

NO: PC-286
DATE: May 2014

PRODUCT: CJ1W-MCH71 Motion Control Unit
TYPE: Discontinuation Notice

SYSMAC CJ-Series MECHATROLINK-II Compatible Motion Control Unit CJ1W-MCH71 to be Discontinued

Last order date: March 2015

Note: Date is subject to change based on raw materials and components availability at the factory.

Reason for discontinuation: Omron continues to standardize on EtherCAT for high-speed motion control and is moving away from MECHATROLINK-II interfacing products.

From a performance point of view, the CJ PLC based motion control system lacks the synchronization to handle a large number of motion axes at high speed. The NJ501-1400 Machine Automation Controller delivers the tight synchronization of motion, sequencing, vision, and network communication in a single cycle to handle a high number of axes without creating lagging response as production speed increases.



Affected Parts

Product discontinuation	Recommended replacement
CJ1W-MCH71 uses CJ Series PLC CPUs MECHATROLINK-II interface built in	NJ501-1400 EtherCAT interface built in



Cautions on Applying Recommended Replacement

- There are some restrictions on functionality in NJ501-1400 including linear interpolation number of axes, time specified positioning, and traverse function
- Requires new motion network connections: Change from MECHATROLINK-II to EtherCAT
- Dimensions and body color are different

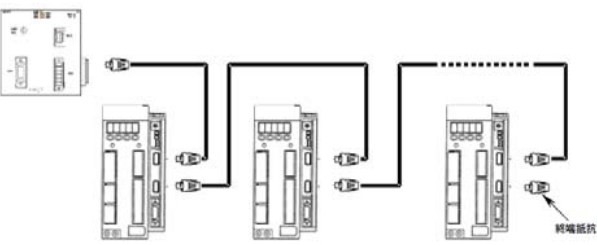
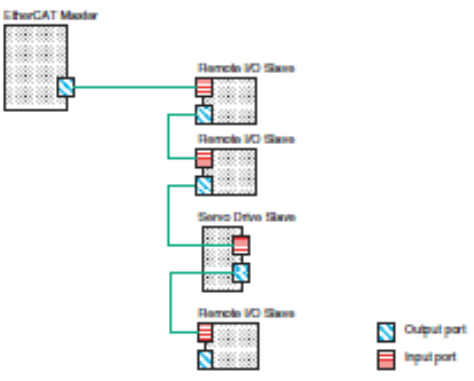
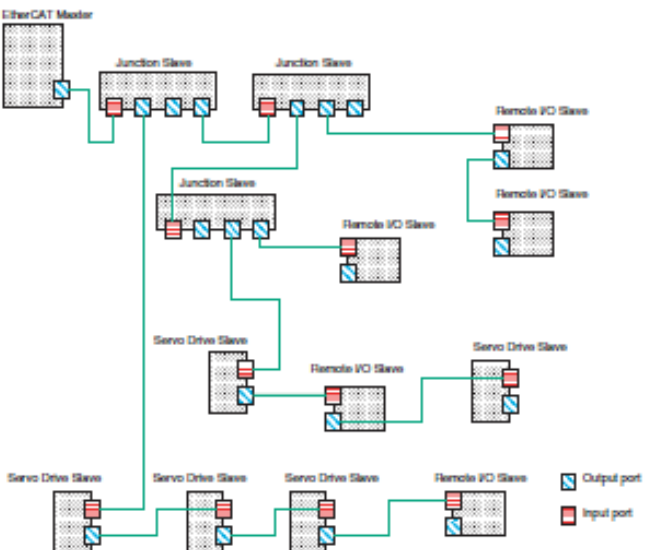
See the following pages for additional details

Detail of Differences

Body Color

<p>Product discontinuation Model CJ1W-MCH71</p>	<p>Recommended replacement Model NJ501-1400</p>
<p>Ivory</p> 	<p>Black</p> 

Wiring Diagrams

<p>Product discontinuation Model CJ1W-MCH71</p>	<p>Recommended replacement Model NJ501-1400</p>
<p>MECHATROLINK-II compatible</p> <ul style="list-style-type: none"> • No Branching 	<p>EtherCAT on NJ501</p> <ul style="list-style-type: none"> • No Branching  <ul style="list-style-type: none"> • Branching 

Mounting

Product discontinuation Model CJ1W-MCH71	Recommended replacement Model NJ501-1400
DIN rail or direct mounting	DIN rail

Dimensions

Product discontinuation Model CJ1W-MCH71	Recommended replacement Model NJ501-1400

Characteristics

Item	Product discontinuation Model CJ1W-MCH71	Recommended replacement Model NJ501-1400
Power Supply Voltage	5 VDC (from Backplane) 24 VDC (from external power supply)	100 to 240 VAC (external power supply) 24 VDC (external power supply)
Voltage fluctuation tolerance	4.5 to 5.5 VDC (from Backplane) 21.6 to 26.4 VDC (from external power supply)	85 to 264 VAC (AC power supply type) 19.2 to 28.8 VDC (DC power supply type)
Internal current consumption	5 VDC 0.6 A max.	5 VDC 1.90 A max.
Weight (Connectors excluded)	210 g max.	550 g max. (End cover included)
Safety standards	UL, CSA, C-TICK, EC compliant	cULus, EC compliant, NK, LR
Altitude	At 2,000 m elevation or lower	At 2,000 m elevation or lower
Controlled Devices	MECHATROLINK II below supported: SMARTSTEP Junior servo drive Various I/O unit (Yaskawa)	EtherCAT below supported: G5 series servo drive EtherCAT slaves
Program language	Dedicated motion control language	LD, ST
Control method	Position control, Speed control, Torque control	Position control, Speed control, Torque control
Baud rate	10 Mbps	100 Mbps
Number of controlled axes	32 axes max. Physical axes, Virtual axes: 30 axes max. Dedicated for virtual axes: 2 axes	32 axes Physical axes, Virtual axes, encoder axes, Virtual encoder axes
Control period	1, 2, 3, 4, 6, 8 ms	Primary task: 0.5, 1, 2, 4 ms
Minimum setting unit	Pulse, mm, inch, degree	Pulse, mm, inch, degree, μ m, nm

Characteristics (continued)

Functionality	Product discontinuation Model CJ1W-MCH71	Recommended replacement Model NJ501-1400
Linear interpolation	○ (8 axes max.)	○ (4 axes max./ axes group)
Circular interpolation	○ (2 axes max.)	○ (2 axes max./ axes group)
Time specified positioning	○	× (Available by custom code)
Target position change function	○	○
Interrupt feeding	○	○
Electronic Shaft	○	○
Travel distance super impose	○	○
Traverse function	○	× (Available by custom code)
Latch function	○	○
Link operation	○	○
Trailing synchronous operation	○	○
Speed command	○	○
Torque command	○	○
Override	○	○
Acceleration/deceleration curve	Trapezoidal or S-shape	Trapezoidal or S-shape
Origin search	○	○
Backlash compensation	○	○
Teaching	○	× (Available by custom code)
Arithmetic operation	○	○

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