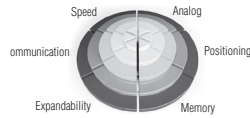


# MELSEC-F Series FX3U/FX3UC Main Units and Configuration



## FX3U - Top of the Line

**Controllable I/O:** 16 - 384 points with CC-Link or AS-i remote I/O

**Main Unit I/O:** 16/32/48/64/80/128 points

- Exchangeable communication expansion boards that mount directly into the main unit (USB, RS-232C, RS-422, RS-485)
- Simultaneous memory cassette and display module mounting available
- Integrated real-time clock

### Product Details

All-in-one CPU, power supply and I/O. Includes many upgraded features from the FX2N, including high expandability using Expansion Boards and Special Adapters to add functionality.

### Fast Instruction Times

Basic Instructions: 0.065  $\mu$ s / instruction (Contact Instruction)

Applied Instructions: 0.642  $\mu$ s / instruction (MOV Instruction)

### Large Memory

64,000 steps of built-in program memory

Flash Memory Cassettes with loader functionality also available

### Large Device Memory

Auxiliary Relays: 7,680 points

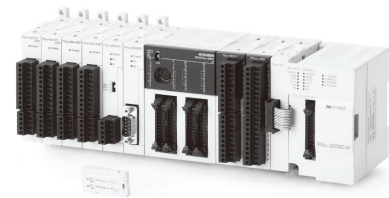
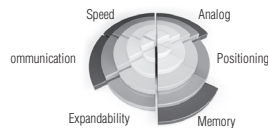
Timers: 512 points

Counters: 235 points

Data Registers: 8,000 points

Extension Registers: 32,768 points

Extension File Registers: 32,768 points  
(with optional memory cassette)



## FX3UC - Slim Fit

**Controllable I/O:** 16 - 384 points with CC-Link or AS-i remote I/O

**Main Unit I/O:** 16/32/64/96 points

- Ultra-compact design featuring connector-type wiring for installation space optimization
- Integrated real-time clock
- Relay output

### Product Details

Ultra-compact size main unit including many upgraded features from the FX2NC, including high expandability using Special Adapters to add functionality.

### Fast Instruction Times

Basic Instructions: 0.065 $\mu$ s / instruction (Contact Instruction)

Applied Instructions: 0.642 $\mu$ s / instruction (MOV Instruction)

### Large Memory

64,000 steps of built-in program memory

Flash Memory Cassettes with loader functionality also available

### Large Device Memory

Auxiliary Relays: 7,680 points

Timers: 512 points

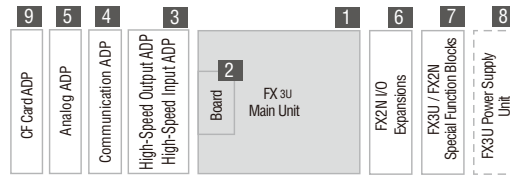
Counters: 235 points

Data Registers: 8,000 points

Extension Registers: 32,768 points

Extension File Registers: 32,768 points  
(with optional memory cassette)

# Main Unit Configuration



## Expansion Boards

**Communication**

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

**Interface Board**

- FX3U-CNV-BD
- Analog Potentiometer
- FX3U-8AV-BD

OR

## Special Adapters

**Communication**

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

**Data Storage**

- FX3U-CF-ADP
- FX3U-CF-ADP

**Analog**

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

**Temperature**

- FX3U-4AD-PN-K-ADP
- FX3U-4AD-PT-ADP
- FX3U-4AD-TC-ADP
- FX3U-4AD-PTW-ADP
- FX3U-4AD-PN-K-ADP

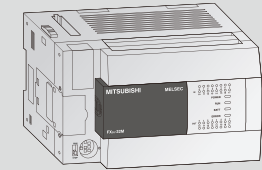
**High Speed Counter**

- FX3U-4HSX-ADP
- FX3U-2HSY-ADP

**Positioning**

- FX3U-4HSX-ADP
- FX3U-2HSY-ADP

## FX3U Main Units



**FX3U Main Units 16-128 I/O**

FX3U-16MR/ES	AC D R	FX3U-48MR/ES	AC D R	FX3U-80MR/ES	AC D R
FX3U-16MT/ES	AC D T1	FX3U-48MT/ES	AC D T1	FX3U-80MT/ES	AC D T1
FX3U-16MT/ESS	AC D T2	FX3U-48MT/ESS	AC D T2	FX3U-80MT/ESS	AC D T2
FX3U-16MR/DS	DC D R	FX3U-48MR/DS	DC D R	FX3U-80MR/DS	DC D R
FX3U-16MT/DS	DC D T1	FX3U-48MT/DS	DC D T1	FX3U-80MT/DS	DC D T1
FX3U-16MT/DSS	DC D T2	FX3U-48MT/DSS	DC D T2	FX3U-80MT/DSS	DC D T2
FX3U-32MR/ES	AC D R	FX3U-64MR/ES	AC D R	FX3U-128MR/ES	AC D R
FX3U-32MT/ES	AC D T1	FX3U-64MT/ES	AC D T1	FX3U-128MT/ES	AC D T1
FX3U-32MT/ESS	AC D T2	FX3U-64MT/ESS	AC D T2	FX3U-128MT/ESS	AC D T2
FX3U-32MR/DS	DC D R	FX3U-64MR/DS	DC D R		
FX3U-32MT/DS	DC D T1	FX3U-64MT/DS	DC D T1		
FX3U-32MT/DSS	DC D T2	FX3U-64MT/DSS	DC D T2		
FX3U-32MR/UA1	AC E R	FX3U-64MR/UA1	AC E R		
FX3U-32MS/ES	AC D TR	FX3U-64MS/ES	AC D TR		

**AC** AC Power supply    **DC** DC Power supply    **R** Relay output    **T1** Transistor (sink)  
**E** AC Input    **D** DC Input (sink/source)    **TR** Triac output    **T2** Transistor (source)

## Special Function Modules

**Powered Extension Units**

**Input/Output Extension Units**

- FX2N-32ER-ES/UL
- FX2N-32ET-ESS/UL
- FX2N-48ER-DS
- FX2N-48ER-ES/UL
- FX2N-48ER-UA1/UL
- FX2N-48ET-DSS
- FX2N-48ET-ESS/UL

**FX2N-48ER**

**FX2N-8EX**

**FX2N-16EYR**

**Unpowered Extension Blocks**

**Input Extension Blocks**

- FX2N-8EX-ES/UL
- FX2N-8EX-UA1/UL
- FX2N-16EX-ES/UL

**Output Extension Blocks**

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

**Input/Output Extension Blocks**

- FX2N-8ER-ES/UL

**7**

**Analog**

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

**Temperature**

- FX2N-2L
- FX3U-4LC

**Positioning**

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

**High Speed Counter**

- FX2N-1HC
- FX3U-2HC

**Network**

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

**Communication**

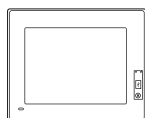
- FX2N-232IF

**8**

**Power Supply Unit**

- FX3U-1PSU-5V

## Optional Equipment and Software

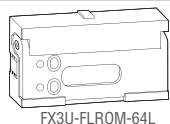


- GOT**
- GOT1000
- GT10/GT11/GT12/GT14/GT16

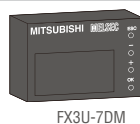
- Interface Converter**
- FX-USB-AW
- FX-232AWC-H

- Software**
- GX Developer
- GX Works2
- GX Works2 FX

## Accessories



- Memory Cassettes**
- FX3U-FLROM-64
- FX3U-FLROM-16
- FX3U-FLROM-64L
- FX3U-FLROM-1M

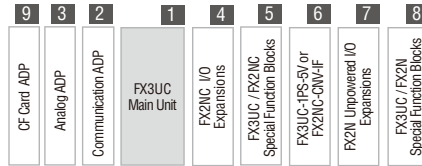


- Display Modules**
- FX3U-7DM
- Display Module Holder**
- FX3U-7DM-HLD



- Extension Cables**
- FXON-30EC (30cm)
- FXON-65EC (65cm)
- Battery**
- FX3U-32BL
- PLC Bus Connector**
- FX2N-CNV-BC

# FX3UC



## Special Adapters

**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

**2**

**Communication**

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

**9**

**Data Storage**

FX3U-CF-ADP

## FX3UC Main Units

**1**

FX3UC-64MT/DSS

**■ FX3UC Main Units 16-96 I/O**

FX3UC-16MT/D*	DC	DI	T1
FX3UC-16MT/DSS	DC	D2	T2
FX3UC-16MR/DS-TDC	DC	D2	R
FX3UC-32MT/D*	DC	DI	T1
FX3UC-32MT/DSS	DC	D2	T2
FX3UC-64MT/D*	DC	DI	T1
FX3UC-64MT/DSS	DC	D2	T2
FX3UC-96MT/D	DC	DI	T1
FX3UC-96MT/DSS	DC	D2	T2

DC DC Power supply  
DI DC Input (sink)  
D2 DC Input (sink/source)  
T1 Transistor Output (sink)  
T2 Transistor Output (source)  
R Relay

\* Refer to the HARDWARE MANUAL for system configuration.

## Special Function Modules\*

\* The special function Modules of FX-\*\*MT/DSS.

**■ I/O Extension Blocks**

**4**

**Input Extension Blocks**

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

**Output Extension Blocks**

FX2NC-16EYR-T-DS  
FX2NC-16EYT-DSS  
FX2NC-32EYT-DSS

**6**

**Power Supply Unit**

FX3UC-1PS-5V

**Interface Converter**

FX2NC-CNV-IF

**Unpowered Extension Blocks**

**7**

**Input Extension Blocks**

FX2N-8EX-ES/UL  
FX2N-8EX-UA1/UL  
FX2N-16EX-ES/UL

**Output Extension Blocks**

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

**■ Special Function Blocks**

**5**

**Analog**

FX3UC-4AD  
FX2NC-4DA

**High Speed Counter**

FX2NC-1HC

**8**

**Network**

FX2N-32CCL FX3U-32DP  
FX3U-160CCL-M FX3U-64DP-M  
FX3U-64CCL FX3U-ENET

**Temperature**

FX2N-2LC FX3U-4LC  
FX2N-4AD-TC  
FX2N-4AD-PT

**High Speed Counter**

FX2N-1HC FX3U-2HC

**Communication**

FX2N-232IF

## Optional Equipment and Software

**■ GOT**

GOT1000  
GT10/GT11/GT12/GT14/GT16

**■ Interface Converter**

FX-USB-AW  
FX-232AWC-H

**■ Software**

GX Developer  
GX Works2  
GX Works2 FX

## Accessories

**■ Memory Cassettes**

FX3U-FLROM-64  
FX3U-FLROM-16  
FX3U-FLROM-64L  
FX3U-FLROM-1M

**■ I/O Cables**

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

**■ Connecting to Terminal Block**

FX-16E-150CAB (1.5m) FX-16E-150CAB-R (1.5m)  
 FX-16E-300CAB (3m) FX-16E-300CAB-R (3m)  
 FX-16E-500CAB (5m) FX-16E-500CAB-R (5m)

**■ Terminal Blocks**

FX-16E-TB/UL  
FX-16EYR-ES-TB/UL  
FX-16EYS-ES-TB/UL  
FX-16EYT-ESS-TB/UL  
FX-32E-TB/UL

**■ Input Switches**

FX2C-16SW-C  
FX2C-16SW-TB

**■ Battery**

FX3U-32BL

**■ Connector Parts**

FX2C-I/O-CON  
FX2C-I/O-CON-S  
FX2C-I/O-CON-SA

**■ PLC Bus Connector**

FX2N-CNV-BC

**■ Power Supply Cables**

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

## Main Unit Options

### FX3U

#### FX3U Main Units with 16 I/O

Model Number	FX3U-16MR/DS	FX3U-16MR/ES	FX3U-16MT/DSS	FX3U-16MT/DS	FX3U-16MT/ESS	FX3U-16MT/ES
Stocked Item	S	S	S	S	S	S
Certification	UL • cUL • CE (EMC)					
Integrated Inputs/Outputs	16	16	16	16	16	16
Power Supply	24VDC	100-240VAC	24VDC	24VDC	100-240VAC	100-240VAC
Integrated Inputs	8	8	8	8	8	8
Integrated Outputs	8	8	8	8	8	8
Output Type	Relay	Relay	Transistor (Source)	Transistor (Sink)	Transistor (Source)	Transistor (Sink)
Power Consumption (W)	25	30	25	25	30	30
Weight (kg)	0.60	0.60	0.60	0.60	0.60	0.60
Dimensions (W x H x D) mm	130 x 90 x 86	130 x 90 x 86	130 x 90 x 86	130 x 90 x 86	130 x 90 x 86	130 x 90 x 86

#### FX3U Main Units with 32 I/O

Model Number	FX3U-32MR/DS	FX3U-32MR/ES	FX3U-32MT/DSS	FX3U-32MT/DS	FX3U-32MT/ESS	FX3U-32MT/ES	FX3U-32MR/UA1	FX3U-32MS/ES
Stocked Item	S	S	S	S	S	S	S	S
Certification	UL • cUL • CE (EMC)							
Integrated Inputs/Outputs	32	32	32	32	32	32	32	32
Power Supply	24VDC	100-240VAC	24VDC	24VDC	100-240VAC	100-240VAC	100-240VAC	100-240VAC
Integrated Inputs	16	16	16	16	16	16	16	16
Integrated Outputs	16	16	16	16	16	16	16	16
Output Type	Relay	Relay	Transistor (Source)	Transistor (Sink)	Transistor (Source)	Transistor (Sink)	Relay	Triac
Power Consumption (W)	30	35	30	30	35	35	35	35
Weight (kg)	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
Dimensions (W x H x D) mm	150 x 90 x 86	150 x 90 x 86	150 x 90 x 86	150 x 90 x 86	150 x 90 x 86	150 x 90 x 86	182 x 90 x 86	150 x 90 x 86

#### FX3U Main Units with 48 I/O

Model Number	FX3U-48MR/DS	FX3U-48MR/ES	FX3U-48MT/DSS	FX3U-48MT/DS	FX3U-48MT/ESS	FX3U-48MT/ES
Stocked Item	S	S	S	S	S	S
Certification	UL • cUL • CE (EMC)					
Integrated Inputs/Outputs	48	48	48	48	48	48
Power Supply	24VDC	100-240VAC	24VDC	24VDC	100-240VAC	100-240VAC
Integrated Inputs	24	24	24	24	24	24
Integrated Outputs	24	24	24	24	24	24
Output Type	Relay	Relay	Transistor (Source)	Transistor (Sink)	Transistor (Source)	Transistor (Sink)
Power Consumption (W)	35	40	35	35	40	40
Weight (kg)	0.85	0.85	0.85	0.85	0.85	0.85
Dimensions (W x H x D) mm	182 x 90 x 86	182 x 90 x 86	182 x 90 x 86	182 x 90 x 86	182 x 90 x 86	182 x 90 x 86

#### FX3U Main Units with 64 I/O

Model Number	FX3U-64MR/DS	FX3U-64MR/ES	FX3U-64MT/DSS	FX3U-64MT/DS	FX3U-64MT/ESS	FX3U-64MT/ES	FX3U-64MR/UA1	FX3U-64MS/ES
Stocked Item	S	S	S	S	S	S	S	S
Certification	UL • cUL • CE (EMC)							
Integrated Inputs/Outputs	64	64	64	64	64	64	64	64
Power Supply	24VDC	100-240VAC	24VDC	24VDC	100-240VAC	100-240VAC	100-240VAC	100-240VAC
Integrated Inputs	32	32	32	32	32	32	32	32
Integrated Outputs	32	32	32	32	32	32	32	32
Output Type	Relay	Relay	Transistor (Source)	Transistor (Sink)	Transistor (Source)	Transistor (Sink)	Relay	Triac
Power Consumption (W)	40	45	40	40	45	45	45	45
Weight (kg)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Dimensions (W x H x D) mm	220 x 90 x 86	220 x 90 x 86	220 x 90 x 86	220 x 90 x 86	220 x 90 x 86	220 x 90 x 86	285 x 90 x 86	220 x 90 x 86

## FX3U Main Units with 80 I/O

Model Number	FX3U-80MR/DS	FX3U-80MR/ES	FX3U-80MT/DSS	FX3U-80MT/DS	FX3U-80MT/ESS	FX3U-80MT/ES
Stocked Item	-	S	-	S	S	S
Certification	UL • cUL • CE (EMC)					
Integrated Inputs/Outputs	80	80	80	80	80	80
Power Supply	24VDC	100-240VAC	24VDC	24VDC	100-240VAC	100-240VAC
Integrated Inputs	40	40	40	40	40	40
Integrated Outputs	40	40	40	40	40	40
Output Type	Relay	Relay	Transistor (Source)	Transistor (Sink)	Transistor (Source)	Transistor (Sink)
Power Consumption (W)	45	50	45	45	50	50
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 86	285 x 90 x 86	285 x 90 x 86	285 x 90 x 86	285 x 90 x 86	285 x 90 x 86

## FX3U Main Units with 128 I/O

Model Number	FX3U-128MR/ES	FX3U-128MT/ESS	FX3U-128MT/ES
Stocked Item	S	-	-
Certification	UL • cUL • CE (EMC)		
Integrated Inputs/Outputs	128	128	128
Power Supply	100-240VAC	100-240VAC	100-240VAC
Integrated Inputs	64	64	64
Integrated Outputs	64	64	64
Output Type	Relay	Transistor (Source)	Transistor (Sink)
Power Consumption (W)	65	65	65
Weight (kg)	1.8	1.8	1.8
Dimensions (W x H x D) mm	350 x 90 x 86	350 x 90 x 86	350 x 90 x 86

## FX3UC

### FX3UC Main Units with 16 - 96 I/O

Model Number	FX3UC-16MT/D	FX3UC-16MT/DSS	FX3UC-16MR/DS-T	FX3UC-32MT/D	FX3UC-32MT/DSS	FX3UC-64MT/D	FX3UC-64MT/DSS	FX3UC-96MT/D	FX3UC-96MT/DSS
Stocked Item	-	S	S	-	S	S	-	-	S
Certification	UL • cUL • CE (EMC)							UL • cUL	UL • cUL • CE (EMC)
Integrated Inputs/Outputs	16	16	16	32	32	64	64	96	96
Integrated Inputs	8	8	8	16	16	32	32	48	48
Input Type	Sink	Sink / Source	Sink / Source	Sink	Sink / Source	Sink	Sink / Source	Sink	Sink / Source
Integrated Outputs	8	8	8	16	16	32	32	48	48
Output Type	Transistor (Sink)	Transistor (Source)	Relay	Transistor (Sink)	Transistor (Source)	Transistor (Sink)	Transistor (Source)	Transistor (Sink)	Transistor (Source)
Power Consumption (W)	6	6	6	8	8	11	11	14	14
Weight (kg)	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.35	0.35
Dimensions (W x H x D) mm	34 x 90 x 74	34 x 90 x 74	34 x 90 x 74	34 x 90 x 74	34 x 90 x 74	59.7 x 90 x 74	59.7 x 90 x 74	85.4 x 90 x 74	85.4 x 90 x 74