

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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