

FPM50 – Servo Position Control Module



Specifications		
Number of Control Axes	2	
Command Type	Velocity (Analog)	
Maximum Distance	-32768 ~ +32767 units	
Maximum Encoder Feedback	512Kpps (pps: pulses per second)	
Acceleration / Deceleration Time	0.001 sec ~ 32.767 sec	
Interpolation Time Interval	Linear / Circular	4 msecs
	Home / Constant Speed / MPG	1 msecs
D/A Resolution	12 bits	
Motion Functions	Independent movement Linear interpolation Circular interpolation Jog, Home Simultaneous or Independent X / Y Axis modes	
Servo Drive Compatibility	-10 ~ +10V Encoder feedback	
Input Port Impedance	3.3K input impedance (12/24VDC)	
Power Consumption	550 mA	
Environmental Ranges	Operating Temp	0 ~ 60 C°
	Storage Temp	-20 ~ 80 C°
	Relative Humidity	10 ~ 95% RH (non-condensing)
External Connections	I/O	D-Sub 15 Pin Male
	Axis (X & Y)	SCSI-II 20-pin Female max. wire size 28AWG Stranded, 30 AWG Solid

CN1 Pin Assignment (D-Sub, 15-Pin connector)		
Pin	Label	Description
1	COM+	24VDC Power Input
2	COM+	Internal hardware connection w/ Pin 11 & 12 on CN2 & CN3
3	X HOME	X Axis HOME sensor input Internal hardware connection w/ Pin 15 on CN2
4	X PLIMIT	X Axis P limit switch input Internal hardware connection w/ Pin 16 on CN2
5	X NLIMIT	X Axis N limit switch input Internal hardware connection w/ Pin 17 on CN2
6	Y HOME	Y Axis HOME sensor input Internal hardware connection w/ Pin 15 on CN3
7	Y PLIMIT	Y Axis P limit switch input Internal hardware connection w/ Pin 16 on CN3
8	Y NLIMIT	Y Axis N limit switch input Internal hardware connection w/ Pin 17 on CN3
10	MPG A	A Phase input encoder multiplier (MPG A)
11	MPG B	B Phase input encoder multiplier (MPG B)
12	COM-	24VDC Power Output
14	COM-	Internal hardware connection w/ Pin 9 & 10 on CN2 & CN3
15	COM-	Internal hardware connection w/ Pin 9 & 10 on CN2 & CN3

* cross wiring at the board level is for wiring convenience only.

CN2 & CN3 Pin Assignment (SCSI-II, 20-pin connector)			
Pin	Label	Description	
1	A+	Encoder's A+ Phase input	
2	A-	Encoder's A- Phase input	
3	B+	Encoder's B+ Phase input	
4	B-	Encoder's B- Phase input	
5	Z+	Encoder's Z+ Phase input	
6	Z-	Encoder's Z- Phase input	
7	OUT+	Velocity command output (-10 ~ +10V)	
8	OUT-		
9	COM-	External 24VDC Input	
10	COM-		
11	COM+		
12	COM+		
13	SV-ON	Servo ON output	
14	ST	ON	'1' Velocity command output
		OFF	'0' Torque command output
15	HOME	Home sensor input	
16	PLIMIT	P (+) limit switch input	
17	NLIMIT	N (-) limit switch input	
18	SV-RDY	Servo Ready input	
19	DG	Digital ground for connecting the servo driver ground (Common ground)	
		(Note: JP3 in FPM50 should be shorted for common ground, by default the connection is open)	
20	OUT+	Torque command output	

