CJ1W-NC271/471/F71 - NC MECHATROLINK-II

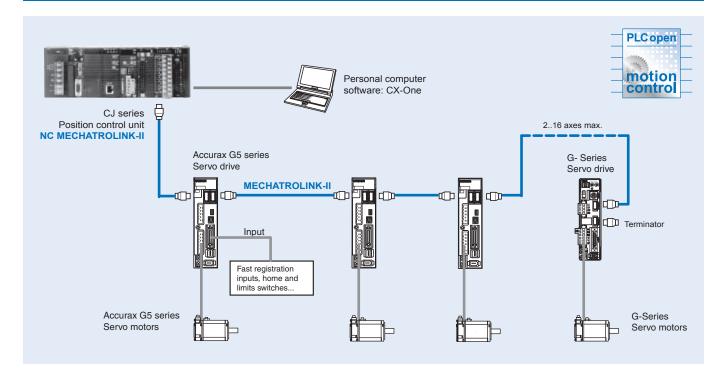
Position control unit

Multi-axis point-to-point positioning controller over MECHATROLINK-II Motion Bus

- · Position control units with 2, 4 or 16 axes.
- High-speed bus MECHATROLINK-II is specially designed for motion control.
- Supports position, speed and torque control.
- Programming languages: ladder, function blocks. Supports PLC Open Function Blocks.
- Smart active parts for OMRON HMIs terminals reduce engineering time.
- Access to the complete system from one point. Network setup, servo drives configuring and monitoring, and PLC programming.



System configuration





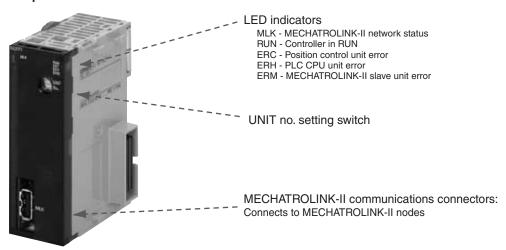
Specifications

Position control unit

Position command unit Command un	Model		CJ1W-NC271	CJ1W-NC471	CJ1W-NCF71
Control functions Control functions Control functions Command unit or speed control Control units Control	Classification		CJ-series CPU bus unit	'	•
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Number of words allocated: 50 words (25 output words, 25 input words) × inghest axis No. used Control units		Axis operating memory area		lowing areas (user-specified). Civ	J, WOIK, auxiliary, Holding, Divi, of Livi al-
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larget speed specified from the ladder program.	Control functions	Servo lock/unlock	Locks and unlocks the se	rvo drive.	
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Software limits Limits software operation for controlling positioning.		Monitoring function	Monitors the control statu	s of the servo drive's command c	oordinate positions, feedback position, cur-
Backlash compensation Compensates for the amount of play in the mechanical system according to a set value. Deviation counter reset The position deviation in the servo drive's deviation counter can be reset to 0 (unit version 1.3 or later External I/O Position control unit One MECHATROLINK-II interface port Servo drive I/O CW/CCW limit inputs, origin proximity inputs, external interrupt inputs 1 to 3 (can be used as external origin inputs) Programming methods Standard ladder Directly over NCF unit memory area Function blocks Using standard PLC open function blocks Smart active parts Use of OMRON HMIs smart active parts optimizes CPU usage and engineering time Internal current consumption 360 mA or less at 5 VDC			. , , ,		
Deviation counter reset The position deviation in the servo drive's deviation counter can be reset to 0 (unit version 1.3 or later External I/O Position control unit One MECHATROLINK-II interface port CW/CCW limit inputs, origin proximity inputs, external interrupt inputs 1 to 3 (can be used as external origin inputs) Programming methods Standard ladder Directly over NCF unit memory area Using standard PLC open function blocks PLCopen Internal current consumption Use of OMRON HMIs smart active parts optimizes CPU usage and engineering time Internal current consumption		Software limits	Limits software operation	for controlling positioning.	
External I/O Position control unit One MECHATROLINK-II interface port CW/CCW limit inputs, origin proximity inputs, external interrupt inputs 1 to 3 (can be used as external origin inputs) Programming methods Function blocks Using standard PLC open function blocks Using standard PLC open function blocks PLCopen Internal current consumption One MECHATROLINK-II interface port CW/CCW limit inputs, origin proximity inputs, external interrupt inputs 1 to 3 (can be used as external origin inputs) Using standard PLC open function blocks PLCopen Internal current consumption One MECHATROLINK-II interface port CW/CCW limit inputs, origin proximity inputs, external interrupt inputs 1 to 3 (can be used as external origin inputs) Using standard PLC open function blocks PLCopen Internal current consumption One MECHATROLINK-II interface port		Backlash compensation	Compensates for the am	ount of play in the mechanical sy	stem according to a set value.
Servo drive I/O CW/CCW limit inputs, origin proximity inputs, external interrupt inputs 1 to 3 (can be used as external origin inputs) Programming methods Function blocks Directly over NCF unit memory area Using standard PLC open function blocks PLCopen motion Smart active parts Use of OMRON HMIs smart active parts optimizes CPU usage and engineering time Internal current consumption 360 mA or less at 5 VDC		Deviation counter reset	The position deviation in	he servo drive's deviation counte	r can be reset to 0 (unit version 1.3 or later).
Programming methods Standard ladder Directly over NCF unit memory area		Position control unit	One MECHATROLINK-II	interface port	
Programming methods Standard ladder Directly over NCF unit memory area		Servo drive I/O			rrupt inputs 1 to 3
Function blocks Using standard PLC open function blocks PLCopen motion control Smart active parts Use of OMRON HMIs smart active parts optimizes CPU usage and engineering time Internal current consumption 360 mA or less at 5 VDC				0 . ,	
Smart active parts Use of OMRON HMIs smart active parts optimizes CPU usage and engineering time Internal current consumption 360 mA or less at 5 VDC		Standard ladder	•		
Smart active parts Use of OMRON HMIs smart active parts optimizes CPU usage and engineering time Internal current consumption 360 mA or less at 5 VDC	methods	Function blocks	Using standard PLC oper	n function blocks	DI Conon
Smart active parts Use of OMRON HMIs smart active parts optimizes CPU usage and engineering time Internal current consumption 360 mA or less at 5 VDC					PLCopen
Smart active parts Use of OMRON HMIs smart active parts optimizes CPU usage and engineering time Internal current consumption 360 mA or less at 5 VDC					motion
Internal current consumption 360 mA or less at 5 VDC					control
Internal current consumption 360 mA or less at 5 VDC		Smart active parts	Use of OMRON HMIs sm	art active parts optimizes CPU us	sage and engineering time
	Internal current consumption		360 mA or less at 5 VDC		
	Weight		95 g		

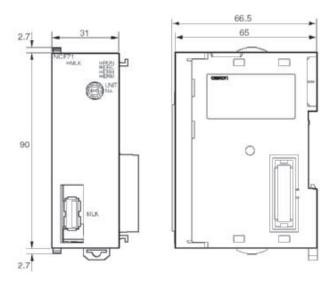
Nomenclature

CJ1W-NC271/471/F71 - position control unit



Dimensions

CJ1W-NC271/471/F71 - position control unit



Ordering information

Position controller unit

Name	Model
MECHATROLINK-II position controller unit - 16 axes	CJ1W-NCF71
MECHATROLINK-II position controller unit - 4 axes	CJ1W-NC471
MECHATROLINK-II position controller unit - 2 axes	CJ1W-NC271

MECHATROLINK-II related devices

Servo system

Name	Model
Accurax G5 servo drive ML-II built-in	R88D-KN□□□-ML2
G-Series servo drive ML-II built-in	R88D-GN□□H-ML2

Note: Refer to servo systems section for detailed specs and ordering information

MECHATROLINK-II cables

Name	Remarks	Model
MECHATROLINK-II terminator	Terminating resistor	JEPMC-W6022
MECHATROLINK-II cables	0.5 meter	JEPMC-W6003-A5
	1 meter	JEPMC-W6003-01
	3 meters	JEPMC-W6003-03
	5 meters	JEPMC-W6003-05
	10 meters	JEPMC-W6003-10
	20 meters	JEPMC-W6003-20
	30 meters	JEPMC-W6003-30

Computer software

Specifications	Model
CX-One version 2.0 (CX-Motion NCF 1.70 or higher)	CX-One
CX-One version 3.0 (CX-Motion NCF 1.90 or higher)	
CX-One version 4.0 or higher	

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

Cat. No. I09E-EN-02B

In the interest of product improvement, specifications are subject to change without notice.