Panasonic
INDUSTRY

Programmable Controller

FP0R

2022.8

* The contents of this catalog are as of October 2017.
For the latest information, please visit our company website.

Programmable Controller

FP0R

* Refer to our website for details of product.

RoHS compliance

*1 Conforming to EMC Directive

Pocket-size ultra-compact controller

Features

- **Large capacity program / data memory**
  Program capacity: 32 k steps max.
  Data register: 32 k words max.
- **Ultra-high speed processing**
  80 ns/step (ST instruction)
  * Within a range of 0 to 3,000 program steps
- **USB tool port provided as standard equipment**
  Capable of high-speed program transfer with USB 2.0
- **Multi-axis control available without expansion units**
  Built-in pulse outputs for four axes (50 kHz max. each)
- **Battery-less automatic backup of all data**
  The F type has a built-in FeRAM, that allows the automatic saving of all data without a backup battery.
- **Makeover for FP0R analog units. Greatly improved performance, extended functions**
  Higher resolution: 14 bits (previously 12 bits)
  Up to 8-channel input: Easier transition to multi-channel systems.

SPECIFICATIONS

Product type of **FP0R** control unit			**C10** (Relay output type only)	**C14** (Relay output type only)	**C16** (Transistor output type only)	**C32** (Transistor output type only)	**T32** (Transistor output type only)	**F32** (Transistor output type only)
Programming method / Control method			Relay symbol / Cyclic operation					
Number of I/O points	Control unit only (No expansion)		10 points [Input: 6, Relay Output: 4]	14 points [Input: 8, Relay Output: 6]	16 points [Input: 8, Transistor Output: 8]	32 points [Input: 16, Transistor Output: 16]	32 points [Input: 16, Transistor Output: 16]	
	With expansion 1 Same type of control and expansion units (Note)		Max. 58 points	Max. 62 points	Max. 112 points	Max. 128 points	Max. 128 points	
	With expansion 2 Mix type of relay and transistor units (Note)		Max. 106 points	Max. 110 points	Max. 112 points	Max. 128 points	Max. 128 points	
Program memory			EEPROM (no backup battery required)					
Program capacity			16 k steps			32 k steps		
Number of instructions		Basic instructions	110 types approx.					
		High-level instructions	210 types approx.					
Operation speed		Up to 3,000 steps	Basic instructions: 0.08 µs min. Timer instructions: 2.2 µs min. High-level instructions: 0.32 µs (MV instruction) min.					
		3,001st. and later steps	Basic instructions: 0.58 µs min. Timer instructions: 3.66 µs min. High-level instructions: 1.62 µs (MV instruction) min.					
Operation memory	Relay	Internal relay (R)	4,096 points					
		Timer / Counter (T/C)	1,024 points					
	Memory area	Data register (DT)	12,315 words			32,765 words		
		Index register (IX, IY)	14 words (IO to ID)					
Master control relay points (MCR)			256 words					
Number of labels (JMP and LOOP)			256 labels					
Differential points			Equivalent to the program capacity					
Number of step ladder			1,000 stages					
Number of subroutines			500 subroutines					
Special functions	High speed counter		Single-phase: 6 points (50 kHz max. each) 2-phase: 3 channels (15 kHz max. each) (Note)					
	Pulse output		Not available		4 points (50 kHz max. each) 2 channels can be controlled individually. (Note)			
	PWM output		Not available		4 points (6 Hz to 4.8 kHz)			
	Pulse catch input / interrupt input		Total 8 points (with high speed counter)					
	Interrupt program		Input: 8 programs (6 programs for **C10** only) / Periodic: 1 program / Pulse match: 4 programs					
	Periodical interrupt		In units of 0.5 ms: 0.5 ms to 1.5 sec. / In units of 10 ms: 10 ms to 30 sec.					
	Constant scan		In units of 0.5 ms: 0.5 ms to 600 ms					
	RS-232C port		One RS-232C port is mounted on each of **C10CRS**, **C10CRM**, **C14CRS**, **C14CRM**, **C16CT**, **C16CP**, **C32CT**, **C32CP**, **T32CT**, **T32CP**, **F32CT** and **F32CP** type (3P terminal block) Transmission speed (Baud rate): 2,400 to 115,200 bits/sec., Transmission distance: 15 m 9.843 ft. Communication method: half duplex					
Maintenance	Memory backup	Program and system register	Stored program and system register in EEPROM					
		Operation memory	Stored fixed area in EEPROM Counter: 16 points Internal relay: 128 points Data register: 315 words				Backup of the entire area by a built-in secondary battery	Backup of the entire area by FeRAM (without the need for a battery)
	Self-diagnostic function		Watchdog timer (690 ms approx.), program syntax check					
	Real-time clock function		Not available				Available	Not available
	Other functions		Rewriting in RUN mode, download in RUN mode (incl. comments) 8-character password setting, and program upload protection					

Note: For the limitations while operating units, reter to the manual.

Disclaimer

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Panasonic Industry Co., Ltd.
Industrial Device Business Division
7-1-1, Morofuku, Daito-shi, Osaka 574-0044, Japan
industrial.panasonic.com/ac/e/

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