

Changes for the Better

**PROGRAMMABLE CONTROLLERS
MELSEC-F**

Power Supply Specifications

Please refer to the FX3s series user's manual for other specifications.

Item	FX3s-30M[]/ES(S)-2AD	FX3s-10M[]/DS(S)	FX3s-14M[]/DS(S)	FX3s-20M[]/DS(S)	FX3s-30M[]/DS(S)
Supply voltage	100 to 240 V AC	24 V DC			
Allowable supply voltage range	85 to 264 V AC	20.4 to 26.4 V DC			
Rated frequency	50/60 Hz	—			
Allowable instantaneous power failure time	Operation can be continued upon occurrence of instantaneous power failure for 10 ms or less.	Operation can be continued upon occurrence of instantaneous power failure for 5 ms or less.			
Power fuse	250 V 1 A	250 V 1.6 A			
Rush current	15 A max. 5 ms or less/100 V AC 28 A max. 5 ms or less/200 V AC	20 A max. 1 ms or less/24 V DC			
Power consumption*	21 W	6 W	6.5 W	7 W	8.5 W
24 V DC service power supply	400 mA	—			

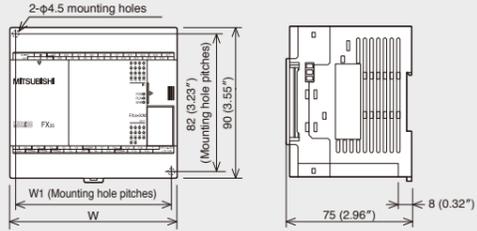
*: This item shows values when all 24 V DC service power supplies are used in the maximum configuration connectable to the main unit, and includes the input current (5 or 7 mA per point).

External Dimensions

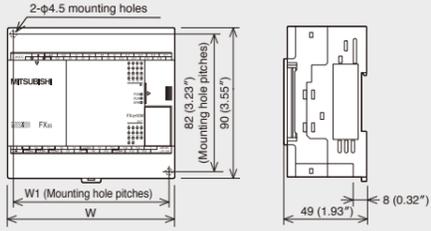
Unit: mm (inches)

FX3s series

[FX3s built-in analog input type]



[FX3s DC power type]



Model name	W: mm (inches)	W1: mm (inches) Direct mounting hole pitches	MASS (Weight): kg (lbs)
FX3s-30M[]/ES(S)-2AD	100 (3.94")	92 (3.63")	0.45 (0.99)

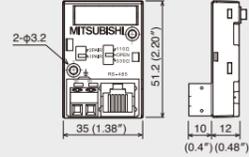
Installation: 35-mm-wide DIN rail or Direct (screw) mounting (M4x2)

Model name	W: mm (inches)	W1: mm (inches) Direct mounting hole pitches	MASS (Weight): kg (lbs)
FX3s-10M[]/DS(S)	60 (2.37")	52 (2.05")	0.22 (0.48)
FX3s-14M[]/DS(S)	60 (2.37")	52 (2.05")	0.22 (0.48)
FX3s-20M[]/DS(S)	75 (2.96")	67 (2.64")	0.30 (0.66)
FX3s-30M[]/DS(S)	100 (3.94")	92 (3.63")	0.35 (0.77)

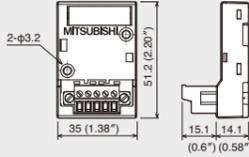
Installation: 35-mm-wide DIN rail or Direct (screw) mounting (M4x2)

FX3s/FX3G series expansion board

[FX3G-485-BD-RJ]



[FX3G-4EX-BD]
[FX3G-2EYT-BD]



MASS (Weight): 0.02 kg (0.05 lbs)

Product Specifications

Series	Model name	Power Supply	Input Specifications		Output Specifications					
			Number of points	Input type	Number of points	Output type				
Main Unit	AC power analog input built-in type	100 to 240 V AC	FX3s-30MR/ES-2AD	16	Sink/Source	14	Relay			
			FX3s-30MT/ES-2AD	16		14	Transistor(Sink)			
			FX3s-30MT/ESS-2AD	16		14	Transistor(Source)			
	DC power supply type	24 V DC	FX3s-10MR/DS	6		4	Relay			
			FX3s-10MT/DS	6		4	Transistor(Sink)			
			FX3s-10MT/DSS	6		4	Transistor(Source)			
			FX3s-14MR/DS	8		6	Relay			
			FX3s-14MT/DS	8		6	Transistor(Sink)			
			FX3s-14MT/DSS	8		6	Transistor(Source)			
			FX3s-20MR/DS	12		8	Relay			
			FX3s-20MT/DS	12		8	Transistor(Sink)			
			FX3s-20MT/DSS	12		8	Transistor(Source)			
			FX3s-30MR/DS	16		14	Relay			
			FX3s-30MT/DS	16		14	Transistor(Sink)			
			FX3s-30MT/DSS	16		14	Transistor(Source)			
			Expansion board	FX3G-485-BD-RJ		RJ45 connector type RS-485 communication				
				FX3G-4EX-BD		4 points of 24 V DC input expansion input board				
				FX3G-2EYT-BD		2 points of transistor output expansion output board				

▲ Safety Warning

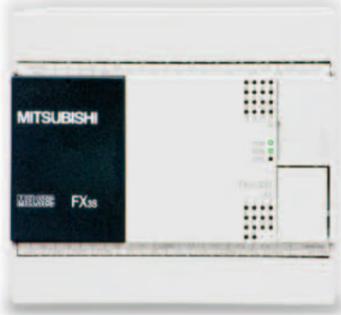
To ensure proper use of the products in this document, please be sure to read the instruction manual prior to use.

Registration

- Ethernet is a trademark of Xerox Corporation in the United States.
- All other company names and product names used in this document are trademarks or registered trademarks of their respective companies.

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FX3s series analog input built-in type



FX3s-30MR/ES-2AD
FX3s-30MT/ES-2AD
FX3s-30MT/ESS-2AD

FX3s series DC power supply type



FX3s-10MR/DS FX3s-14MR/DS FX3s-20MR/DS FX3s-30MR/DS
FX3s-10MT/DS FX3s-14MT/DS FX3s-20MT/DS FX3s-30MT/DS
FX3s-10MT/DSS FX3s-14MT/DSS FX3s-20MT/DSS FX3s-30MT/DSS

FX3s/FX3G series expansion boards



FX3G-485-BD-RJ FX3G-4EX-BD FX3G-2EYT-BD

**FX3s series
Additional line-up!**

Empowering Industries

Easier to use. FX3s series line-up expanded with analog input built-in type and DC power supply type!

FX3s series analog input built-in type



Voltage input 0 to 10 V DC

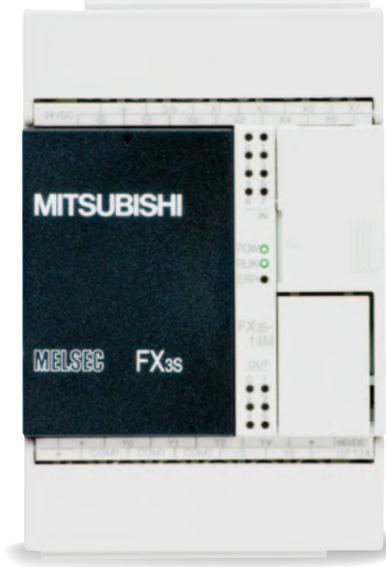
NEW FX3s series analog input built-in type

Item	Input specification
Analog input range	0 to 10 V DC (input resistance: 115.7 kΩ)
Digital output	10 bits, binary
Device allocation	D8270 (The digital value of CH1 is stored) D8271 (The digital value of CH2 is stored)
Resolution	10 mV (10 V/1000)

FX3s-30MR/ES-2AD **AC D R**
 FX3s-30MT/ES-2AD **AC D T1**
 FX3s-30MT/ESS-2AD **AC D T2**
 16 inputs 14 outputs

AC AC power supply **D** DC input (sink/source)
R Relay output **T1** Transistor output (sink) **T2** Transistor output (source)

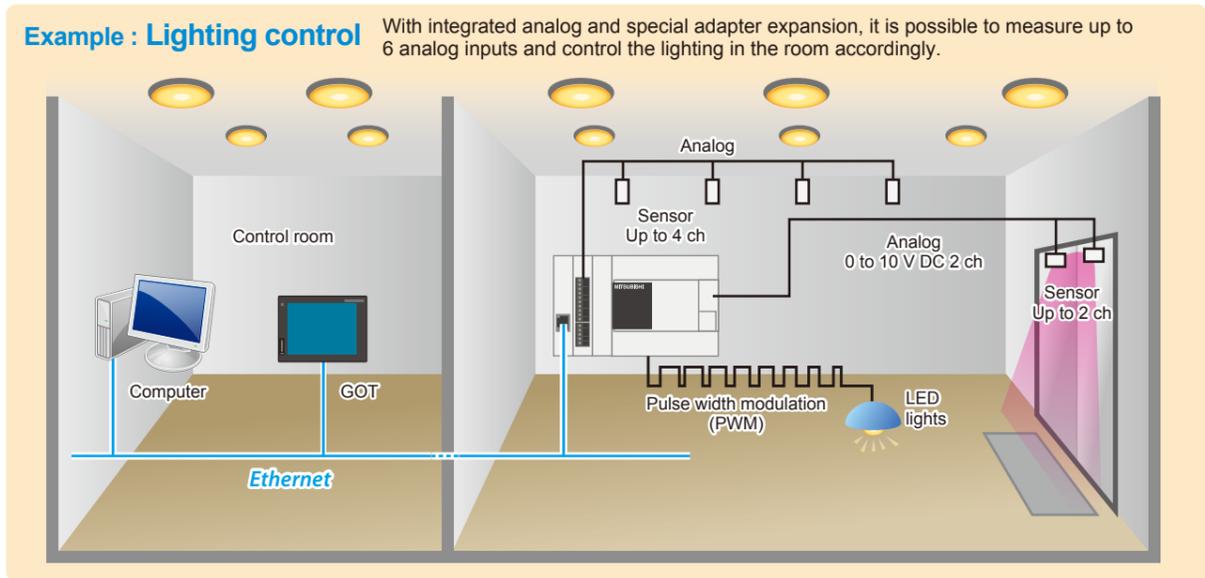
FX3s series DC power supply type



NEW FX3s series DC power supply type

FX3s-10MR/DS DC D R	FX3s-14MR/DS DC D R
FX3s-10MT/DS DC D T1	FX3s-14MT/DS DC D T1
FX3s-10MT/DSS DC D T2	FX3s-14MT/DSS DC D T2
6 inputs 4 outputs	8 inputs 6 outputs
FX3s-20MR/DS DC D R	FX3s-30MR/DS DC D R
FX3s-20MT/DS DC D T1	FX3s-30MT/DS DC D T1
FX3s-20MT/DSS DC D T2	FX3s-30MT/DSS DC D T2
12 inputs 8 outputs	16 inputs 14 outputs

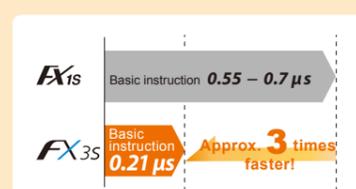
DC DC power supply **D** DC input (sink/source)
R Relay output **T1** Transistor output (sink) **T2** Transistor output (source)



FX3s series features

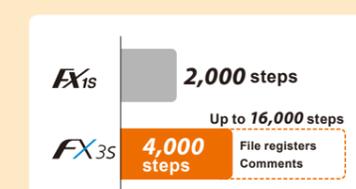
High-speed operation

- FX3s processes basic instructions in 0.21 μs, which is faster by approximately 3 times compared with FX1s.



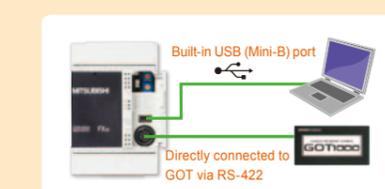
Increased program capacity

- Up to 4,000 steps program capacity.
- 2,000 steps file register capacity.
- Up to 12,000 steps for comments.
- In total, the built-in EEPROM of the FX3s can store up to 16,000 steps.



Enhanced communication functions

- Built-in USB (Mini-B) port and RS-422 port.
- 115.2 kbps serial communication.
- USB port supports 12 Mbps communication speed.



Enhanced analog expandability

- Analog expansion board can be connected.
- Special analog adapter can be connected.
- Analog input adapter for temperature sensor can be connected.

More instructions

- Supports inverter communication instructions.
- Supports floating point instructions.
- Supports 116 applied instructions (31 more instructions than FX1s).

Compatibility with global standards

- Conforms to the EC Directive and UL Standard.
- Conforms to the Radio Law in South Korea.
- Select between sink and source inputs.

More functions available with new expansion boards! (for FX3s and FX3G)

Easy wiring of RS-485 communication by RJ45 connector

Fast and fault-free wiring can be achieved using a LAN cable for RS-485 communication.

NEW **FX3s FX3G**
 RJ45 connector type RS-485 communication expansion board
 FX3G-485-BD-RJ

Example: Connecting with a Mitsubishi inverter



Compact options for a few additional I/O*

4 inputs or 2 outputs can be added without any additional installation space.

NEW **FX3s FX3G**
 Input expansion board [4 inputs (sink/source)]
 FX3G-4EX-BD

NEW **FX3s FX3G**
 Output expansion board [2 outputs transistor (sink/source)]
 FX3G-2EYT-BD



Please refer to the brochure above for details on FX3s AC power supply type. (HIME-L063)

*: FX3s Ver. 1.10 or later, FX3G Ver. 2.20 or later