

Function introduction

Standard model

Realize advanced control from automation to networks. The standard model is equipped with the functions required for basic control, and supports a variety of applications. The compact FX3GC model is equipped with the basic functions.



Built-in High-speed Counter Functions

A high-speed counter that can retrieve data at max. 60 kHz (for 1-phase) is built-in, so high-speed control is possible with a simple program.

Built-in Positioning Function (Transistor output type)

With the independent 3-axis*¹, the speed can be designated for each axis. In addition, the program can be simplified with batch setting positioning that can be set easily with parameters.

Built-in Analog Volume Function

The main unit has a 2-point analog volume function built in. The current analog volume value increases between 0 and 255 when turned right, and is automatically written into the special data register.

Battery-less and Maintenance-free

The program and devices are held by the EEPROM memory, so a battery is not required.*²

14-point, 24-point type



CC-Link V2

40-point, 60-point type

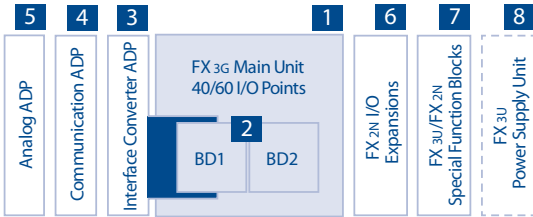
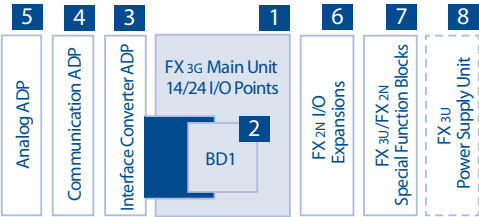


*1: The 14-point and 24-point types are independent 2-axis, and 40-point and 60-point types are independent 3-axis.

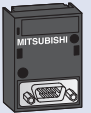
*2: The device's holding capacity can be increased by using the optional battery.



FX3G Configuration Guide ///



Expansion Boards



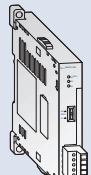
FX3G-232-BD

Communication	Analog
FX3G-232-BD FX3G-422-BD FX3G-485-BD	FX3G-2AD-BD FX3G-1DA-BD
Analog Setpoint	
FX3G-8AV-BD	

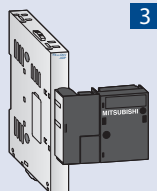
Special Adapters



FX3U-232ADP-MB

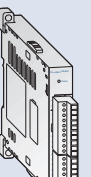


FX3U-485ADP-MB



FX3G-CNV-ADP

Communication	Interface Converter
FX3U-232ADP-MB FX3U-485ADP-MB	FX3G-CNV-ADP



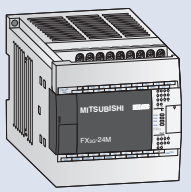
FX3U-4AD-ADP



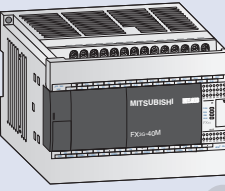
FX3U-4AD-PNK-ADP

Analog	Temperature
FX3U-4AD-ADP FX3U-4DA-ADP FX3U-3A-ADP (pending)	FX3U-4AD-PT-ADP FX3U-4AD-TC-ADP FX3U-4AD-PTW-ADP FX3U-4AD-PNK-ADP

FX3G Main Units



FX3G-24MT/ES



FX3G-40MT/ES

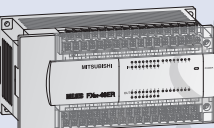
FX3G Main Units 14-60 I/O

FX3G-14MT/ESS	AC	D	T1
FX3G-24MT/ESS	AC	D	T1
FX3G-40MT/ESS	AC	D	T1
FX3G-60MT/ESS	AC	D	T1
FX3G-14MR/ES	AC	D	R
FX3G-24MR/ES	AC	D	R
FX3G-40MR/ES	AC	D	R
FX3G-60MR/ES	AC	D	R

AC AC Power supply
D DC Input(sink/source)
T1 Transistor Output
R Relay output

Special Function Modules

I/O Extension Blocks

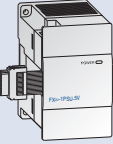


FX2N-48ER

Powered extension units

Input/Output Extension Units

FX2N-32ER-ES/UL
FX2N-32ET-ESS/UL
FX2N-48ER-ES/UL
FX2N-48ET-ESS/UL



FX3U-1PSU-5 V

Unpowered extension Blocks

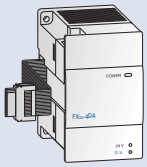
Input Extension Blocks	Output Extension Blocks	Input/Output Extension Blocks
FX2N-8EX-ES/UL FX2N-16EX-ES/UL	FX2N-8EYR-ES/UL FX2N-8EYT-ESS/UL FX2N-16EYR-ES/UL FX2N-16EYT-ESS/UL	FX2N-8ER-ES/UL



FX2N-8EX

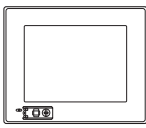
Special Function Blocks

Analog	Temperature	Network
FX2N-2AD FX3U-4AD FX2N-2DA FX3U-4DA FX2N-5A FX2N-8AD	FX2N-2LC	FX2N-16CCL-M FX2N-32CCL FX3U-64CCL FX3U-ENET FX3U-32DP FX2N-32CAN



FX3U-4DA

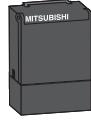
Optional Equipment and Software



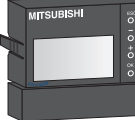
GT11

GOT
GOT1000 (GT10/GT11/GT15)
USB cable
Software
GX Developer, GX IEC Developer
Power Supplies
Modems

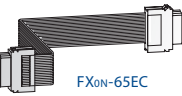
Accessories



FX3G-EEPROM-32L



FX3G-5DM



FX0N-65EC

Extension Cables
FX0N-65EC (65 cm)

PLC Bus Connector
FX2N-CNV-BC



FX3U-32BL

Battery

FX3 series

◆ Main units

Model	Points		Outline dimensions (mm) (W × H × D)
	Input	Output	
◆FX3S series			
FX3s-10MR/ES	6	4	60 × 90 × 75
FX3s-10MT/ES			
FX3s-10MT/ESS			
FX3s-14MR/ES	8	6	60 × 90 × 75
FX3s-14MT/ES			
FX3s-14MT/ESS			
FX3s-20MR/ES	12	8	75 × 90 × 75
FX3s-20MT/ES			
FX3s-20MT/ESS			
FX3s-30MR/ES	16	14	100 × 90 × 75
FX3s-30MT/ES			
FX3s-30MT/ESS			
FX3s-30MR/ES-2AD	16	14	100 × 90 × 75
FX3s-30MT/ES-2AD			
FX3s-30MT/ESS-2AD			
FX3s-10MR/DS	6	4	60 × 90 × 49
FX3s-10MT/DS			
FX3s-10MT/DSS			
FX3s-14MR/DS	8	6	60 × 90 × 49
FX3s-14MT/DS			
FX3s-14MT/DSS			
FX3s-20MR/DS	12	8	75 × 90 × 49
FX3s-20MT/DS			
FX3s-20MT/DSS			
FX3s-30MR/DS	16	14	100 × 90 × 49
FX3s-30MT/DS			
FX3s-30MT/DSS			
◆FX3G series			
FX3g-14MR/ES	8	6	90 × 90 × 86
FX3g-14MT/ES			
FX3g-14MT/ESS			
FX3g-24MR/ES	14	10	90 × 90 × 86
FX3g-24MT/ES			
FX3g-24MT/ESS			
FX3g-40MR/ES	24	16	130 × 90 × 86
FX3g-40MT/ES			
FX3g-40MT/ESS			
FX3g-60MR/ES	36	24	175 × 90 × 86
FX3g-60MT/ES			
FX3g-60MT/ESS			
FX3g-14MR/DS	8	6	90 × 90 × 86
FX3g-14MT/DS			
FX3g-14MT/DSS			
FX3g-24MR/DS	14	10	90 × 90 × 86
FX3g-24MT/DS			
FX3g-24MT/DSS			
FX3g-40MR/DS	24	16	130 × 90 × 86
FX3g-40MT/DS			
FX3g-40MT/DSS			
FX3g-60MR/DS	36	24	175 × 90 × 86
FX3g-60MT/DS			
FX3g-60MT/DSS			
◆FX3GE series			
FX3GE-24MR/ES	14	10	130 × 90 × 86
FX3GE-24MT/ES			
FX3GE-24MT/ESS			
FX3GE-24MR/DS			
FX3GE-24MT/DS			
FX3GE-24MT/DSS	24	16	175 × 90 × 86
FX3GE-40MR/ES			
FX3GE-40MT/ES			
FX3GE-40MT/ESS			
FX3GE-40MR/DS			
FX3GE-40MT/DS			
FX3GE-40MT/DSS			

Model	Points		Outline dimensions (mm) (W × H × D)
	Input	Output	
◆FX3GC series			
FX3GC-32MT/D	16	16	34 × 90 × 87
FX3GC-32MT/DSS			
◆FX3U series			
FX3U-16MR/ES	8	8	130 × 90 × 86
FX3U-16MT/ES			
FX3U-16MT/ESS			
FX3U-32MR/ES	16	16	150 × 90 × 86
FX3U-32MT/ES			
FX3U-32MS/ES			
FX3U-32MT/ESS			
FX3U-32MR/UA1			
FX3U-48MR/ES	24	24	182 × 90 × 86
FX3U-48MT/ES			
FX3U-48MT/ESS			
FX3U-64MR/ES	32	32	220 × 90 × 86
FX3U-64MT/ES			
FX3U-64MS/ES			
FX3U-64MT/ESS			
FX3U-64MR/UA1			
FX3U-80MR/ES	40	40	285 × 90 × 86
FX3U-80MT/ES			
FX3U-80MT/ESS			
FX3U-128MR/ES	64	64	350 × 90 × 86
FX3U-128MT/ES			
FX3U-128MT/ESS			
FX3U-16MR/DS	8	8	130 × 90 × 86
FX3U-16MT/DS			
FX3U-16MT/DSS			
FX3U-32MR/DS	16	16	150 × 90 × 86
FX3U-32MT/DS			
FX3U-32MT/DSS			
FX3U-48MR/DS	24	24	182 × 90 × 86
FX3U-48MT/DS			
FX3U-48MT/DSS			
FX3U-64MR/DS	32	32	220 × 90 × 86
FX3U-64MT/DS			
FX3U-64MT/DSS			
FX3U-80MR/DS	40	40	285 × 90 × 86
FX3U-80MT/DS			
FX3U-80MT/DSS			
◆FX3UC series			
FX3UC-16MR/D-T	8	8	34 × 90 × 89
FX3UC-16MR/DS-T			
FX3UC-16MT/D	8	8	34 × 90 × 87
FX3UC-16MT/DSS			
FX3UC-32MT/D	16	16	34 × 90 × 87
FX3UC-32MT/DSS			
FX3UC-64MT/D	32	32	59.7 × 90 × 87
FX3UC-64MT/DSS			
FX3UC-96MT/D	48	48	85.4 × 90 × 87
FX3UC-96MT/DSS			

◇ Extension, peripheral device, and battery, etc.

Model	Specifications		Compatible PLC					
	Input	Output	FX3s	FX3G	FX3GE	FX3GC	FX3U	FX3UC
◆Extension unit								
FX2N-32ER-ES/UL	16 points	16 points	—	○	○	—	○	—
FX2N-32ET-ESS/UL			—	○	○	—	○	—
FX2N-32ER			—	○	○	—	○	—
FX2N-32ET			—	○	○	—	○	—
FX2N-32ES			—	○	○	—	○	—
FX2N-48ER-ES/UL	24 points	24 points	—	○	○	—	○	—
FX2N-48ET-ESS/UL			—	○	○	—	○	—
FX2N-48ER			—	○	○	—	○	—
FX2N-48ET			—	○	○	—	○	—
FX2N-48ER-DS			—	○	○	—	○	—
FX2N-48ET-DSS			—	○	○	—	○	—
FX2N-48ER-D			—	○	○	—	○	—
FX2N-48ET-D			—	○	○	—	○	—
FX2N-48ER-UA1/UL			—	○	○	—	○	—
◆Input/output mixed block								
FX2N-8ER-ES/UL	4 points	4 points	—	○	○	◇	○	◇
FX2N-8ER			—	○	○	◇	○	◇
FX2NC-64ET	32 points	32 points	—	—	—	○	—	○
◆Input block								
FX2N-8EX-ES/UL	8 points	—	—	○	○	◇	○	◇
FX2N-8EX			—	○	○	◇	○	◇
FX2N-8EX-UA1/UL			—	○	○	◇	○	◇
FX2N-16EX-ES/UL	16 points	—	—	○	○	◇	○	◇
FX2N-16EX			—	○	○	◇	○	◇
FX2N-16EX-C			—	○	○	◇	○	◇
FX2N-16EXL-C			—	○	○	◇	○	◇
FX2NC-16EX-T-DS			—	—	—	○	—	○
FX2NC-16EX-DS			—	—	—	○	—	○
FX2NC-16EX			—	—	—	○	—	○
FX2NC-16EX-T			—	—	—	○	—	○
FX2NC-32EX	32 points	—	—	—	—	○	—	○
FX2NC-32EX-DS			—	—	—	○	—	○
◆Output block								
FX2N-8EYR-ES/UL	—	8 points	—	○	○	◇	○	◇
FX2N-8EYR-S-ES/UL			—	○	○	◇	○	◇
FX2N-8EYT-ESS/UL			—	○	○	◇	○	◇
FX2N-8EYR			—	○	○	◇	○	◇
FX2N-8EYT			—	○	○	◇	○	◇
FX2N-8EYT-H			—	○	○	◇	○	◇
FX2N-8EYR-S-ES/UL			—	○	○	◇	○	◇
FX2N-16EYR-ES/UL			—	○	○	◇	○	◇
FX2N-16EYT-ESS/UL	—	16 points	—	○	○	◇	○	◇
FX2N-16EYR			—	○	○	◇	○	◇
FX2N-16EYT			—	○	○	◇	○	◇
FX2N-16EYT-C			—	○	○	◇	○	◇
FX2N-16EYS			—	○	○	◇	○	◇
FX2NC-16EYR-T			—	—	—	○	—	○
FX2NC-16EYR-T-DS			—	—	—	○	—	○
FX2NC-16EYT			—	—	—	○	—	○
FX2NC-16EYT-DSS	—	32 points	—	—	—	○	—	○
FX2NC-32EYT			—	—	—	○	—	○
FX2NC-32EYT-DSS			—	—	—	○	—	○
◆Analog input/output								
FX2N-5A	4 ch	1 ch	—	○	○	◇	○	◇
FX2N-2DA	—	2 ch	—	○	○	◇	○	◇
FX3U-4DA	—	4 ch	—	○	○	◇	○	*9
FX2N-2AD	2 ch	—	—	○	○	◇	○	◇
FX3U-4AD	4 ch	—	—	○	○	◇	○	*9
FX3UC-4AD	4 ch	—	—	—	—	○	—	○
FX2N-8AD	8 ch	—	—	○	○	◇	○	◇
◆Temperature sensor input block								
FX2N-2LC	2 ch temperature regulator		—	○	○	◇	○	◇
FX3U-4LC	4 ch temperature regulator		—	○	○	◇	○	*1
◆High-speed counter block								
FX2N-1HC	1 ch 2-phase 50 kHz		—	—	—	—	○	*1
FX2NC-1HC	1 ch 2-phase 50 kHz		—	—	—	—	—	○
FX3U-2HC	2 ch 2-phase 200 kHz		—	—	—	—	○	*1

Model	Specifications		Compatible PLC					
	Input	Output	FX3s	FX3G	FX3GE	FX3GC	FX3U	FX3UC
◆Positioning related module/block								
FX3U-1PG	1-axis 200 kHz	—	—	—	—	—	○	*1
FX2N-10PG	1-axis 1 M kHz	—	—	—	—	—	○	◇
FX2N-10GM	1-axis 200 kHz	—	—	—	—	—	○	◇
FX2N-20GM	2-axis 200 kHz	—	—	—	—	—	○	◇
FX3U-20SSC-H	2-axis SSCNET III	—	—	—	—	—	○	*1
FX2N-1RM-E-SET	Cam switch	—	—	—	—	—	○	◇
◆Communication block								
FX-485PC-IF-SET	Signal exchange	—	○	○	○	○	○	○
FX2N-232IF	1 ch RS-232C communication	—	—	—	—	—	○	◇
FX3U-ENET	Ethernet	—	○	○	◇	*2	*2	
FX3U-ENET-L	Ethernet	—	—	—	—	—	*2	*2
FX2N-64CCL-M	CC-Link master station	—	○	○	◇	○	*1	
FX3U-64CCL	Intelligent device station	—	○	○	◇	○	*1	
FX2N-32CCL	Intelligent device station	—	○	○	◇	○	◇	
FX2N-64CL-M	CC-Link/LT master station	—	○	○	◇	○	◇	
FX3U-128ASL-M	AnyWireASLINK master station	—	○	○	◇	○	*1	
◆Communication adapter								
FX3U-232ADP-MB	RS-232C (MODBUS®) communication	—	★	☆	○	○	●	●
FX3U-485ADP-MB	RS-485 (MODBUS®) communication	—	★	☆	○	○	●	●
FX3U-ENET-ADP	Ethernet	—	*10	*7	—	*7	*8	*8
◆Analog, temperature sensor adapter								
FX3U-3A-ADP	2 ch	1 ch	★	*3	○	○	*4	*4
FX3U-4A-ADP	—	4 ch	★	☆	○	○	●	○
FX3U-4AD-ADP	4 ch	—	★	☆	○	○	●	○
FX3U-4AD-PT-ADP	4 ch	—	★	☆	○	○	●	○
FX3U-4AD-PTW-ADP	4 ch	—	★	☆	○	○	●	○
FX3U-4AD-TC-ADP	4 ch	—	★	☆	○	○	●	○
FX3U-4AD-PNK-ADP	4 ch	—	★	☆	○	○	●	○
◆High-speed input/output adapter								
FX3U-4HSX-ADP	4 ch	—	—	—	—	—	○	—
FX3U-2HSY-ADP	—	2 ch	—	—	—	—	○	—
◆CF card special adapter								
FX3U-CF-ADP	For CF card connection	—	—	—	—	—	*4	*4
◆FX3s interface adapter								
FX3S-CNV-ADP	For adapter connection	—	○	—	—	—	—	—
◆FX3G interface adapter								
FX3G-CNV-ADP	For adapter connection	—	—	○	—	—	—	—
◆Expansion board for FX3s, FX3G(e)								
FX3G-8AV-BD	8-point volume	—	○	*5	○	—	—	—
FX3G-232-BD	1 ch RS-232C communication	—	○	○	○	—	—	—
FX3G-422-BD	1 ch RS-422C communication	—	○	○	○	—	—	—
FX3G-485-BD	1 ch RS-485C communication	—	○	○	○	—	—	—
FX3G-485-BD-RJ	RS-485C communication	—	○	○	○	—	—	—
FX3G-4EX-BD	4 points	—	*5	*1	○	—	—	—
FX3G-2EYT-BD	—	2 points	*5	*1	○	—	—	—
FX3G-2AD-BD	2 ch	—	○	*5	○	—	—	—
FX3G-1DA-BD	—	1 ch	○	*5	○	—	—	—
◆Expansion board for FX3U								
FX3U-8AV-BD	8-point volume	—	—	—	—	—	*6	—
FX3U-232-BD	1 ch RS-232C communication	—	—	—	—	—	○	—
FX3U-422-BD	1 ch RS-422C communication	—	—	—	—	—	○	—
FX3U-485-BD	1 ch RS-485C communication	—	—	—	—	—	○	—
FX3U-USB-BD	USB connection	—	—	—	—	—	○	—
FX3U-CNV-BD	For adapter connection	—	—	—	—	—	○	—
◆Battery								
FX3U-32BL	For FX3G(e), FX3U(e), etc.	—	—	○	○	○	○	○

- *1: Main unit Ver. 2.20 and above (FX3UC requires FX2NC-CNV-IF or FX3UC-1PS-5V).
 *2: Main unit Ver. 2.21 and above (FX3UC requires FX2NC-CNV-IF or FX3UC-1PS-5V).
 *3: Main unit Ver. 1.20 and above and FX3G-CNV-ADP are required.
 *4: Expansion board is required to connect main unit Ver. 2.61 and above FX3U.
 *5: Main unit Ver. 1.10 and above.
 *6: Supported with main unit Ver. 2.70.
 *7: Main unit Ver. 2.00 and above, and FX3G-CNV-ADP are required (FX3GC is not required).
 *8: Expansion board is required to connect main unit Ver. 3.10 and above FX3U.
 *9: Main unit Ver. 1.30 and above, and FX2NC-CNV-IF or FX3UC-1PS-5V are required.
 *10: FX3U-ENET-ADP Ver. 1.20 and above, and FX3S-CNV-ADP are required.

◇: FX2NC-CNV-IF or FX3UC-1PS-5V required ☆: FX3G-CNV-ADP required
 ●: Extension board required ★: FX3S-CNV-ADP required

◆ Extension and peripheral devices, etc.

Model	Specifications		Compatible PLC					
	Input	Output	FX3S	FX3G	FX3GE	FX3GC	FX3U	FX3UC
◆ Extension power supply unit								
FX3UC-1PS-5V	For FX3GC, FX3UC	Extension power supply	—	—	—	○	—	○
FX3U-1PSU-5V	For FX3G, FX3GE, FX3U	Extension power supply	—	○	○	—	○	—
◆ Extension block extension cable								
FX3N-30EC	30 cm	Extension block extension length	—	○	○	◇	○	◇
FX3N-65EC	65 cm	Extension block extension length	—	○	○	◇	○	◇
◆ Connector converter								
FX2N-CNV-BC	Extension cable relay		—	○	○	◇	○	◇
FX2N-CNV-IF	Holder for external mounting		—	—	—	○	—	○
◆ Display module								
FX3S-5DM	Setting display		*4	—	—	—	—	—
FX3G-5DM	Setting display		—	*1	○	—	—	—
FX3U-7DM	Setting display		—	—	—	○	—	—
FX3U-7DM-HLD	Holder for external mounting		—	—	—	○	—	—
◆ Memory Cassettes								
FX3G-EEPROM-32L	With 32 k loader function		○	○	○	—	—	—
FX3U-FLROM-16	16 k step		—	—	—	○	○	○
FX3U-FLROM-64	64 k step		—	—	—	—	○	○
FX3U-FLROM-64L	With 64 k loader function		—	—	—	○	○	○
FX3U-FLROM-1M	64 k source information 1.3 MB		—	—	—	—	*2	*2
◆ Power cables								
FX2N-100MPCB	For main unit		—	—	—	○	—	○
FX2N-100BPCB	For extension		—	—	—	○	—	○
FX2N-10BPCB1	For input extension blocks		—	—	—	○	—	○
◆ Terminal block								
FX-16E-TB	Depends on connection source		—	○	○	○	○	○
FX-32E-TB	Depends on connection source		—	○	○	○	○	○
FX-16EYR-TB	—	16 points	—	○	○	○	○	○
FX-16EYS-TB	—	16 points	—	○	○	○	○	○
FX-16EYT-TB	—	16 points	—	○	○	○	○	○
FX-16EX-A1-TB	16 points	—	—	○	○	○	○	○
FX-16E-TB/UL	Depends on connection source		—	○	○	○	○	○
FX-32E-TB/UL	Depends on connection source		—	○	○	○	○	○
FX-16EYR-ES-TB/UL	—	16 points	—	○	○	○	○	○
FX-16EYS-ES-TB/UL	—	16 points	—	○	○	○	○	○
FX-16EYT-ES-TB/UL	—	16 points	—	○	○	○	○	○
FX-16EYT-ESS-TB/UL	—	16 points	—	○	○	○	○	○
◆ Input/output connection cable								
FX-16E-150CAB	1.5 m	Flat cable between TB-FX	—	*3	*3	○	*3	○
FX-16E-300CAB	3.0 m	Flat cable between TB-FX	—	*3	*3	○	*3	○
FX-16E-500CAB	5.0 m	Flat cable between TB-FX	—	*3	*3	○	*3	○
FX-32E-150CAB	1.5 m	Flat cable between TB-FX	—	—	—	*3	—	*3
FX-32E-300CAB	3.0 m	Flat cable between TB-FX	—	—	—	*3	—	*3
FX-32E-500CAB	5.0 m	Flat cable between TB-FX	—	—	—	*3	—	*3
FX-16E-500CAB-S	5.0 m	FX side connector loose wire	—	*3	*3	○	*3	○
FX-16E-150CAB-R	1.5 m	Round cable between TB-FX	—	*3	*3	○	*3	○
FX-16E-300CAB-R	3.0 m	Round cable between TB-FX	—	*3	*3	○	*3	○
FX-16E-500CAB-R	5.0 m	Round cable between TB-FX	—	*3	*3	○	*3	○
◆ Input/output connector								
FX2c-I/O-CON	20-pin	Connector 10-piece set	—	*3	*3	○	*3	○
FX2c-I/O-CON-S	20-pin	Connector 5-piece set enclosed (for 0.3 mm ²)	—	*3	*3	○	*3	○
FX2c-I/O-CON-SA	20-pin	Connector 5-piece set enclosed (for 0.5 mm ²)	—	*3	*3	○	*3	○
FX-I/O-CON2	40-pin	Connector 2-piece set enclosed	—	—	—	*3	—	*3
FX-I/O-CON2-S	40-pin	Connector 2-piece set enclosed (for 0.3 mm ²)	—	—	—	*3	—	*3
FX-I/O-CON2-SA	40-pin	Connector 2-piece set enclosed (for 0.5 mm ²)	—	—	—	*3	—	*3

*1: Supported with main unit Ver. 1.10 and above

*2: Supported with main unit Ver. 3.00 and above

*3: Refer to each PLC manual for details on the products that can be used.

*4: Supported with main unit Ver. 1.20 and above

*5: Refer to the product manual for details on the Windows® compatible operating system.

*6: FX-30P Ver. 1.50 and above.

*7: FX-30P Ver. 1.30 and above.

◆ Sequence programs and peripheral devices, etc.

Model	Specifications		Compatible PLC					
	Input	Output	FX3S	FX3G	FX3GE	FX3GC	FX3U	FX3UC
◆ MELSOFT GX series programming software								
SW□DND-GXW2-E	GX Works2		○	○	○	○	○	○
SW□D5C-GPPW-E	GX Developer		—	○	○	○	○	○
◆ MELSOFT MX series integrated data link software								
SW1D5C-ACT-E	MX Component		○	○	○	○	○	○
SW1D5C-SHEET-E	MX Sheet		○	○	○	○	○	○
SW1D5C-SHEETSET-E	MX Works		○	○	○	○	○	○
◆ RS-232C cable for personal computer								
F2-232CAB-1	3 m	D-sub 9-pin female ⇔ D-sub 25-pin male	○	○	○	○	○	○
FX-232CAB-1	3 m	D-sub 9-pin female ⇔ D-sub 9-pin female	○	○	○	○	○	○
F2-232CAB	3 m	D-sub 25-pin male ⇔ D-sub 25-pin male	○	○	○	○	○	○
F2-232CAB-2	3 m	Half-pitch 14-pin ⇔ D-sub 25-pin male	○	○	○	○	○	○
FX-232CAB-2	3 m	Half-pitch 14-pin ⇔ D-sub 9-pin female	○	○	○	○	○	○
◆ RS-422 cable for PLC								
FX-422CAB0	1.5 m	FX round connector ⇔ FX-232AWC-H	○	○	○	○	○	○
◆ RS-232C/RS-422 converter								
FX-232AWC-H	Between FX-personal computer		○	○	○	○	○	○
◆ USB/RS-422 converter								
FX-USB-AW	FX-personal computer		—	—	—	—	○	○
◆ Handy programming panel (HPP)								
FX-30P	HPP unit, cable		*6	○	○	*7	○	○
◆ PLC connection cable for FX-30P								
FX-20P-CAB0	1.5 m	FX round connector	○	○	○	○	○	○
FX-20P-CADP	0.3 m	FX round connector ⇔ FX square connector	○	○	○	○	○	○

◆ Peripheral devices and connection cables for positioning

Model	Specifications		Compatible Models		
			FX2N-10GM	FX2N-20GM	FX2N-20SSC-H
◆ Personal computer software*5					
SW1D5C-FXSSC-E	FX Configurator-FP		—	—	○
FX-PCS-VPS/WIN-E	For FX2N-10GM/20GM		○	○	—
◆ Teaching panel					
E-20TP-SET0	3 m	With cable	○	○	—
E-20TP-CAB0	3 m	Cable	○	○	—
◆ Connection cable for servo					
E-GMH-200CAB	2 m	For MR-H	○	○	—
E-GMJ-200CAB	2 m	For MR-J	○	○	—
E-GMJ2-200CAB1A	2 m	For MR-J2(S)	○	○	—
E-GMC-200CAB	2 m	For MR-C	○	○	—
E-GM-200CAB	2 m	With GM side connector	○	○	—
◆ Extension cable					
FX2N-GM-5EC	55 mm	Connection between GM-FX	○	○	—
FX2N-GM-65EC	65 cm	Connection between GM-FX	○	○	—

List of models

Voltage and current input/output

	1 to 3 ch	4 to 5 ch	8 ch
Analog input	FX3s  FX3s-30M□/ES□-2AD Resolution at 0 to 10 V DC input: 10 mV	FX3s FX3G FX3GE FX3GC FX3U FX3UC  FX3U-4AD-ADP - Resolution at 0 to 10 V DC input: 2.5 mV - Resolution at 4 to 20 mA DC input: 8 μA	
	FX3s FX3G FX3GE  FX3G-2AD-BD - Resolution at 0 to 10 V DC input: 2.5 mV - Resolution at 4 to 20 mA DC input: 8 μA	FX3G FX3GE FX3GC FX3U FX3UC  FX3U-4AD* - Resolution at -10 to 10 V DC input: 0.32 mV - Resolution at -20 to 20 mA DC input: 1.25 μA	
	FX3G FX3GE FX3GC FX3U FX3UC  FX2N-2AD* - Resolution at 0 to 10 V DC input: 2.5 mV - Resolution at 4 to 20 mA DC input: 4 μA *Same characteristics for both 2 ch	FX3GC FX3UC  FX3UC-4AD - Resolution at -10 to 10 V DC input: 312.5 μV (0.3125 mV) - Resolution at -20 to 20 mA DC input: 1.25 μA	FX3G FX3GE FX3GC FX3U FX3UC  FX2N-8AD* - Resolution at -10 to 10 V DC input: 0.63 mV - Resolution at -20 to 20 V DC input: 2.5 μA
	FX3s FX3G FX3GE FX3GC FX3U FX3UC Resolution at 0 to 10 V DC input: 2.5 mV Resolution at 4 to 20 mA DC input: 5 μA	FX3G FX3GE FX3GC FX3U FX3UC Resolution at -10 to 10 V DC input: 50 μA Resolution at -20 to 20 mA DC input: 1.25 μA	
	2 ch  FX3U-3A-ADP - Resolution at 0 to 10 V DC output: 2.5 mV - Resolution at 4 to 20 mA DC output: 4 μA	4 ch  FX2N-5A* - Resolution at -10 to 10 V DC output: 50 mV - Resolution at 0 to 20 mA DC output: 20 μA	
Analog output	FX3s FX3G FX3GE  FX3G-1DA-BD - Resolution at 0 to 10 V DC output: 2.5 mV - Resolution at 4 to 20 mA DC output: 8 μA	FX3s FX3G FX3GE FX3GC FX3U FX3UC  FX3U-4DA-ADP - Resolution at 0 to 10 V DC output: 2.5 mV - Resolution at 4 to 20 mA DC output: 4 μA	
	FX3G FX3GE FX3GC FX3U FX3UC  FX2N-2DA* - Resolution at 0 to 10 V DC output: 2.5 mV - Resolution at 4 to 20 mA DC output: 4 μA *Same characteristics for both 2 ch	FX3G FX3GE FX3GC FX3U FX3UC  FX3UC-4DA* - Resolution at -10 to 10 V DC output: 0.32 mV - Resolution at 0 to 20 mA DC output: 0.63 μA	

*: FX2Nc-CNV-IF or FX3Uc-1PS-5V is required to be connected to the FX3GC/FX3UC main unit.

List of models

Temperature sensor input

	Temperature input		Temperature control	
	4 ch	8 ch	2 ch	4 ch
Thermocouple	FX3S FX3G FX3GE FX3GC FX3U FX3UC  FX3U-4AD-TC-ADP • K, J types supported • Example of measurement temperature range and resolution K type : -100 to 1000°C (0.4°C) J type : -100 to 600°C (0.3°C)	FX3G FX3GE FX3GC FX3U FX3UC  FX2N-8AD* • K, J, T types supported • Example of measurement temperature range and resolution K type : -100 to 1200°C (0.1°C) J type : -100 to 600°C (0.1°C)	FX3G FX3GE FX3GC FX3U FX3UC  FX2N-2LC* Production discontinued in March 2018 • K, J, R, S, E, T, B, N, PL II, W5Re/W26Re, U, L types supported • Example of measurement temperature range and resolution K type : -100 to 400°C (1°C) J type : -100 to 800°C (0.1°C)	FX3G FX3GE FX3GC FX3U FX3UC  FX3U-4LC* • K, J, R, S, E, T, B, N, PL II, W5Re/W26Re, U, L types supported • Example of measurement temperature range and resolution K type : -100 to 1300°C (1°C) J type : -100 to 800°C (0.1°C)
	FX3S FX3G FX3GE FX3GC FX3U FX3UC  FX3U-4AD-PT-ADP • Pt100 supported • Example of measurement temperature range and resolution -50 to 250°C (0.1°C)		FX3G FX3GE FX3GC FX3U FX3UC  FX3U-4AD-PTW-ADP • Pt100 supported • Example of measurement temperature range and resolution -100 to 600°C (0.2 to 0.3°C)	FX3S FX3G FX3GE FX3GC FX3U FX3UC  FX3U-4AD-PNK-ADP • Pt1000, Ni1000 supported • Example of measurement temperature range and resolution Pt1000: -50 to 250°C (0.1°C) Ni1000: -40 to 110°C (0.1°C)
Resistance temperature detector			FX3G FX3GE FX3GC FX3U FX3UC  FX2N-2LC* Production discontinued in March 2018 • JPt100, Pt100 supported • Example of measurement temperature range and resolution JPt100 : -200 to 500°C (0.1°C) Pt100 : -200 to 600°C (0.1°C)	FX3G FX3GE FX3GC FX3U FX3UC  FX3U-4LC* • Pt100, JPt100, Pt1000 supported • Example of measurement temperature range and resolution Pt100 : -200 to 600°C (0.1°C) Pt1000: -200 to 650°C (0.1°C)
			FX3G FX3GE FX3GC FX3U FX3UC  FX2N-2LC* Production discontinued in March 2018 • NPN open collector transistor output 2 points • Standard PID control	FX3G FX3GE FX3GC FX3U FX3UC  FX3U-4LC* • NPN open collector transistor output 4 points • Standard PID control • Heating/cooling PID control

*: FX2NC-CNV-IF or FX3UC-1PS-5V is required to be connected to the FX3GC/FX3UC main unit.

List of models

	1-axis	2-axis	3-axis
Main unit (Built-in positioning)		FX3u  FX3u-2HSY-ADP FX3s, FX3G 14/24-point type, FX3GE 24-point type, FX3GC main unit Transistor output type - Up to 1 Mpps - Differential line driver output - PULSE/SIGN mode, CW/CCW mode	FX3G, FX3GE, FX3u, FX3uc  FX3G 40/60-point type, FX3GE 40-point type, FX3u/FX3uc main unit Transistor output type - Up to 200 kpps - Transistor output - PULSE/SIGN mode
High-speed output special adapter		FX3s, FX3G 14/24-point type, FX3GE 24-point type, FX3GC main unit Transistor output type - Up to 200 kpps - Transistor output - PULSE/SIGN mode	
Positioning module	FX3u, FX3uc  FX3u-1PG - Up to 200 kpps - Transistor output - PULSE/SIGN mode, CW/CCW mode	FX3u, FX3uc  FX2N-10PG* - Up to 1 Mpps - Differential line driver output - PULSE/SIGN mode, CW/CCW mode	
Pulse output block	FX3u, FX3uc  FX2N-10GM* - Up to 200 kpps - Transistor output - PULSE/SIGN mode, CW/CCW mode - Positioning software: FX-PCS-VPS/WIN-E	FX3u, FX3uc  FX2N-20GM* - Up to 200 kpps - Transistor output - PULSE/SIGN mode, CW/CCW mode - Positioning software: FX-PCS-VPS/WIN-E	
SSCNET III compatible positioning block		FX3u, FX3uc, SSCNET III  FX3u-20SSC-H* - Linear interpolation, circular interpolation - Parameter setting software: FX Configurator-FP	
Angle control unit	FX3u, FX3uc  FX2N-1RM-E-SET* - No. of cam output points: Max. 48 points - Control resolution: 720 divisions (0.5 degree) or 360 divisions (1 degree) per revolution - Response rotation speed: 415 r/min/0.5 degrees or 830 r/min/1 degree		

*: FX2NC-CNV-IF or FX3UC-1PS-5V is required to be connected to the FX3uc main unit.

List of models

		Number of channels	Input format/ input voltage	Type/max. frequency
Main unit (Built-in high-speed counter)	FX3S  FX3S Main unit	Max. 6 ch 1-phase 1-input Max. 60 kHz: 2 ch Max. 10 kHz: 4 ch	Open collector 24 V DC	1-phase 1-input : 60 kHz*1 1-phase 2-input : 60 kHz*1 2-phase 2-input [multiplied by 1] : 30 kHz*1
Main unit (Built-in high-speed counter)	FX3G FX3GE FX3GC  FX3G/FX3GE/FX3GC Main unit	Max. 6 ch 1-phase 1-input Max. 60 kHz: 4 ch Max. 10 kHz: 2 ch	Open collector 24 V DC	1-phase 1-input : 60 kHz*1 1-phase 2-input : 60 kHz*1 2-phase 2-input [multiplied by 1] : 30 kHz*1
Main unit (Built-in high-speed counter)	FX3U FX3UC  FX3U/FX3UC Main unit	Max. 8 ch 1-phase 1-input Max. 100 kHz: 6 ch Max. 10 kHz: 2 ch	Open collector 24 V DC	1-phase 1-input : 100 kHz*1 1-phase 2-input : 100 kHz*1 2-phase 2-input [multiplied by 1] : 50 kHz*1 2-phase 2-input [multiplied by 4] : 50 kHz*1
High-speed counter block	FX3U FX3UC  FX3U-2HC*2	Max. 2 ch	Open collector Differential line driver 5 V to 24 V DC	1-phase 1-input : 200 kHz 1-phase 2-input : 200 kHz 2-phase 2-input [multiplied by 1] : 200 kHz 2-phase 2-input [multiplied by 2] : 100 kHz 2-phase 2-input [multiplied by 4] : 50 kHz
High-speed input special adapter	FX3U  FX3U-4HSX-ADP	Max. 4 ch (1-phase 1-input)	Differential line driver 5 V DC	1-phase 1-input : 200 kHz 1-phase 2-input : 200 kHz 2-phase 2-input [multiplied by 1] : 100 kHz 2-phase 2-input [multiplied by 4] : 100 kHz
High speed counter blocks	FX3U FX3UC FX2NC  FX2N-1HC*2 FX2NC-1HC	Max. 1 ch	Open collector Differential line driver 5 V to 24 V DC	1-phase 1-input : 50 kHz 1-phase 2-input : 50 kHz 2-phase 2-input [multiplied by 1] : 50 kHz 2-phase 2-input [multiplied by 2] : 25 kHz 2-phase 2-input [multiplied by 4] : 12.5 kHz

*1: The max. frequency varies according to the high-speed counter No. The number of channels and general frequency may be restricted by the usage conditions. Refer to each manual for details.

*2: FX2NC-CNV-IF or FX3UC-1PS-5V is required to be connected to the FX3UC main unit.

List of models

Open Field Network

	Master station	Remote device station	Intelligent device station
CC-Link	FX3G FX3GE FX3GC FX3U FX3UC CC-Link V2  FX3U-16CCCL-M* • Max. 16 stations • Remote I/O station: 8 maximum/256 points or less • Remote device stations + intelligent device stations: 8 maximum/256 points or less • Assign link devices with program	FX3G FX3GE FX3GC FX3U FX3UC CC-Link  FX2N-32CCCL* • 1 to 4 stations occupied • Assign link devices with program	FX3G FX3GE FX3GC FX3U FX3UC CC-Link V2  FX3U-64CCCL* • 1 to 4 stations occupied • Assign link devices with program
CC-Link/LT	FX3G FX3GE FX3GC FX3U FX3UC CC-Link/LT  FX2N-64CL-M* • Automatically assign link devices with CONFIG mode		

*: FX2NC-CNV-IF or FX3UC-1PS-5V is required to be connected to the FX3GC/FX3UC main unit.

List of models

Sensor Solution

Master station

AnyWireASLINK

FX3G FX3GE FX3GC FX3U FX3UC



FX3U-128ASL-M*1

- Max. 128 modules/128 points

AnyWire
ASLINK

MODBUS®

RS-485

RS-232C

FX3S FX3G FX3GE FX3GC FX3U FX3UC



FX3U-485ADP-MB

- MODBUS® RTU supported
- MODBUS® ASCII supported (FX3U/FX3UC only)
- Master/slave selectable
- Max. 32 stations for master
- Transmission distance 500 m or less

FX3S FX3G FX3GE FX3GC FX3U FX3UC



FX3U-232ADP-MB

- MODBUS® RTU supported
- MODBUS® ASCII supported (FX3U/FX3UC only)
- Master/slave selectable
- Max. 1 station for master
- Transmission distance 15 m or less

1 ch
for master
or slave

MODBUS®

Ethernet

FX3G FX3GE FX3GC FX3U FX3UC

FX3U FX3UC

FX3S FX3G FX3GC FX3U FX3UC

FX3GE



FX3U-ENET*1

Max.
8 connections


FX3U-ENET-L*2

Max.
4 connections


FX3U-ENET-ADP

Max.
4 connections

FX3GE Main unit
(Built-in Ethernet port)

Supported protocol

- Fixed buffer communication (non-procedural communication)
- Mail send/receive function (FX3U-ENET only)
- MELSOFT connection
- MC protocol (1E frame)
- Mail send function (FX3U-ENET-L only)

Supported protocol

- MELSOFT connection
- MC protocol (1E frame)
- Data monitoring

Ethernet

*1: FX2NC-CNV-IF or FX3UC-1PS-5V is required to be connected to the FX3GC/FX3UC main unit.

*2: FX2NC-CNV-IF or FX3UC-1PS-5V is required to be connected to the FX3UC main unit.

List of models

Serial Communication

RS-485

Inverter communication

FX3U



FX3U-485-BD

FX3S FX3G FX3GE



FX3G-485-BD

FX3S FX3G FX3GE



FX3G-485-BD-RJ

8
modules/ch

FX3S FX3G FX3GE



FX3U-485ADP-MB

FX3GC FX3U FX3UC

- Max. 8 modules
- Transmission distance 50 m or less

- Max. 8 modules
- Transmission distance 500 m or less

N:N network

FX3U



FX3U-485-BD

FX3S FX3G FX3GE



FX3G-485-BD

FX3S FX3G FX3GE



FX3G-485-BD-RJ

1 : n
(n=1 to 7)

FX3S FX3G FX3GE



FX3U-485ADP-MB

FX3GC FX3U FX3UC

- Max. 8 modules
- Can be used with FX5
- Transmission distance 50 m or less

- Max. 8 modules
- Can be used with FX5
- Transmission distance 500 m or less

Parallel link

FX3U



FX3U-485-BD

FX3S FX3G FX3GE



FX3G-485-BD

FX3S FX3G FX3GE



FX3G-485-BD-RJ

1 : 1

FX3S FX3G FX3GE



FX3U-485ADP-MB

FX3GC FX3U FX3UC

- 1:1 between same CPU series
- Transmission distance 50 m or less

- 1:1 between same CPU series
- Transmission distance 500 m or less

RS-485

Computer Link

FX3U



FX3U-485-BD

FX3S FX3G FX3GE



FX3G-485-BD

FX3S FX3G FX3GE



FX3G-485-BD-RJ

FX3S FX3G FX3GE

FX3GC FX3U FX3UC



FX3U-485ADP-MB

- 1C frame supported (with restrictions)
- Transmission distance 50 m or less

- 1C frame supported (with restrictions)
- Transmission distance 500 m or less

RS-232C

FX3U



FX3U-232-BD

FX3S FX3G FX3GE



FX3G-232-BD

FX3S FX3G FX3GE

FX3GC FX3U FX3UC



FX3U-232ADP-MB

- 1C frame supported (with restrictions)
- Transmission distance 15 m or less

List of models

Serial Communication

RS-485

Non-protocol
communication

- Send/receive with RS, RS2 instructions
- Transmission distance 50 m or less

FX3S FX3G FX3GE FX3GC FX3U FX3UC



FX3U-485ADP-MB

- Send/receive with RS, RS2 instructions
- Transmission distance 500 m or less

RS-232C



- Send/receive with RS, RS2 instructions
- Transmission distance 15 m or less

FX3S FX3G FX3GE FX3GC FX3U FX3UC



FX2N-232IF*

- Send/receive to and from buffer memory with FROM/TO instructions
- Transmission distance 15 m or less

RS-422/485

Programming
communication

- Transmission distance: depends on connected devices

RS-232C



- Transmission distance 15 m or less

USB



FX3U-USB-BD

FX3S/FX3G/FX3GE/FX3GC
(Built-in USB port)

*: FX2NC-CNV-IF or FX3UC-1PS-5V is required to be connected to the FX3UC main unit.