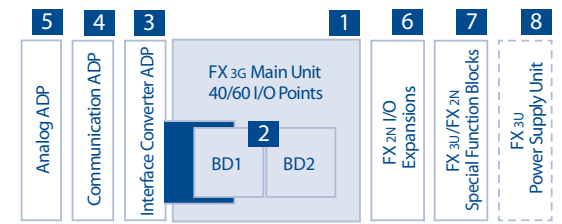
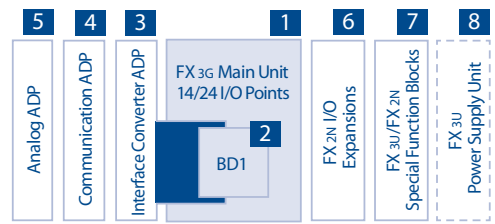




FX3G Configuration Guide



Expansion Boards

Communication

- FX3G-232-BD
- FX3G-422-BD
- FX3G-485-BD

Analog

- FX3G-2AD-BD
- FX3G-1DA-BD

Analog Setpoint

- FX3G-8AV-BD

FX3G-232-BD

Special Adapters

Communication

- FX3U-232ADP-MB
- FX3U-485ADP-MB

Interface Converter

- FX3G-CNV-ADP

Analog

- FX3U-4AD-ADP
- FX3U-4DA-ADP
- FX3U-3A-ADP (pending)

Temperature

- FX3U-4AD-PT-ADP
- FX3U-4AD-TC-ADP
- FX3U-4AD-PTW-ADP
- FX3U-4AD-PNK-ADP

FX3G Main Units

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 Main Units 14-60 I/O

- 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

Powered extension units

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

Unpowered extension Blocks

Input Extension Blocks

- FX2N-8EX-ES/UL
- FX2N-16EX-ES/UL

Output Extension Blocks

- FX2N-8EYR-ES/UL
- FX2N-8EYT-ESS/UL
- FX2N-16EYR-ES/UL
- FX2N-16EYT-ESS/UL

Input/Output Extension Blocks

- FX2N-8ER-ES/UL

Power Supply Unit

- FX3U-1PSU-5 V

Special Function Blocks

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

Optional Equipment and Software

GT11

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

Accessories

Memory Cassette

- FX3G-EEPROM-32L

Display Module

- FX3G-5DM

Extension Cables

- FX0N-65EC (65 cm)

Battery

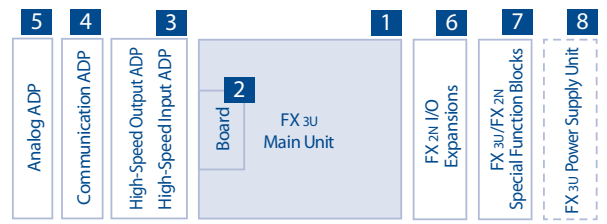
- FX3U-32BL

PLC Bus Connector

- FX2N-CNV-BC



FX3U Configuration Guide ///



Expansion Boards

2

Communication OR Interface Converter

FX3U-232-BD
FX3U-422-BD
FX3U-485-BD
FX3U-USB-BD

FX3U-CNV-BD

Special Adapters

4 Communication
FX3U-232ADP-MB
FX3U-485ADP-MB

5

Communication
FX3U-4AD-ADP
FX3U-4AD-PNK-ADP

Analog
FX3U-4AD-ADP
FX3U-4DA-ADP
FX3U-3A-ADP

Temperature
FX3U-4AD-PT-ADP
FX3U-4AD-TC-ADP
FX3U-4AD-PTW-ADP
FX3U-4AD-PNK-ADP

3

Interface Converter
FX3U-4HSX-ADP
FX3U-2HSY-ADP

High Speed Counter
FX3U-4HSX-ADP
FX3U-2HSY-ADP

Positioning
FX3U-2HSY-ADP

FX3U Main Units

1

FX3U-32MR

FX3U Main Units 16-128 I/O

FX3U-16MR/ES	AC D R	FX3U-64MR/ES	AC D R
FX3U-16MT/ESS	AC D T2	FX3U-64MT/ESS	AC D T2
FX3U-16MR/DS	DC D R	FX3U-64MR/DS	DC D R
FX3U-16MT/DSS	DC D T2	FX3U-64MT/DSS	DC D T2
FX3U-32MR/ES	AC D R	FX3U-80MR/ES	AC D R
FX3U-32MT/ESS	AC D T2	FX3U-80MT/ESS	AC D T2
FX3U-32MR/DS	DC D R	FX3U-80MR/DS	DC D R
FX3U-32MT/DSS	DC D T2	FX3U-80MT/DSS	DC D T2
FX3U-48MR/ES	AC D R	FX3U-128MR/ES	AC D R
FX3U-48MT/ESS	AC D T2	FX3U-128MT/ESS	AC D T2
FX3U-48MR/DS	DC D R		
FX3U-48MT/DSS	DC D T2		

AC AC Power supply
DC DC Power supply
D DC Input(sink/source)
R Relay output
T2 Transistor(source)

Special Function Modules

6

Powered extension Blocks

Input/Output Extension Units

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

Power Supply Unit
FX3U-1PSU-5 V

Unpowered extension Blocks

Input Extension Blocks

FX2N-8EX-ES/UL
FX2N-16EX-ES/UL

Output Extension Blocks

FX2N-8EYR-ES/UL
FX2N-8EYT-ESS/UL
FX2N-16EYR-ES/UL
FX2N-16EYT-ESS/UL

Input/Output Extension Blocks

FX2N-8ER-ES/UL

7

Analog	Positioning	Network
FX2N-2AD FX3U-4AD FX2N-2DA FX3U-4DA FX2N-5A FX2N-8AD	FX2N-1PG-E FX2N-10PG FX3U-20SSC-H FX2N-1RM-E-SET	FX2N-16CCL-M FX2N-32CCL FX3U-64CCL FX3U-ENET FX3U-32DP FX3U-64DP-M FX2N-32CAN
Temperature	High Speed Counter	Communication
FX2N-2LC RE10TC	FX2N-1HC	FX2N-232IF

FX2N-48ER

FX2N-8EX **FX2N-16EYR**

FX3U-3A **FX3U-20SSC-H** **FX3U-64CCL**

Optional Equipment and Software

GOT
GOT1000 (GT10/GT11/GT15)

GT11

Interface Converters
FX-USB-AW
SC09

Software
GX Developer, GX IEC Developer

Power Supplies

Modems

Accessories

FX3U-FLROM-64L

Memory Cassettes
FX3U-FLROM-64
FX3U-FLROM-16
FX3U-FLROM-64L

FX3U-7DM

Display Modules
FX3U-7DM

Display Module Holder
FX3U-7DM-HLD

FX0N-65EC

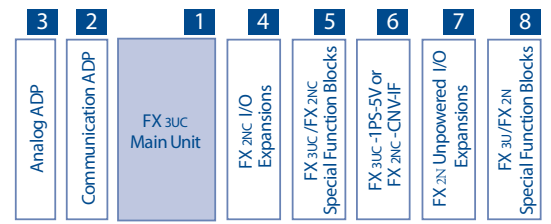
Extension Cables
FX0N-65EC (65 cm)

PLC Bus Connector
FX2N-CNV-BC

Battery
FX3U-32BL



FX3UC Configuration Guide ///



Special Adapters

2

Communication

FX3U-232ADP-MB
FX3U-485ADP-MB

3

Analog

FX3U-4AD-ADP
FX3U-4DA-ADP
FX3U-3A-ADP

Temperature

FX3U-4AD-PT-ADP
FX3U-4AD-TC-ADP
FX3U-4AD-PTW-ADP
FX3U-4AD-PNK-ADP

FX3UC Main Units

1

FX3UC-64MT/DSS

FX3UC Main Units 16-96 I/O

FX3UC-16MT/DSS DC D2 T2

FX3UC-32MT/DSS DC D2 T2

FX3UC-64MT/DSS DC D2 T2

FX3UC-96MT/DSS DC D2 T2

DC DC Power supply

D2 DC Input(sink/source)

T2 Transistor Output(source)

Special Function Modules*

I/O Extension Blocks

4

FX2NC-32EX FX2NC-16EYR-T

Input Extension Blocks

FX2NC-16EX-T-DS
FX2NC-16EX-DS
FX2NC-32EX-DS

Output Extension Blocks

FX2NC-16EYR-T-DS
FX2NC-16EY-DS
FX2NC-32EY-DS

6

FX3UC-1PS-5V

Power Supply Unit

FX3UC-1PS-5V

OR

Interface Converter

FX2NC-CNV-IF

Special Function Blocks

5

FX3UC-4AD

Analog

FX3UC-4AD
FX2NC-4DA

High Speed Counter

FX2NC-1HC

7

Unpowered extension Blocks

Input Extension Blocks

FX2N-8EX-ES/UL
FX2N-16EX-ES/UL

Output Extension Blocks

FX2N-8EYR-ES/UL
FX2N-8EYT-ESS/UL
FX2N-16EYR-ES/UL
FX2N-16EYT-ESS/UL

Input/Output Extension Blocks

FX2N-8ER-ES/UL

FX2N-8EX FX2N-16EYR

8

Communication

FX2N-232IF

Analog

FX2N-2AD
FX3U-4AD
FX2N-2DA
FX3U-4DA
FX2N-5A
FX2N-8AD

Temperature

FX2N-2LC
RE10TC

Network

FX2N-16CCL-M
FX2N-32CCL
FX3U-64CCL
FX3U-ENET
FX3U-32DP
FX3U-64DP-M
FX2N-32CAN

Positioning

FX2N-1PG-E
FX2N-10PG
FX2N-1RM-E-SET
FX3U-20SSC-H

High Speed Counter

FX2N-1HC

FX3U-4DA FX2N-2AD FX3U-64CCL FX3U-20SSC-H

Optional Equipment and Software

GOT

GOT1000 (GT10/GT11/GT15)

Interface Converters

FX-USB-AW
SC09

Software

GX Developer, GX IEC Developer

Power Supplies

Modems

GT11

Accessories

Memory Cassettes

FX3U-FLROM-64
FX3U-FLROM-16
FX3U-FLROM-64L

I/O Cables

General I/O cable
FX-16E-500CAB-S (5 m)

Connecting to Terminal Block

TB-EX-CAB-1M TB-EY-CAB-1M
TB-EX-CAB-3M TB-EY-CAB-3M
TB-EX-CAB-5M TB-EY-CAB-5M

Terminal Blocks

TB-8EX-S TB-8EY-C
TB-8EX-C TB-20-S
TB-16EX-S TB-20-C
TB-16EX-C
TB-8EY-S

Connector Blocks

TB-CON10-C
TB-CON5-C

TB Accessories

TB-8-RELAY-6A
TB-8-TRANSISTOR-2A

Extension Cables

FX0N-65EC (65 cm)

PLC Bus Connector

FX3U-CNV-BC

Power Supply Cables

FX2NC-100MPCB (1 m)
FX2NC-100BPCB (1 m)
FX2NC-10BPCB1 (0.1 m)

Battery

FX3U-32BL



Selection guide ///

Select System Item		Select Item Specification		Select an Applicable FX Model		
System Item	Item Specification *	Terminal-Type I/O		Connector-Type I/O		
		FX3G	FX3U	FX3UC		
I/O Points	Up to 128 local I/O's	✓	★	★		
	Up to 256 local I/O's		✓	✓		
	Up to 256 local and network I/O's	✓	★	★		
	Up to 384 local and network I/O's		✓	✓		
Power Supply	AC Power	✓	✓			
	DC Power		✓	✓		
Output Type	Relay	✓	✓			
	Transistor	✓	✓	✓		
CPU Speed	Standard	✓	★	★		
	Advanced		✓	✓		
Analog I/O (Volt / Current)	Up to 8 ADP channels	✓ *1	★	★		
	Up to 16 ADP channels		✓	✓		
	Up to 64 special function block channels	✓	✓	✓		
Temperature Sensor Input	Up to 8 ADP input channels	✓ *1	★	★		
	Up to 16 ADP input channels		✓	✓		
	Up to 64 special function block input channels	✓	✓	✓		
Network	Temperature control	✓	✓	✓		
	CC-Link (Master/Slave)	✓	✓	✓		
	CANopen	✓	✓	✓		
	Ethernet	✓	✓	✓		
Communication	PROFIBUS-DP		✓	✓		
		Master		✓		
		Slave		✓		
	N:N Network/Parallel Link	✓	✓	✓		
	Computer Link (RS-232C/RS-485)	✓	✓	✓		
	Non-Protocol Communication:	1 Channel (RS-232C/RS-485)	✓	✓	✓	
		Multi-Channel (RS-232C)	✓	✓	✓	
		Multi-Channel (RS-485)	✓	✓	✓	
	Add-on Communication Ports	RS-485	✓	✓	✓	
RS-232C		✓	✓	✓		
Embedded USB		✓				
Modbus	✓		✓			
Inverter Control	Analog	✓	✓	✓		
	Pulse width modulation	✓	✓	✓		
	RS-485 Communication	✓	✓	✓		
Positioning	2 100kHz Axis Built-in Positioning	✓	★	★		
	Up to 3 100kHz Axis Built-in Positioning	✓ *2	✓	✓		
	Up to 4 200kHz Axis with High-Speed Output Adapters		✓			
	Up to 8 1MHz Axis with Special Function Blocks		✓	✓		
	Up to 16 SSCNET-III Axis with Special Function Blocks		✓	✓		
Cam switching		✓	✓			
High-Speed Counters	Up to 6 high speed counter, max 60kHz	✓	★	★		
	Up to 8 high speed counter, max 100kHz		✓	✓		
	Up to 8-high speed counter with 200kHz Adapter		✓			
	Additional Expansion using High-Speed Counter Block		✓	✓		

* : Some items require additional expansion modules in order to function where other connection rules and requirements may apply. For more details, refer to the respective product manuals.

- ✓ : Contains required functionality
- ★ : Higher functionality or more expandability
- *1 : 14 and 24 I/O points main units: max 4 channels
- *2 : Only for the 40 and 60 I/O points main units
- *3 : For the connection to an FX3UC main unit, the FX2NC -CNV-IF interface adapter or the FX3UC -1PS-5V power supply unit is required.
- *4 : To connect to the FX3U main unit a FX3UBD board is required. For the connection to a FX3G is the FX3G -CNV-ADP required.

Select Item Type	Select Function and Model		Check an Applicable FX Model			See more Details					
Group	Function	Product Name	FX 3G	FX 3U	FX 3UC	Description					
						Input	Input Type	Output	Output Type	Power Supply	
I/O Extension Units	Powered Extension Units	FX 2N-32ER-ES/UL	✓	✓		16	DC	16	Relay	AC	
		FX 2N-32ET-ESS/UL	✓	✓		16	DC	16	Transistor	AC	
		FX 2N-48ER-DS		✓		24	DC	24	Relay	DC	
		FX 2N-48ER-ES/UL	✓	✓		24	DC	24	Relay	AC	
		FX 2N-48ET-DSS		✓		24	DC	24	Transistor	DC	
		FX 2N-48ET-ESS/UL	✓	✓		24	DC	24	Transistor	AC	
	Unpowered Extension Blocks	FX 2N-8ER-ES/UL	✓	✓	✓ *3	4	DC	4	Relay	-	
		FX 2N-8EX-ES/UL	✓	✓	✓ *3	8	DC	-	-	-	
		FX 2N-8EYR-ES/UL	✓	✓	✓ *3	-	-	8	Relay	-	
		FX 2N-8EYT-ESS/UL	✓	✓	✓ *3	-	-	8	Transistor	-	
		FX 2N-16EX-ES/UL	✓	✓	✓ *3	16	DC	-	-	-	
		FX 2N-16EYR-ES/UL	✓	✓	✓ *3	-	-	16	Relay	-	
		FX 2N-16EYT-ESS/UL	✓	✓	✓ *3	-	-	16	Transistor	-	
		FX 2NC-16EX-T-DS			✓	16	DC	-	-	-	
		FX 2NC-16EYR-T-DS			✓	-	-	16	Relay	-	
		FX 2NC-16EX-DS			✓	16	DC	-	-	-	
		FX 2NC-16EYT-DSS			✓	-	-	16	Transistor	-	
		FX 2NC-32EX-DS			✓	32	DC	-	-	-	
		FX 2NC-32EYT-DSS			✓	-	-	32	Transistor	-	
		Special Function Blocks	Analog	FX 2N-2AD	✓	✓	✓ *3	2	Volt/Current	-	-
FX 3U-4AD	✓			✓	✓ *3	4	Volt/Current	-	-	Max. 15 bit resolution	
FX 3UC-4AD					✓	4	Volt/Current	-	-	Max. 15 bit resolution	
FX 2N-8AD	✓			✓	✓ *3	8	Volt/Current/TC	-	-	Max. 14 bit resolution	
FX 2N-2DA	✓			✓	✓ *3	-	-	2	Volt/Current	12 bit resolution	
FX 3U-4DA	✓			✓	✓ *3	-	-	4	Volt/Current	15 bit resolution	
FX 2NC-4DA					✓	-	-	4	Volt/Current	Max. 11 bit resolution	
FX 2N-5A	✓			✓	✓ *3	4	Volt/Current	1	Volt/Current	Input : Max. 14 bit Output : Max.12 bit res.	
Temperature Control	FX 2N-2LC		✓	✓	✓ *3	2	Pt/TC	2	Digital outputs	Temperature controller	
	RE10TC			✓	✓ *3	10	Pt/TC	10	Digital outputs	Temperature controller	
Communication										Note	
	FX 2N-232IF			✓	✓ *3					Serial communication module, RS-232C interface	
Network										Note	
	FX 2N-16CCL-M		✓	✓	✓ *3					CC-Link V1.10 compatible master	
	FX 2N-32CCL		✓	✓	✓ *3					CC-Link V1.00 compatible slave	
	FX 3U-64CCL		✓	✓	✓ *3					CC-Link V2 compatible intelligent device station	
	FX 3U-32DP		✓	✓	✓ *3					Profibus slave supporting DP-V1	
	FX 3U-64DP-M			✓	✓ *3					Profibus master supporting DP-V1	
	FX 2N-32CAN		✓	✓	✓ *3					CANopen master or slave module	
	FX 3U-ENET		✓	✓	✓ *3					Ethernet communication module	
Positioning							Axis	Max. Frequency	Output Type		
	FX 2N-1PG-E			✓	✓ *3	1		100kHz	Open collector		
	FX 2N-10PG			✓	✓ *3	1		1MHz	Differential line driver		
	FX 3U-20SSC-H			✓	✓ *3	2			SSCNET-III positioning network		
	FX 2N-1RM-E-SET			✓	✓ *3	1			Electronic cam module		

Select Item Type	Select Function and Model		Check an Applicable FX Model			See more Details				
Group	Function	Product Name	FX 3G	FX 3U	FX 3UC	Description				
Special Expansion Board	High-Speed Counters	FX 2N-1HC		✓	✓ *3	Input	Max. Frequency	Output	Output Type	Note
		FX 2NC-1HC			✓	1	50 kHz	2	Transistor	–
Special Adapter (ADP)	Analog	FX 3U-3A-ADP	✓ *4	✓ *4	✓	Input	Input Type	Output	Output Type	Note
		FX 3U-4AD-ADP	✓ *4	✓ *4	✓	2	Volt/Current	1	Volt/Current	Max. 12 bit resolution
		FX 3U-4DA-ADP	✓ *4	✓ *4	✓	4	Volt/Current	–	–	Max. 12 bit resolution
	Temperature Sensor Input	FX 3U-4AD-PT-ADP	✓ *4	✓ *4	✓	–	–	4	Volt/Current	12 bit resolution
		FX 3U-4AD-PTW-ADP	✓ *4	✓ *4	✓	Input	Input Type	Output	Output Type	Note
		FX 3U-4AD-PNK-ADP	✓ *4	✓ *4	✓	4	Pt100	–	–	–50 °C to +250 °C
		FX 3U-4AD-TC-ADP	✓ *4	✓ *4	✓	4	Pt100	–	–	–100 °C to +600 °C
	Communication & Modbus	FX 3U-232ADP-MB	✓ *4	✓ *4	✓	4	Pt1000/Ni1000	–	–	–50 °C to +250 °C Pt1000 –40 °C to +110 °C Ni1000
		FX 3U-485ADP-MB	✓ *4	✓ *4	✓	4	Thermocouple	–	–	–100 °C to +600 °C J-type –100 °C to +1000 °C K-type
	Positioning	FX 3U-2HSY-ADP		✓		Note				
FX 3U-4HSX-ADP			✓		Axis	Max. Frequency	Output Type			
High-Speed Counters	FX 3U-4HSX-ADP		✓		2	200 kHz	Differential line driver			
	FX 3U-4HSX-ADP		✓		Input	Max. Frequency	Input Type			
Expansion Boards (BD)	Analog Board	FX 3G-2AD-BD	✓			4	200 kHz	Differential line receiver		
		FX 3G-1DA-BD	✓			Input	Input Type	Output	Output Type	Note
	Communication Board	FX 3G-232-BD	✓			2	Volt/Current	–	–	Max. 12 bit resolution
		FX 3U-232-BD		✓		–	–	1	Volt/Current	Max. 12 bit resolution
		FX 3G-422-BD	✓			Note				
		FX 3U-422-BD		✓		Programmable RS-232C communication expansion board				
		FX 3G-485-BD	✓			Programmable RS-232C communication expansion board and ADP interface converter				
		FX 3U-485-BD		✓		RS-422 port for programming tool and GOT connection				
	FX 3U-USB-BD		✓		RS-422 port for programming tool and GOT connection and ADP interface converter					
	Analog Setpoint	FX 3G-8AV-BD	✓			Programmable RS-485 communication expansion board				
FX 2NC -CNV-IF				✓	Programmable RS-485 communication expansion board and ADP interface converter					
Expansion Boards	FX 3U -CNV-BD			✓	USB port for PC connection and ADP interface converter					
	FX 3G -CNV-ADP	✓			Note					
Power Supply	Power Supply Modules	FX 3U-1PSU-5V	✓	✓		8 analog setpoint potentiometers with 8 bit resolution				
		FX 3UC-1PS-5V			✓	Connect the FX3UC main units with the standard FX2N/FX3U right side units				
Options	Memory Cassettes	FX 3G-EEPROM-32L	✓			ADP interface converter				
		FX 3U-FLROM-16		✓	✓	FX3G ADP interface adapter				
		FX 3U-FLROM-64		✓	✓	Add power to the 5 V and 24 V expansion buses				
		FX 3U-FLROM-64L		✓	✓	Combination of FX2N-CNV-IF and FX3U-1PSU-5 V				
	Display Unit	FX 3G-5DM	✓			EEPROM based memory cassette including loader function				
		FX 3U-7DM		✓		Flash based memory cassette				
	Batteries	FX 3U-32BL	✓	✓	✓	Flash based memory cassette				
Extension Cables & Connectors	FX 2N -CNV-BC	✓	✓	✓ *3	Flash based memory cassette including loader function					
	FX 0N-65EC	✓	✓	✓ *3	Display module that can be attached directly to the front face of the PLC					