

KEYENCE CORPORATION

Positioning/Motion unit KV-XH04ML, KV-XH16ML

Category
Category1 (★)

Features

- Incorporated with a 1GHz Dual Core SoC motion control CPU for high-speed motion control period (125 μs/5 axes).
- Units are able to execute programs autonomously, allowing for highly responsive motor control. Furthermore, processing can be decentralized, allowing CPU load to become lighter for stable system control.
- Synchronicity with less than 1 μs of variability between PLC system and servo amplifier is possible.
- Full coverage for positioning, speed, torque, interpolation (linear/arc/helical) and synchronization control with just 1 unit.
- Supported programming: ladder program, flow and C language.
- Line-up: 4-axis type (KV-XH04ML), 16-axis type (KV-XH16ML)



KV-XH04ML
KV-XH16ML

Specifications

Item	Specification	
	KV-XH16ML	KV-XH04ML
Control mode	MECHATROLINK-III (Positioning / speed / torque / ML-III / I/O control)	
No. of control axes	16 axes (total including virtual axes)	4 axes (total including virtual axes)
Connectable CPU unit	KV-7500/7300	
Max. number of connectable units	7	16
Control period	62.5 μs or more	500 μs or more
Axis control function execution method	Ladder program, unit program (flow, C language)	Ladder program, unit program (flow)
Unit program capacity	3MB	
Position unit	mm, deg (angle), PLS (number of pulses) Decimal point position from 0 to 9 digits, unit conversion function available	
Positioning control	Absolute/relative value, linear/arc/helical interpolation	
Synchronization control	Input: external reference, instruction coordinates, current coordinates Cam resolution: 2048 to 32768, Data points: 4 to 64 Compensation: compensation via auxiliary input, phase compensation, and step angle compensation	
Origin return method	Data set type, dog type (push), dog type (selectable from “with Z phase” or “without Z phase”), dog type sizing (selectable from “with Z phase” or “without Z phase”), immediate Z phase, origin sensor and Z phase, rising edge of limit switch, origin sensor midpoint/rising edge	

MECHATROLINK Specifications

		M-III			
		16-byte	32-byte	48-byte	64-byte
Profile	Standard servo	-	-	×	-
	Standard I/O	×	×	×	×
	Standard Stepping Motor Drivers	-	-	×	-
	Standard Inverter	-	-	-	×
Transmission cycle		KV-XH16ML : 62.5μs, 125μs, 250μs, 500μs, 750μs, 1ms, 1.5ms, 2ms KV-XH04ML : 500μs, 750μs, 1ms, 1.5ms, 2ms			

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