



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Makeover for FP0R Analog Units

Greatly Improved Performance, Extended Functions



NEW
Analog Input Unit
Input: 4 channels
AFP0RAD4



NEW
Analog Input Unit
Input: 8 channels
AFP0RAD8



NEW
Analog Output Unit
Output: 4 channels
AFP0RDA4



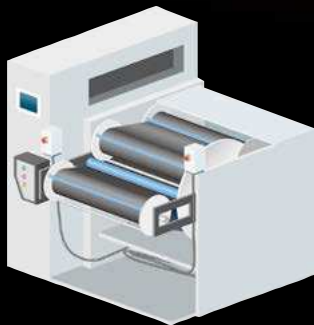
NEW
Analog I/O Unit
Input: 2 channels / Output: 1 channel
AFP0RA21



NEW
Analog I/O Unit
Input: 4 channels / Output: 2 channels
AFP0RA42

Higher resolution: 14 bits (previously 12 bits)

Higher resolution: 12 bits → 14 bits (analog input, output)
Higher precision: ±0.6 % → ±0.2 % (at 25 °C 77 °F)
Achieve high-resolution analog control in applications such as film winding, tension control, winding speed control, and other operations.



Enables move to multi-channel systems and optimization

Up to 8-channel input: Easier transition to multi-channel systems
And, with free combination of input/output, systems can be optimized.

Select among 5 input ranges and 6 output ranges

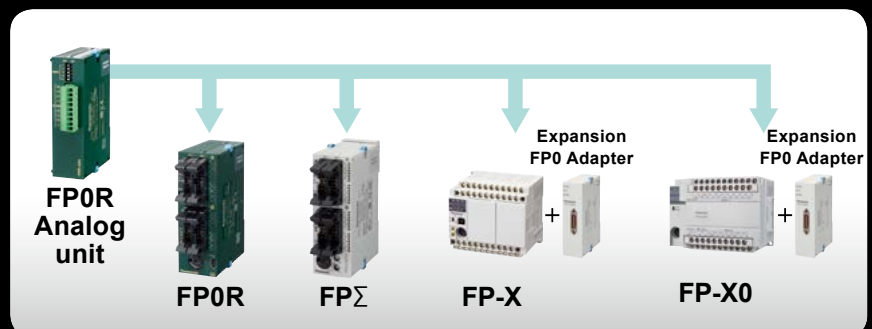
Five selectable input settings: ±10 V, ±5 V, 0 to +10 V, 0 to +5 V, 0 to 20 mA
Sixth output setting: ±10 V, ±5 V, 0 to +10 V, 0 to +5 V, 0 to 20 mA, 4 to 20 mA
With ±10 V support it is even possible to control the rotation of motors.

Easy backward compatibility

Use compatibility mode to retain existing ladder programming.
You can use a DIP switch to enable compatibility mode, which allows operation at 12-bit resolution (using program resources).

Can also be used with other PLCs outside the FP0R series

Use in connection with FPΣ, FP-X, and FP-X0 series PLCs is possible.



FP0R series Control unit Features

- Large capacity program/data memory**
 Program capacity: 32 k steps max., Data register: 32 k words max.
- USB tool port provided as standard equipment**
 Capable of high-speed program transfer with USB 2.0
- Battery-less automatic backup of all data**
 The F type has a built-in FeRAM, industry's first, that allows the automatic saving of all data without a backup battery.
- Ultra-high speed processing**
 80 ns / step (ST instruction)
 * Within a range of 0 to 3,000 program steps
- Multi-axis control available without expansion units**
 Built-in pulse outputs for four axes (50 kHz max. each)

SPECIFICATIONS

Product name		Analog input units		Analog I/O units (Only input section)	
Item	Part No.	AFP0RAD4	AFP0RAD8	AFP0RA21	AFP0RA42
Number of input / output channels		4 / 0	8 / 0	2 / 1	4 / 2
Input range (digital input range)	Voltage	-10 to +10 V 14 bits (-8,000 to +8,000) -5 to +5 V 14 bits (-8,000 to +8,000) 0 to +10 V 14 bits (0 to +16,000) 0 to +5 V 14 bits (0 to +16,000)			
	Current	0 to 20 mA 14 bits (0 to +16,000)			
Absolute maximum input	Voltage	±15 V			
	Current	±30 mA			
Input impedance	Voltage	1 MΩ approx.			
	Current	250 Ω approx.			
Max. resolution		14 bits (1/16,000)			
Overall accuracy	Voltage	±0.2 % F.S. or less (at +25°C +77°F) ±0.4 % F.S. or less (at 0 to +50°C +32 to +122°F)			
	Current	±0.3 % F.S. or less (at +25°C +77°F) ±0.6 % F.S. or less (at 0 to +50°C +32 to +122°F)			
Conversion speed		2 ms/all channels			
Other functions		Averaging processing (moving, number of times) Compatibility function for existing programs (12 bits)			
Insulation method	Between input terminals and internal circuit	Photocoupler and isolated DC/DC converter			
	Between channels	Not insulated			

Product name		Analog output unit	Analog I/O units (Only output section)	
Item	Part No.	AFP0RDA4	AFP0RA21	AFP0RA42
Number of input / output channels		0 / 4	2 / 1	4 / 2
Output range (analog output setting range)	Voltage	-10 to +10 V 14 bits (-8,000 to +8,000) -5 to +5 V 14 bits (-8,000 to +8,000) 0 to +10 V 14 bits (0 to +16,000) 0 to +5 V 14 bits (0 to +16,000)		
	Current	0 to 20mA 14 bits (0 to +16,000) 4 to 20mA 14 bits (0 to +16,000)		
Output impedance	Voltage	0.5 Ω or less		
Max. output current	Voltage	±10 mA		
Permissible output load resistance	Current	500 Ω or less		
Max. resolution		14 bits (1/16,000)		
Overall accuracy	Voltage	±0.2 % F.S. or less (at +25°C +77°F) ±0.4 % F.S. or less (at 0 to +50°C +32 to +122°F)		
	Current	±0.3 % F.S. or less (at +25°C +77°F) ±0.6 % F.S. or less (at 0 to +50°C +32 to +122°F)		
Conversion speed		500 μs/all channels		
Other functions		Compatibility function for existing programs (12 bits)		
Insulation method	Between the output terminals and internal circuit	Photocoupler and isolated DC/DC converter		
	Between channels	Not insulated		

PRODUCT TYPES

Product name	Number of channels	Part No.
FP0R Analog input unit	Input: 4 channels	AFP0RAD4
FP0R Analog input unit	Input: 8 channels	AFP0RAD8
FP0R Analog I/O unit	Input: 2 channels / Output: 1 channel	AFP0RA21
FP0R Analog I/O unit	Input: 4 channels / Output: 2 channels	AFP0RA42
FP0R Analog output unit	Output: 4 channels	AFP0RDA4

PREVIOUS MODEL SUBSTITUTION TABLE

Analog type	Previous model	New model
Input	—	AFP0RAD4
	—	AFP0RAD8
Output	Voltage	AFP04121
	Current	AFP04123
Input / Output	—	AFP0RA21
	—	AFP0RA42

DIMENSIONS (Unit: mm in)

The CAD data can be downloaded from our website.

