Programmable Controller CS1

Replace Guide
From CS1G/H to CJ2

CJ2H-CPU6□
CJ2M-CPU1□
CS1H-CPU6□H
CS1G-CPU4□H

P164-E1-01

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Related Manuals

Manual No.	Manual
W339	CS-series Programmable Controllers Operation Manual
W394	CS-series Programmable Controllers Programming Manual
W472	CJ-series CJ2 CPU Unit Hardware User's Manual
W473	CJ-series CJ2 CPU Software User's Manual
W474	CS/CJ/NSJ-series Instructions Reference Manual
W446	CX-Programmer Operation Manual
W447	CX-Programmer Operation Manual Function Blocks / Structured Text
W366	CS/CJ/CP/NSJ-series CX-Simulator Operation Manual

Replacement Guide

From CS1G/H to CJ2

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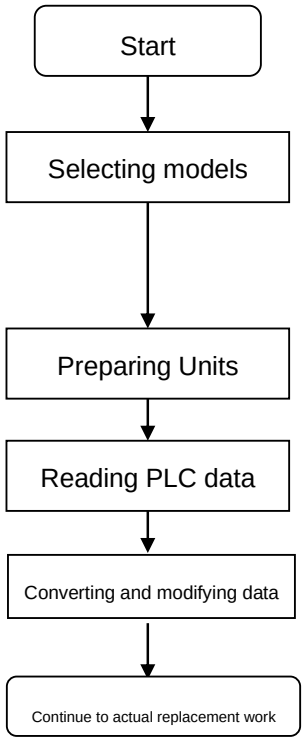
Follow the below work flow to replace the Sysmac CS1 Series (CS1G/H) with the CJ2 Series.

Refer to the reference pages for details.

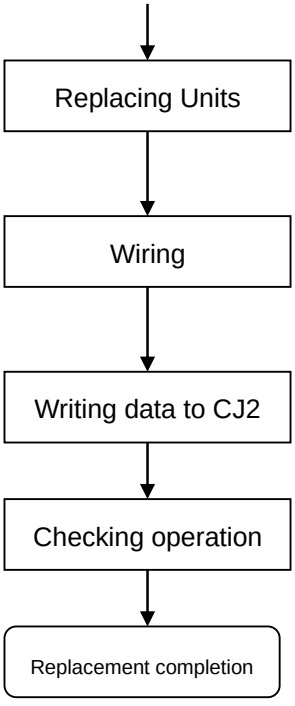
1. Work Flow

1) Preliminary steps: Take the following steps before starting the replacement work.



	Description	Reference pages
Selecting models	Select the Units, Programming Devices, and connecting cables to replace CS1 Series (CS1G/H) with CJ2 Series. Read the recommended models and remarks in the reference pages and select the models.	*3. Selecting Models*
Preparing Units	Prepare the Units, Programming Devices, and connecting cables.	
Reading PLC data	Load the program, I/O Memory and other settings from CS1 Series (CS1G/H) with the necessary Programming Device and connecting cable.	*4. Reading Data from CS Series*
Converting and modifying data	Convert the data read from CS1 Series (CS1G/H) for CJ2 Series. Most of the data can be automatically converted. However, some instructions and some Unit data cannot be converted.	*5. Converting and Modifying the Program for CJ Series*
Continue to actual replacement work	Refer to the details in *5. Converting and Modifying the Program for CJ Series* and modify the data and program separately.	

2) Actual replacement work: Take the following steps to replace the CS1 Series (CS1G/H) with the CJ2 Series.



	Description	Reference pages
Replacing Units	Install the prepared Units instead of CS1-series Units. *Refer to the *CJ-series CJ2 CPU Unit Hardware User's Manual* (Cat. No. W472) and user's manuals for Special I/O Units and CPU Bus Units for details of installation.	Related manuals
Wiring	Wiring for the installed Units. *Refer to the *CJ-series CJ2 CPU Unit Hardware User's Manual* (Cat. No. W472) and user's manuals for Special I/O Units and CPU Bus Units for details on wiring.	
Writing data to CJ2	Transfer the converted data to the CJ2 Series. To check the wiring, operate input and output bits to see if they operate correctly.	*6. Writing Data to CJ Series*
Checking operation	Turn ON the power and check the operation.	

1. If the Unit is operated between uploading the program and executing replacement work, data handled by the program may change. If so, upload the data right before the replacement work, modify data if necessary, and download it to the CJ2 Series.
2. The cycle time of CS1 Series (CS1G/H) and CJ2 Series are different, which may affect system operation. If so, it is necessary to adjust cycle time in the PLC Setup.

2. Differences in Main Specifications

The table below describes the differences in main specifications between the CS1 Series and the CJ2 Series.

For details, refer to *Appendix 1. Specification Comparison between CS1 Series and CJ2 Series*.

	CS1 Series	CJ2 Series		Remarks
		CJ2H	CJ2M	
Maximum number of I/O points	5,120 points	2,560 points		
Program capacity	10k to 250k steps	50k to 400k steps	5k to 60k steps 20k for FB program area	
Data memory	32k words	32k words	32k words	
EM	32k words x 13 banks max.	32k words x 25 banks max.	32k words x 4 banks max.	
Programming language	Ladder Logic (LD) Sequential Function Chart (SFC) Structured Text (ST) Instruction List (IL)			
Instructions	Same (about 400 instructions)			
I/O memory	Same			
PLC Setup	Same			
Number of tasks	Cyclic tasks: 32 Interrupt tasks: 256	Cyclic tasks: 128 Interrupt tasks: 256		
Function blocks	Maximum number of definitions: 1,024 Maximum number of instances: 2,048	Maximum number of definitions: 1,024 Maximum number of instances: 2,048		
Instruction execution time	Basic instructions: 20 ns Special instructions: 60 ns	Basic instructions: 16 ns Special instructions: 48 ns	Basic instructions: 40 ns Special instructions: 60 ns	
Overhead processing time	0.3 ms	0.2 ms	0.27 ms	
File memory	Same (Memory Card, EM file memory)			
Trace memory	4,000 words	32,000 words max.	8,000 words	
Inner boards	1 Unit	Not provided		
Maximum number of mountable Units	Basic I/O Units: 80 Special I/O Units: 80 CPU Bus Units: 16	Basic I/O Units: 40 Special I/O Units: 40 CPU Bus Units: 16		
Maximum number of Expansion Racks	7 max.	3 max.		
Maximum total distance of expansion cables	Same (12 m max.)			
Long-distance Expansion Racks	50 m max.	Not provided		
Memory Cards	Same (use HMC-EF□□□)			
Communications commands	Same (FINS commands and host link commands)			
Battery	CS1W-BAT01	CJ1W-BAT01		
Peripheral port	Dedicated peripheral port	USB		
Programming Devices	CX-One (CX-Programmer) Programming Console	CX-One (CX-Programmer)		
Unit connection	Mounting on the backplane	No backplane required (connection with connectors)		
Mounting	Mounting with screws or a DIN Track	Mounting on a DIN Track		

CPU Unit models and specifications

< CS1H-H/CS1G-H CPU Units>

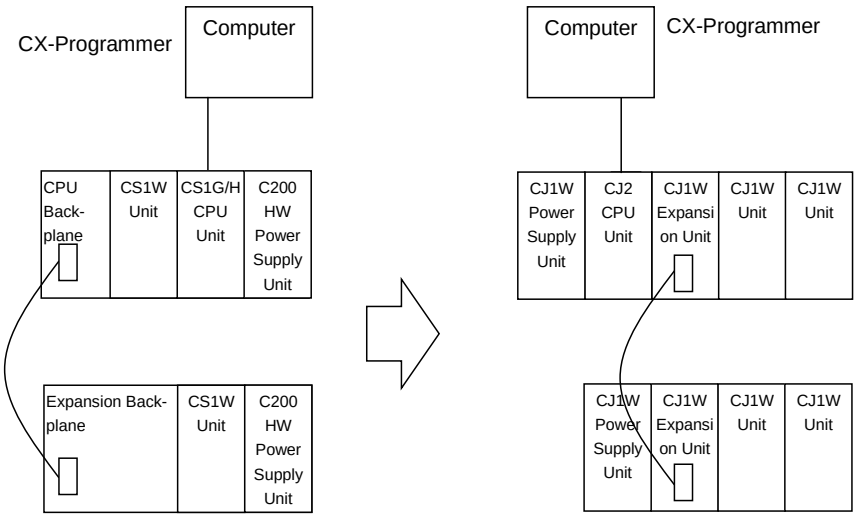
Model	Program capacity	Data memory and EM	Maximum number of mountable Units	Maximum number of I/O points	Instruction execution time LD instruction/MOV instruction	Maximum number of FB instances
CS1H-CPU67H	250k steps	DM + EM x 13 banks	80	5,120 points	20 ns/180 ns	2,048
CS1H-CPU66H	120k steps	DM + EM x 7 banks	80	5,120 points	20 ns/180 ns	2,048
CS1H-CPU65H	60k steps	DM + EM x 3 banks	80	5,120 points	20 ns/180 ns	2,048
CS1H-CPU64H	30k steps	DM + EM x 1 bank	80	5,120 points	20 ns/180 ns	2,048
CS1H-CPU63H	20k steps	DM + EM x 1 bank	80	5,120 points	20 ns/180 ns	256
CS1G-CPU45H	60k steps	DM + EM x 3 banks	80	5,120 points	40 ns/200 ns	2,048
CS1G-CPU44H	30k steps	DM + EM x 1 bank	80	1,280 points	40 ns/200 ns	2,048
CS1G-CPU43H	20k steps	DM + EM x 1 bank	80	960 points	40 ns/200 ns	256
CS1G-CPU42H	10k steps	DM + EM x 1 bank	80	960 points	40 ns/200 ns	256

<CJ2H/CJ2M CPU Units>

Model	Program capacity	Data memory and EM	Maximum number of mountable Units	Maximum number of I/O points	Instruction execution time LD instruction/MOV instruction	Maximum number of FB instances
CJ2H-CPU68	400k steps	DM + EM x 25 banks	40	2,560 points	16 ns/50 ns	2,048
CJ2H-CPU67	250k steps	DM + EM x 15 banks	40	2,560 points	16 ns/50 ns	2,048
CJ2H-CPU66	150k steps	DM + EM x 10 banks	40	2,560 points	16 ns/50 ns	2,048
CJ2H-CPU65	100k steps	DM + EM x 4 banks	40	2,560 points	16 ns/50 ns	2,048
CJ2H-CPU64	50k steps	DM + EM x 4 banks	40	2,560 points	16 ns/50 ns	256
CJ2M-CPU15	60k steps	DM + EM x 4 banks	40	2,560 points	40 ns/120 ns	2,048
CJ2M-CPU14	30k steps	DM + EM x 1 bank	40	2,560 points	40 ns/120 ns	2,048
CJ2M-CPU13	20k steps	DM + EM x 1 bank	40	2,560 points	40 ns/120 ns	256
CJ2M-CPU12	10k steps	DM + EM x 1 bank	40	2,560 points	40 ns/120 ns	256
CJ2M-CPU11	5k steps	DM + EM x 1 bank	40	2,560 points	40 ns/120 ns	256

3. Selecting Models

Outline of the system configuration



The table below shows the corresponding models between the CS Series and the CJ Series for each Unit.

Select a CJ-series Unit with the same or similar specifications as the CS-series Unit you are using.

Refer to the following manuals for details on each model.

CJ2 Series: CJ-series CJ2 CPU Unit Hardware User's Manual (Cat. No. W472)

CS1 Series: CS-series CS1G/H-CPU□□ Programmable Controllers Operation Manual (Cat. No. W339)

<CPU Racks>

Unit name	CS1 Series	CJ2 Series	Remarks
CPU Units (*)	[CS1G] CS1G-CPU42H CS1G-CPU43H CS1G-CPU44H CS1G-CPU45H [CS1H] CS1H-CPU63H CS1H-CPU64H CS1H-CPU65H CS1H-CPU66H CS1H-CPU67H	[CJ2M] CJ2M-CPU11 CJ2M-CPU12 CJ2M-CPU13 CJ2M-CPU14 CJ2M-CPU15 [CJ2H] CJ2H-CPU64 CJ2H-CPU65 CJ2H-CPU66 CJ2H-CPU67 CJ2H-CPU68	Select an appropriate replacement CPU from the list of CPU Units in Chapter 2.
Backplanes (CPU Backplanes)	CS1W-BC023/BC022 CS1W-BC033/BC032 CS1W-BC053/BC052 CS1W-BC083/BC082 CS1W-BC103/BC102	Not required.	Backplanes are not required for the CJ2 Series.
Expansion Racks (I/O Control Units)	Not required.	CJ1W-IC101	Expansion Racks are required for expansion.
Long-distance Expansion Racks (I/O Control Units)	CS1W-IC102	Not supported.	The CJ2 Series does not support long-distance Expansion Racks.
Memory Cards	HMC-EF□□□	HMC-EF□□□	
Battery	CS1W-BAT01	CJ1W-BAT01	

(*) A built-in serial port has the same function. Refer to the related manuals for details on different specifications. Use a communications board or communications Unit if necessary for applications using the built-in ports.

<I/O Expansion Racks>

Unit name	CS Series	CJ Series	Remarks
Backplanes (Expansion Backplanes)	CS1W-BI033/BI032 CS1W-BI053/BI052 CS1W-BI083/BI082 CS1W-BI103/BI102	Not required.	Backplanes are not required for the CJ2 Series.
Expansion Racks (I/O Interface Units)	Not required.	CJ1W-II101	Expansion Racks are required for expansion.
Expansion cables	CS-series Expansion Connecting Cables CS1W-CN313 (30 cm) CS1W-CN713 (70 cm) CS1W-CN223 (2 m) CS1W-CN323 (3 m) CS1W-CN523 (5 m) CS1W-CN133 (10 m) CS1W-CN133-B2-B2 (12 m) CS-series to C200H-series I/O Connecting Cables CS1W-CN311 (30 cm) CS1W-CN711 (70 cm) CS1W-CN221 (2 m) CS1W-CN321 (3 m) CS1W-CN521 (5 m) CS1W-CN131 (10 m) CS1W-CN131-B2 (12 m)	CS1W-CN313 (30 cm) CS1W-CN713 (70 cm) CS1W-CN223 (2 m) CS1W-CN323 (3 m) CS1W-CN523 (5 m) CS1W-CN133 (10 m) CS1W-CN133-B2 (12 m)	Connect the CPU Rack to an Expansion Rack or connect two Expansion Racks. The CS-series Expansion Connecting Cables are also available for the CJ2 Series.
Long-distance Expansion Racks (I/O Interface Units)	CS1W-II102	Not supported.	The CJ2 Series does not support long-distance Expansion Racks.
Long-distance expansion cables	CV500-CN□□2	Not supported.	The CJ2 Series does not support long-distance expansion cables.

<Power Supply Units>

Unit name	SYSMAC CS Series	CJ Series	Remarks
Power Supply Units (AC Power Supply Units)	C200HW-PA204	CJ1W-PA202	
	C200HW-PA204R C200HW-PA209R	CJ1W-PA205R	With RUN output
	C200HW-PA204C	CJ1W-PA205C	With replacement notification
	C200HW-PA204S	Not supported.	With service power supply
Power Supply Units (DC Power Supply Units)	C200HW-PD024 C200HW-PD025	CJ1W-PD022 CJ1W-PD025	

<Basic I/O Units and CPU Bus Units>

Unit name	SYSMAC CS Series	CJ Series	Remarks
Basic I/O Units	CS1W-I□□□ CS1W-O□□□ CS1W-M□□□	CJ1W-I□□□ CJ1W-O□□□ CJ1W-M□□□	Refer to *Appendix 5. Table of Input/Output Units*.
Special I/O Units CPU Bus Units (Communications Units, Analog I/O Units, Process I/O Units and other Special I/O Units)	CS1W-□□□□	CJ1W-□□□□	Refer to *Appendix 5. Table of Input/Output Units*. Select the required models from the related manuals for various Special Units. There may be no Special Unit with the same function. In that case, consider using another Special Unit as an alternative.
Inner boards	CS1W-□□B	Not supported.	The CJ2 Series does not support inner boards. Consider replacing with a Special I/O Unit or a CPU Bus Unit.

<Support Software and peripheral devices>

Name	SYSMAC CS Series	CJ Series	Remarks
Support Software	CX-One	CX-One	
Programming Device Connecting Cable for peripheral (USB) port	CS1W-CN226/626 (2 m/6 m) CS1W-CIF31 (required for USB connection)	Commercially available USB cable	USB 2.0 (or 1.1) cable (A connector - B connector), 5.0 m max.
Programming Console	C200H-PRO27 (+C200H-CN□□2) CQM1-PRO01	Not supported.	A Programming Console cannot be used with the CJ2 Series. Use the CX-Programmer instead.

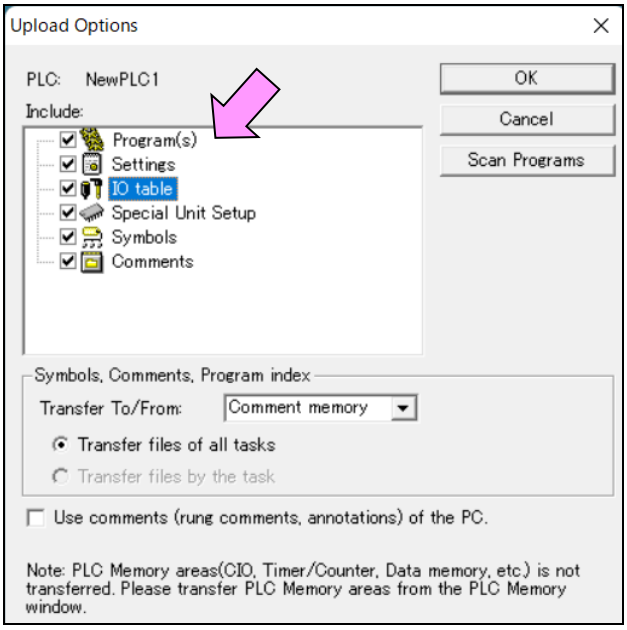
4. Reading Data from CS Series

Use the CX-Programmer to load the ladder program, PLC settings, and PLC memory data from the CS Series.

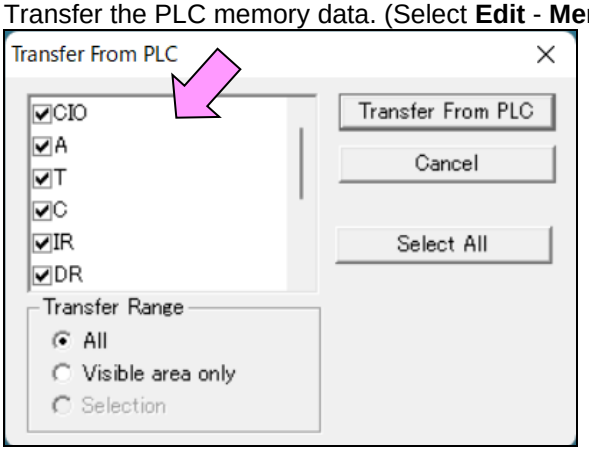
(1) Select **Work Online** from the PLC Menu to go online.

(2) Transfer the ladder program, PLC settings and I/O table. (Select **Transfer** - **From PLC** from the PLC Menu.)

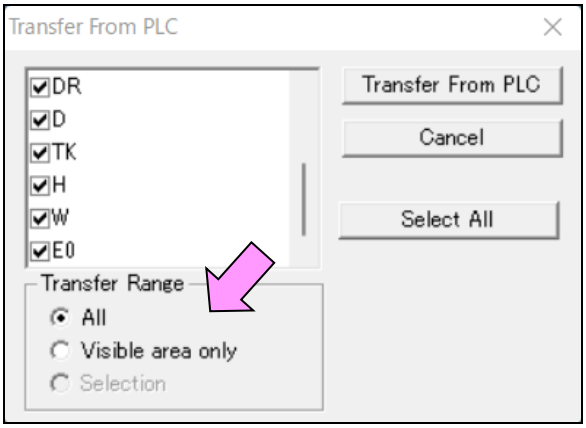
Click the **OK** button to start transfer.



(3) Transfer the PLC memory data. (Select **Edit** - **Memory** from the PLC Menu.)



Scroll and select all areas. Click the **Transfer from PLC** button to start transfer.



(4) Select **Work Online** from the PLC Menu to go offline.

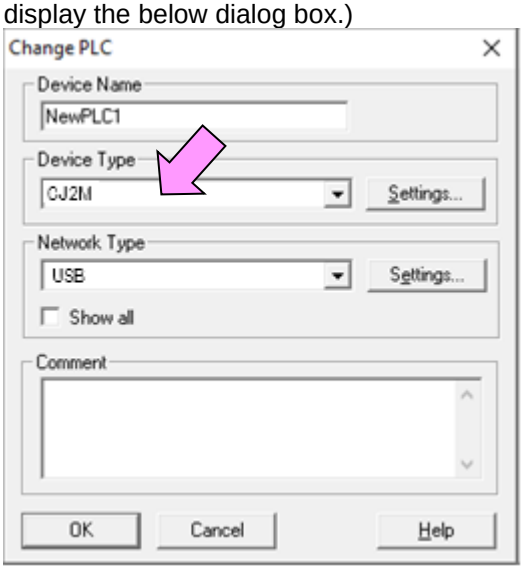
(5) Save the file with a file name. (Select **Save As** from the File Menu.)

5. Converting and Modifying the Program for CJ Series

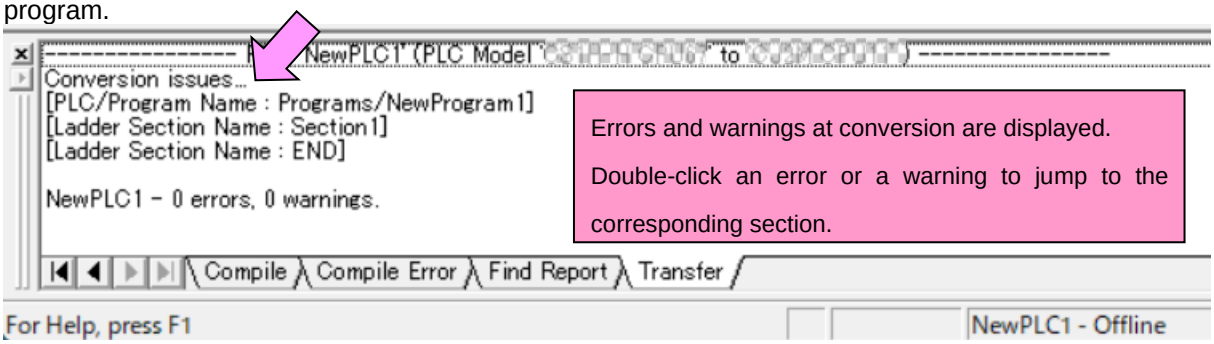
Convert and modify the program for the CJ Series on the CX-Programmer.

(1) Start the CX-Programmer and open the saved program file for the CJ Series. (Select **Open** from the File Menu.)

(2) Change the Device Type from CS Series to CJ2H or CJ2M. (Select **Change Model** from the PLC Menu to display the below dialog box.)



(3) The instructions are automatically converted. The conversion results are displayed in the Output window. Double-click an error displayed in the Output window to jump to the corresponding section of the ladder program.



The following gives the program checks that are performed in the **Compile** tab page.

- ・Data undefined check (Is it established as a normal circuit?)
- ・Instruction existence check (Is it an instruction or operand that exists in the PLC?)
- ・Operand check (Is the operand within the operable range?)
- ・Program capacity check (Is it within the UM capacity of the target PLC model?)
- ・Syntax check (Is the ladder syntax correct?)
- ・Circuit shape check (Is the circuit shape appropriate?)
- ・Duplicated use check (A duplicated use check for an output.)
- ・Task-related check (A check related to the task.)

Some instructions cannot be converted. Refer to *Appendix 2. Differences in Instructions* and the *CS/CJ/NSJ Series Programmable Controllers Instructions Reference Manual* (Cat. No. W474) and modify the ladder program.

You can check the program by selecting **Compile** from the Program Menu. Check results are displayed in the Output window.

(4) The I/O allocation of CS Series (CS1G/H) is partly different from that of CJ Series. Refer to *Appendix 3. Differences in I/O Memory* and modify the ladder program.

(5) The PLC settings of CS Series (CS1G/H) are partly different from those of CJ Series. Also, the PLC settings are initialized when the PLC model is changed. Refer to *Appendix 4. Comparison of PLC Settings* and change the PLC settings.

(6) I/O tables are initialized when the PLC model is changed. The CJ-series I/O tables can be automatically generated and operated based on the mounted Units. I/O tables can also be edited and set when I/O allocation needs to be changed in consideration of its effect on the ladder program.

(7) When replacing a CS-series Unit with a CJ-series Unit, the same unit number can be set to assign the same CIO Area and DM Area for the same Special I/O Unit or CPU Bus Unit.

Some data used by Special I/O Units and CPU Bus Units are set with the Support Software and stored in each Unit. In that case, it is necessary to use the Support Software to read data from the CS-series Unit and transfer it to the CJ-series Unit.

Refer to the manual for the specific Unit for details.

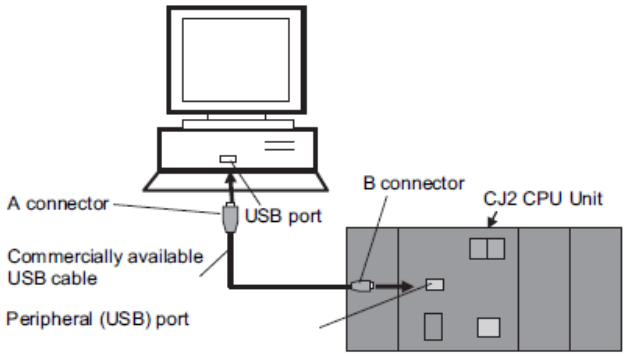
(8) Select **Compile** from the Program Menu to check the program. If an error is detected, correct it.

(9) Save the program with a new project name. (Select **Save As** from the File Menu.)

6. Writing Data to CJ Series

Transfer the converted and modified program, PLC settings, and data memory to the CJ Series.

Required items	Support Software (computer)	CX-One CXONE-AL□□C-V□/AL□□D-V□ (CX-Programmer)
	Connecting cable	Commercially available USB cable USB 2.0 (or 1.1) cable (A connector - B connector), 5.0 m max.



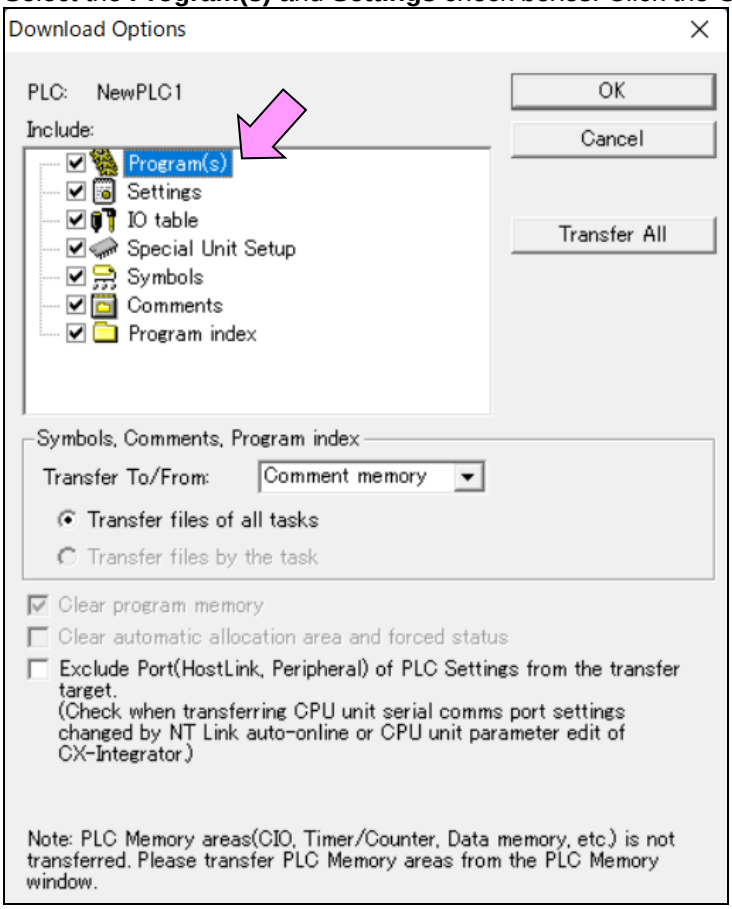
(1) Connect CJ2H/CJ2M with a computer.

(2) Start the CX-Programmer and open the converted and modified program file for the CJ Series.

(3) Connect online with CJ2H/CJ2M.

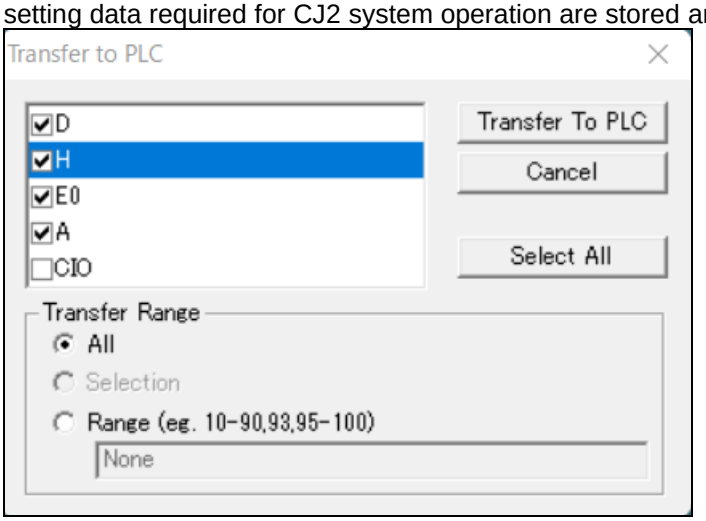
(4) Transfer the ladder program and PLC settings to CJ2H/CJ2M. (Select **Transfer** - **To PLC** from the PLC Menu.)

Select the **Program(s)** and **Settings** check boxes. Click the **OK** button to start transfer.



(5) Select **Edit** - **Memory** from the PLC Menu to display the below dialog box.

Select the PLC memory (Data Memory Area: D, Holding Area: HR, and EM Area) where initial values and setting data required for CJ2 system operation are stored and click the **Transfer to PLC** button to start transfer.



(6) Select **Work Online** from the PLC Menu to go offline.

(7) Test Run

Turn ON the power, perform a Test Run, and check the operation.

Precautions for Correct Use

After the replacement, be sure to check the operational safety by performing a Test Run or other operations before you start the system operation. Incorrect wiring or settings may cause the system to malfunction.

Cycle time may be shortened by changing to the CJ2 Series. When you create a program that depends on the cycle time, check the operation after conversion. Use **Constant Cycle Time** in the PLC settings to make it the same as the CS Series.

Appendix

Appendix 1. Specification Comparison between CS1 Series and CJ2 Series

The table below describes the differences in common specifications between the CS1 Series and the CJ2 Series.

Refer to the related manuals for details.

Items in bold are features that are deprecated from the CS1 Series.

	CS1H-H/CS1G-H CPU Units	CJ2H/CJ2M CPU Units	Remarks
Control method	Stored program		
I/O control method	Cyclic scan and immediate processing are both possible.		
Programming languages	Ladder Logic (LD)/Mnemonic SFC Structured Text (ST) Instruction List (IL)		
CPU processing mode	・Normal Mode ・Parallel Processing Mode with Asynchronous Memory Access ・Parallel Processing Mode with Synchronous Memory Access ・Peripheral Servicing Priority Mode	**Normal Mode only**	The CJ2 Series does not support Parallel Processing Mode.
Instruction length	1 to 7 steps per instruction		
Ladder instructions	Approx. 400		
Instruction execution time (LD instruction)	CS1H-H CPU Units LD: 0.02 μs, MOV: 0.18 μs CS1G-H CPU Units LD: 0.04 μs, MOV: 0.2 μs	CJ2H CPU Units LD: 0.016 μs, MOV: 0.05 μs CJ2M CPU Units LD: 0.04 μs, MOV: 0.12 μs	
Overhead processing time	300 μs	CJ2H-CPU6□: 100 μs CJ2H-CPU6□-EIP: 200 μs CJ2M-CPU3□: 270 μs CJ2M-CPU1□: 160 μs	
Maximum number of Expansion Racks	7 max. (C200H Expansion I/O Racks: 3 max.) Maximum number of mountable Units: 80 max.	**3 max.** **Maximum number of mountable Units: 40 max.**	The maximum number of mountable Units and Expansion Racks is reduced for CJ2.
Number of tasks	288 Cyclic tasks: 32 Interrupt tasks: 256	384 Cyclic tasks: 128 Interrupt tasks: 256	
Interrupt types	Scheduled Interrupts, I/O Interrupts, Power OFF Interrupts, and External I/O Interrupts		
Calling subroutines from more than one task	Applicable (by global subroutines)		
Languages in function block definitions	Ladder programming and structured text		
Constant cycle time	1 to 32,000 ms in 1-ms increments	0.2 to 32,000 ms in 0.1-ms increments	
Cycle time monitoring	10 to 40,000 ms in 10-ms increments	0.01 to 40,000 ms in 0.01-ms increments	
I/O refreshing	Cyclic refreshing Immediate refreshing Refreshing by IORF (097)		
I/O memory holding when changing operating modes	Applicable (depends on the ON/OFF status of the IOM Hold Bit in the Auxiliary Area)		
Load OFF	All outputs on Output Units can be turned OFF when the CPU Unit is operating in RUN mode or MONITOR mode.		
Input response time setting	Time constants can be set for inputs from Basic I/O Units.		
Startup mode setting	RUN mode, MONITOR mode, PROGRAM mode, or Use Programming Console mode	RUN mode, MONITOR mode, or PROGRAM mode	
Flash memory	The user program and parameter area data (e.g., PLC Setup) are always backed up automatically in flash memory.		
Memory Card functions			
Automatically reading programs from the Memory Card when the power is turned	Applicable		

	CS1H-H/CS1G-H CPU Units	CJ2H/CJ2M CPU Units	Remarks
ON.			
Program replacement during PLC operation	Applicable		
Format in which data is stored in Memory Card	User program: Program file format PLC Setup and other parameters: Data file format I/O memory: Data file format (binary format), text format, or CSV format		
Functions for which Memory Card read/write is supported	User program instructions, Programming Devices (including Programming Consoles), host link computers, AR Area control bits, easy backup operation		
Filing	Memory Card data and the EM (Extended Data Memory) Area can be handled as files.		
Debugging	Forced set/reset Differential monitoring Data tracing (scheduled, each cycle, or when instruction is executed) Storing location generating error when a program error occurs		
Online editing	Applicable		
Program protection	Overwrite protection: Set using the DIP switch Read protection: Password set using a Programming Device		
Error check	User-defined errors (i.e., user can define fatal errors and non-fatal errors) The FPD (269) instruction can be used to check the execution time and logic of each programming block.		
Error log	Up to 20 errors are stored in the error log. Information includes the error code, error details, and the time the error occurred.		
Serial communications (CPU Unit built-in serial port)	・**Built-in peripheral port:** **Programming Device (including Programming Console) connections, host links, NT links** ・Built-in RS-232C port: Programming Device connections, host links, non-protocol communications, NT links, Serial Gateway	・**Built-in USB port:** **Programming Device connections** ・Built -in RS-232C port: Programming Device connections, host links, NT link (1:N), non-protocol communications, Serial Gateway	A Programming Console cannot be used with the CJ2 Series.
Clock	Provided.		
Power OFF detection time	AC power supply: 10 to 25 ms DC power supply: 2 to 5 ms	AC power supply: 10 to 25 ms DC power supply: 2 to 20 ms (CJ1W-PD025) 2 to 5 ms (CJ1W-PD022)	
Power OFF detection delay time	0 to 10 ms	0 to 10 ms (Cannot be used with the CJ1W-PD022)	
Memory protection	Held Areas: Holding Area data, DM Area data, EM Area data, Counter Completion Flags, and counter present values.		
Sending commands to a host link computer	FINS commands can be sent to a computer connected via the host link system by executing network communications instructions from the PLC.		
Remote programming and monitoring	Host link communications can be used for remote programming and remote monitoring through a Controller Link, Ethernet, DeviceNet™, or SYSMAC LINK network.		
Communicating across network layers	FINS message communications can be conducted across network layers. Controller Link or Ethernet: 8 layers DeviceNet or SYSMAC LINK: 3 layers		
Storing comments in CPU Unit	I/O comments can be stored as variable table files in the Memory Card, EM file memory, or comment memory.		
Program check	Program checks are performed at the start of operation for items such as no END instruction and instruction errors. CX-Programmer can also be used to check programs.		
Control output signals	RUN output: The internal contacts will turn ON (close) while the CPU Unit is operating.		
Battery life	Battery Set: CS1W-BAT01	Battery Set: CJ1W-BAT01	Maintenance battery model difference exists.
Self-diagnostic function	CPU error (watchdog timer), I/O verification error, I/O bus error, memory error, and battery error.		
Other functions	Storage of number of times power has been interrupted. (Stored in A514.)		

Appendix 2. Differences in Instructions

The table below describes the differences in instructions between the CS1 Series and the CJ2 Series.
Refer to the related manuals for details.

Instruction	Difference	CS1G/H	CJ2H	CJ2M
TST/TSTN	Operation of P_ER	OFF	No change	No change
	Operation of P_EQ	OFF	No change	No change
	Operation of P_N	OFF	No change	No change
IL/ILC	Operation of P_ER	OFF	No change	No change
	Operation of P_EQ	OFF	No change	No change
	Operation of P_N	OFF	No change	No change
Timer/ Counter	PV refresh mode setting	BCD/BIN select one of above	BCD/BIN combined possibly	BCD/BIN combined possibly
TIM/TIMX TIMH/TIMHX TMHH/TMHHX	Operation of P_EQ	OFF	No change	No change
	Operation of P_N	OFF	No change	No change
	Timer accuracy	-0.01 to 0 seconds	When using the synchronous Unit control function Maximum 1 cycle time error	When the internal pulse control period is 1 ms Maximum 1 cycle time error
	When the cycle time is 100 ms	TIM0 to 2047: Normal operation TIM2048 to 4095: Not operating properly	When using the synchronous Unit control function Not operating properly	When the internal pulse control period is 1 ms Not operating properly
	If the instruction was specified in a task that was stopped, or jumped between JMP, CJMP, and CJPN-JME instructions and was not executed	TIM0 to 2047: Normal operation TIM2048 to 4095: Not operating properly	When using the synchronous Unit control function Not operating properly	When the internal pulse control period is 1 ms Not operating properly
CNT/CNTX	Operation of P_EQ	OFF	No change	No change
	Operation of P_N	OFF	No change	No change
=/<>/</<=/>/>=	Operation of P_ER	OFF	No change	No change
	Operation of P_N	OFF	No change	No change
CMP/CMPL CPS/CPSL	Operation of P_ER	OFF	No change	No change
	Operation of P_N	OFF	No change	No change
ZCP/ZCPL	Operation of ≥ (P_GE)	No change	Compare data ≥ Lower limit of range: ON, Others: OFF	Compare data ≥ Lower limit of range: ON, Others: OFF
	Operation of ≠ (P_NE)	No change	Compare data < Lower limit of range or Compare data > Upper limit of range: ON, Others: OFF	Compare data < Lower limit of range or Compare data > Upper limit of rang: ON, Others: OFF
	Operation of ≤ (P_LE)	No change	Compare data ≤ Upper limit of range: ON, Others: OFF	Compare data ≤ Upper limit of range: ON, Others: OFF
XCHG/XCGL	Operation of P_ER	OFF	No change	No change
	Operation of P_EQ	OFF	No change	No change
	Operation of P_N	OFF	No change	No change
MOVR/MOVRW	Operation of P_ER	OFF	No change	No change
	Operation of P_EQ	OFF	No change	No change
	Operation of P_N	OFF	No change	No change
STC/CLC	Operation of P_ER	OFF	No change	No change
	Operation of P_EQ	OFF	No change	No change
	Operation of P_N	OFF	No change	No change

Instruction	Difference	CS1G/H	CJ2H	CJ2M
MSKS/CLI	I/O Interrupts Operand (N)	CS1W-INT01: 0 or 1 C200HS-INT01: 0 to 3	CJ1W-INT01: 0 or 1 *Review required when using multiple C200HS.	CJ1W-INT01: 0 or 1 CJ2M built-in input: 100 to 107 *Review required when using multiple C200HS. *Review required when using CJ2M pulse I/O.
	I/O Interrupts Operand (C)	CS1W-INT01: #0000 to FFFF C200HS-INT01: #0000 to 00FF	CJ1W-INT01: #0000 to FFFF *Review required when using multiple C200HS.	CJ1W-INT01: #0000 to FFFF CJ2M built-in input: Refer to the manual. *Review required when using multiple C200HS. *Review required when using CJ2M pulse I/O.
	Scheduled Interrupts	Applicable	When using the synchronous Unit control function Not applicable	Applicable
MSKR	I/O Interrupts Operand (N)	CS1W-INT01: 0 or 1 C200HS-INT01: 0 to 3	CJ1W-INT01: 0 or 1 *Review required when using multiple C200HS.	CJ1W-INT01: 0 or 1 CJ2M built-in input: 100 to 107 *Review required when using multiple C200HS. *Review required when using CJ2M pulse I/O.
	I/O Interrupts Operand (C)	CS1W-INT01: #0000 to FFFF C200HS-INT01: #0000 to 00FF	CJ1W-INT01: #0000 to FFFF *Review required when using multiple C200HS.	CJ1W-INT01: #0000 to FFFF CJ2M built-in input: Refer to the manual. *Review required when using multiple C200HS. *Review required when using CJ2M pulse I/O.
PMCR STUP SEND/SEND2 RECV/RECV2 CMND/CMND2	Operand	Inner boards can be specified.	Inner boards cannot be specified.	Inner boards cannot be specified.
FAL/FALS	Errors related to inner boards.	Displayed in Error Log.	Displayed as undefined errors.	Displayed as undefined errors.

Appendix 3. Differences in I/O Memory

The table below describes the differences in unit area allocation between the CS1 Series and the CJ2 Series.
Refer to the related manuals for details.

			CS1 Series	CJ2 Series	Remarks
CIO Area	I/O Area		CIO 0 to CIO 319	CIO 0000 to CIO 0159	
		C200H DeviceNet Area	OUT Area: CIO 50 to CIO 99 IN Area: CIO 350 to CIO 399	Not supported.	The CJ2 Series does not support C200H DeviceNet Area.
		PLC Link Area	CIO 247 to CIO 250 A442	Not supported.	
	CLK Data Link Area		CIO 1000 to CIO 1199		
	Synchronous Data Refresh Area		Not supported.	CIO 1200 to CIO 1295	For synchronous control between CJ2H Units
	CPU Bus Unit Area		CIO 1500 to CIO 1899 (25 words × 16 unit numbers)		
	Inner Board Area		CIO 1900 to CIO 1999	Not supported.	The CJ2 Series does not support Inner Board Area.
	Special I/O Unit Area		CIO 2000 to CIO 2959 (10 words × 96 unit numbers)		
	SYSMAC BUS Area		CIO 3000 to CIO 3079	Not supported.	The CJ2 Series does not support SYSMAC BUS Area.
	SYSMAC BUS I/O Terminal Area		CIO 3100 to CIO 3131	Not supported.	The CJ2 Series does not support SYSMAC BUS Area.
	Serial PLC Link Area		Not supported.	CIO 3100 to CIO 3189	For CJ2M serial PLC link
	CS/CJ-series DeviceNet Area		CIO 3200 to CIO 3799		
	Internal I/O Area		Among CIO 0 to CIO 6143, unused area above		
Work Area			W000 to W511		
Holding Area			H000 to H511		
Auxiliary Area		Read-only Area	A000 to A447	A000 to A447 A10000 to A11535	
		Read/Write Area	A448 to A959	A448 to A959 A960 to A1471	
TR Area			TR0 to TR15		
DM Area			D00000 to D32767		
	DM Area for Special I/O Unit		D20000 to D29599 (100 words x 96 unit numbers)		
	DM Area for CPU Bus Unit		D30000 to D31599 (100 words x 16 unit numbers)		
EM Area			E0_0 to EC_32767	(E00_0 to E18_32767)	
Timer Area			T0 to T4095		
Counter Area			C0 to C4095		
Task Flags			TK0 to TK31	TK0 to TK127	
Index Registers			IR0 to IR15		
Data Registers			DR0 to DR15		

Auxiliary Area

The table below describes the differences in Auxiliary Area between the CS1 Series and the CJ2 Series.
However, the differences in Auxiliary Area due to the changes in the specifications below are not described.
Refer to the related manuals for details.

- ・Functions that are added in CJ2
- ・Functions related to inner boards, peripheral ports, SYSMAC BUS, and PLC Link Units that are not supported by CJ2
- ・Differences in the number of Expansion Racks and the number of mounted Units

■Read-only Area: A000 to A447

Name	CS1 Series	CJ2 Series	Remarks
Timer/Counter PV Refresh Mode Flag	A099 A09915	---	The CJ2 Series does not support this function. Only one of BIN/BCD can be used for CS1 Series. Make the setting in the PLC Properties.
Peripheral Servicing Cycle Time	A268	---	The CJ2 Series does not support this function. The CJ2 Series does not have the Parallel Processing Mode.
Production Lot Number Information	A310 to 311 (binary digits) Example: Lot No.150701 A310 = 0701 A311 = 0015	A10000 to A10003 (BCD) Example: Lot No.150701 A10000 = 0000 A10001 = 0100 A10002 = 1507 A10003 = 0000	Differences exist. Words changing Different display method
Simple Backup Write Capacity	A397	---	The CJ2 Series does not support this function.
I/O Verification Error Flag (Non-fatal error)	A402 A40209	---	The CJ2 Series does not support this function. Because there are no base or no open slots.
Memory Card Startup Transfer Error Flag	A403 A40309	A401 A401.03 (Card Transfer Error Flag)	Specification changed.
Flash Memory Error Flag	A403 A40310	A315 A315.15 (Backup Memory Error Flag)	Specification changed.
Peripheral Servicing Too Long Flag	A405 A40515	---	The CJ2 Series does not support this function. Only CS1 Series has the Parallel Processing Mode.
PLC Setup Error Location	A406	---	The CJ2 Series does not support this function. Occurs only when using a Programming Console.
Interrupt Task Error, Task Number	A426 A42600 to A42611	A426 A426.00 to A426.11 (Duplicate Refresh Error Unit Number)	Name changed.
Interrupt Task Error Cause Flag	A426 A42615	A426 A426.15 (Duplicate Refresh Error Cause Flag)	Name changed.

■Read/Write Area: A448 to A959

No change.

EM Area

CS1 Series	CJ2 Series	Remarks
E0_00000 to EC_32767 32,768 words per bank 13 banks max. (0 to C hex)	E00_0 to E18_32767 32,768 words per bank 25 banks max. (0 to 18 hex)	12 banks added for the CJ2 Series. The current bank is available.
	Banks D to 18 of the EM Area (E0D_0 to E18_32767) were added to EM Area in CJ2 CPU Units. These banks cannot be accessed by CPU Bus Units, Special I/O Units, HMIs, and Support Software that do not specifically support the CJ2 CPU Units. Only the following CPU Bus Units and Special I/O Units specifically support the CJ2 CPU Units. • EtherNet/IP™ Units CJ1W-EIP21 and CJ1W-EIP21S • Position Control Units CJ1W-NC214, CJ1W-NC234, CJ1W-NC281, CJ1W-NC414, CJ1W-NC434, CJ1W-NC481, and CJ1W-NC881 • Analog Input Unit CJ1W-AD042 • Analog Output Unit CJ1W-DA042V •Serial Communications Units CJ1W-SCU22, CJ1W-SCU32, and CJ1W-SCU42	There is a restriction on Units for which additional banks can be used.

Appendix 4. Comparison of PLC Setup Settings

The table below describes the differences in PLC settings between the CS1 Series and the CJ2 Series.
Refer to the related manuals for details.

The following table gives the default settings in the PLC Setup.
To change the settings, edit the PLC Setup with the CX-Programmer and then transfer the PLC Setup to the CPU Unit.

PLC Setup tab page	Setting items		Applicable models			Default	Remarks
			CS1	CJ2H	CJ2M		
Startup	Startup Hold Settings	Forced Status Hold Bit	Yes	Yes	Yes	Not retained when power is turned ON.	
		IOM Hold Bit	Yes	Yes	Yes	Not retained when power is turned ON.	
	Operating Mode		Yes	Yes	Yes	CS1: Programming Console CJ2: RUN mode	
	Execution Setting	Start running program before initializing Unit/Inner board recognition	Yes	Yes	Yes	Do not start.	
CPU Unit Settings	Execute Process Settings	Do not detect Low Battery	Yes	Yes	Yes	Detect. (A402.04)	
		CS1: Detect Interrupt Task Error CJ2: Detect Duplicated Refreshing Error	Yes	Yes	Yes	Detect. (A402.13)	
		Stop CPU on Instruction Error	Yes	Yes	Yes	Do not stop. (A295.08)	
		FAL Error Log Registration	Yes	Yes	Yes	Register to error log.	
	Background Execution Settings		Yes	Yes	Yes	Not executed in background.	
	Memory Allocation Settings		Yes	Refer to *Default* and *Remarks*.	Refer to *Default* and *Remarks*.	**PLC** - **Memory Allocation** - **EM Memory Settings**	The setting method is different. Refer to *Appendix 4-1* for details.
	Comms Instructions Settings in FB	Retry Counts	Yes	Yes	Yes	0 times (A58000 to A58003)	
		Response Monitoring Time	Yes	Yes	Yes	2 s (A581)	
Timing/Synchronous Settings	Watch Cycle Time		Yes	Yes	Yes	1,000 ms (1 s)	
	Constant Cycle Time (Minimum Cycle Time)		Yes	Yes	Yes	Not Constant.	
	Scheduled Interrupt Interval		Yes	Yes	Yes	10 ms	
	Power Off Detection Time		Yes	Yes	Yes	0 ms	
	Power Off Interrupt		Yes	Yes	Yes	Do not use.	
	Enable High-speed Interrupt Function		No	Yes	No	Do not enable.	
	Use Synchronous Operation		No	Yes	No	Do not use.	
Special I/O Unit Cyclic Refreshing	Disable SIOU Cycle Refresh		Yes	Yes	Yes	Not disabled.	
Unit Settings	Input response times for Basic I/O Units		Yes	Yes	Yes	8 ms	
Serial Port	Mode (Pin 5 on the DIP switch on the CPU Unit must be OFF (default) to set the mode.)		Yes	Yes	Yes	Host Link (default)	

PLC Setup tab page	Setting items	Applicable models			Default	Remarks
		CS1	CJ2H	CJ2M		
Peripheral Port	Mode (When pin 4 on the DIP switch on the CS-series CPU Unit is ON.)	Yes	No	No	Host Link (default)	When communications functions are needed. Add a Serial Communications Unit.
Peripheral Service	Execution Mode	Yes	Refer to *Default* and *Remarks*.	Refer to *Default* and *Remarks*.	CJ2 supports only Normal Mode.	Parallel Processing Mode cannot be set. Since the operating status will be changed, confirm that there are no problems with the system after replacement.
	Set Time to All Events	Yes	Yes	Yes	4% of cycle time for CS and 10% of cycle time for CJ2.	
	Peripheral Servicing Priority Mode	Yes	No	No	Do not use.	CJ2 does not support Peripheral Servicing Priority Mode. Since the operating status will be changed, confirm that there are no problems with the system after replacement.
FINS Protection	Settings for FINS write protection via network	Yes	Yes	Yes	FINS write protection disabled.	
I/O Module	Function allocations and detailed settings for Pulse I/O Modules.	No	No	Yes	---	

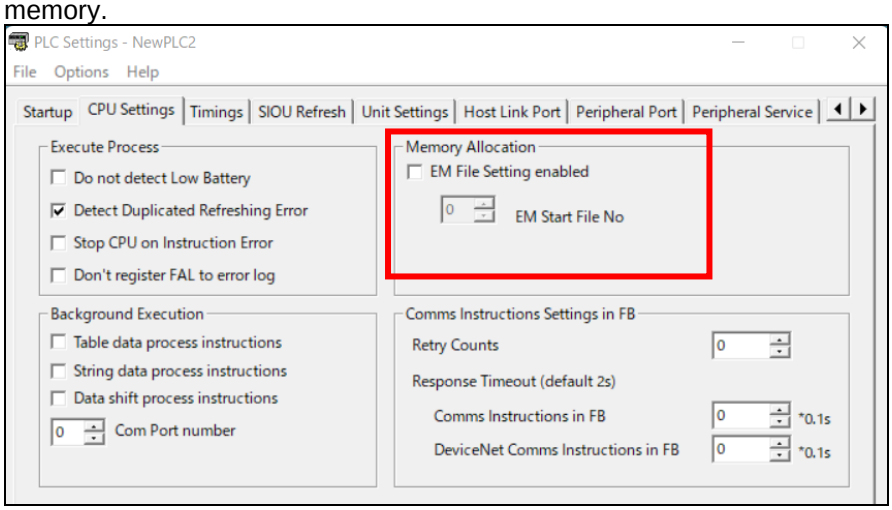
Appendix 4-1 CPU Unit Settings

CS1 Series

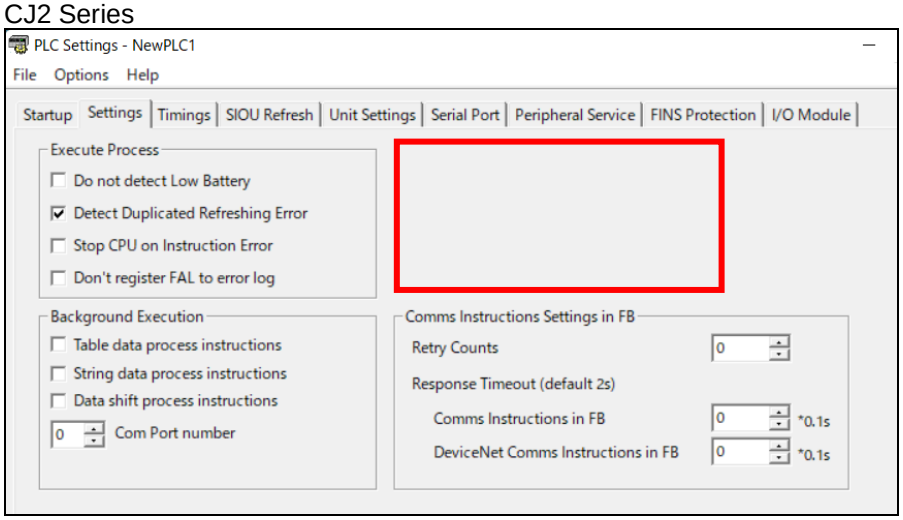
The CS1 Series supports the Memory Allocation Settings.

The EM File Memory Enabled can be selected.

If the EM File Memory Enabled is selected, the specified EM bank and all subsequent banks will be used as file memory.



CJ2 Series

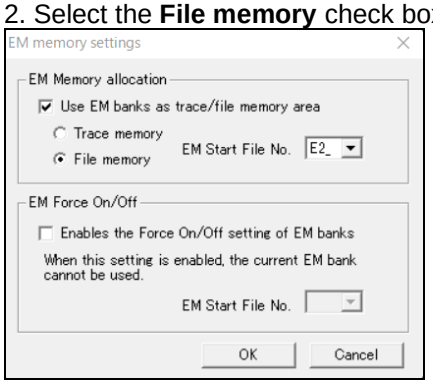


The EM file memory setting of the CJ Series has a separate setting menu from the PLC Setup.

1. Select **PLC** - **Memory Allocate** - **EM Memory Settings** from the CX-Programmer.

   The **EM Memory Settings** dialog box is displayed.

2. Select the **File memory** check box and set **EM Start File No.**



Appendix 5. Table of Input/Output Units

■ Input Units

(1) Since the terminal block is different, it is necessary to change the wiring.

(2) If a different type of connector is used, change the wiring.

(3) If the input section specifications differ, make sure that the system operates correctly.

(4) If the number of circuits increases, rewire the terminals to each common terminal.

(5) If internal current consumption is different, make sure the power supply capacity is large enough.

(6) Some specifications may differ even the basic functions are compatible. Refer to the related manuals for details.

(7) Refer to the *Replacement Guide From C200HX/HG/HE to CJ2* (Cat. No. P075) for details on C200H-series Input Units.

[DC Input Units]

CS Series	Alternative CJ Series	Description	Difference
CS1W-ID211 24 VDC, 7 mA, 16 inputs, terminal block	CJ1W-ID211 24 VDC, 7 mA, 16 inputs, terminal block	DC Input Unit with terminal block for 16 inputs.	1) Terminal block 2) Number of circuits (8 points/common, 2 circuits → 16 points/common, 1 circuit) 3) Internal current consumption (5 VDC: 100 mA → 80 mA)
CS1W-ID231 24 VDC, 6 mA, 32 inputs, Fujitsu connector	CJ1W-ID231 24 VDC, 4.7 mA, 32 inputs, Fujitsu connector	DC Input Unit with connector for 32 inputs.	1) Input section specification ・Input impedance (3.9 kΩ → 5.6 kΩ) ・ON voltage (15.4 VDC → 19.0 VDC) 2) Internal current consumption (5 VDC: 150 mA → 90 mA)
	CJ1W-ID232 24 VDC, 4.7 mA, 32 inputs, MIL connector		1) Connector 2) Input section specification ・Input impedance (3.9 kΩ → 5.6 kΩ) ・ON voltage (15.4 VDC → 19.0 VDC) 3) Internal current consumption (5VDC: 150 mA → 90 mA)
CS1W-ID261 24 VDC, 6 mA, 64 inputs, Fujitsu connector	CJ1W-ID261 24 VDC, 4.7 mA, 64 inputs, Fujitsu connector	DC Input Unit with connector for 64 inputs.	1) Input section specification ・Input impedance (3.9 kΩ → 5.6 kΩ) ・ON voltage (15.4 VDC → 19.0 VDC) 2) Internal current consumption (5 VDC: 150 mA → 90 mA)
	CJ1W-ID262 24 VDC, 4.7 mA, 64 inputs, MIL connector		1) Connector 2) Input section specification ・Input impedance (3.9 kΩ → 5.6 kΩ) ・ON voltage (15.4 VDC → 19.0 VDC) 3) Internal current consumption (5VDC: 150 mA → 90 mA)
CS1W-ID291 24 VDC, 5 mA, 96 inputs, Fujitsu connector	CJ1W-ID261 x 1 Unit + CJ1W-ID231 x 1 Unit 24 VDC, 4.7 mA, 64 inputs, Fujitsu connector	DC Input Unit with connector for 96 inputs.	1) Number of Units: 1 Unit → 2 Units 2) Number of circuits (16 points/common, 6 circuits → 16 points/common, 4 circuits + 16 points/common, 2 circuits) 3) Input section specification ・Input impedance (4.7 kΩ → 5.6 kΩ) ・ON voltage (17 VDC → 19.0 VDC) 4) Internal current consumption (5 VDC: 200 mA → 90 mA x 2)
	CJ1W-ID262 x 1 Unit + CJ1W-ID232 x 1 Unit 24 VDC, 4.7 mA, 64 inputs, MIL connector		1) Number of Units: 1 Unit → 2 Units 2) Connector 3) Number of circuits (16 points/common, 6 circuits → 16 points/common, 4 circuits + 16 points/common, 2 circuits) 4) Input section specification ・Input impedance (4.7 kΩ → 5.6 kΩ) ・ON voltage (17 VDC → 19.0 VDC) 5) Internal current consumption (5 VDC: 200 mA → 90 mA x 2)

[AC Input Units]

CS Series	Alternative CJ Series	Description	Difference
CS1W-IA111 100 to 120 VAC/VDC, 16 inputs, terminal block	CJ1W-IA111 100 to 120 VAC, 16 inputs, terminal block	100 VAC Input Unit with terminal block for 16 inputs.	1) Terminal block 2) DC input voltage (100 to 120 VDC → DC input not possible) 3) Number of circuits (8 points/common, 2 circuits → 16 points/common, 1 circuit) 4) Input section specification ・Input impedance (10 kΩ/50 Hz → 14.5 kΩ/50 Hz) ・ON voltage (65 VAC → 70 VAC) ・OFF voltage (20 VAC → 20 VAC) 4) Internal current consumption (5 VDC, 110 mA → 90 mA)
CS1W-IA211 200 to 240 VAC, 16 inputs, terminal block	CJ1W-IA201 × 2 Units 200 to 240 VAC, 8 inputs x 2, terminal block	200 VAC Input Unit with terminal block for 16 inputs.	1) Number of Units: 1 Unit → 2 Units 2) Terminal block 3) Input points (16 points → 8 points x 2 Units) 4) Internal current consumption (5 VDC, 110 mA → 80 mA x 2 Units)

[Interrupt Input Units]

CS Series	Alternative CJ Series	Description	Difference
CS1W-INT01 16 inputs, 24 VDC, 7 mA, ON response time: 0.1 ms, OFF response time: 0.5 m, terminal block	CJ1W-INT01 16 inputs, 24 VDC, 7 mA, ON response time: 0.05 ms, OFF response time: 0.5 m, terminal block	Interrupt Input Unit with terminal block for 16 inputs.	1) Terminal block 2) Number of circuits Input circuit (8 points/common, 2 circuits → 16 points/common, 1 circuit) 3) Input section specification ON response time (0.1 ms → 0.05 ms)

[Quick-response Input Units]

CS Series	Alternative CJ Series	Description	Difference
CS1W-IDP01 16 inputs, 24 VDC, 7 mA, ON response time: 0.1 ms, OFF response time: 0.5 m, terminal block	CJ1W-IDP01 16 inputs, 24 VDC, 7 mA, ON response time: 0.05 ms, OFF response time: 0.5 m, terminal block	Quick-response Input Unit with terminal block for 16 inputs.	1) Terminal block 2) Number of circuits Input circuit (8 points/common, 2 circuits → 16 points/common, 1 circuit) 3) Input section specification ON response time (0.1 ms → 0.05 ms)

■ **Output Units**

(1) Since the terminal block is different, it is necessary to change the wiring.

(2) If a different type of connector is used, change the wiring.

(3) If the number of circuits increases, rewire the terminals to each common terminal.

(4) If the output section specifications differ, make sure that the system operates correctly.

(5) The relay lifetime may vary depending on usage when a different relay is used. Refer to *A-1-3 Precautions on Contact Output Unit* in the *CJ-series CJ2 CPU Unit Hardware User's Manual* (Cat. No. W472) for details.

(6) If internal current consumption is different, make sure the power supply capacity is large enough.

(7) If the voltage and current consumption of the external power supply differ, make sure the power supply capacity is large enough.

(8) Some specifications may differ even the basic functions are compatible. Refer to the related manuals for details.

(9) Refer to the *Replacement Guide From C200HX/HG/HE to CJ2* (Cat. No. P075) for details on C200H-series Output Units.

[Relay Output Units]

CS Series	Alternative CJ Series	Description	Difference
CS1W-OC201 8 outputs (independent contacts), 250 VAC/24 VDC: 2 A, 120 VDC/0.1 A, terminal block	CJ1W-OC201 8 outputs (independent contacts), 250 VAC/24 VDC: 2 A, terminal block	Relay Output Unit with terminal block for 8 outputs.	1) Terminal block 2) 120 VDC input (Possible → Not possible) 3) Output section specification 4) Internal current consumption (5 VDC: 100 mA → 90 mA)
CS1W-OC211 16 outputs, 250 VAC/24 VDC: 2 A, 120 VDC/0.1 A	CJ1W-OC211 16 outputs, maximum switching capacity: 250 VAC/24 VDC: 2 A,	Relay Output Unit with terminal block for 16 outputs.	1) Terminal block 2) 120 VDC input (Possible → Not possible) 3) Number of circuits (8 points/common, 2 circuits →16 points/common, 1 circuit) 4) Internal current consumption (5 VDC: 130 mA → 110 mA)

[Transistor Output Units]

CS Series	Alternative CJ Series	Description	Difference
CS1W-OD211 12 to 24 VDC, 0.5 A, terminal block, 16 sinking outputs	CJ1W-OD211 12 to 24 VDC, 0.5 A, terminal block, 16 sinking outputs, HAT	Transistor Output Unit with terminal block for 16 sinking outputs.	1) Terminal block 2) Number of circuits (8 points/common, 2 circuits → 16 points/common, 1 circuit) 3) Output section specification ・Output capacity (0.5 A/point, 8 A/Unit → 0.5 A/point, 5 A/Unit) ・ON response time (0.5 ms → 0.1 ms) ・OFF response time (1 ms → 0.8 ms) 4) Internal current consumption (5 VDC: 170 mA → 100 mA)
CS1W-OD212 24 VDC, 0.5 A, terminal block, load short circuit protection (with alarm output), 16 sourcing outputs	CJ1W-OD212 12 to 24 VDC, 0.5 A, terminal block, load short circuit protection, 16 sourcing outputs	Transistor Output Unit with terminal block for 16 sourcing outputs.	1) Terminal block 2) Output section specification ・ON response time (0.5 ms → 0.1 ms) ・OFF response time (1 ms → 0.8 ms) 3) Internal current consumption (5 VDC: 170 mA → 100 mA)
CS1W-OD231 12 to 24 VDC, 0.5 A, 32 sinking outputs, Fujitsu connector	CJ1W-OD231 12 to 24 VDC, 0.5 A, 32 sinking outputs, Fujitsu connector, SH8K	Transistor Output Unit with connector for 32 sinking outputs.	1) Output section specification ・Output capacity (0.5 A/point, 5 A/Unit → 0.5 A/point, 4 A/Unit) ・ON response time (0.5 ms → 0.1 ms) ・OFF response time (1 ms → 0.8 ms) 2) Internal current consumption (5 VDC: 270 mA → 140 mA)
	CJ1W-OD233 12 to 24 VDC, 0.5 A, 32 sinking outputs, MIL connector		1) Connector 2) Output section specification ・Output capacity (0.5 A/point, 5 A/Unit → 0.5 A/point, 4 A/Unit) ・ON response time (0.5 ms → 0.1 ms) ・OFF response time (1 ms → 0.8 ms) 3) Internal current consumption (5 VDC: 270 mA → 140 mA)

CS Series	Alternative CJ Series	Description	Difference
CS1W-OD232 24 VDC, 0.5 A, load short circuit protection, 32 sourcing outputs, Fujitsu connector	CJ1W-OD232 24 VDC, 0.5 A, load short circuit protection, 32 sourcing outputs, MIL connector	Transistor Output Unit with connector for 32 sourcing outputs.	1) Connector 2) Output section specification ・Output capacity (0.5 A/point, 5 A/Unit → 0.5 A/point, 4 A/Unit) ・ON response time (0.5 ms → 0.1 ms) ・OFF response time (1 ms → 0.8 ms) 3) Internal current consumption (5 VDC: 270 mA → 140 mA)

[Transistor Output Units]

CS Series	Alternative CJ Series	Description	Difference
CS1W-OD261 12 to 24 VDC, 0.3 A, 64 sinking outputs, Fujitsu connector	CJ1W-OD261 12 to 24 VDC, 0.3 A, 64 sinking outputs, Fujitsu connector	Transistor Output Unit with connector for 64 sinking outputs.	1) Output section specification ・Residual voltage (1.5 V→1.5 V) ・ON response time (0.5 ms → 0.1 ms) ・OFF response time (1 ms → 0.8 ms) 2) Internal current consumption (5 VDC: 390 mA → 170 mA)
	CJ1W-OD263 12 to 24 VDC, 0.3 A, 64 sinking outputs, MIL connector		1) Connector (Fujitsu connector → MIL connector) 2) Output section specification ・ON response time (0.5 ms → 0.1 ms) ・OFF response time (1 ms → 0.8 ms) 3) Internal current consumption (5 VDC: 390 mA → 170 mA)
CS1W-OD262 24 VDC, 0.3 A, 64 sourcing outputs, Fujitsu connector	CJ1W-OD262 24 VDC, 0.3 A, 64 sourcing outputs, MIL connector	Transistor Output Unit with connector for 64 sourcing outputs.	1) Connector (Fujitsu connector → MIL connector) 2) Output section specification ・ON response time (0.5 ms → 0.1 ms) ・OFF response time (1 ms → 0.8 ms) 3) Internal current consumption (5 VDC: 390 mA → 170 mA)
CS1W-OD291 12 to 24 VDC, 0.3 A, 96 sinking outputs, with fuse, Fujitsu connector	CJ1W-OD261 + CJ1W-OD231 12 to 24 VDC, 0.3 A, 64 sinking outputs + 32 sinking outputs, Fujitsu connector	Transistor Output Unit with connector for 96 sinking outputs.	1) Number of Units: 1 Unit → 2 Units 2) Connector (pin→pin) 3) Number of circuits (16 points/common, 6 circuits → 16 points/common, 4 circuits + 2 circuits) 3) Output section specification ・Output capacity (0.1 A/point, 7.2 A/Unit → 0.3 A/point, 6.4 A/Unit) ・ON response time (0.5 ms → 0.1 ms) ・OFF response time (1 ms → 0.8 ms) 4) Internal current consumption (5 VDC: 480 mA → 170 mA)
	CJ1W-OD263 + CJ1W-OD233 12 to 24 VDC, 0.3 A, 64 sinking outputs + 32 sinking outputs, MIL connector		1) Number of Units: 1 Unit → 2 Units 2) Connector (Fujitsu connector → MIL connector) 3) Number of circuits (16 points/common, 6 circuits → 16 points/common, 4 circuits + 2 circuits) 3) Output section specification ・Output capacity (0.1 A/point, 7.2 A/Unit → 0.3 A/point, 6.4 A/Unit) ・ON response time (0.5 ms → 0.1 ms) ・OFF response time (1 ms → 0.8 ms) 4) Internal current consumption (5 VDC: 480 mA → 170 mA)
CS1W-OD292 12 to 24 VDC, 0.1 A, 96 sourcing outputs, with fuse, Fujitsu connector	CJ1W-OD232 24 VDC, 0.5 A, 32 sourcing outputs, without fuse, MIL connector	Transistor Output Unit with connector for 96 sourcing outputs.	1) Number of Units: 1 Unit → 3 Units 2) Connector (Fujitsu connector → MIL connector) 3) Number of circuits ・Output circuit (16 points/common, 3 circuits x 2CN → 16 points/common, 2 circuits x 3) 4) Output section specification ・Output capacity (0.1 A/point, 7.2 A/Unit → 0.5 A/point, 4 A/Unit x 3) 5) Internal current consumption (10.2 to 26.4 VDC: 100 mA → 70 mA x 3)

[Triac Output Units]

CS Series	Alternative CJ Series	Description	Difference
CS1W-OA201 250 VAC, 1.2 A, terminal block, 8 outputs, with fuse	CJ1W-OA201 250 VAC, 0.6 A, terminal block, 8 outputs, with fuse	Triac Output Unit with terminal block for 8 outputs.	1) Terminal block 3) Input section specification ・Maximum current (1.2 A, 4.8 A/Unit → 0.6 A, 2.4 A/Unit) ・Maximum inrush current (10 A: 100 ms, 20 A: 10 ms → 10 A: 15 ms) ・Minimum switching capacity (10 VAC: 100 mA, 24 VAC: 50 mA, 100 VAC: 10 mA → 75 VAC: 50 mA) 3) Internal current consumption (5 VDC: 230 mA → 220 mA) 4) Fuse detection (Supported → Not supported)
CS1W-OA211 250 VAC, 0.5A, terminal block, 16 outputs, with fuse	CJ1W-OA201 × 2 Units 250 VAC, 0.6 A, terminal block, 8 outputs x 2, with fuse	Triac Output Unit with terminal block for 16 outputs.	1) Number of Units (1 Unit → 2 Units) 2) Terminal block 3) Number of circuits (8 points/common, 1 circuit → 8 points/common, 1 circuit x 2 Units) 4) Input section specification ・Maximum current (0.5 A, 4 A/Unit → 0.6 A, 2.4 A/Unit) ・Maximum inrush current (15 A: 10 ms → 10 A: 15 ms) 5) Internal current consumption (5 VDC: 406 mA → 220 mA x 2 Units)

■ **Input/Output Units**

(1) The CJ Series has following I/O Units: CJ1W-MD23□, CJ1W-MD26□, and CJ1W-MD563.

(2) Some specifications may differ even the basic functions are compatible. Refer to the related manuals for details.

(3) Refer to the *Replacement Guide From C200HX/HG/HE to CJ2* (Cat. No. P075) for details on C200H-series Input/Output Units.

[DC Input/Transistor Output Units]

CS Series	Alternative CJ Series	Description	Difference
CS1W-MD261 24 VDC/32 inputs (6 mA), 12 to 24 VDC/32 outputs (0.3 A, sinking), Fujitsu connector	CJ1W-MD261 24 VDC/32 inputs (4.6 mA), 12 to 24 VDC/32 outputs (0.3 A, sinking), Fujitsu connector	DC Input/Transistor Output Unit with connector for 32 inputs and 32 outputs.	1) Input section specification ・Input impedance (3.9 kΩ → 5.6 kΩ) ・ON voltage (15.4 V → 19 V) 2) Internal current consumption (5 VDC: 270 mA → 140 mA)
	CJ1W-MD263 24 VDC/32 inputs (4.6 mA), 12 to 24 VDC/32 outputs (0.3 A, sinking), MIL connector		1) Connector (Fujitsu connector → MIL connector) 2) Input section specification ・Input impedance (3.9 kΩ → 5.6 kΩ) ・ON voltage (15.4 V → 19 V) 3) Internal current consumption (5 VDC: 270 mA → 140 mA)
CS1W-MD262 24 VDC/32 inputs (6 mA), 12 to 24 VDC/32 outputs (0.3 A, sourcing), Fujitsu connector	CJ1W-MD232 × 2 Units 24 VDC/16 inputs x 2 (7 mA), 12 to 24 VDC/16 outputs x 2 (0.3 A, sourcing), MIL connector	DC Input/Transistor Output Unit with connector for 32 inputs and 32 outputs.	1) Number of Units (1 Unit → 2 Units) 2) Connector (Fujitsu connector → MIL connector) 3) Number of circuits ・Output circuit (16 points/common, 2 circuits → 16 points/common, 1 circuit x 2) ・Input circuit (16 points/common, 2 circuits → 16 points/common, 1 circuit x 2) 4) Output section specification ・Output capacity (0.3 A/point, 3.2 A/Unit → 0.5 A/point, 2A/Unit) 5) Input section specification ・Input impedance (3.9 kΩ → 3.3 kΩ) ・ON voltage (15.4 V → 14.4 V) 6) Internal current consumption (5 VDC: 270 mA → 130mA x 2)
CS1W-MD291 24 VDC/48 inputs (5 mA), 12 to 24 VDC/48 outputs (0.1 A, sinking), Fujitsu connector, with fuse	CJ1W-MD261 + CJ1W-MD231 24 VDC/32 inputs (6 mA) + 24 VDC/16 inputs (7 mA), 12 to 24 VDC/32 outputs + 16 outputs (0.5 A, sinking), Fujitsu connector	DC Input/Transistor Output Unit with connector for 48 inputs and 48 outputs.	1) Number of Units (1 Unit → 2 Units) 2) Connector (for 96 I/O points → for 48 I/O points) 3) Number of circuits ・Output circuit (16 points/common, 3 circuits) → 16 points/common, 2 circuits + 1 circuit) ・Input circuit (16 points/common, 3 circuits → 16 points/common, 2 circuits + 1 circuit) 4) Output section specification ・Output capacity (0.1 A/point, 3.6 A/Unit → 0.3 A/point, 3.2 A/Unit + 0.5 A/point, 2 A/Unit) 5) Input section specification ・Input impedance (4.7 kΩ → 5.6 kΩ, 3.3 kΩ) ・ON voltage (17 V → 19V, 14.4 V) 6) Internal current consumption (5 VDC: 350 mA → 140 mA, 130 mA)
	CJ1W-MD263 + CJ1W-MD233 24 VDC/32 inputs (6 mA) + 24 VDC/16 inputs (7 mA), 12 to 24 VDC/32 outputs (0.5 A) + 12 to 24 VDC/16 outputs (0.5 A, sinking), MIL connector		1) Number of Units (1 Unit → 2 Units) 2) Connector (Fujitsu connector → MIL connector) 3) Number of circuits ・Output circuit (16 points/common, 3 circuits) → 16 points/common, 2 circuits + 1 circuit) ・Input circuit (16 points/common, 3 circuits → 16 points/common, 2 circuits + 1 circuit) 4) Output section specification ・Output capacity (0.1 A/point, 3.6 A/Unit → 0.3 A/point, 3.2 A/Unit + 0.5 A/point, 2 A/Unit) 5) Input section specification ・Input impedance (4.7 kΩ → 5.6 kΩ, 3.3 kΩ) ・ON voltage (17 V → 19V, 14.4 V) 6) Internal current consumption (5 VDC: 350 mA → 140 mA, 130 mA)

CS Series	Alternative CJ Series	Description	Difference
CS1W-MD292	CJ1W-MD232 x 3 Units	DC Input/Transistor Output Unit with connector for 48 inputs and 48 outputs.	1) Number of Units (1 Unit → 3 Units) 2) Connector (Fujitsu connector → MIL connector) 3) Number of circuits ・Output circuit (16 points/common, 3 circuits) → 16 points/common, 2 circuits x 3) ・Input circuit (16 points/common, 3 circuits → 16 points/common, 2 circuits x 3) 4) Output section specification ・Output capacity (0.1 A/point, 3.6 A/Unit → 0.5 A/point, 2 A/Unit x 3) 5) Input section specification ・Input impedance (4.7 kΩ → 3.3 kΩ) ・ON voltage (17 V → 14.4 V) 6) Internal current consumption (5 VDC: 350 mA → 130 mA)
24 VDC/48 inputs (5 mA), 12 to 24 VDC/48 outputs (0.1 A, sourcing), Fujitsu connector	24 VDC/16 inputs x 3 (7 mA), 12 to 24 VDC/16 outputs x 3 (0.3 A, sourcing), MIL connector		

[TTL I/O Units]

CS Series	Alternative CJ Series	Description	Difference
CS1W-MD561	CJ1W-MD563	MIL connector for 32 inputs and 32 outputs.	1) Connector (Fujitsu connector → MIL connector) 2) Number of circuits ・Output circuit (16 points/common, 2 circuits → 16 points/common, 2 circuit) ・Input circuit (16 points/common, 2 circuits → 16 points/common, 2 circuit) 3) Output section specification ・Output capacity (35 mA/point, 1.12 A/Unit → 35mA/point, 1.12 A/Unit x 2) 4) Input section specification ・Input impedance (1.1 kΩ → 1.1 kΩ) ・ON voltage (3 V → 3 V) 5) Internal current consumption (5 VDC: 270 mA → 190 mA)
5 VDC/32 inputs (3.5 mA), 5 VDC/32 outputs (35 mA), Fujitsu connector	5 VDC/32 inputs (3.5 mA), 5 VDC/32 outputs (35 mA,), MIL connector		

■ Special I/O Units and CPU Bus Units

(1) Since the terminal block is different, it is necessary to change the wiring.

(2) If a different type of connector is used, change the wiring.

(3) If the output section specifications differ, make sure that the system operates correctly.

(4) If internal current consumption is different, make sure the power supply capacity is large enough.

(5) Some specifications may differ even the basic functions are compatible. Refer to the related manuals for details.

(6) Refer to the *Replacement Guide From C200HX/HG/HE to CJ2* (Cat. No. P075) for details on C200H-series Special I/O Units.

[Communications Units]

CS Series	CJ Series	Remarks
[Serial Communications Unit] CS1W-SCU21-V1 CS1W-SCU31-V1 [Serial Communications Board] CS1W-SCB21-V1 CS1W-SCB41-V1	[Serial Communications Unit] CJ1W-SCU22 CJ1W-SCU32 The following models are discontinued. CJ1W-SCU21-V1 CJ1W-SCU31-V1	Inner boards cannot be connected to the CJ-series CPU Units. Use Serial Communications Units instead. Refer to the *CS/CJ-series Serial Communications Boards/Units Operation Manual* (Cat. No. W336) for details.
[Ethernet Unit] CS1W-ETN21 [EtherNet/IP Unit] CS1W-EIP21	[EtherNet/IP Unit] CJ1W-EIP21S [Ethernet Unit] CJ1W-ETN21 [EtherNet/IP Unit] CJ1W-EIP21	Refer to the *CS/CJ-series EtherNet/IP Units Operation Manual* (Cat. No. W465) for details.
[Controller Link Unit] Wired: CS1W-CLK23 Optical ring: CS1W-CLK13 Optical ring: CS1W-CLK53	[Controller Link Unit] Wired: CJ1W-CLK23 Optical ring: No replacement model	Since the CJ Series does not have the optical ring method, use the wired method instead. Refer to the *Controller Link Units Operation Manual* (Cat. No. W309) for details.
[SYSMAC LINK Unit] Coaxial: CS1W-SLK21 Optical: CS1W-SLK11	[SYSMAC LINK Unit] No replacement model	SYSMAC LINK Units cannot be connected to the CJ Series.
[FL-net Unit] CS1W-FLN22	[FL-net Unit] CJ1W-FLN22	Refer to the *CS/CJ-series FL-net Units Operation Manual* (Cat. No. W440) for details.
[DeviceNet™ Unit] CS1W-DRM21(-V1)	[DeviceNet Unit] CJ1W-DRM21	Refer to the *CS/CJ-series DeviceNet Units Operation Manual* (Cat. No. W380) for details.
[CompoNet™ Unit] CS1W-CRM21	[CompoNet Unit] CJ1W-CRM21	Refer to the *CS/CJ-series CompoNet Master Units Operation Manual* (Cat. No. W456) for details.

[Process I/O Units]

CS Series	CJ Series	Remarks
[Insolated Thermocouple Input Unit] CS1W-PTS11 CS1W-PTS51 CS1W-PTS55 CS1W-PTS01-V1	[Insolated Thermocouple Input Unit] CJ1W-PTS15 CSJ1W-PTS51	When you replace with CJ1W-PTS, check the input points, corresponding thermocouple and signal range. Refer to the *CS/CJ-series Analog I/O Units Operation Manual* (Cat. No. W368) for details.
[Insolated Resistance Thermometer Input Unit] CS1W-PTS12 CS1W-PTS52 CS1W-PTS56 CS1W-PTS02 CS1W-PTS03	[Insolated Resistance Thermometer Input Unit] CJ1W-PTS52	When you replace with CJ1W-PTS, check the input points, corresponding thermocouple and signal range. Refer to the *CS/CJ-series Analog I/O Units Operation Manual* (Cat. No. W368) for details.
[Isolated DC Input Unit] CS1W-PDC11 CS1W-PDC55 CS1W-PDC01	[Isolated DC Input Unit] CJ1W-PDC15	When you replace with CJ1W-PTS, check the input points, corresponding thermocouple and signal range. Refer to the *CS/CJ-series Analog I/O Units Operation Manual* (Cat. No. W368) for details.
[Isolated 2-wire Transmission Device Input Unit] CS1W-PTW01 [Power Transducer Input Unit] CS1W-PTR01 [DC Input Unit (100 mV)]	No replacement model	Since the CJ Series does not have an Isolated Control Input Unit, use a non-isolated Analog Input Unit instead. Refer to the *CS/CJ-series Analog I/O Units Operation Manual* (Cat. No. W345) for details.

CS Series	CJ Series	Remarks
CS1W-PTR02		
[Isolated Control Output Unit] CS1W-PMV01 CS1W-PMV02	[Isolated Control Output Unit] No replacement model [Analog Output Unit] CJ1W-DA041 CJ1W-DA08V CJ1W-DA08C	Since the CJ Series does not have an Isolated Control Output Unit, use a non-isolated Analog Output Unit instead. Refer to the *CS/CJ-series Analog I/O Units Operation Manual* (Cat. No. W345) for details.

[Analog I/O Units]

CS Series	CJ Series	Remarks
[Analog Input Unit] CS1W-AD041-V1 CS1W-AD081-V1 CS1W-AD161	[Analog Input Unit] CJ1W-AD041-V1 CJ1W-AD081-V1	When you replace with CJ1W-AD, check the input specifications such as resolution, conversion time and input points. Refer to the *CS/CJ-series Analog I/O Units Operation Manual* (Cat. No. W345) for details.
[Analog Output Unit] CS1W-DA041 CS1W-DA08V CS1W-DA08C	[Analog Output Unit] CJ1W-DA041 CJ1W-DA08V CJ1W-DA08C	Refer to the *CS/CJ-series Analog I/O Units Operation Manual* (Cat. No. W345) for details.
[Analog I/O Unit] CS1W-MAD44	[Analog I/O Unit] CJ1W-MAD42	The CJ Series has 2 outputs (4 outputs for CS Series). Refer to the *CS/CJ-series Analog I/O Units Operation Manual* (Cat. No. W345) for details.

[Special I/O Units]

CS Series	CJ Series	Remarks
[MECHATROLINK-Ⅱ] CS1W-NC271 CS1W-NC471 CS1W-NC471	[MECHATROLINK-Ⅱ] CJ1W-NC271 CJ1W-NC471 CJ1W-NC471	Refer to the *CS/CJ-series Position Control Units Operation Manual* (Cat. No. W426) for details.
[Insolated Pulse Input Unit] CS1W-PPS01	[Insolated Pulse Input Unit] No replacement model	The CJ Series does not have an Isolated Pulse Input Unit.
[Loop Control Board] CS1W-LCB01 CS1W-LCB05	[Loop Control Board] No replacement model	Inner boards cannot be connected to the CJ-series CPU Units.
[High-speed Counter Unit] CS1W-CT021 CS1W-CT041	[CPU Unit + Pulse I/O Module] CJ2M-CPU1□/CJ2M-CPU3□ + CJ2M-MD21□ [High-speed Counter Unit] CJ1W-CT021	CJ2M-CPU1□/CJ2M-CPU3□ and CJ2M-MD21□ are required. Refer to the *CJ2M CPU Unit Pulse I/O Module User's Manual* (Cat. No. W486) for details.
[Customizable Counter Unit] CS1W-HCP22-V1 CS1W-HCA12-V1 CS1W-HCA22-V1 CS1W-HIO01-V1	[Customizable Counter Unit] No replacement model	The CJ Series does not have a Customizable Counter Unit. Use a combination of I/O Unit, Analog I/O Unit and Pulse Input Unit for CJ Series instead.
[Position Control Unit] CS1W-NC113 CS1W-NC213 CS1W-NC413 CS1W-NC133 CS1W-NC233 CS1W-NC433	[Position Control Unit] CJ1W-NC214 CJ1W-NC414 CJ1W-NC234 CJ1W-NC434 CJ1W-NC113 CJ1W-NC213 CJ1W-NC413 CJ1W-NC133 CJ1W-NC233 CJ1W-NC433 [CPU Unit + Pulse I/O Module] CJ2M-CPU1□/CJ2M-CPU3□ + CJ2M-MD21□	Refer to the *CJ-series Position Control Units Operation Manual* (Cat. No. W477) for details. CJ2M-CPU1□/CJ2M-CPU3□ and CJ2M-MD21□ are required. Refer to the *CJ2M CPU Unit Pulse I/O Module User's Manual* (Cat. No. W486) for details.

CS Series	CJ Series	Remarks
[Motion Control Unit] CS1W-MC421-V1 CS1W-MC221-V1	[Motion Control Unit] No replacement model Use the following Position Control Unit. CJ1W-NC□□□	The CJ Series does not have a Motion Control Unit. Use a Position Control Unit instead. Refer to the following manuals for details. *CJ-series Position Control Units Operation Manual* (Cat. No. W397) *CS/CJ-series Position Control Units Operation Manual* (Cat. No. W426) *CJ-series Position Control Units Operation Manual* (Cat. No. W487)
[ID Sensor Unit] CS1W-V680C11 CS1W-V680C12 CS1W-V600C11 CS1W-V600C12	[ID Sensor Unit] CJ1W-V680C11 CJ1W-V680C12	Refer to the *CS/CJ-series ID Sensor Units Operation Manual* (Cat. No. Z174) for details.
[GP-IB Interface Unit] CS1W-GPI01	[GP-IB Interface Unit] No replacement model	The CJ Series does not have a GP-IB Interface Unit. Use another Interface Unit such as RS232 instead.
[High-speed Storage and Processing Unit] CS1W-SPU01-V2 CS1W-SPU02-V2	[High-speed Storage and Processing Unit] CJ1W-SPU01-V2	Refer to the *CS/CJ-series SYSMAC SPU Units Operation Manual* (Cat. No. V229) for details.

■ Replacement Models Scheduled to Be Discontinued and Discontinued Products

[B7A Interface Units]

CS Series	Corresponding CJ Series	Remarks
CS1W-B7A12	No replacement model	The CJ Series does not have a B7A Interface Unit.
32 inputs, transmission delay: Standard (19.2 ms typical) or high-speed (3 ms typical), terminal block	CJ1W-B7A14 is discontinued in June 2023.	
CS1W-B7A02	No replacement model	
32 outputs, transmission delay: Standard (19.2 ms typical) or high-speed (3 ms typical), terminal block	CJ1W-B7A04 is discontinued in June 2023.	
CS1W-B7A21	No replacement model	
16 inputs, 16 outputs, transmission delay: Standard (19.2 ms typical) or high-speed (3 ms typical), terminal block	CJ1W-B7A22 is discontinued in June 2023.	
CS1W-B7A22	No replacement model	
32 inputs, 32 outputs, transmission delay: Standard (19.2 ms typical) or high-speed (3 ms typical), terminal block	CJ1W-B7A22 is discontinued in June 2023.	

[Special I/O Units]

CS Series	CJ Series	Remarks
[Motion Control Unit] CS1W-MCH71	[Motion Control Unit] No replacement model CJ1W-MCH71 is discontinued.	The CJ Series does not have a Motion Control Unit. Use a Position Control Unit instead. Refer to the following manuals for details. *CJ-series Position Control Units Operation Manual* (Cat. No. W397) *CS/CJ-series Position Control Units Operation Manual* (Cat. No. W426) *CJ-series Position Control Units Operation Manual* (Cat. No. W487)

Note: Do not use this document to operate the Unit.

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