● Configuration Units

CJ-series Special I/O Units

Type	Name	Specifications	Model	Number of words allocated (CIO 2000 to CIO 2959)	Number of words allocated (D20000 to D29599)	Unit No.	Number of mountable Units	Current consumption (A)		Weight
								5 VDC	24 VDC	
Special I/O Units	General-purpose Universal Analog Input Unit	4 inputs, fully universal	CJ1W-AD04U	10 words	100 words	0 to 95	40 Units	0.32	---	150 g max.
	Analog Input Units	8 inputs (4 to 20 mA, 1 to 5 V, etc.)	CJ1W-AD081-V1	10 words	100 words	0 to 95	40 Units	0.42	---	140 g max.
		4 inputs (4 to 20 mA, 1 to 5 V, etc.)	CJ1W-AD041-V1	10 words	100 words	0 to 95	40 Units	0.42	---	140 g max.
		4 inputs (4 to 20 mA, 1 to 5 V, etc.)	CJ1W-AD042	10 words	100 words	0 to 95	40 Units	0.52	---	150 g max.
	Analog Output Units	4 outputs (1 to 5 V, 4 to 20 mA, etc.)	CJ1W-DA041	10 words	100 words	0 to 95	40 Units	0.12	---	150 g max.
		2 outputs (1 to 5 V, 4 to 20 mA, etc.)	CJ1W-DA021	10 words	100 words	0 to 95	40 Units	0.12	---	150 g max.
		8 outputs (1 to 5 V, 0 to 10 V, etc.)	CJ1W-DA08V	10 words	100 words	0 to 95	40 Units	0.14	---	150 g max.
		8 outputs (4 to 20 mA)	CJ1W-DA08C	10 words	100 words	0 to 95	40 Units	0.14	---	150 g max.
		4 outputs (1 to 5 V, 0 to 10 V, etc.)	CJ1W-DA042V	10 words	100 words	0 to 95	40 Units	0.40	---	150 g max.
	Analog I/O Unit	4 inputs (1 to 5 V, 4 to 20 mA, etc.) 2 outputs (1 to 5 V, 4 to 20 mA, etc.)	CJ1W-MAD42	10 words	100 words	0 to 95	40 Units	0.58	---	150 g max.
	Isolated-type High-resolution Universal Input Unit	4 inputs, fully universal Resolution: 1/256,000, 1/64,000, 1/16,000	CJ1W-PH41U	10 words	100 words	0 to 95	40 Units	0.30	---	150 g max.
	Isolated-type Thermocouple Input Units	4 thermocouple inputs	CJ1W-PTS51	10 words	100 words	0 to 95	40 Units	0.25	---	150 g max.
		2 thermocouple inputs	CJ1W-PTS15	10 words	100 words	0 to 95	40 Units	0.18	---	150 g max.
	Isolated-type Resistance Thermometer Input Units	4 resistance thermometer inputs	CJ1W-PTS52	10 words	100 words	0 to 95	40 Units	0.25	---	150 g max.
		2 resistance thermometer inputs	CJ1W-PTS16	10 words	100 words	0 to 95	40 Units	0.18	---	150 g max.
	Direct Current Input Unit	DC voltage or DC current, 2 inputs	CJ1W-PDC15	10 words	100 words	0 to 95	40 Units	0.18	---	150 g max.
	Temperature Control Units	4 control loops, thermocouple inputs, NPN outputs	CJ1W-TC001	20 words	200 words	0 to 94 (uses words for 2 unit numbers)	40 Units	0.25	---	150 g max.
		4 control loops, thermocouple inputs, PNP outputs	CJ1W-TC002	20 words	200 words	0 to 94 (uses words for 2 unit numbers)	40 Units	0.25	---	150 g max.
		2 control loops, thermocouple inputs, NPN outputs, heater burnout detection	CJ1W-TC003	20 words	200 words	0 to 94 (uses words for 2 unit numbers)	40 Units	0.25	---	150 g max.
		2 control loops, thermocouple inputs, PNP outputs, heater burnout detection	CJ1W-TC004	20 words	200 words	0 to 94 (uses words for 2 unit numbers)	40 Units	0.25	---	150 g max.
		4 control loops, temperature- resistance thermometer inputs, NPN outputs	CJ1W-TC101	20 words	200 words	0 to 94 (uses words for 2 unit numbers)	40 Units	0.25	---	150 g max.
		4 control loops, temperature- resistance thermometer inputs, PNP outputs	CJ1W-TC102	20 words	200 words	0 to 94 (uses words for 2 unit numbers)	40 Units	0.25	---	150 g max.
		2 control loops, temperature-resistance thermometer inputs, NPN outputs, heater burnout detection	CJ1W-TC103	20 words	200 words	0 to 94 (uses words for 2 unit numbers)	40 Units	0.25	---	150 g max.
		2 control loops, temperature-resistance thermometer inputs, PNP outputs, heater burnout detection	CJ1W-TC104	20 words	200 words	0 to 94 (uses words for 2 unit numbers)	40 Units	0.25	---	150 g max.

Note: Including models whose production are discontinued.

Type	Name	Specifications	Model	Number of words allocated (CIO 2000 to CIO 2959)	Number of words allocated (D20000 to D29599)	Unit No.	Number of mountable Units	Current consumption (A)		Weight
								5 VDC	24 VDC	
Special I/O Units	Position Control Units	1 axis, pulse output; open collector output	CJ1W-NC113	10 words	100 words	0 to 95	40 Units	0.25	---	100 g max.
		2 axes, pulse outputs; open collector outputs	CJ1W-NC213	10 words	100 words	0 to 95	40 Units	0.25	---	100 g max.
			CJ1W-NC214 ✻1, ✻2	18 words ✻3	None	0 to 94 (uses words for 2 unit numbers)	5 Units/ Rack	0.27	---	170 g max.
		4 axes, pulse outputs; open collector outputs	CJ1W-NC413	20 words	200 words	0 to 94 (uses words for 2 unit numbers)	40 Units	0.36	---	150 g max.
			CJ1W-NC414 ✻1, ✻2	18 words ✻3	None	0 to 94 (uses words for 2 unit numbers)	5 Units/ Rack	0.31	---	220 g max.
		1 axis, pulse output; line driver output	CJ1W-NC133	10 words	100 words	0 to 95	40 Units	0.25	---	100 g max.
		2 axes, pulse outputs; line driver outputs	CJ1W-NC233	10 words	100 words	0 to 95	40 Units	0.25	---	100 g max.
			CJ1W-NC234 ✻1, ✻2	18 words ✻3	None	0 to 94 (uses words for 2 unit numbers)	5 Units/ Rack	0.27	---	170 g max.
		4 axes, pulse outputs; line driver outputs	CJ1W-NC433	20 words	200 words	0 to 94 (uses words for 2 unit numbers)	40 Units	0.36	---	150 g max.
			CJ1W-NC434 ✻1, ✻2	18 words ✻3	None	0 to 94 (uses words for 2 unit numbers)	5 Units/ Rack	0.31	---	220 g max.
		Space Unit ✻4	CJ1W-SP001	None	None	---	---	---	---	50 g max.
	ID Sensor Units	V600-series single-head type	CJ1W-V600C11	10 words	100 words	0 to 95	40 Units	0.26	0.12	120 g max.
		V600-series two-head type	CJ1W-V600C12	20 words	200 words	0 to 94 (uses words for 2 unit numbers)	40 Units	0.32	0.24	130 g max.
		V680-series single-head type	CJ1W-V680C11	10 words	100 words	0 to 95	40 Units	0.26	0.13	120 g max.
		V680-series two-head type	CJ1W-V680C12	20 words	200 words	0 to 94 (uses words for 2 unit numbers)	40 Units	0.32	0.26	130 g max.
	High-speed Counter Unit	Number of counter channels: 2, Maximum input frequency: 500 kHz, line driver compatible ✻5	CJ1W-CT021 ✻7	40 words	400 words	0 to 92 (uses words for 4 unit numbers)	24 Units	0.28	---	100 g max.
	CompoBus/S Master Units	CompoBus/S remote I/O, 256 bits max.	CJ1W-SRM21	10 words or 20 words	None	0 to 95 or 0 to 94	40 Units	0.15	---	66 g max. ✻6

✻1. With a CJ2 CPU Unit, up to 10 Configuration Units can be connected in the CPU Rack and in each Expansion Rack. The CJ1W-NC□□4, however, must be counted as two Units. Configure the Units to satisfy the following formula.
Number of CJ1W-NC□□4 Units × 2 + Number of other Units ≤ 10
For example, if five CJ1W-NC□□4 Units are connected to one Rack, no other Units can be connected.

✻2. The Units must be mounted on the CPU Rack to use synchronous unit operation.

✻3. In addition to the words allocated in the Special I/O Unit Area, up to 144 words are allocated according to the number of axes and functions uses. Word allocations are set using the CX-Programmer.

✻4. The Space Unit is for Position Control Units.

✻5. If interrupts to the CPU Unit are used, mount the Interrupt Input Unit in one of the following slots on the CPU Rack.
- CJ2H-CPU6□-EIP: Slots 0 to 3
- CJ2H-CPU6□ or CJ2M-CPU□□: Slots 0 to 4

✻6. Includes the weight of accessory connectors.

✻7. Use Lot No. 030121 or later (Unit Version 1.06) of CJ1W-CT021 when using with CJ2 CPU Units.

Type	Name	Specifications	Model	Number of words allocated (CIO 2000 to CIO 2959)	Number of words allocated (D20000 to D29599)	Unit No.	Number of mountable Units	Current consumption (A)		Weight
								5 VDC	24 VDC	
Special I/O Units	CompoNet Master Unit	CompoNet remote I/O Communications mode No. 0: 128 inputs/ 128 outputs for Word Slaves	CJ1W-CRM21	20 words	None	0 to 94 (uses words for 2 unit numbers)	40 Units	0.40	---	130 g max.
		Communications mode No. 1: 256 inputs/ 256 outputs for Word Slaves		40 words	None	0 to 92 (uses words for 4 unit numbers)	24 Units	0.40	---	
		Communications mode No. 2: 512 inputs/ 512 outputs for Word Slaves		80 words	None	0 to 88 (uses words for 8 unit numbers)	12 Units	0.40	---	
		Communications mode No. 3: 256 inputs/ 256 outputs for Word Slaves and 128 inputs/ 128 outputs for Bit Slaves		80 words	None	0 to 88 (uses words for 8 unit numbers)	12 Units	0.40	---	
		Communications mode No. 8: 1,024 inputs/ 1,024 outputs for Word Slaves and 256 inputs/ 256 outputs for Bit Slaves maximum		10 words	Depends on setting	0 to 95 uses words for 1 unit number)	40 Units	0.40	---	

CJ-series CPU Bus Units

Type	Name	Specifications	Model	Number of words allocated (CIO 1500 to CIO 1899)	Unit No.	Maximum number of Units ✻1	Current consumption (A)		Weight
							5 VDC	24 VDC	
CPU Bus Units ✻1	High-speed Analog Input Unit	4 inputs: 80 μs/2 inputs, 160 μs/4 inputs	CJ1W-ADG41 ✻2	25 words	0 to F	16 Units ✻3	0.65	---	150 g max.
	Controller Link Units	Wired data links	CJ1W-CLK23	25 words	0 to F	8 Units	0.35	---	110 g max.
	Serial Communications Units	One RS-232C port and one RS-422A/485 port	CJ1W-SCU41-V1	25 words	0 to F	16 Units ✻3	0.38 ✻4	---	110 g max.
		Two RS-232C ports	CJ1W-SCU21-V1				0.28 ✻4		
		Two RS-422A/485 ports	CJ1W-SCU31-V1				0.38		
		Two RS-232C ports High-speed models	CJ1W-SCU22			16 Units ✻3	0.28 ✻4		160 g max.
		Two RS-422A/485 ports High-speed models	CJ1W-SCU32				0.4		120 g max.
		One RS-232C port and one RS-422A/485 port High-speed models	CJ1W-SCU42				0.36 ✻4		140 g max.
	Ethernet Units	100Base-TX, FINS communications, socket service, FTP server, and mail communications	CJ1W-ETN21	25 words	0 to F	4 Units	0.37	---	100 g max.
	EtherNet/IP Unit	Tag data links, FINS communications, CIP message communications, FTP server, etc.	CJ1W-EIP21	25 words	0 to F	✻5	0.41	---	94 g max.
	FL-net Unit	100Base-TX cyclic transmissions and message transmissions	CJ1W-FLN22	25 words	0 to F	4 Units	0.37	---	100 g max.
	DeviceNet Unit	DeviceNet remote I/O, 2,048 points; Both Master and Slave functions, Automatic allocation possible without Configurator	CJ1W-DRM21	25 words ✻6	0 to F	16 Units ✻3	0.29	---	118 g max. ✻7
	Position Control Units with EtherCAT interface ✻8	2 servo axes	CJ1W-NC281	25 words	0 to F	16 Units ✻3	0.46	---	110 g max.
		4 servo axes	CJ1W-NC481						
		8 servo axes	CJ1W-NC881						
		16 servo axes	CJ1W-NCF81						
		4 servo axes and 64 I/O slaves	CJ1W-NC482						
		8 servo axes and 64 I/O slaves	CJ1W-NC882						
		16 servo axes and 64 I/O slaves	CJ1W-NCF82						
	EtherCAT Slave Unit	EtherCAT REMORT I/O DATA Input: 400 bytes Output: 400 bytes	CJ1W-ECT21	25 words	0 to F	16 Units	0.34	---	97g max.
	Position Control Units supporting MECHATROLINK-II communications	MECHATROLINK-II, 16 axes max.	CJ1W-NCF71(-MA)	25 words	0 to F	16 Units ✻3	0.36	---	95 g max.
	Motion Control Units supporting MECHATROLINK-II communications	MECHATROLINK-II, Real axes: 30 max., Virtual axes: 2 max., Special motion control language	CJ1W-MCH71	25 words	0 to F	3 Units/ Rack ✻9	0.60	---	210 g max.
	SPU Unit (High-speed Storage and Processing Unit)	One CF card type I/II slot (used with OMRON HMC-EF□□□ Memory Card), one Ethernet port	CJ1W-SPU01-V2 ✻10	Not used.	0 to F	16 Units ✻3	0.56	---	180 g max.

Note: Including models whose production are discontinued.

✻1. Some CJ-series CPU Bus Units are allocated words in the CPU Bus Unit Setup Area. The system must be designed so that the number of words allocated in the CPU Bus Unit Setup Area does not exceed its capacity. Refer to *4-6-2 CPU Bus Unit Setup Area in CJ2 CPU Unit Software User's Manual* (Cat. No. W473). There may also be limits due to the capacity of the Power Supply Unit that you are using or the maximum number of Units to which memory can be allocated in the CPU But Unit Setup Area.

✻2. If interrupts to the CPU Unit are used, mount the Interrupt Input Unit in one of the following slots on the CPU Rack.
- CJ2H-CPU6□-EIP: Slots 0 to 3
- CJ2H-CPU6□ or CJ2M-CPU□□: Slots 0 to 4

✻3. Up to 15 Units can be connected for a CJ2H-CPU6□-EIP or CJ2M-CPU3□ CPU Unit.

✻4. Increases by 0.15 A/Unit when an NT-AL001 RS-232C/RS-422A Link Adapter is used. Increases by 0.04 A/Unit when a CJ1W-CIF11 RS-422A Converter is used. Increases by 0.20 A/Unit when an NV3W-M□20L Programmable Terminal is used.

✻5. Up to seven Units can be connected for a CJ2H-CPU6□-EIP CPU Unit, up to eight Units can be connected for a CJ2H-CPU6□ CPU Unit, and up to two Units can be connected for a CJ2M CPU Unit.

✻6. Slave I/O are allocated in DeviceNet Area (CIO 3200 to CIO 3799).

✻7. Includes the weight of accessory connectors.

✻8. Only G5-series Servo Drives with Built-in EtherCAT can be connected.

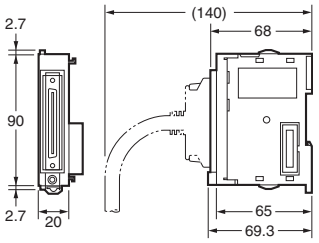
✻9. When mounting to a CJ-series CPU Rack or a CJ-series Expansion Rack, one of these Units uses the space of three Units.

✻10. Use version 2 or higher of the SPU Unit with a CJ2 CPU Unit.

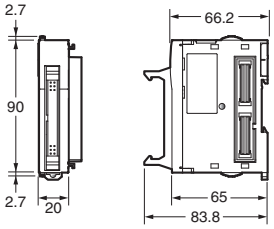
● Units of Width 20 mm

Unit/product	Model	Width
I/O Control Unit	CJ1W-IC101	20
Pulse I/O Modules	CJ2M-MD211/212	
32-point Basic I/O Units	CJ1W-ID231/232/233	
	CJ1W-OD231/232/233/234	
B7A Interface Unit	CJ1W-B7A22 CJ1W-B7A14 CJ1W-B7A04	
CompoBus/S Master Unit	CJ1W-SRM21	
Space Unit	CJ1W-SP001	

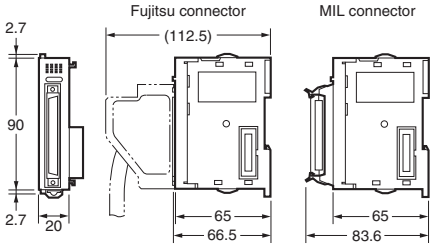
● I/O Control Unit



● Pulse I/O Modules (Only CJ2M CPU Unit)



● 32-Point I/O Units (CJ1W-ID223□/OD23□)

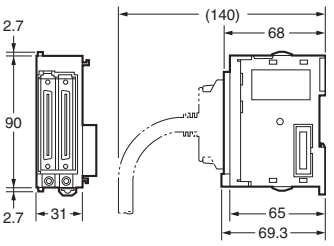


● Units of Width 31 mm

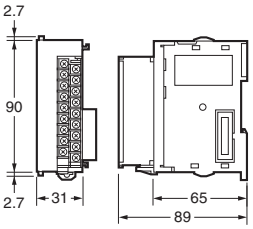
Unit	Model	Width
I/O Interface Unit	CJ1W-II101	31
8/16-point Basic I/O Units	CJ1W-ID201 CJ1W-ID211/212 CJ1W-IA111/201 CJ1W-OD20□ CJ1W-OD211/212/213 CJ1W-OC201/211 CJ1W-OA201	
32-point Basic I/O Units	CJ1W-MD231 CJ1W-MD232/233	
64-point Basic I/O Units	CJ1W-ID261 CJ1W-OD261 CJ1W-MD261	
	CJ1W-ID262 CJ1W-OD262/263 CJ1W-MD263 CJ1W-MD563	
Interrupt Input Unit	CJ1W-INT01	
Quick-response Input Unit	CJ1W-IDP01	
Analog I/O Units	CJ1W-AD□□□ (-V1) CJ1W-DA□□□ (□) CJ1W-MAD42	
Process Input Units	CJ1W-PH41U CJ1W-AD04U CJ1W-PTS51/52/15/16 CJ1W-PDC15	
Temperature Control Units	CJ1W-TC□□□	
Position Control Units	CJ1W-NC113/133 CJ1W-NC213/233 CJ1W-NC413/433	
Position Control Unit with EtherCAT interface	CJ1W-NC281 CJ1W-NC481 CJ1W-NC881 CJ1W-NCF81 CJ1W-NC482 CJ1W-NC882 CJ1W-NCF82	
EtherCAT Slave Unit	CJ1W-ECT21	
Position Control Unit with MECHATROLINK-II interface	CJ1W-NCF71	
High-speed Counter Unit	CJ1W-CT021	
ID Sensor Units	CJ1W-V680C11 CJ1W-V680C12 CJ1W-V600C11 CJ1W-V600C12	

Unit	Model	Width
Controller Link Units	CJ1W-CLK23	
Serial Communications Units	CJ1W-SCU22 CJ1W-SCU32 CJ1W-SCU42 CJ1W-SCU41-V1 CJ1W-SCU21-V1 CJ1W-SCU31-V1	
EtherNet/IP Unit	CJ1W-EIP21	31
Ethernet Unit	CJ1W-ETN21	
DeviceNet Unit	CJ1W-DRM21	
CompoNet Master Unit	CJ1W-CRM21	
FL-net Unit	CJ1W-FLN22	

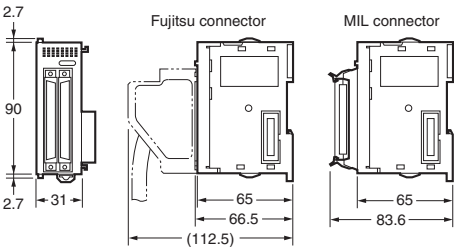
● I/O Interface Unit



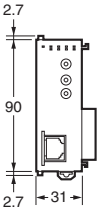
● 8/6-point Basic I/O Units, Interrupt Input Unit, and High-speed Input Unit



● 64-point Basic I/O Units and 32-point Basic I/O Units (CJ1W-MD23□)



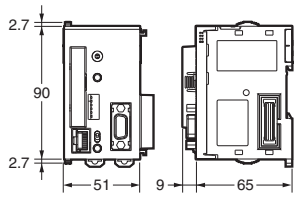
● Special I/O Units and CPU Bus Units



● Units of Width 51 mm

Unit	Model	Width
SPU Unit (High-speed Data Storage Unit)	CJ1W-SPU01-V2	51
Position Control Units (High-speed type)	CJ1W-NC214/234	

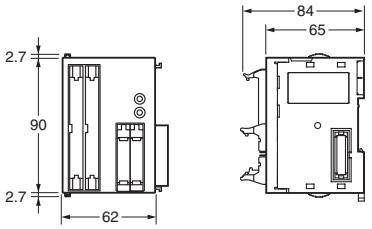
● SPU Unit (High-speed Data Storage Unit)
CJ1W-SPU01-V2



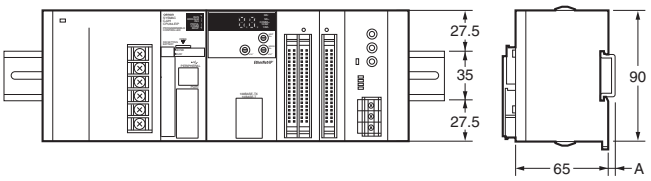
● Unit of Width 62 mm

Unit	Model	Width
Position Control Units (High-speed type)	CJ1W-NC414/434	62

● Position Contorol Unit (High-speed model)
CJ1W-NC414/434



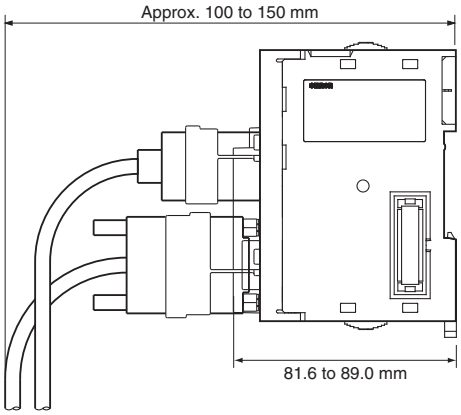
■ Mounting Dimensions



DIN Track model number	A
PFP-100N2	16 mm
PFP-100N	7.3 mm
FPP-50N	7.3 mm

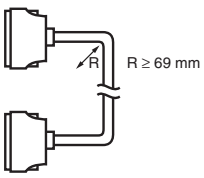
■ Mounting Height

The mounting height of CJ-series CPU Racks and Expansion Racks is from 81.6 to 89.0 mm depending on the Units that are mounted.
Additional height is required to connect Programming Devices (e.g., CX-Programmer) and Cables. Be sure to allow sufficient mounting height.



Note: Consider the following points when expanding the configuration:
The total length of I/O Connecting Cable must not exceed 12 m.
I/O Connecting Cables require the bending radius indicated below.

● Expansion Cable



Note: Outer diameter of cable: 8.6 mm.