

MP2300 - MECHATROLINK-II

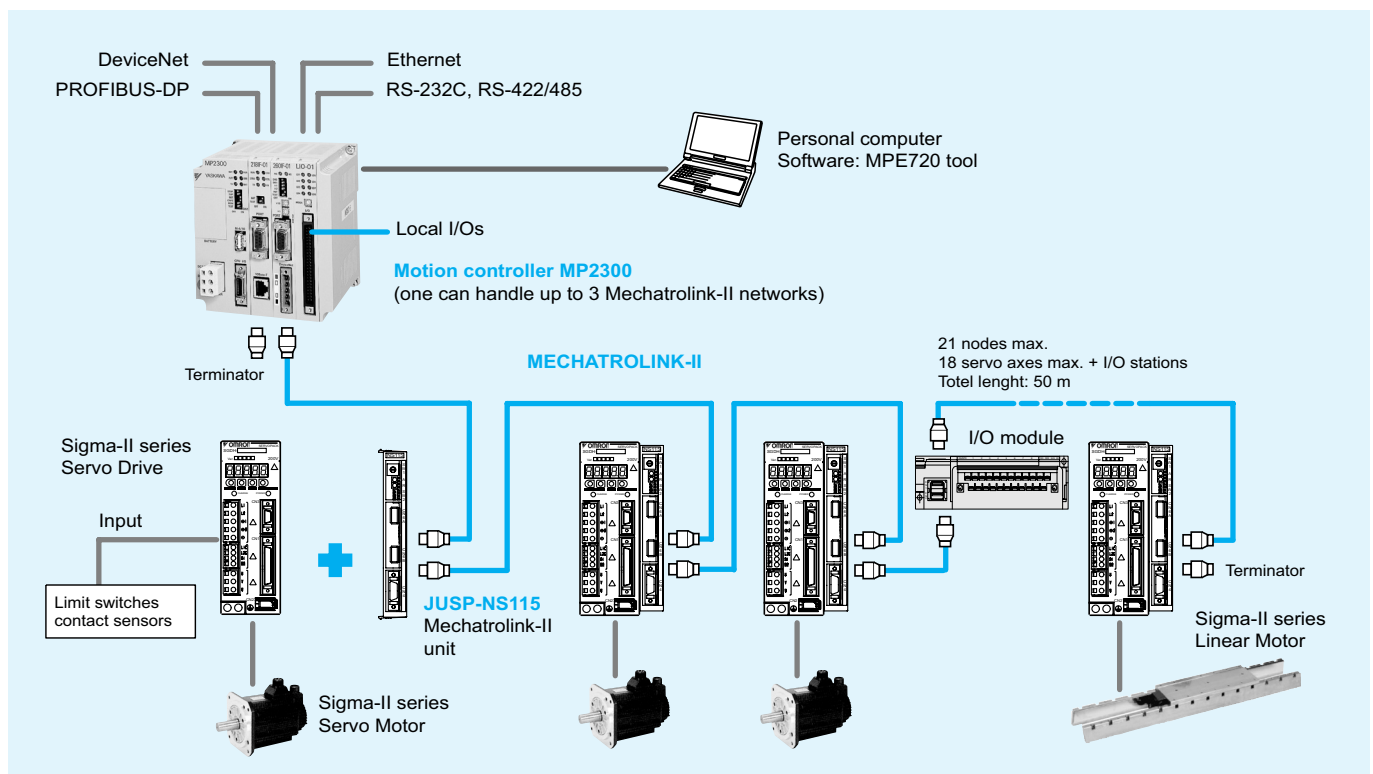
Motion controller

Stand-alone solution for advanced motion control

- Up to 48 axes controlled with minimum wiring
- Self configuration of nodes for an easy setup
- DeviceNet, PROFIBUS and ethernet network interfaces provide easy connectivity to any system
- Supports position, speed and torque control
- Electronic CAM profiles and axes synchronization
- The high-speed bus MECHATROLINK-II is specially designed for motion control
- Support for I/Os and pulse inputs locally and over the network
- Access to the complete system from one point.



System configuration



Specifications

General specifications

Hardware specifications

Items	Specifications
Environmental conditions	Ambient operating temperature 0 to 55 °C
	Ambient storage temperature -25 to 85 °C
	Ambient operating humidity 30% to 95% (with no condensation)
	Ambient storage humidity 5% to 95% (with no condensation)
	Pollution level Pollution level 1 (conforming to JIS B 3501)
	Corrosive gas There must be no combustible or corrosive gas.
	Operating altitude 2,000 m above sea level or lower
Mechanical operating conditions	Vibration resistance Conforming to JIS B 3502: 10 to 57 Hz with single-amplitude of 0.075 mm 57 to 150 Hz with acceleration of 1G 10 sweeps each in X, Y, and Z directions (sweep time: 1 octave/min)
	Shock resistance Conforming to JIS B 3502: Peak acceleration of 147 m/s ² (15 G) twice for 11 ms each in the X, Y, and Z directions
Electrical operating conditions	Noise resistance Conforming to EN 61000-6-2, EN 55011 (Group 1, Class A)
Installation requirements	Ground Ground to 100 Ω max.
	Cooling method Natural cooling


Sequential function specifications

Items	Specifications
Control method	Sequence: High-speed and low-speed scan methods
Programming language	Ladder diagram: Relay circuit
	Text-type language: Numeric operations, logic operations, etc.
Scanning	Two scan levels: High-speed scan and low-speed scan
	High-speed scan time setting: 1 to 32 ms (Integral multiple of MECHATROLINK communication cycle) Low-speed scan time setting: 2 to 300 ms (Integral multiple of MECHATROLINK communication cycle)
User drawings, functions and motion programs	Startup drawings (DWG.A): 64 drawings max. up to three hierarchical drawing levels
	Interrupt processing drawings (DWG.I): 64 drawings max. up to three hierarchical drawing levels
	High-speed scan process drawings (DWG.H): 200 drawings max. up to three hierarchical drawing levels
	Low-speed scan process drawings (DWG.L): 500 drawings max. up to three hierarchical drawing levels
	Number of steps: Up to 1,000 steps per drawing
	User functions: Up to 500 functions
	Motion programs: Up to 256
Data memory	Revision history of drawings and motion programs
	Security function for drawings and motion programs
	Common data (M) registers: 64 Kwords
	System (S) registers: 8 Kwords
	Drawing local (D) registers: Up to 16 Kwords per drawing
	Drawing constant (#) registers: Up to 16 Kwords per drawing
	Input (I) registers: 5 Kwords (including internal input registers)
Trace memory	Output (O) registers: 5 Kwords (including internal output registers)
	Constant (C) registers: 16 Kwords
Trace memory	Data trace: 128 Kwords (32 Kwords, 4 groups), 16 points defined
Memory backup	Program memory: Flash memory: 8 MBytes (user area: 5.5 MBytes) definition files, ladder programs, motion programs, etc.
	Data memory: Battery backup: 256 Kbytes, M registers, S registers, alarm history, trace data
Data types	Bit (relay): ON/OFF
	Integer: -32768 to +32767
	Double-length integer: -2147483648 to +2147483647
	Real number: ± (1.175E-38 to 3.402E+38)
Register designation method	Register number: Direct designation of register number
	Symbolic designation: Up to 8 alphanumeric characters (up to 200 symbols per drawing) With automatic number or symbol assignment

Motion control function specifications

Item		Specifications		
Interface		MECHATROLINK-I, MECHATROLINK-II		
Number of controlled axes/module		Up to 16 axes		
Control specifications	PTP control		Linear, rotary, and infinite-length	
	Interpolation		Up to 16 linear axes, 2 circular axes, and 3 helical axes	
	Speed reference output		Yes	
	Torque reference output		Yes	
	Phase control		Yes	
	Position control	Positioning		Yes
		External positioning		Yes
		Zero point return		Yes
		Interpolation		Yes
		Interpolation with position detection function		Yes
		JOG operation		Yes
STEP operation		Yes		
Parameter changes during motion command execution		Yes		
Reference unit		mm, inch, deg, or pulse		
Reference unit minimum setting		1, 0.1, 0.01, 0.001, 0.0001, 0.00001		
Maximum programmable value		-2147483648 to +2147483647 (signed 32-bit value)		
Speed reference unit		Reference unit/s designation: mm/s, inch/s, deg/s, pulse/s Reference unit/min. designation: mm/min, inch/ min, deg/min, pulse/min Percentage designation: Percentage of rated speed		
Acceleration/deceleration type		Linear, asymmetric, S-curve, exponent		
Acceleration/deceleration reference unit		Reference unit/s ² designation: mm/s ² , inch/s ² , deg/s ² , pulse/s ² Acceleration/deceleration time constant: Time from 0 to rated speed (ms)		
Override function		Positioning: 0.01% to 327.67% by axis		
Coordinate system		Rectangular coordinates		
Zero point re- turn	DEC1+ phase-C pulse		Yes	
	ZERO signal		Yes	
	DEC1+ ZERO signal		Yes	
	Phase-C pulse		Yes	
	Only phase-C pulse		Yes	
	POT and phase-C pulse		Yes	
	POT		Yes	
	Home limit switch and phase-C pulse		Yes	
	HOME		Yes	
	NOT and phase-C pulse		Yes	
	NOT		Yes	
INPUT and phase-C pulse		Yes		
INPUT		Yes		
Applicable servo drives		SGDH-□□□E-OY + NS115		
Applicable frequency inverters		Varispeed V7, F7, G7 with MECHATROLINK-II interface (for inverter version support contact your OMRON sales office)		
Encoders		Incremental encoder Yaskawa absolute encoder		

MP2300 CPU (basic module)

Items	Specifications	Appearance
Model	JEPMC-MP2300	
Power supply	Input power voltage: 24 VDC±20% Current consumption: 1 A Inrush current: 40 A or less	
Motion network	One channel for MECHATROLINK-II: Twenty-one stations, including servo drives and I/O equipment, can be connected. (16 axes for servo drives and inverters) Transmission speed: 10Mbps (MECHATROLINK-II) Transmission distance: See "MECHATROLINK-II repeater"	
I/O signals	Digital input: 8 points (one point can be used for interrupts), 24 VDC, 4 mA, and source mode or sink mode input Digital output: 4 points, 24 VDC, 100 mA, open collector, and sink mode output (NPN)	
Slot for optional modules	3 slots	
Dimensions (mm)	130x120x108 (HxWxD)	
Weight	500 g	

General-purpose serial communication module (217IF-01)

Items	Specifications		Appearance
Model	JAPMC-CM2310		
Port	For RS-232C communication	For RS-422/485 communication	
Interface	One port	One port (RS-422 or -485)	
Connector	D-sub 9 pins (female)	MDR 14 pins (female)	
Max. transmission distance	15 m	300 m	
Transmission speed	76.8 kbps	76.8 kbps	
Access mode	Asynchronous (start-stop synchronization)	Asynchronous (start-stop synchronization)	
Communication protocols	MEMOBUS (master or slave) MELSEC, HostLink, or non-protocol	MEMOBUS (master or slave) MELSEC, HostLink, or non-protocol	
Media access control method	1:1	1:1 (RS-422), 1:N (RS-485)	
Transmission format (can be set)	Data bit length: 7 or 8 bits Stop bits: 1 or 2 bits Parity bits: even, odd, or none	Data bit length: 7 or 8 bits Stop bits: 1 or 2 bits Parity bits: even, odd, or none	


Ethernet communication module (218IF-01)

Items	Specifications		Appearance
Model	JAPMC-CM2300		
Port	For ethernet communication	Port	
Interface	One port (10BaseT) (RJ-45 modular jack)	Interface	
Max. segment length	100 m	Connector	
Transmission speed	10 Mbps	Max. transmission distance	
Access mode	IEEE802.3	Transmission speed	
Flame format	Ethernet ver.2 (conforming to DIX)	Access mode	
Connections	TCP/UDP/IP/ARP	Communication protocols	
Max. number of words in transmission	512 words (1024 bytes)	Media access control method	
Communication protocols	Extended MEMOBUS, MEMOBUS, MELSEC-A, non-protocol, or MODBUS/TCP	Transmission format (can be set)	
Max. number of connections	20 stations		


DeviceNet communication module (260IF-01)

Items	Specifications		Appearance
Model	JAPMC-CM2320		
Port	For DeviceNet communication	Port	
Number of circuits	1	Interface	
Applicable communication	Conforms to DeviceNet master or slave - I/O transmission (polled I/O and bistrobbed I/O) - Explicit messaging	Connector	
I/O communication	Max. number of slaves Max. I/O bytes	Max. transmission distance	
Message communication (only for master)	Max. number of nodes Max. message length Executed functions	Transmission speed	
Switches on the front	Two rotary switches: Node address settings DIP switch: Settings for transmission speed and switching master or slave	Access mode	
Indicators	2 LEDs: MS or NS	Communication protocols	
Power voltage for communication	24 VDC±10% (using the specially designed cable)	Media access control method	
Max. current consumption	Communication power: 45 mA (supplied by transmission connectors)	Transmission format (can be set)	


PROFIBUS communication module (261IF-01)

Items	Specifications			Appearance
Model	JAPMC-CM2330			
Port	For PROFIBUS communication	Port	For RS-232C communication	
Functions	DP slave	Interface	One port	
	Cyclic communication (DP standard function)	Connector	D-sub 9 pins (female)	
Transmission speed	12M/6M/4M/3M/1.5M/750k/500k/187.5k/93.75k/19.2k/9.6kbps (automatic detection)	Max. transmission distance	15 m	
Configuration	By PROFIBUS master	Transmission speed	76.8 kbps	
Slave address	1 to 64			
I/O processing	Total capacity of IW/OW registers: 64 words	Access mode	Asynchronous (start-stop synchronization)	
	Max. I/O allocation (IN and OUT each): 64 words	Communication protocols	MEMOBUS (master or slave) MELSEC, HostLink, or non-protocol	
Diagnostic functions	Display for status and slave status using the EWS. I/O error display for SW registers	Media access control method	1:1	
		Transmission format (can be set)	Data bit length: 7 or 8 bits Stop bits: 1 or 2 bits Parity bits: even, odd, or none	


Analogue reference motion control module (SVA-01)

Items	Specifications	Appearance
Model	JAPMC-MC2300	
Number of axes	2 axes (CN1 & CN2) analogue output and encoder input.	
Digital inputs (per axis)	6 inputs, PNP or NPN (including alarm, ready, zero and latch)	
Digital outputs (per axis)	6 outputs (including servo_on, alarm_reset, control_mode_select and SEN)	
Encoder input (per axis)	Differential line-driver (A./A.B./B./Z./Z.). 4 Mpps (before multiplication).	
Analog outputs (per axis)	2 outputs ± 10 V 16 bits (typically speed and torque references)	
Analog inputs (per axis)	2 inputs ± 10 V 16 bits	
External supply	24 VDC (in CN3)	
LED's	RUN (green) ERR (red)	


MECHATROLINK-II motion control module (SVB-01)

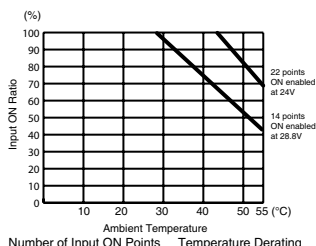
Items	Specifications	Appearance
Model	JAPMC-MC2310	
Communication circuits	1 circuit	
Communication ports	2 ports	
Terminator	External resistor (JEPMC-W6022 required)	
Transmission speed	10 Mbps	
Communication cycle	0.5ms, 1ms, 1.5ms, 2ms	
Number of connecting stations	21 stations (16 axes for servo drives and inverters) /2 ms, 15 stations (15 axes for servo drives) /1.5 ms, 9 stations (9 axes for servo drives) /1ms, 4 stations (4 axes for servo drives) /0.5 ms	
Retry function	Available with MECHATROLINK-II	
Slave function	Available with MECHATROLINK-II	
Transmission distance	See "MECHATROLINK-II repeater"	

I/O modules (LIO-01/-02)


Items	Specifications	Appearance
Models	JAPMC-IO2300 (NPN output), JAPMC-IO2301 (PNP output)	
Digital I/O		
Input signals	16 points (all connected) and 24 VDC \pm 20%, 5 mA (TYP) Sink mode or source mode input and photocoupler isolation Min. ON voltage/current: 15V/1.6 mA Max. OFF voltage/current: 5V/1.0 mA Max. response time: OFF \rightarrow ON 1 ms and ON \rightarrow OFF 1 ms Interruption (DI-00): DI-00 can be used for interruptions. If an interruption is enabled, the interrupt drawing is started when DI-00 is set to ON. Pulse latch (DI-01): DI-01 can be used for pulse latching. If pulse latching is enabled, the pulse counter is latched when DI-01 is set to ON.	
Output signals	16 points (all connected) and 24 VDC \pm 20%, 100 mA max. Open collector: Sink mode output (LIO-01 module) Source mode output (LIO-02 module) Photocoupler isolation and max. OFF current: 0.1 mA Max. response time: OFF \rightarrow ON 1 ms and ON \rightarrow OFF 1 ms Output protection: Fuse (for protection against fires caused by an overcurrent when outputting after a short circuit occurred). If circuit protection is required, provide a fuse for each output circuit.	
Pulse input		
Number of channels	1 (Phase A, B, or Z input)	
Input circuit	Phase A/B: 5V differential inputs, no insulation, and max. frequency 4 MHz Phase Z: 5 V/12 V photocoupler inputs and max. frequency 500 kHz	
Input method	A/B (1, 2, or 4 multipliers), sign (1 or 2 multipliers), UP/DOWN (1 or 2 multipliers)	
Latch input	Pulse latch with phase Z or DI-01 Min. response time: 5 μ s when input with phase Z; 60 μ s when input with DI-01	
Others	Coincident detection; preset and clear functions for counter values.	

I/O modules (LIO-04)


Items	Specifications	Appearance
Model	JAPMC-IO2303	
Input signals	<p>32 points (8 points common) and 24 VDC\pm20%, 5 mA (TYP) Sink mode or source mode input and photocoupler isolation Min. ON voltage/current: 15 V/1.6 mA Max. OFF voltage/current: 5 V/1.0 mA Max. response time: OFF\rightarrowON 0.5 ms and ON\rightarrowOFF 0.5 ms Interruption (DI-00, DI-01, DI-16, DI-17): DI-00, DI-01, DI-16, and DI-17 can be used for interruptions. If an interruption is enabled, the interrupt drawing is started when DI-00, DI-01, DI-16, or DI-17 is set to ON. Note: See right for the derating conditions</p>	
Output signals	<p>32 points (8 points common) and 24 VDC\pm20%, 100 mA max. Open collector: Sink mode output (NPN) and photocoupler isolation Max. OFF current: 0.1 mA Max. response time: OFF\rightarrowON 0.5 ms and ON\rightarrowOFF 1 ms Output protection: Fuse (for protection against fires caused by an overcurrent when outputting after a short circuit occurred) If circuit protection is required, provide a fuse for each output circuit.</p>	




MECHATROLINK-II, 64 point I/O module (IO2310)

Items	Specifications	Appearance
Model	JEPMC-IO2310	
I/O signals	<p>Input: 64 points, 24 VDC, 5 mA, sink/source mode input Output: 64 points, 24 VDC, 50 mA when all points ON, (the max. rating is 100 mA per point) sink mode output (NPN) Signal connection method: Connector (FCN360 series)</p>	
Module power supply	<p>24 VDC (20.4 V to 28.8 V) Rated current: 0.5 A Inrush current: 1 A</p>	
Weight	590 g	


MECHATROLINK-II, counter module (PL2900)

Items	Specifications	Appearance
Model	JEPMC-PL2900	
Number of input channels	2	
Functions	Pulse counter, notch output, registration input	
Pulse input method	Sign (1/2 multipliers), A/B (1/2/4 multipliers), UP/DOWN (1/2 multipliers)	
Max. counter speed	1200 kpps (4 multipliers)	
Pulse input voltage	3/5/12/24 VDC	
External power supply	For input signal: 24 VDC, For dividing load: 24 VDC, For module: 24 VDC (20.4 V to 26.4 V), 120 mA or less	
Weight	300 g	

MECHATROLINK-II, pulse output module (PL2910)

Items	Specifications	Appearance
Model	JEPMC-PL2910	
Number of output channels	2	
Functions	Pulse positioning, JOG run, zero-point return	
Pulse output method	CW, CCW pulse, sign	
Max. output speed	500kpps	
Pulse output voltage	5VDC	
Pulse interface circuit	Open collector output 5VDC, 10mA/circuit	
External control signal	Digital input: 8 points/module, 5 VDC x 4 points, 24 VDC x 4 points Digital output: 6 points/module, 5 VDC x 4 points, 24 VDC x 2 points	
Weight	300 g	

MECHATROLINK-II, analog input module (AN2900)

Items	Specifications	Appearance
Model	JEPMC-AN2900	
Number of input channels	4	
Input voltage range	-10 V to +10 V	
Input impedance	1 M Ω min.	
Data format	Binary, -32000 to +32000	
Input delay time	4 ms max.	
Error	\pm 0.5% F.S. (at 25 °C), \pm 1.0% F.S. (at 0 °C to 60 °C)	
External power supply	24 VDC (20.4 VDC to 26.4 VDC), 120 mA max.	
Weight	300 g	

MECHATROLINK-II, analog output module (AN2910)

Items	Specifications	Appearance
Model	JEPMC-AN2910	
Number of output channels	2	
Output voltage range	-10 V to +10 V	
Max. allowable load current	± 5 mA (2 kΩ)	
Data format	Binary, -32000 to +32000	
Output delay time	1 ms	
Error	± 0.2% F.S. (at 25 °C), ± 0.5% F.S. (at 0 °C to 60 °C)	
External power supply	24 VDC (20.4 VDC to 26.4 VDC), 120 mA max.	
Weight	300 g	

MECHATROLINK-II, repeater

Items	Specifications	Appearance
Model	JEPMC-REP2000	
Communication type	MECHATROLINK-II	
Cable length	Between controller and repeater: 50 m., after repeater: 50 m	
Max. connected stations	Total stations on both sides of repeater: 30 (limited to the max. number of connectable stations of the controller (e.g., 21 stations for the MP2300 series))	
Restrictions	Between controller and repeater - Total cable length ≤ 30 m: 15 stations max. including I/O and servo, etc. - 30 m < total cable length ≤ 50 m: 14 stations max. including I/O and servo, etc. After repeater: - Total cable length ≤ 30 m: 16 stations max. including I/O and servo, etc. - 30 m < total cable length ≤ 50 m: 15 stations max. including I/O and servo, etc.	
Power supply	24 VDC, 100 mA	
Weight	340 g	
Dimensions (mm)	30x160x77 (HxWxD)	

MECHATROLINK-II, servo drive interface unit

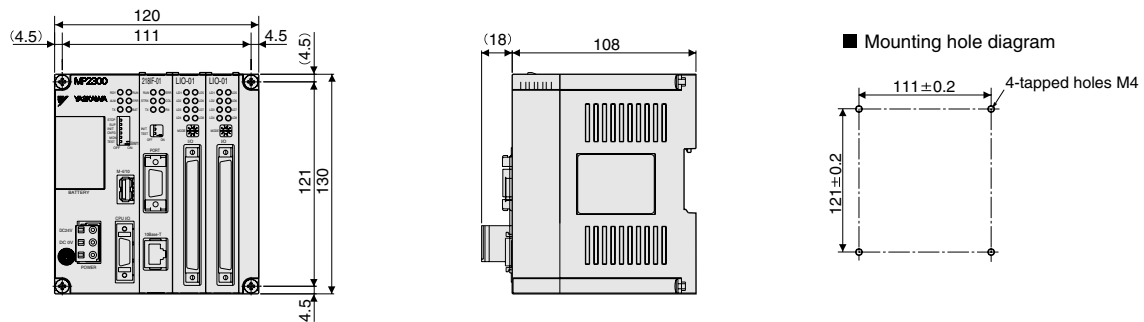
Item	Details	
Type	JUSP-NS115	
Applicable servo drive	SGDH-□□□□E models (version 38 or later)	
Installation method	Mounted on the SGDh servo drive side: CN10.	
Basic specifications	Power supply method	Supplied from the servo drive control power supply.
	Power consumption	2 W
MECHATROLINK-II communications	Baud rate/transmission cycle	10 Mbps / 1 ms or more. MECHATROLINK-II communications
Command format	Operation specification	Positioning using MECHATROLINK-I/II communications.
	Reference input	MECHATROLINK-I/II communications Commands: position, speed, torque, parameter read/write, monitor output
Position control functions	Acceleration/deceleration method	Linear first/second-step, asymmetric, exponential, S-curve
	Fully closed control	Position control with fully closed feedback is possible.
Fully closed system specifications	Encoder pulse output in the servo drive	5 V differential line-driver output (complies with EIA Standard RS-422A)
	Fully closed encoder pulse signal	A quad B line-driver
	Maximum receivable frequency for servo drive	1 Mpps
	Power supply for fully closed encoder	To be prepared by customer.
Input signals in the servo drive	Signal allocation changes possible	Forward/reverse run prohibited, zero point return deceleration LS External latch signals 1, 2, 3 Forward/reverse torque control
	Internal functions	Position data latching is possible using phase C, and external signals 1, 2, 3
	Protection	Parameters damage, parameter setting errors, communications errors, WDT errors, fully closed encoder detecting disconnection
	LED indicators	A: alarm, R: MECHATROLINK-I/II communicating

MECHATROLINK-II, frequency inverter interface units

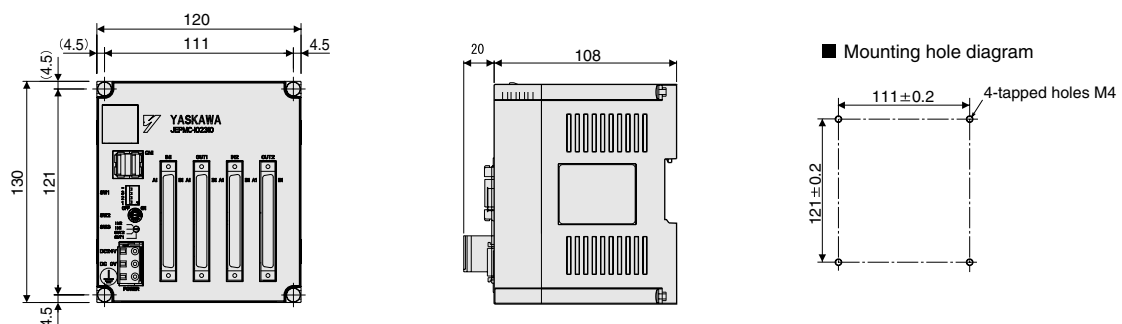
Item	Details
Type	SI-T/V7 SI-T
Applicable inverter	CIMR-V7 / 3G3-MV (firmware 5740 or newer) CIMR-G7 / CIMR-F7 (firmware 656x/for G7 / 4011 or newer for F7) Contact your OMRON sales office for information about firmware compatibility
Installation method	Mounted on the inverter
Power supply	Supplied from the inverter
MECHATROLINK-II communications	10 MHz, 0.5 ms to 8 ms for MECHATROLINK-II
Operation	Read and write registers, read monitors, inverter operation, speed reference, torque reference (G7/F7 only).
Inputs and outputs	The inputs and outputs in the inverter can be read and set by the MLII master
Connectors	ML-II bus connector. DPRAM connector for the inverter
Switches	Rotary switch for ML-II address (low byte) Dip switch for: ML-II address (high bit). ML-II/ML-I selection. 17 byte/32 byte data length selection.

Dimensions

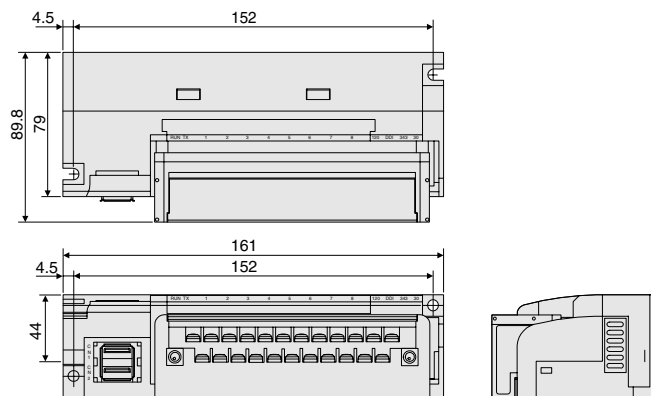
MP2300 basic module



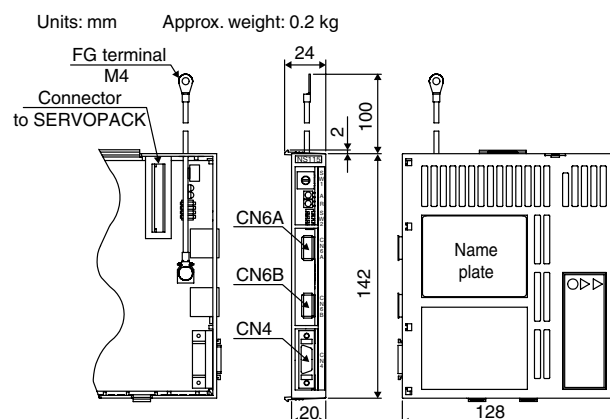
IO2310 I/O module



I/O modules PL2900, PL2910, AN2900, AN2910



MECHATROLINK-II servo drive interface unit



Ordering information

MP2300 - motion controller main unit

Name	Model name	Model
MP2300 basic module (CPU module included), 1 channel for MECHATROLINK-II, I/O	MP2300	JEPMC-MP2300

MP2300 - motion control modules

Name	Model name	Model
Analogue reference motion control module (2 axes)	SVA-01	JAPMC-MC2300
1 additional MECHATROLINK-II communication channel	SVB-01	JAPMC-MC2310

MP2300 - communication modules

Name	Model name	Model
General-purpose serial communication module (RS-232C / RS422 communication)	217IF-01	JAPMC-CM2310
Ethernet communication module (RS-232C / ethernet communication)	218IF-01	JAPMC-CM2300
DeviceNet communication module (RS-232C / DeviceNet communication)	260IF-01	JAPMC-CM2320
PROFIBUS communication module (RS-232C / PROFIBUS communication)	261IF-01	JAPMC-CM2330

MP2300 - I/O modules

Name	Model name	Model
16-point input, 16-point output (sink mode output / NPN), and 1-point pulse input	LIO-01	JAPMC-IO2300
16-point input, 16-point output (source mode output / PNP), and 1-point pulse input	LIO-02	JAPMC-IO2301
32-point input and 32-point output	LIO-04	JAPMC-IO2303

MECHATROLINK-II - related devices

Name	Remarks	Model
Distributed I/O modules	64-point input and 64-point output	JEPMC-IO2310
	Reversible counter: 2 channels	JEPMC-PL2900
	Pulse output: 2 channels	JEPMC-PL2910
	Analog input: -10 V to +10 V, 4 channels	JEPMC-AN2900
	Analog output: -10 V to +10 V, 2 channels	JEPMC-AN2910
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
MECHATROLINK-II terminator	Terminating resistor	JEPMC-W6022
MECHATROLINK-II interface unit	For Sigma-II series servo drives. (Firmware version 38 or later)	JUSP-NS115
	For Varispeed V7 inverter (for inverter version support contact your OMRON sales office)	SI-T/V7
	For Varispeed F7, G7 inverter (for inverter version support contact your OMRON sales office)	SI-T
MECHATROLINK-II repeater	MECHATROLINK-II repeater	JEPMC-REP2000

I/O cables

	Remarks	Length m	Model
I/O cable for LIO-01, 02	With connector on the LIO-01, -02 side	0.5	JEPMC-W2061-A5
		1.0	JEPMC-W2061-01
		3.0	JEPMC-W2061-03
I/O cable for LIO-04	With connector on the LIO-04 side	0.5	JEPMC-W6060-05
		1.0	JEPMC-W6060-10
		3.0	JEPMC-W6060-30
I/O cable for MP2300	With connector on the MP2300 side	0.5	JEPMC-W2060-A5
		1.0	JEPMC-W2060-01
		3.0	JEPMC-W2060-03
I/O cable for IO2310	With connector on the IO2310 side	0.5	JEPMC-W5410-05
		1.0	JEPMC-W5410-10
		3.0	JEPMC-W5410-30

Accessories

Name	Model
Battery ER3V 3.6V	JZSP-BA01
Empty slot cover	JEPMC-OP2300
Brackets for DIN rail	JEPMC-OP300

Computer software

Specifications	Model
Programming software to support from system design to maintenance. Intuitive ladder programming and editing functions. CAM data generation Windows-based (Windows 95/98/NT4.0/2000/XP)	CPMC-MPE720

Servo system

Note: Refer to servo systems section for detailed information

Frequency inverters

Note: Refer to frequency inverters section for detailed information

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.