MELSEC-L Series Positioning Modules

Positioning Modules

Open collector and differential line driver pulse positioning modules can be added on and configured in GX Works2 using built-in utilities.

Model Number			LD75P1 • LD75D1 (*1)	LD75P2 • LD75D2 (*1)	LD75P4 • LD75D4 (*1)
Stocked Item			S	S	S
Certification			UL • cUL • CE		
Number of Control Axes			1 axis	2 axes	4 axes
Interpolation Function			None	2-axis linear interpolation 2-axis circular interpolation	2-, 3-, or 4-axis linear interpolation 2-axis circular interpolation
Control System			PTP (Point To Point) control, path control (both linear and arc can be set), speed control, speed position switching control, position-speed switching control		
Control Unit			mm, inch, degree, pulse		
Positioning Data			600 data/axis (Can be set with GX Works2 or program.)		
Backup			Parameters, positioning data, and block start data can be saved on flash ROM (battery-less backup)		
Positioning Control	Positioning Control System	PTP Control (*1)	Incremental system/absolute system		
		Speed-Position Switching Control	Incremental system/absolute system (*2)		
		Position-Speed Switching Control	Incremental system		
		Path Control	Incremental system/absolute system		
	Positioning Control Range	In Absolute System	–214748364.8 to 214748364.7 (μm) –21474.83648 to 21474.83647 (inch) 0 to 359.99999 (degree) –2147483648 to 2147483647 (pulse)		
		In Incremental System	–214748364.8 to 214748364.7 (μm) –21474.83648 to 21474.83647 (inch) –21474.83648 to 21474.83647 (degree) –2147483648 to 2147483647 (pulse)		
		In speed-Position Switching Control (INC Mode)/Position-Speed Switching Control	0 to 214748364.7 (μm) 0 to 21474.83647 (inch) 0 to 21474.83647 (degree) 0 to 2147483647 (pulse)		
		In Speed-Position Switching Control (ABS Mode) (*2)	0 to 359.99999 (degree)		
	Speed Command		0.01 to 20000000.00 (mm/min) 0.001 to 2000000.000 (inch/min) 0.001 to 2000000.000 (degree/min) 1 to 4000000 (pulse/s)		
	Acceleration/Deceleration System Selection		Trapezoidal acceleration/deceleration, S-curve acceleration/deceleration		
	Acceleration/Deceleration Time		1 to 8388608 (ms) Four patterns can be set for each of acceleration time and deceleration time		
	Sudden Stop Deceleration Time		1 to 8388608 (ms)		
Starting Time (*3)			1-axis linear control: 1.5ms 1-axis speed control: 1.5ms 2-axis linear interpolation control (Composite speed): 1.5ms 2-axis linear interpolation control (Reference axis speed): 1.5ms 2-axis circular interpolation control: 2.0ms 2-axis speed control: 1.5ms 3-axis linear interpolation control (Composite speed): 1.7ms 3-axis linear interpolation control (Reference axis speed): 1.7ms 3-axis speed control: 1.7ms 4-axis linear interpolation control: 1.8ms 4-axis speed control: 1.8ms Factors in starting time extension. The following times will be added to the starting time in the described conditions: • S-curve acceleration/ deceleration is selected: 0.1ms; Other axis is in operation: 0.5ms; During continuous positioning control: 0.3ms; During continuous path control: 0.3ms		
External Wiring Connection System			40-pin connector		
Applicable Wire Size			0.3mm² (22AWG) (for A6CON1 or A6CON4), 0.088 to 0.24mm² (28 to 24AWG) (for A6CON2)		
Applicable Connector For External Device			A6CON1, A6CON2, A6CON4 (sold separately)		
Max. Output Pulse			LD75P1, LD75P2, LD75P4: 200kpulse/s; LD75D1, LD75D2, LD75D4: 4Mpulse/s		
Max. Connection Distance Between Servos			LD75P1, LD75P2, LD75P4: 2m; LD75D1, LD75D2, LD75D4: 10m		
Internal Current Consumption (5VDC)			LD75P1: 0.44A; LD75D1: 0.51A	LD75P2: 0.48A; LD75D2: 0.62A	LD75P4: 0.55A; LD75D4: 0.76A
Flash ROM Write Count			Max. 100000 times		
No. of Occupied I/O Points			32 points (I/O assignment: intelligent 32 points)		
Weight (kg)			0.18		
Dimensions (W x D x H) mm			45.0 x 95.0 x 90.0		

Notes:
1. LD75P represents the open collector output system, and LD75D represents the differential driver output system.
2. In speed-position switching control (ABS mode), the control unit available is "degree" only. (For details, refer to the User's Manual)
3. Using the "Pre-reading start function", the virtual start time can be shortened. (For details, refer to the User's Manual).