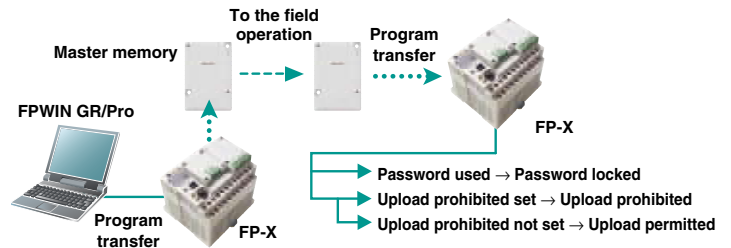# FP-X series

Other useful functions

■ The master memory makes program transfer easy, and a real-time clock is also included

■ The built-in 512kb flash-ROM can store a 32-k step program as well as the comments and FPWIN Pro source file.

■ Program update in a remote location is easy by simply sending master memory for local installation.

■ As the master memory stores the password information, password protection can be applied for program transmission. Similarly, upload prohibition/permission can be set up.

■ The built-in real-time clock enables periodical repeated control and periodical data logging.

Master memory
To the field operation
Program transfer
FPWIN GR/Pro
FP-X
Program transfer
FP-X
Password used → Password locked
Upload prohibited set → Upload prohibited
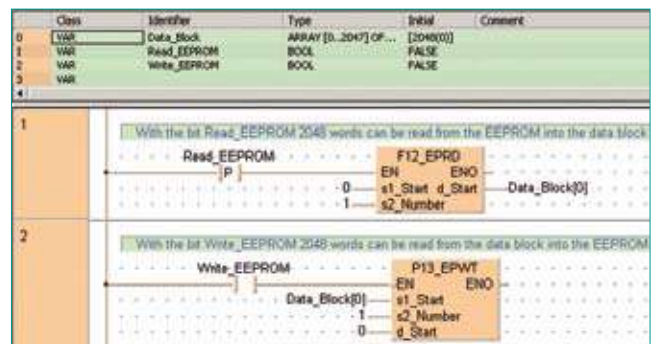Upload prohibited not set → Upload permitted

■ Programs can be saved without a backup battery, making maintenance easier

■ The programs and comments are stored in flash-ROM requiring no backup batteries.

■ A backup battery (AFPX-BATT) is provided for data and the real-time clock. 1 battery for C14, 2 for C30 and 3 for C60 can be attached. A 2-battery installation can operate for a long time (10 years or more) without maintenance. (The real-time clock does not work without a battery.)

Battery holder
Connector
Backup battery for FP-X (AFPX-BATT)

■ F-ROM data saving (data can be saved without a battery)

■ FP-X can store a program, comments, a total of 55 words of data and bit setting values in a flash memory without a battery. All of the data and bits can be stored by adding optional batteries, but writing into a flash-ROM is possible without a battery by using applied instructions (F12, P13). Perfectly suited for data storage of the setup values and recipes modified several times a day. *

Flash-ROM
① Reading
② Writing

* The limitation in a flash-ROM designates the number of rewrites to be 10,000, or the feasible number to be approx 30,000. However, rewriting every second will generate a memory failure within a few hours.

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FP-X series

Product number list

■ FP-X add-on cassette

Product name	Specifications	Product number
FP-X Input /Output cassette	4-point input of 24VDC, bi-directional (sink/source), 3-point output of NPN transistor 0.3 A/24VDC	AFPX-IN4T3
FP-X Input cassette	8-point input of 24VDC, bi-directional (sink/source)	AFPX-IN8
FP-X Output cassette	8-point output of NPN transistor, 0.3A/24VDC	AFPX-TR8
	6-point output of PNP transistor, 0.5A/24VDC	AFPX-TR6P
FP-X Pulse I/O cassette	High-speed counter input: single-phase 2ch., each 80kHz or two-phase 1ch., 30kHz, Pulse output: one axis 100kHz/ch. (Use restriction is applied for a two-unit installation) Cannot be used with a transistor output type control unit.	AFPX-PLS
FP-X Analog input cassette	2-point analog input, 0 to 10V/0 to 20mA, 12-bit, 2ms/2ch. (non-insulated)	AFPX-AD2
FP-X Analog output cassette	2-point analog output, 0 to 10V/0 to 20mA, 12-bit, 2ms/2ch. (insulated)	AFPX-DA2
FP-X Analog I/O cassette	2-point analog input, 0 to 5V/0 to 10V or 0 to 20m, 12-bit, 2ms/2ch., 1 point analog output, 0 to 10V or 0 to 20m, 12-bit, 1ms/1ch. (insulated)	AFPX-A21
FP-X Thermocouple input cassette	2-point thermocouple input, K/J type, Resolution: 0.2°C, 200ms/2ch. Channels insulated	AFPX-TC2
FP-X Master memory cassette with a real-time clock	Master memory: Capable of storing all program steps and comments simultaneously. Storage of FPWIN Pro source files Real-time clock: Year, month, day, hour, minute, second, day of week (optional battery required)	AFPX-MRTC
FP-X COM1 Communication cassette	RS232C 1ch. RS and CS control signal equipped (non-insulated)	AFPX-COM1
FP-X COM2 Communication cassette	RS232C 2ch. (non-insulated)	AFPX-COM2
FP-X COM3 Communication cassette	RS485/RS422 selectable 1ch. (insulated)	AFPX-COM3
FP-X COM4 Communication cassette	RS485 1ch. (insulated) + RS232C 1ch. (non-insulated)	AFPX-COM4
FP-X COM5 Communication cassette	Ethernet 1ch. (10BASE-T, 100BASE-TX) + RS232C 1ch. (non-insulated)	AFPX-COM5
FP-X COM6 Communication cassette	RS485 2ch. (insulated)	AFPX-COM6

■ FP-X options and service parts

Product name	Specifications	Product number
FP-X Backup battery	Battery for backing up the operation memory and real-time clock	AFPX-BATT
FP-X Expansion cable	Expansion unit connection cable, 8cm	AFPX-EC08
	Expansion unit connection cable, 30cm	AFPX-EC30
	Expansion unit connection cable, 80cm	AFPX-EC80
FP-X Terminal block	Terminal block for C30, C60 and E30, 21 pins, cover with no marking, four units included	AFPX-TAN1
RS232C Programming cable	Programming cable for FP series PLCs, Mini DIN 5-pin male to sub-D 9-pin, 3m	AFC8513
USB Programming cable	FPX programming cable, USBA to USBB, 2m	AFPXCABUSB2

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