJ				FX5U/FX5UC/FX5UJ (*2)			
Number of Analog Input Points	4 points (4 channels)				4 points (4 channels)			
Analog Input Voltage	-10 to +10 VDC (input resistance 1 MΩ)							
Analog Input Current	-20 to +20 mA DC (input resistance 250Ω)							
Digital Output Value	14-bit binary value				16-bit signed binary (-32768 to +327670)			
Input Characteristics, Resolution (*1)	Analog Input Range		Digital Output Value	Resolution	Analog Input Range		Digital Output Value	Resolution
	Voltage	0 to 10 V	0 to 16000	625 µV	Voltage	0 to 10 V	0 to 32000	312.5 µV
		0 to 5 V	0 to 16000	312.5 µV		0 to 5 V	0 to 32000	156.25 µV
		1 to 5 V	0 to 12800	312.5 µV		1 to 5 V	0 to 32000	125 µV
		-10 to +10V	-8000 to +8000	1250 µV		-10 to +10V	-32000 to +32000	312.5 µV
	Current	0 to 20 mA	0 to 16000	1.25 µA	Current	0 to 20 mA	0 to 32000	625 nA
		4 to 20 mA	0 to 12800	1.25 µA		4 to 20 mA	0 to 32000	500 nA
		-20 to +20 mA	-8000 to +8000	2.5 µA		-20 to +20 mA	-32000 to +32000	625 nA
Accuracy (Accuracy for the Full Scale Digital Output Value)	Ambient temperature 25 ±5°C: within ±0.1 % (±16 digit); Ambient temperature 0 to 55°C: within ±0.2 % (±32 digit)				Ambient temperature 25°5°: within ±0.1% (±32 digits) Ambient temperature 0 to 55°: within ±0.2% (±64 digits) Ambient temperature -20 to 0°: within ±0.3% (±96 digits)			
Conversion Speed	Maximum 450 µs (The data is updated at every scan time of the PLC.)				80 µs/CH			
Absolute Maximum Input	Voltage: ±15 V, Current: ±30 mA							
Isolation Method	Between input terminal and PLC: Photocoupler Between input channels: Non-isolation							
Number of Occupied I/O Points	0 point (This number is not related to the maximum number of I/O points of the PLC)				8			
Weight (kg)	0.1				0.2			
Dimensions (W x H x D) mm	17.6 x 106 x 89.1				40 x 90 x 102.2			

Notes
1. For the input conversion characteristic refer to User's Manual.
2. FX5-CNV-IFC or FX5-C1PS-5V is necessary to connect FX5-4AD to the FX5UC CPU module.

Analog Input Module continued

Model Number	FX5-8AD (*3)			
Stocked Item	S			
Certification	UL • cUL • CE (EMC)			
Applicable PLCs	FX5U/FX5UC/FX5UJ (*2)			
Number of Analog Input Points	8 points (8 channels)			
Analog Input Voltage	-10 to +10 VDC (input resistance 1 MΩ)			
Analog Input Current	-20 to +20 mA DC (input resistance 250Ω)			
Digital Output Value	16-bit signed binary (-32000 to +32000)			
Input Characteristics, Resolution (*1)	Analog Input Range		Digital Output Value	Resolution
	Voltage	0 to 10 V	0 to 32000	312.5 µV
		0 to 5 V	0 to 32000	156.25 µV
		1 to 5 V	0 to 32000	125 µV
		-10 to +10V	-32000 to +32000	312.5 µV
	Current	0 to 20 mA	0 to 32000	625 nA
		4 to 20 mA	0 to 32000	500 nA
		-20 to +20 mA	-32000 to +32000	625 nA
Accuracy (Accuracy for the Full Scale Digital Output Value)	Ambient temperature 25 ± 5°C: within ±0.3% (±192 digits) Ambient temperature -20 to 55°C: within ±0.5% (±320 digits)			
Conversion Speed	Voltage/current: 1ms/ch, Thermocouple/RTD: 40ms/ch			
Absolute Maximum Input	Voltage: ±15 V, Current: ±30 mA			
Isolation Method	Between input terminal and PLC: Photocoupler Between input channels: Non-isolation			
Number of Occupied I/O Points	8			
Weight (kg)	0.3			
Dimensions (W x H x D) mm	50 x 90 x 102.2			

Notes
1. For the input conversion characteristic refer to User's Manual.
2. FX5-CNV-IFC or FX5-C1PS-5V is necessary to connect FX5-4AD to the FX5UC CPU module.
3. FX5-8AD accepts K, J, T, B, R, S type thermocouples and Pt100, Ni100 RTDs.

Analog Output Modules

Model Number	FX5-4DA-ADP				FX5-4DA			
Stocked Item	S				S			
Certification	UL • cUL • CE (EMC)							
Applicable PLCs	FX5U/FX5UC/FX5UJ							
Number of Analog Output Points	4 points (4 channels)							
Digital input	14-bit binary value				16-bit signed binary (-32768 to +32767)			
Analog Output Voltage	-10 to +10 VDC (external load resistance value 1kΩ to 1MΩ)							
Analog Output Current	0 to 20 mA DC (external load resistance value 0 to 500 Ω)							
Output Characteristics, Resolution (*1)	Analog Output Range		Digital Value	Resolution	Analog Output Range		Digital Value	Resolution
	Voltage	0 to 10 V	0 to 16000	625 µV	Voltage	0 to 10 V	0 to 32000	312.5 µV
		0 to 5 V	0 to 16000	312.5 µV		0 to 5 V	0 to 32000	156.3 µV
		1 to 5 V	0 to 16000	250 µV		1 to 5 V	0 to 32000	125 µV
		-10 to +10V	-8000 to +8000	1250 µV		-10 to +10V	-32000 to +32000	312.5 µV
	Current	0 to 20 mA	0 to 16000	1.25 µA	Current	0 to 20 mA	0 to 32000	625 nA
		4 to 20 mA	0 to 16000	1 µA		4 to 20 mA	0 to 32000	500 nA
Accuracy (Accuracy for the Full Scale Analog Output Value)	Ambient temp. 25 ±5°C: ±0.1 % (Volt. ±20 mV, Current ±20 µA) Ambient temp. 0 to 55°C: ±0.2 % (Voltage ±40 mV, Current ±40 µA)				Ambient temp. 25±5°C Within ±0.1% (volt. ±20 mV, current ±20 µA) Ambient temp. 0 to 55°C: Within ±0.2% (volt. ±40 mV, current ±40 µA) Ambient temp. -20 to 0°C: Within ±0.3% (volt. ±60 mV, current ±60 µA)			
Conversion Speed	Maximum 950 µs (The data will be updated at every scan time of the PLC.)				80 µs/CH			
Isolation Method	Between output terminal and PLC: Photocoupler; Between output channels: Non-isolation							
Number of Occupied I/O Points	0 point (This number is not related to the maximum number of I/O points of the PLC)				8 points			
Weight (kg)	0.1				0.2			
Dimensions (W x H x D) mm	17.6 x 106 x 89.1				40 x 90 x 102.2			

Note 1: For the output conversion characteristic refer to User's Manual.

Combination Analog Input Output Modules

Model Number		FX5-4A-ADP		
Stocked Item		S		
Certification		UL • cUL • CE (EMC)		
Applicable PLCs		FX5U/FX5UC/FX5UJ		
Analog Channels	Input	2		
	Output	2		
Input Characteristics, Resolution		Analog input range		Digital output value	Resolution
	Voltage		0 to 10 V	0 to 16000	625 µV
			0 to 5 V	0 to 16000	312.5 µV
			1 to 5 V	0 to 12800	312.5 µV
			-10 to +10 V	-8000 to +8000	1250 µV
	Current		0 to 20 mA	0 to 16000	1.25 µA
			4 to 20 mA	0 to 12800	1.25 µA
			-20 to +20 mA	-8000 to +8000	2.5 µA
Output Characteristics, Resolution		Analog output range		Digital value	Resolution
	Voltage		0 to 10 V	0 to 16000	625 µV
			0 to 5 V	0 to 16000	312.5 µV
			1 to 5 V	0 to 16000	250 µV
			-10 to +10 V	-8000 to +8000	1250 µV
	Current		0 to 20 mA	0 to 16000	1.25 µA
			4 to 20 mA	0 to 16000	1 µA
Weight (kg)		0.1			
Dimensions (W x H x D) mm		17.6 x 106 x 89.1			

Temperature Input Modules

Model Number		FX5-4AD-PT-ADP	FX5-4AD-TC-ADP	FX5-4LC
Stocked Item		S	S	S
Certification		UL • cUL • CE		
Applicable PLCs		FX5U/FX5UC/FX5UJ		
Analog Input Points		4 points		
Resistance Temperature Detector/Thermocouples		Pt100 /Ni100	K, J, T, B, R, S	Thermocouple: K, J, R, S, E, T, B, N JIS C 1602-1995, PL II, W5Re/W26Re, U, L Resistance thermometer: 3-wire Pt100 JIS C 1604-1997 3-wire JPt100 JIS C 1604-1981 2-wire/3-wire Pt1000 JIS C 1604-2013
Temperature Measuring Range		Pt100: -200 to +850°C Ni100: -60 to +250°C	K: -200 to +1200°C J: -40 to +750°C T: -200 to +350°C B: 600 to 1700°C R: 0 to 1600°C S: 0 to 1600°C	K: -200 to +1300°C (-100 to +2400°F) J: -200 to +1200°C (-100 to +2100°F) T: -200 to +400°C (-300 to +700°F) S: 0 to 1700°C (0 to 3200°F) R: 0 to 1700°C (0 to 3200°F) E: -200 to +1000°C (0 to 1800°F) B: 0 to 1800°C (0 to 3000°F) N: 0 to 1300°C (0 to 2300°F) PL II: 0 to 1200°C (0 to 2300°F) W5Re/W26Re: 0 to 2300°C (0 to 3000°F) U: -200 to +600°C (-300 to +700°F) L: 0 to 900°C (0 to 1600°F) Micro voltage input: DC0 to 10mV, DC0 to 100mV Pt100 (3-wire type): -200 to +600°C (-300 to +1100°F) JPt100 (3-wire type): -200 to +500°C (-300 to +900°F) Pt1000 (2-wire type/3-wire type): -200.0 to +650.0°C (-328 to +1184°F)
Digital Output		Pt100: -2000 to +8500 Ni100: -600 to +2500	K: -2000 to +12000 J: -400 to +7500 T: -2000 to +3500 B: 6000 to 17000 R: 0 to 16000 S: 0 to 16000	4 transistor outputs
Accuracy	25±5°C	Pt100: ±0.8°C Ni100: ±0.4°C	Varies according to thermocouple used. Please refer to the manual	
	-20 to 55°C	Pt100: ±2.4°C Ni100: ±1.2°C		
Resolution		0.1°C(0.2°F)	K/J/T: 0.1°C B/R/S: 0.3°C	0.1°C (0.1°F), 1.0°C (1.0°F), 0.5 µV, or 5.0 µV Varies depending on input range of used sensors
Conversion Speed		85 ms/channel		250 ms/4ch
Isolation Method		Between input terminal and CPU module: Photocoupler Between input channels: Non-isolation		The photocoupler is used to insulate the analog input area and transistor output area from the PLC. The DC/DC converter is used to insulate the power supply from the analog input area and transistor output area. Channels are insulated from each other.
Number of Occupied I/O Points		0		8
Dimensions (H x W x D) mm		106 x 17.6 x 89.1		90 x 60 x 102.2
Weight (kg)		0.1		0.3

Positioning and Motion Modules

Motion Modules and Simple Motion Modules

Please refer to the Motion Controller section in this guide.

2-Axis Positioning Modules

Model Number	FX5-20PG-P	FX5-20PG-D
Stock	S	S
Certification	UL • cUL • CE	
Applicable CPU	FX5U/FX5UC/FX5UJ	
Number of Control Axes	2 axes	
Pulse Output Form	Transistor	Differential
Interpolation Function	2-axis linear interpolation, 2-axis circular interpolation	
Control Method	PTP (Point To Point) control, path control (line and arc), speed control, speed-position switching control, position-speed switching control	
Control Unit	mm, inch, degree, pulse	
Positioning Data	600 data/axis	
Maximum Connection Distance Between Servos	2 m	10 m
Number of Write Access to Flash ROM	100000 times maximum	
Number of Occupied I/O Points	8 points	
Power Supply Voltage	24 VDC +20%, -15%	
Current Consumption	120mA	165mA
Weight (kg)	0.2	
Dimensions (W x H x D) mm	50 x 90 x 83	

Communications and Networking Expansion

Serial Communication Expansion Boards

These communication expansion boards mount on the front of the CPU modules and allow communication with external devices and other CPU modules over serial networks including Modbus.

Model Number	FX5-232-BD	FX5-485-BD	FX5-422-BD-GOT
Stocked Item	S	S	S
Certification	CE		
Applicable PLCs	FX5U/FX5UJ		
Rated Voltage	5 VDC	5 VDC	5 VDC
Current Consumption	20 mA	20 mA	20 mA/5 VDC
Transmission Standard	RS-232C	RS-485/RS-422	RS-422
Max. Distance	15 m (49' 2")	50 m (164')	According to the specification of the GOT
Connection Method	9-pin D-sub, male	European terminal block	8-pin MINI-DIN, female
Terminal Resistor	-	Built-in (OPEN / 110Ω / 330Ω)	-
Insulation	Not insulated		
Communication Method	Half-duplex/Full-duplex		Half-duplex
Baud Rate	300/600/1200/2400/4800/9600/19200/38400/57600/115200 (bps)		9600/19200/38400/57600/115200 (bps)
Weight (kg)	0.02	0.02	0.02
Dimensions (W x H x D) mm	38 x 51.4 x 18.2	38 x 51.4 x 30.5	38 x 51.4 x 15.4

Serial Communication Expansion Adapters

These expansion adapters mount to the left side of the FX5 CPU modules and provide a wide range of serial communication standards including Modbus.

Model Number	FX5-232ADP	FX5-485ADP
Stocked Item	S	S
Certification	UL • cUL • CE	
Applicable PLCs	FX5U/FX5UC/FX5UJ	
Rated Voltage	5 VDC; 24 VDC	
Current Consumption	30 mA / 5 VDC 30 mA / 24 VDC	20 mA / 5 V DC30 mA / 24 VDC
Transmission Standard	RS-232C	RS-485/RS-422
Max. Distance	15 m (49' 2")	1200 m (3937')
Connection Method	9-pin D-sub, male	European terminal block
Terminal Resistor	-	Built-in (OPEN/110Ω / 330Ω)
Insulation	Photocoupler isolation	Photocoupler isolation
Communication Method	Half-duplex/Full-duplex	Half-duplex/Full-duplex
Baud Rate	300/600/1200/2400/4800/9600/19200/38400 57600/115200 (bps)	300/600/1200/2400/4800/9600/19200/3840057600/115200 (bps)
Weight (kg)	0.08	0.08
Dimensions (W x H x D) mm	17.6 x 106 x 82.8	17.6 x 106 x 89.1

CC-Link Networks

Model Number	FX5-CCLGN-MS	FX5-CCLIEF	FX5-CCL-MS
Stocked Item	S	S	S
Certification	UL • cUL • CE	UL • cUL • CE	UL • cUL • CE
Applicable CPU	FX5U/FX5UC	FX5U/FX5UC/FX5UJ	FX5U/FX5UC/FX5UJ
Network Protocol	CC-Link IE TSN	CC-Link IE Field	CC-Link Ver. 2.00 (Ver 1.10 also supported)
Station Type	Master or Local Station (Slave) Authentication Class B device	Intelligent Device Station (Slave)	Master or Intelligent Device Station
Power Supply	24VDC +20%/-15%	5VDC/10mA (internal), 24VDC/230MA (external)	24 VDC +20%, -15%
Current Consumption	220mA	230 mA	100mA
Communication Speed	1Gbps	1Gbps	Master station:156 kbps/625 kbps/2.5 Mbps/5 Mbps/10 Mbps Intelligent device station:156 kbps/625 kbps/2.5 Mbps/5 Mbps/ 10 Mbps/Auto-tracking
Max. Station-to-Station Distance	100m	100m	1200m at 156kbps (varies depending on speed)
Network Topology	Line, star	Line, star, ring	Bus (RS-485)
I/O Points	8	8	8
Max Number of Connectable Slaves (When Operating as Master)	60	-	FX5U/FX5UC: 14 device stations, 14 remote I/O stations FX5UJ: 8 device stations, 6 remote I/O stations
Max Number of Link Points (When Operating as Master)	8K	-	FX5U/FX5UC: 896 FX5UJ: 448
	8K	-	
	4K	-	FX5U/FX5UC: 112 FX5UJ: 96
	4K	-	FX5U/FX5UC: 112 FX5UJ: 96
Weight (kg)	0.3		
Dimensions (W x H x D) mm	50 x 90 x 83		

CC-Link IE Basic, Ethernet, EtherNet/IP, and Bacnet/IP Networks

Model Number	FX5-ENET	FX5-ENET/IP
Stocked Item	S	S
Certification	UL • cUL • CE	
Applicable CPU	FX5U/FX5UC/FX5UJ	
Station Type	CC-Link IE Basic Master 32 connections	EtherNet/IP scanner, adapter 32 connections (Class 1, Class3, UCMM communications)
Other Protocols	32 connections (TCP/IP, Bacnet/IP slave, Modbus TCP, simple CPU communication, MELSOFT, SLMP)	
Power Supply	24VDC (internal)	
Current Consumption	110mA	
Communication Speed	100Mbps/10Mbps	
Max. Station-to-Station Distance	100m	
Network Topology	Star (CC-Link IE Basic)	Star, Line (EtherNet/IP)
I/O Points	8	
Weight (kg)	0.2	
Dimensions (W x H x D) mm	40 x 90 x83	

OPC UA Server Module

Model Number	FX5-OPC
Stocked Item	S
Certification	UL • cUL • CE
Applicable CPU	FX5U/FX5UC
Power Supply	24 VDC
Current Consumption	110 mA
Number of Occupied I/O Points	8
Weight (kg)	0.2
Dimensions (W x H x D) mm	40 x 90 x 83

Anywire ASLINK and PROFIBUS

Model Number	FX5-ASL-M	FX5-DP-M
Stocked Item	S	S
Certification	UL • cUL • CE	
Applicable CPU	FX5U/FX5UC/FX5UJ	
Network Protocol	Anywire ASLINK	Profibus
Station Type	Master	
Power Supply	24 VDC +15%, -10%, ripple voltage 0.5 Vp-p or lower (external), 5VDC (internal)	24VDC (internal)
Current Consumption	100 mA (external), 200mA (internal)	150mA
Maximum Transmission Distance (Total Length)	200 m	1200m/segment
Network Topology	Bus (multidrop, T-branch, tree branch system)	Bus
Number of Data Points	384 I/O max (input: 256 max, output 256 max)	Max 2048 bytes input, 2048 bytes output
Number of Connected Slave Modules	128 max (varies depending on current consumption of each slave module)	64
Number of Occupied I/O Points	8 pts	
Weight (kg)	0.2	
Dimensions (W x H x D) mm	40 x 90 x 97.3	40 x 90 x 88.3

Safety Extension Modules

Safety Extension Modules

Safety control systems can be easily added to iQ-F with Safety Extension Modules. They must be configured as the right-most modules in an iQ-F system.

Model Number	FX5-SF-MU4T5	FX5-SF-8DI4
Stocked Item	S	S
Certification	UL • cUL • CE	
Applicable PLCs	FX5U/FX5UC	
Safety Integrity Level (SIL)	SIL3 (IEC 61508)/SILCL 3 (IEC 62061)	
Category	Category 4 (DIN EN ISO 13849-1)	
Performance Level (PL)	PL e(DIN EN ISO 13849-1)	
PFHd	1.5×10^{-9} to 1.5×10^{-8}	
TM (Mission Tme)	20 years (EN ISO 13849-1)	
Safety Inputs	4 points	8 points
General Inputs	4 points (3 general inputs/1 ENABLE input)	-
Test Outputs	2 points (source)	8 points (source)
Safety Outputs	4 points (source)	-
Weight (kg)	0.3	0.25
Dimensions (W x H x D) mm	50 x 90 x 83	50 x 90 x 83

Interfaces and Power Supplies

Extension Power Supply

The iQ-F Series power supply unit is used to add power onto the expansion buses when the built-in service power supplies are not sufficient.

Model Number		FX5-1PSU-5V	FX5-C1PS-5V
Stocked Item		S	S
Certification		UL • cUL • CE	UL • cUL • CE
Applicable PLCs		FX5U/FX5UJ	FX5UC
Rated Voltage		100 to 240 VAC	24 VDC
Rated Frequency		50/60Hz	-
Allowable Instantaneous Power Failure Time		10 ms or less	Operation can be continued upon occurrence of instantaneous power failure for 5 ms or less
Power Fuse		250 V 3.15 A time-lag fuse	125 V, 3.15 A time-lag fuse
In-Rush Current		25 A Max. 5 ms or less / 100 VAC 50 A Max. 5 ms or less / 200 VAC	35A max 0.5 ms or less / 24 VDC
Power Consumption		20 W Max.	30W
Output Current	24 VDC	0.3A	1200 mA
	5 VDC	1.2A	625 mA
Weight (kg)		0.3	0.1
Dimensions (W x H x D) mm		50 x 90 x 83	20.1 x 90 x 74

Bus Conversion Modules

The iQ-F bus conversion module enables the connection of FX3U Intelligent function modules to the FX5U control system. The FX3U intelligent function modules must be set up through the PLC program as parameter setup is not available in GX Works3.

Model Number	FX5-CNV-BUS	FX5-CNV-BUSC	FX5-CNV-IFC	FX5-CNV-BC	FX5-CNV-IF
Stocked Item	S	S	S	S	S
Certification	UL • cUL • CE				
Applicable PLCs	FX5U/FX5UC	FX5UC	FX5UC	FX5U/FX5UC/FX5UJ	FX5U/FX5UJ
Function	Bus conversion from CPU module or extension modules (extension cable type) or FX5 intelligent function modules	Bus conversion from CPU module or extension modules (extension connector type)	Connector conversion from CPU module or extension modules (extension connector type)	Connects extended extension cable to FX5 I/O, High speed pulse I/O, and intelligent function modules	Connects FX5 I/O modules (extension connector type) with FX5U CPU module systems.
No. of Occupied Input/Output Points	8	8	-	-	-
5 VDC Power Supply	150 mA	150 mA	-	-	-
Weight (kg)	0.1	0.1	0.06	0.04	0.06
Dimensions (W x H x D) mm	16 x 90 x 83	14.6 x 90 x 74	14.6 x 90 x 74	60.5 x 40 x 16.4	14.6 x 90 x 74

Accessories

SD Memory Cards

Model Number	NZ1MEM-2GBSD	NZ1MEM-4GBSD
Stocked Item	S	S
Applicable PLCs	FX5U/FX5UC/FX5UJ	
Memory Card Size	2GB	4GB

Battery

Model Number	FX3U-32BL
Stocked Item	S
Applicable PLCs	FX5U/FX5UC

Communication Cable

Model Number	FX-232CAB-1
Stocked Item	S
Applicable PLCs	FX5U/FX5UC/FX5UJ
Application	PC to FX5-232ADP; PC to FX5-232-BD

Extended Extension Cables

Model Number	FX5-30EC	FX5-65EC
Stocked Item	S	S
Applicable PLCs	FX5U/FX5UC/FX5UJ	
Application	Used to install FX5 extension modules (extension cable type) at a remote location	
Length (m)	0.3	0.65

Connection Cables for FX5UC Remote Terminal Blocks

Model Number	FX-16E-150CAB	FX-16E-300CAB	FX-16E-500CAB	FX-16E-150CAB-R	FX-16E-300CAB-R	FX-16E-500CAB-R
Stocked Item	S	-	-	S	S	-
Application	FX5UC to remote FX terminal block					
Length (m)	1.5	3.0	5.0	1.5	3.0	5.0

Connection Cables for FX5UC Main Units

Model Number	FX2NC-100MPCB	FX2NC-100BPCB	FX2NC-10BPCB1
Stocked Item	S	-	-
Application	24VDC power cable for main units	24VDC power cable for extension units	Power crossover cable for input extension blocks
Length (m)	1	1	0.01

Terminal Blocks

Remote terminal blocks allow I/O modules to be placed at the point of control. The blocks are connected with FX5UC main units using connector-type I/O cabling.

Model Number		FX-16E-TB	FX-16E-TB/UL	FX-16EX-A1-TB	FX-16EYR-ES-TB/UL
Stocked Item		-	S	-	S
Certification		-	UL • cUL	-	UL • cUL
Applicable PLCs		FX5UC			
Max. Number of Inputs/Outputs		16	16	16	16 output
Integrated Inputs (Sink)		16 (24VDC)	16 (24VDC)	16 (120VAC)	-
Integrated Outputs		-	-	-	16
Output Type		-	-	-	Relay
Switching Voltage (Max.)		-	-	-	240VAC / 30VDC
Max. Output Current	Per Output (A)	-	-	-	2
	Per 4 Outputs (A)	-	-	-	8
Dimensions (W x H x D) mm		150 x 55 x 45			

Model Number		FX-16EYS-ES-TB/UL	FX-16EYT-TB	FX-16EYT-ESS-TB/UL	FX-32E-TB/UL
Stocked Item		-	-	-	-
Certification		UL • cUL	-	UL • cUL	
Applicable PLCs		FX5UC			
Max. Number of Inputs/Outputs		16 output	16	16 output	32
Integrated Inputs (Sink)		-	-	-	32 (24VDC)
Integrated Outputs		16	16	16	-
Output Type		Triac (SSR)	Transistor (Sink)	Transistor (Source)	-
Switching Voltage (Max.)		242VAC	30VDC	30VDC	-
Max. Output Current	Per Output (A)	0.3	0.5	0.5	-
	Per 4 Outputs (A)	0.8	0.8	0.8	-
Dimensions (W x H x D) mm		150 x 55 x 45			