

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