

Positioning Control

1-Axis Positioning

The FX3U-1PG and FX2N-10PG positioning modules are extremely efficient single-axis positioning modules for controlling either step drives or servo drives (by external regulator) with a pulse train.

Model Number	FX3U-1PG	FX2N-10PG
Stocked Item	S	S
Certification	UL • cUL • CE (EMC)	
Applicable PLCs	FX3U / FX3UC	
Input Signal Level	24VDC / 40 mA	5VDC / 100 mA; 24VDC / 70 mA
Signal Level	Pulse Output	5 to 24VDC / 35 mA
	CLR Signal	5 to 24VDC / 20 mA
Power Supply	5VDC / 150 mA (from main unit)	5VDC / 120 mA (from main unit)
Accessible Axes	1	1
Output Frequency	Max. 100 kHz	Max. 1 MHz
Related I/O Points	8	8
Weight (kg)	0.2	0.2
Dimensions W x H x D (mm)	43 x 90 x 87	43 x 90 x 87
Function	Servo / stepper pulse control	Advanced servo / stepper control

2-Axis Positioning

High-performance 2-axis positioning module featuring simultaneous and interpolated 2-axis positioning control. With its dedicated setup, monitor and testing software, FX Configurator-FP, all aspects of the servo system can be controlled.

Model Number	FX3U-20SSC-H	
Stocked Item	S	
Certification	UL • cUL • CE (EMC)	
Applicable PLCs	FX3U / FX3UC	
Number of Controllable Axes	2 axes	
Related I/O	8	
Connectable Servo Amplifier	MELSERVO MR-J3-B/MR-J3W-B/MR-J3-BS maximum 2 amplifiers can be connected; Standard cord length: Station-to-station maximum 20m, Long distance cord length: Station-to-station maximum 50m	
Servo Bus	SSCNET III	
Scan Cycle	1.77 ms	
Positioning	Method	Increment / Absolute
	User Units	PLS, μm , 10^{-2} inch, mdeg
	Unit Magnification	1, 10, 100, and 1,000-fold
	Positioning Range	-2,147,483,648 to -2,147,483,648 PLS
	Speed Units	Hz, cm/min, 10deg/min, inch/min
	Acceleration / Deceleration Process	Trapezoidal acceleration/deceleration, S-pattern acceleration/deceleration: 1 to 500 ms. Only trapezoidal acceleration/deceleration is available for interpolation
	Starting Time	1.6 ms or less
Interpolation Function	2-axis linear interpolation, 2-axis circular interpolation	
Power Supply	24VDC + 20% -15% Ripple (p-p) within 5%	
Power Consumption	5W	
Weight (kg)	0.3	
Dimensions (W x H x D) mm	55 x 90 x 87	

Cam Switch

The FX2N-1RM-E-SET is often called an electronic cam module. It can be used to replace a mechanical camming system with a virtual electronic cam sequence using a resolver module.

Model Number	FX2N-1RM-E-SET
Stocked Item	S
Certification	CE (EMC)
Applicable PLCs	FX3U / FX3UC
Number of Controllable Axes	1 using resolver F2-720RSV
Maximum Connectivity	3
Number of Cam Output I/O	48 outputs (32 may be ON at one time)
Control Resolution	1 revolution of 720 divisions (0.5 degrees) or 360 divisions (1 degree)
Response	415 rpm with 0.5 degrees or 830 rpm with 1 degree
ON/OFF Frequency	8 times per CAM profile
Resolver	3000 rpm
Maximum Cable Length	up to 100 m
Power Supply	24VDC (-15% to +10%); 300 mA (400 mA when 32 outputs are ON)
Related I/O Points	8 (*1)
Weight (kg)	0.5
Dimensions (W x H x D) mm	55 x 111 x 97

1. **Note 1:** The number of related I/O points will always be 8, regardless of how many units are attached.