



AFP7PP04L | FP7 Positioning units



※Photo may vary from actual product.

Product Number	AFP7PP04L
Part Number	AFP7PP04L
Product	FP7 Positioning units
Product name	FP7 Positioning units

Spec Detail

As of May 30, 2021

Specifications and design of the products are subject to change without notice for the product improvement.

Item	Specifications
Product Number	AFP7PP04L
Part Number	AFP7PP04L
[[PERFORMANCE SPECIFICATIONS]]Output type	Line driver
[[PERFORMANCE SPECIFICATIONS]]Max. operation speed	4 Mpps
[[PERFORMANCE SPECIFICATIONS]]Number of axes controlled	4 axes
[[PERFORMANCE SPECIFICATIONS]]Interpolation control	2 axes linear interpolation, 3 axes linear interpolation, 2 axes circular interpolation, 3 axes spiral interpolation
[[PERFORMANCE SPECIFICATIONS]]Position command units	pulse, micro m (The minimum command unit can be selected from 0.1 micro m or 1 micro m.), inch (The minimum command unit can be selected from 0.00001 inch or 0.0001 inch.), degree (The minimum command unit can be selected from 0.1 degree or 1 degree.)
[[PERFORMANCE SPECIFICATIONS]]Position command range	pulse: -1,073,741,823 to +1,073,741,823 pulse micro m (0.1 micro m): -107,374,182.3 to +107,374,182.3 micro m micro m (1 micro m): -1,073,741,823 to +1,073,741,823 micro m inch (0.00001 inch): -10,737.41823 to +10,737.41823 inch inch (0.0001 inch): -107,374.1823 to +107,374.1823 inch degree (0.1 degree): -107,374,182.3 to +107,374,182.3 degree degree (1 degree): -1,073,741,823 to +1,073,741,823 degree
[[PERFORMANCE SPECIFICATIONS]]Speed command range	pulse: 1 to 32,767,000 pps micro m: 1 to 32,767,000 micro m/sec. inch: 0.001 to 32,767.000 inch/sec. degree: 0.001 to 32,767.000 rev/sec. *Specify an output speed that is below the maximum operating speed.
[[PERFORMANCE SPECIFICATIONS]]Automatic operation:Position control:Position command method	Absolute (Absolute position designation), Increment (Relative position designation)
[[PERFORMANCE SPECIFICATIONS]]Automatic operation:Position control:Acceleration / deceleration method	Linear acceleration / deceleration, S-curve acceleration / deceleration
[[PERFORMANCE SPECIFICATIONS]]Automatic operation:Position control:Acceleration time	0 to 10,000 ms (in increments of 1 ms)
[[PERFORMANCE SPECIFICATIONS]]Automatic operation:Position control:Deceleration time	0 to 10,000 ms (in increments of 1 ms)

[[PERFORMANCE SPECIFICATIONS]]Automatic operation:Position control:Number of positioning tables	For each axis; Standard area: 600 points, Expansion area: 25 points
[[PERFORMANCE SPECIFICATIONS]]Automatic operation:Position control:Control method:Independent	PTP control (E point control, C point control), CP control (P point control), Speed control (J point control)
[[PERFORMANCE SPECIFICATIONS]]Automatic operation:Position control:Control method:2-axis interpolation:Linear interpolation	E point, P point and C point controls: Specify synthesis speed or major axis speed
[[PERFORMANCE SPECIFICATIONS]]Automatic operation:Position control:Control method:2-axis interpolation:Circular interpolation	E point, P point and C point controls: Specify center point or passing point
[[PERFORMANCE SPECIFICATIONS]]Automatic operation:Position control:Control method:3-axis interpolation:Linear interpolation	E point, P point and C point controls: Specify synthesis speed or major axis speed
[[PERFORMANCE SPECIFICATIONS]]Automatic operation:Position control:Control method:Spiral interpolation	E point, P point and C point controls: Specify center point or passing point
[[PERFORMANCE SPECIFICATIONS]]Automatic operation:Position control:Startup time	Standard area: 3 ms or less, Expansion area: 5 ms or less
[[PERFORMANCE SPECIFICATIONS]]Automatic operation:Position control:Other function:Dwell time	0 to 32,767 ms (in increments of 1 ms)
[[PERFORMANCE SPECIFICATIONS]]Manual operation:JOG operation:Acceleration / deceleration method	Linear acceleration / deceleration, S-curve acceleration / deceleration
[[PERFORMANCE SPECIFICATIONS]]Manual operation:JOG operation:Acceleration time	0 to 10,000 ms (in increments of 1 ms)
[[PERFORMANCE SPECIFICATIONS]]Manual operation:JOG operation:Deceleration time	0 to 10,000 ms (in increments of 1 ms)
[[PERFORMANCE SPECIFICATIONS]]Manual operation:Home return:Acceleration / deceleration method	Linear acceleration / deceleration
[[PERFORMANCE SPECIFICATIONS]]Manual operation:Home return:Acceleration time	0 to 10,000 ms (in increments of 1 ms)
[[PERFORMANCE SPECIFICATIONS]]Manual operation:Home return:Deceleration time	0 to 10,000 ms (in increments of 1 ms)
[[PERFORMANCE SPECIFICATIONS]]Manual operation:Home return:Return method	DOG method (3 types), Limit method (2 types), Data set method, Z-phase method
[[PERFORMANCE SPECIFICATIONS]]Manual operation:Pulser operation:Speed command range	Operates in synchronization with pulser input.
[[PERFORMANCE SPECIFICATIONS]]Stop function:Deceleration stop:Deceleration time	Deceleration time of running operation
[[PERFORMANCE SPECIFICATIONS]]Stop function:Emergency stop:Deceleration time	0 to 10,000 ms (in increments of 1 ms)

[[PERFORMANCE SPECIFICATIONS]]Stop function:Limit stop:Deceleration time	0 to 10,000 ms (in increments of 1 ms)
[[PERFORMANCE SPECIFICATIONS]]Stop function>Error stop:Deceleration time	0 to 10,000 ms (in increments of 1 ms)
[[PERFORMANCE SPECIFICATIONS]]Stop function:System stop:Deceleration time	Immediate stop (0 ms), all axes stop
[[PERFORMANCE SPECIFICATIONS]]Synchronous operation function:Synchronous basic setting:Master axis	Selectable from existence axes, virtual axes or pulse input (1 to 4).
[[PERFORMANCE SPECIFICATIONS]]Synchronous operation function:Synchronous basic setting:Slave axis	Max. 4 axes
[[PERFORMANCE SPECIFICATIONS]]Synchronous operation function:Electronic gear function:Operation setting	Gear ratio setting
[[PERFORMANCE SPECIFICATIONS]]Synchronous operation function:Electronic gear function:Operation method	Direct method, Acceleration / deceleration method
[[PERFORMANCE SPECIFICATIONS]]Synchronous operation function:Electronic clutch function:Clutch ON trigger	Contact input
[[PERFORMANCE SPECIFICATIONS]]Synchronous operation function:Electronic clutch function:Clutch method	Direct method, Linear slip method
[[PERFORMANCE SPECIFICATIONS]]Synchronous operation function:Electronic cam function:Cam curve	Select from 20 types, Multiple curves can be specified within a phase (0 to 100%).
[[PERFORMANCE SPECIFICATIONS]]Synchronous operation function:Electronic cam function:Resolution	1024, 2048, 4096, 8192, 16384, 32768
[[PERFORMANCE SPECIFICATIONS]]Synchronous operation function:Electronic cam function:Number of cam patterns	4 to 16 (Depends on resolution)
[[PERFORMANCE SPECIFICATIONS]]Other specifications:Output mode	1 pulse output (pulse + sign), 2-pulse output (cw/ccw)
[[PERFORMANCE SPECIFICATIONS]]Other specifications:High-speed counter function:Countable range	-1,073,741,823 to +1,073,741,823 pulse
[[PERFORMANCE SPECIFICATIONS]]Other specifications:High-speed counter function:Input mode	Phase difference input, Direction distinction input, Individual input (transfer multiple available for each)
[[PERFORMANCE SPECIFICATIONS]]Other specifications	Built-in servo ON output
[[COMMON GENERAL SPECIFICATIONS]]Ambient temperature	0 to +55 °C +32 to +131 °F, Storage: -40 to +70 °C -40 to +158 °F
[[COMMON GENERAL SPECIFICATIONS]]Ambient humidity	10 to 95 % RH (at +25 °C +77 °F, no condensation), Storage: 10 to 95 % RH (at +25 °C +77 °F, no condensation)
[[COMMON GENERAL SPECIFICATIONS]]Breakdown voltage	500 V AC for 1 minute
[[COMMON GENERAL SPECIFICATIONS]]Insulation resistance	100 MOhm or more (at 500 V DC)

[[COMMON GENERAL SPECIFICATIONS]]Vibration resistance	5 to 8.4 Hz, single amplitude of 3.5 mm 0.138 in , 1 sweep/min. (IEC 61131-2) ; 8.4 to 150 Hz, constant acceleration of 9.8 m/s ² , 1 sweep/min. (IEC 61131-2), 10 times each in X, Y, and Z directions
[[COMMON GENERAL SPECIFICATIONS]]Shock resistance	147 m/s ² or more , 3 times each in X, Y, and Z directions (IEC61131-2)
[[COMMON GENERAL SPECIFICATIONS]]Noise immunity	1,000 V [p-p] with pulse width 50 ns and 1 micro s (using a noise simulator)
[[COMMON GENERAL SPECIFICATIONS]]Operating condition	Free from corrosive gasses and excessive dust
[[INDIVIDUAL GENERAL SPECIFICATIONS]]Rated voltage range	-
[[INDIVIDUAL GENERAL SPECIFICATIONS]]Current consumption	120 mA or less
[[INDIVIDUAL GENERAL SPECIFICATIONS]]Net weight	145 g approx.

Accessories

		
Product Number AFP2801	Product Number AFP2802	Product Number AFP8503
Part Number AFP2801	Part Number AFP2802	Part Number AFP8503
Product name Discrete-wire connector set	Product name Flat cable connector set	Product name Motor Driver I/F Terminal II
		
Product Number AFP8504	Product Number AFP85100	Product Number AFP85101
Part Number AFP8504	Part Number AFP85100	Part Number AFP85101
Product name Motor Driver I/F Terminal II	Product name Connection cable for Posiotioning unit	Product name Connection cable for Posiotioning unit
		
Product Number AXW7221FP	Product Number AXW7231FP	Product Number AXY52000FP
Part Number AXW7221FP	Part Number AXW7231FP	Part Number AXY52000FP
Product Pressure contact for multi-wire	Product Pressure contact for multi-wire	Product Pressure contact tool
Product name Pressure contact for multi-wire	Product name Pressure contact for multi-wire	Details Multi-wire connector pressure contact tool
		Product name Pressure contact tool