

- FIBER SENSORS
- LASER SENSORS
- PHOTOELECTRIC SENSORS
- MICRO PHOTOELECTRIC SENSORS
- AREA SENSORS
- SAFETY LIGHT CURTAINS / SAFETY COMPONENTS
- PRESSURE / FLOW SENSORS
- INDUCTIVE PROXIMITY SENSORS
- PARTICULAR USE SENSORS
- SENSOR OPTIONS
- SIMPLE WIRE-SAVING UNITS
- WIRE-SAVING SYSTEMS
- MEASUREMENT SENSORS
- STATIC CONTROL DEVICES
- LASER MARKERS

Related Information ■ General terms and conditions..... F-3



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USB port for easy connection to a PC
Also compatible with Ethernet

Features

- **Abundant program capacity 32 k steps**
- **Independent comment memory**
 All of 100,000 I/O comments, 5,000 lines of block comments, and 5,000 lines of remark comments are saved in **FP-X** together with programs.
- **High-speed RISC processor**
 Equipped with a RISC processor, achieving high-speed processing with a scan time of less than 2 ms for 5,000 steps.
- **Add-on cassettes can expand the functionality, maintaining the space-saving size**
 Up to three add-on cassettes can be attached to the control unit, which increases the functionality without expanding installation space. The 17 types of add-on cassettes, including the communication and analog types, cover a wide variety of applications.
- **Multi-axis controlling by the built-in pulse output**
 The transistor output type controller has a built-in pulse output that allows multi-axis control of the servo and stepping motors.

SPECIFICATIONS

Item		Descriptions		
		C14	C30	C60
Number of controllable I/O points	Control unit	Relay output type DC input: 8, relay output: 6	DC input: 16, relay output: 14	DC input: 32, relay output: 28
	Max. I/O points when expanded	Transistor output type 254 points (328 points max. when using add-on cassettes and FP0R expansion units)	270 points (352 points max. when using add-on cassettes and FP0R expansion units)	300 points (382 points max. when using add-on cassettes and FP0R expansion units)
Programming method / Control method		Relay symbol / Cyclic operation		
Program memory		Built-in flash ROM (no backup battery required)		
Program capacity		16 k steps	32 k steps	32 k steps
Number of instructions	Basic instructions	89		
	High-level instructions	226		
Operation speed		Basic instruction: 0.32 μs~/step		
I/O refresh + base time		0.2 ms [When using FP0R expansion units: 1 ms + (1.5 × Number of expansion units) ms]		
Operation memory	Relay	External inputs (X)	1,760 points (The actual usable number of points is restricted by the hardware.)	
		External outputs (Y)	1,760 points (The actual usable number of points is restricted by the hardware.)	
		Internal relay (X)	4,096 points (R0 to R255F)	
		Special internal relay (R)	192 points	
		Timer / counter (T/C)	1,024 points: timer capable of counting (1 ms, 10 ms, 100 ms, 1 sec.) × 32,767, Counter capable of counting 1 to 32,767	
	Memory area	Link relay (L)	2,048 points	
Data register		12,285 words (DT0 to DT12284)	32,765 words (DT0 to DT32764)	
Special data register (DT)		374 words		
Link register (LD)		256 words		
	Index register (I)	14 words		
High-speed counter (Note 1)		Built-in (Transistor output): single-phase 8 ch (50 kHz × 4 ch + 10 kHz × 4 ch) Built-in (Relay output): single-phase 8 ch (10 kHz × 8 ch) Pulse I/O cassette: single-phase 2 ch (80 kHz × 2 ch)		
Pulse output (Note 2) / PWM output		Built-in (Transistor output): 100 kHz × 2 ch + 20 kHz × 2 ch Pulse I/O cassette: One unit (one axis) 100 kHz, or two units (two axes) 80 kHz		
Time measurement		10 μs ring counter		
Potentiometer		2 points (K0 to K1000)	2 points (K0 to K1000)	4 points (K0 to K1000)
Constant scan		Available		
Clock / calendar		When AFPX-MRTC is attached: Year (last two digits), month, day, hours (24-hour display), minutes, seconds, day of week. Operates only when a battery is installed.		
Flash ROM backup	Backup by P13 commands	Data register (32,765 words)		
	Auto-backup at power failure	Counter 16 points (1008 to 1023), Internal relay 128 points (R2480 to R255F), Data register 55 words (C30 / C60 = 32710 to 32764, C14 = 12230 to 12284)		
Battery backup		The memory allocated in the storage area by the system register (only when a battery is installed)		

Notes: 1) Specification at the rated input voltage of 24 V DC, +25 °C +77 °F. Frequency may be lower due to the voltage and temperature.
 2) Max. frequency may vary by the method of operation. Please refer to the manual for details.