

# Programmable Controller C200HX/HG/HE

# Replacement Guide From C200HX/HG/HE to CS1

C200HE-CPU□□(-Z)

C200HG-CPU□3(-Z)

C200HX-CPU□□(-Z)

CS1G-CPU4□H

Replace Guide **About this document** This document provides the reference information for replacing C200H PLC systems with CS1 series PLC. This document does not include precautions and reminders ;please read and understand the important precautions and reminders described on the manuals of PLCs (both of PLC used in the existing system and PLC you will use to replace the existing PLC) before attempting to start operation.

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# **Related Manuals**

#### **CPU Units**

Man.No.	Model	Manual
W394	CS1G/H-CPU□□H	CS/CJ/NSJ Series PROGRAMMING MANUAL
	CS1G/H-CPU□□-V1	
	CS1D-CPU□□H	
	CS1D-CPU□□S	
	CJ1H-CPU□□H-R	
	CJ1G/H-CPU□□H	
	CJ1G-CPU□□P	
	CJ1M/G-CPU□□	
	NSJ(B)	
W474	CS1G/H-CPU□□H	CS/CJ/NSJ Series INSTRUCTIONS REFERENCE MANUAL
	CS1G/H-CPU□□-V1	
	CS1D-CPU□□H	
	CS1D-CPU□□S	
	CJ1H-CPU□□H-R	
	CJ1G/H-CPU□□H	
	CJ1G-CPU□□P	
	CJ1M/G-CPU <sub>□□</sub>	
	NSJ0-000(B)-000	
W342	CS1G/H-CPU□□H	CS/CJ/CP/NSJ Series Communications Commands REFERENCE MANUAL
****	CS1G/H-CPU <sub>D</sub> -V1	OS/OS/OF/NOS OS/INITIATIOAXIONO OS/INITIATIOS (EF ETCENOE W/NO) (E
	CS1D-CPUnnH	
	CS1D-CPU <sub>□</sub> S	
	CS1W-SCU <sub>D</sub> -V1	
	CS1W-SCB <sub>□</sub> -V1	
	CJ1H-CPUDBH-R	
	CJ1G/H-CPUDDH	
	CJ1G-CPU <sub>□□</sub> P	
	CJ1M/G-CPU	
	CJ1W-SCU <sub>□□</sub> -V1	
	CP1H-X0000-0	
	CP1H-XA0000-0	
	CP1H-Y0000-0	
	NSJ(B)	
W341	CQM1H-PRO01	CS/CJ Series Programming Consoles OPERATION MANUAL
VV 34 1	CQM1-PRO01	COTOS Series i Togramming Consoles Of ETATION WANDAL
	C200H-PRO27	
	CS1W-KS001	
W339	CS1G/H-CPU□□H	CS Series OPERATION MANUAL
W 339	CS1G/H-CPUDD-V1	C3 Selles OFERATION MANUAL
14/000		OVOMA C INOTALL ATION CHIPE
W302	C200HX/HG/HE	SYSMAC α INSTALLATION GUIDE
M000	-CPUnn/CPUnn-Z	OVOMA C. P. OPERATION MANUAL
W303	C200HX/HG/HE	SYSMAC α OPERATION MANUAL
W322	C200HX-CPU ==-ZE	SYSMAC α OPERATION MANUAL
	C200HG-CPU <sub>□</sub> -ZE	
	C200HE-CPU <sub>□</sub> -ZE	
W227	CV500/CV1000	FINS Commands Reference Manual
	C200H/C1000H/C2000H/	
	3G8F5	

# Special I/O Units

Man.No.	Model	Manual	
W426	CS1W-NC□71 CJ1W-NC□71(-MA)	CS/CJ Series Position Control Units OPERATION MANUAL	
W435	CS1W-MCH71 CJ1W-MCH71	CS/CJ series Motion Control Units OPERATION MANUAL	
W440	CS1W-FLN22 CJ1W-FLN22(100BASE-TX)	CS/CJ Series FL-net Units OPERATION MANUAL	
W336	CS1W-SCB <sub>DD</sub> -V1 CS1W-SCU <sub>DD</sub> -V1	CS/CJ Series Serial Communications Boards Serial Communications Units OPERATION MANUAL	
W345	CJ1W-SCU V1  CS1W-AD0 V1/-AD161  CS1W-DA0	CS/CJ Series Analog I/O Units OPERATION MANUAL	
	CS1W-DA0UU CS1W-MAD44 CJ1W-AD0UU-V1/-AD042 CJ1W-DA0UU/-DA042V CJ1W-MAD42		
W368	CS1W-PTSDDCS1W-PTWDDCDDCS1W-PTRDDCDDCS1W-PPSDDCDS1W-PTSDDCJ1W-PTSDDCJ1W-PDCDDCJ1W-PH41U	CS/CJ Series Analog I/O Units OPERATION MANUAL	
W902	CS1W-CT021/041	CS Series High-speed Counter Units OPERATION MANUAL	
W378	CS1W-HIO01-V1 CS1W-HCP22-V1 CS1W-HCA22-V1 CS1W-HCA12-V1	CS Series Customizable Counter Units OPERATION MANUAL	
W384	CS1W-HIO01 CS1W-HCP22 CS1W-HCA22	CS Series Customizable Counter Units PROGRAMMING MANUAL	
W376	CS1W-NC□□□	CS Series Position Control Units OPERATION MANUAL	
W359	CS1W-MC□□□-V1	CS Series Motion Control Units OPERATION MANUAL	
W124	C200H-TS001/002/101/102	C200H Temperature Sensor Units OPERATION MANUAL	
W127	C200H-AD001/-DA001	C200H Analog I/O Units OPERATION GUIDE	
W229	C200H-AD002/-DA002	C200H Analog I/O Units OPERATION MANUAL	
W325	C200H-AD003 C200H-DA003/-DA004 C200H-MAD01	C200H Analog I/O Units OPERATION MANUAL	
W225	C200H-TC001/002/003 C200H-TC101/102/103	C200H Temperature Control Units OPERATION MANUAL	
W240	C200H-TV001/002/003 C200H-TV101/102/103	C200H Heat/Cool Temperature Control Units OPERATION MANUAL	
W241	C200H-PID01/02/03	C200H PID Control Unit OPERATION MANUAL	
W141	C200H-CT001-V1 C200H-CT002	C200H High-speed Counter Units OPERATION MANUAL	
W311	C200H-CT021	C200H High-speed Counter Units OPERATION MANUAL	
W224	C200H-CP114	C200H Cam Positioner Units OPERATION MANUAL	
W334	C200HW-NC113/213/413	C200HW Position Control Units OPERATION MANUAL	
W137	C200H-NC111	C200H Position Control Units OPERATION MANUAL	
W128	C200H-NC112	C200H Position Control Units OPERATION MANUAL	
W166	C200H-NC211	C200H Position Control Units OPERATION MANUAL	
W314	C200H-MC221	C200H Motion Control Units OPERATION MANUAL:INTRODUCTION	
W315	C200H-MC221	C200H Motion Control Units OPERATION MANUAL:DETAILS	
W165	C200H-ASC02	C200H ASCII Units OPERATION MANUAL	
W306	C200H-ASC11/21/31	C200H ASCII Units OPERATION MANUAL	

Man.No.	Model	Manual
W304	C200HW-COM01	C200HW Communication Boards OPERATION MANUAL
	C200HW-COM02-V1 to	
	C200HW-COM06-EV1	
W257	CVM1-PRS71	Teaching Box OPERATION MANUAL

#### **Network Communications Units**

Man.No.	Model	Manual
W309	CS1W-CLK23	Controller Link Units OPERATION MANUAL
	CS1W-CLK21-V1	
	CJ1W-CLK23	
	CJ1W-CLK21-V1	
	C200HW-CLK21	
	CVM1-CLK21	
	CQM1H-CLK21	
	CS1W-RPT0□	
W370	CS1W-CLK13	Optical Ring Controller Link Units OPERATION MANUAL
	CS1W-CLK12-V1	
	CVM1-CLK12(H-PCF Cable)	
	CS1W-CLK53	
	CS1W-CLK52-V1	
	CVM1-CLK52(GI Cable)	
W465	CS1W-EIP21	CS/CJ Series EtherNet/IP Units OPERATION MANUAL
	CJ1W-EIP21	
	CJ2H-CPU6□-EIP	
	CJ2M-CPU3□	
W420	CS1W-ETN21	CS/CJ Series Ethernet Units OPERATION MANUAL Construction of Networks
	CJ1W-ETN21 (100Base-TX)	
W421	CS1W-ETN21	CS/CJ Series Ethernet Units OPERATION MANUAL Construction of Applications
	CJ1W-ETN21(100Base-TX)	
W456	CS1W-CRM21	CS/CJ Series CompoNet Master Units OPERATION MANUAL
	CJ1W-CRM21	
W457	CRT1	CRT1 Series CompoNet Slave Units and Repeater Unit OPERATION MANUAL
W380	CS1W-DRM21-V1	CS/CJ Series DeviceNet Units OPERATION MANUAL
	CJ1W-DRM21	
W267	CS1W/CJ1W/C200HW	DeviceNet OPERATION MANUAL
	DRT1/DRT2	
	GT1	
	CVM1	
W266	C200HW-SRM21-V1	CompoBus/S OPERATION MANUAL
	CS1W-SRM21	
	CJ1W-SRM21	
	CQM1-SRM21-V1	
	SRT1/SRT2	
W136	C500-RM001-(P)V1	C series Rack PCs Optical Remote I/O SYSTEM MANUAL
	C120-RM001(-P)	
	C500-RT001/RT002-(P)V1	
	C500/C120-LK010(-P)	
	C200H-RM001-PV1	
	C200H-RT001/002-P	
	B500-I/O	
W308	C200HW-ZW3DV2/ZW3PC2	Controller Link Support Software OPERATION MANUAL
	3G8F5-CLK11/21	
	3G8F6-CLK21	

Man.No.	Model	Manual
W120	C500-RM201/RT201	C series Rack PCs Wired Remote I/O SYSTEM MANUAL
	C200H-RM201/RT201/202	
	G71-IC16/OD16	
	G72C-ID16/OD16	
	S32-RS1	
W379	CVM1-DRM21-V1	DeviceNet Master Units OPERATION MANUAL
	C200HW-DRM21-V1	
W347	C200HW-DRT21	DeviceNet Slaves OPERATION MANUAL
	CQM1-DRT21	
	DRT1	
W135	C200H-LK401	C Series PC Link SYSTEM MANUAL
	C500-LK009-V1	

# **Support Software**

Man.No.	Model	Manual	
W463	CXONE-AL□□C-V4	CX-One FA Integrated Tool Package SETUP MANUAL	
W446	CXONE-AL□□D-V4	CX-Programmer OPERATION MANUAL	
W447		CX-Programmer OPERATION MANUAL : Function Blocks/Structured Text	
W464		CX-Integrator OPERATION MANUAL	
W344		CX-Protocol OPERATION MANUAL	

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# **C200HX/HG/HE Replacement Guide** From C200HX/HG/HE to CS1

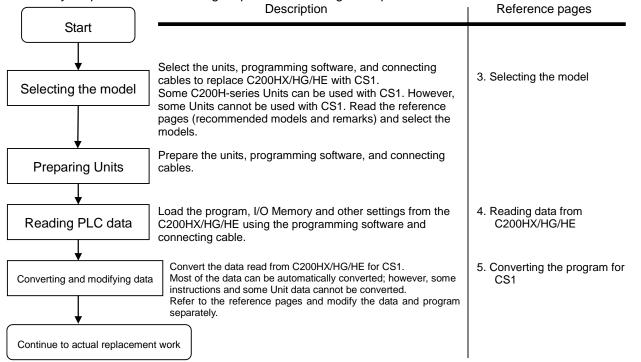
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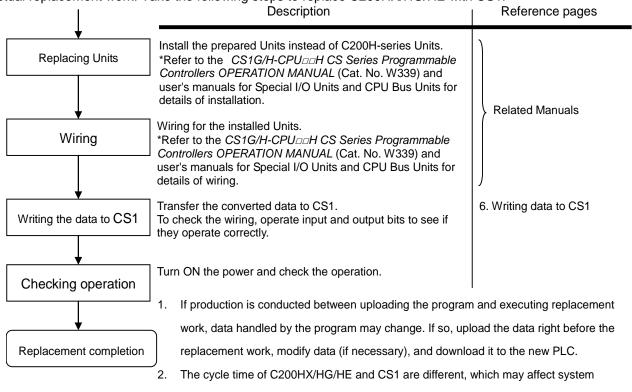
This replacement guide describes the procedure to rebuild the system which uses the C200HX/HG/HE PLC by introducing the CS1-series PLC instead. The CS1-series PLC has functions which can replace the functions and operation of the C200HX/HG/HE PLC. Follow the below work flow to replace your system. Refer to the reference pages for details.

#### 1. Work flow

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



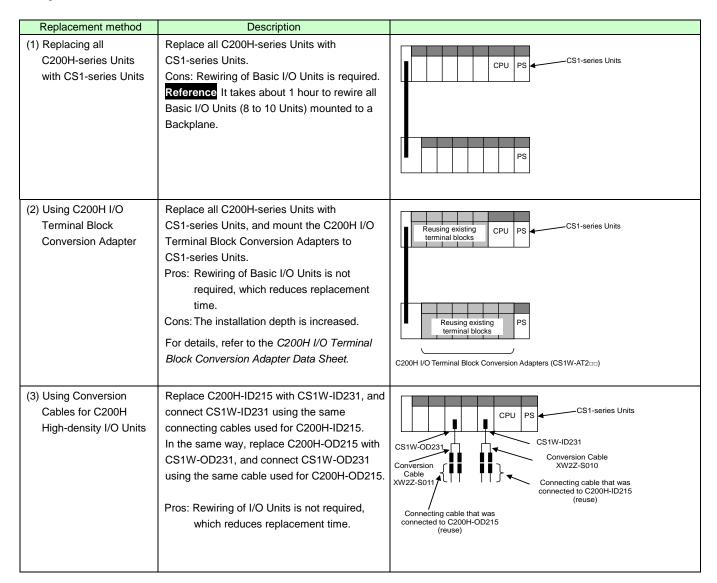
2) Actual replacement work: Take the following steps to replace C200HX/HG/HE with CS1.



operation. If so, it is necessary to adjust cycle time in the PLC Setup.

#### 2. Selecting the replacement method

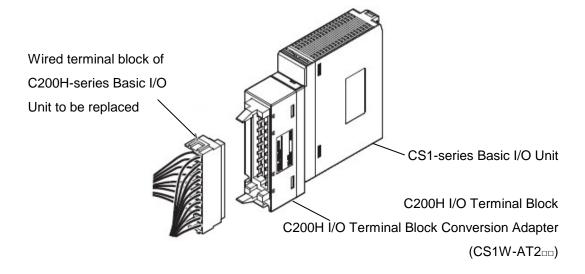
When C200H-series Basic I/O Units are replaced with CS1-series Basic I/O Units, rewiring is required. The C200H I/O Terminal Block Conversion Adapter that allows the terminal block of the C200H-series Basic I/O Unit to be reused for the CS1-series Basic I/O Unit is available. This enables efficient replacement by eliminating rewiring and wiring check times.



Note 1. Depending on the type of Basic I/O Unit, there may be some restrictions (e.g. change in I/O specifications or wiring) or some models cannot be used.

- 2. When you reuse a terminal block with wiring, confirm that there is no problem in the terminal block and wiring conditions.
  - The screws are securely tightened.
  - The cables are not damaged.
  - There is no rust or corrosion.
  - The terminal block is not damaged. (The terminal block is securely inserted and fixed.)

• Image of replacement using C200H I/O Terminal Block Conversion Adapter

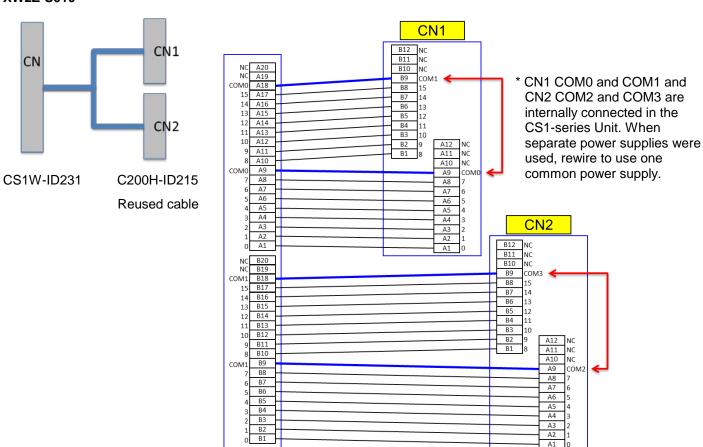


#### Replacement of C200H-ID215 and C200H-OD215 using Conversion Cables

The same connecting cables that were connected to C200H-ID215 and C200H-OD215 can be used to replace them with CS1W-ID231 and CS1W-OD231.

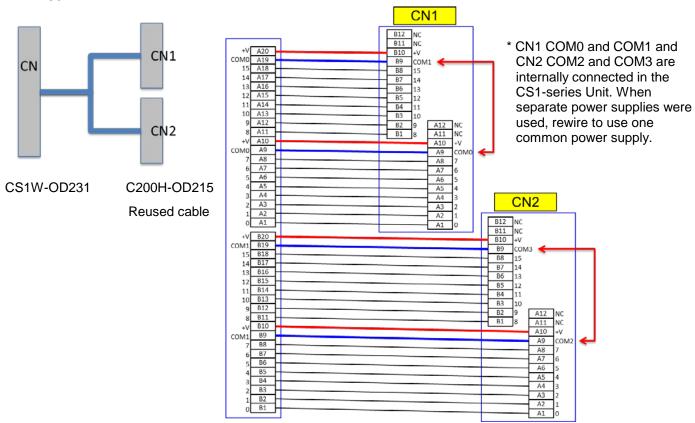
C200H-series Unit	CS1-series Unit	Conversion Cable
C200H-ID215	CS1W-ID231	XW2Z-S010
C200H-OD215	CS1W-OD231	XW2Z-S011

#### XW2Z-S010



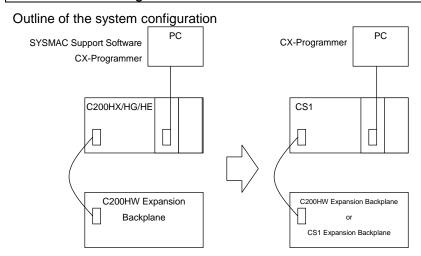
	C200H-ID215	CS1W-ID231	Remarks
Rated input voltage	24 VDC	24 VDC	
Operating input voltage	20.4 to 26.4 VDC	20.4 to 26.4 VDC	
Input impedance	5.6 kΩ	3.6 kΩ	Make sure that the connected device operates correctly.
Input current	4.1 mA typical (at 24 VDC)	6 mA typical (at 24 VDC)	Make sure that the connected device operates correctly.
ON voltage	14.4 VDC min.	15.4 VDC min.	Make sure that the connected device operates correctly.
OFF voltage	5 VDC max.	5 VDC max.	
ON response time	2.5 ms max./15 ms max. (switchable)	8 ms max. (switchable)	Can be set to between 0 and 32 ms in the PLC Setup.
OFF response time	2.5 ms max./15 ms max. (switchable)	8 ms max. (switchable)	Can be set to between 0 and 32 ms in the PLC Setup.
No. of circuits	8 points/common x 4 circuits (32 inputs)	16 points/common x 2 circuits (32 inputs)	The number of circuits decreased from 4 to 2. Rewire if separate power supplies are used.
High-speed inputs	8 points (when pin 2 of the DIP switch is ON)	Not supported	Use CS1W-IDP01 for high-speed inputs.

#### XW2Z-S011



	C200H-OD215	CS1W-OD231	Remarks
Rated voltage	5 to 24 VDC	12 to 24 VDC	Use CS1W-MD561 when using 5 VDC.
Max. switching capacity	16 mA/4.5 VDC to 100 mA/26.4 VDC 0.8 A/common, 3.2 A/Unit	0.5 A/point, 2.5 A/common, 5 A/Unit	
Leakage current	0.1 mA max.	0.1 mA max.	
Residual voltage	0.7 V max.	1.5 V max.	Make sure that the connected device operates correctly.
ON response time	0.2 ms max.	0.5 ms max.	Make sure that the connected device operates correctly.
OFF response time	0.6 ms max.	1 ms max.	Make sure that the connected device operates correctly.
No. of circuits	8 points/common x 4 circuits (32 outputs)	16 points/common x 2 circuits (32 outputs)	The number of circuits decreased from 4 to 2. Rewire if separate power supplies are used.
Fuses	4 (1 fuse/common)	None	When protection is required, connect a protective device externally.
	5 to 24 VDC±10%, 90 mA min. 2.8 mA x no. of ON outputs	10.2 to 26.4 VDC	
Dynamic outputs	30 mA min.	Not supported	Dynamic outputs are not supported.

#### 3. Selecting the model



The table below lists the C200H-series Units and each corresponding CS1-series Unit. Select the CS1-series Unit which is compatible with the C200H-series Unit or which has similar specifications to the C200H-series Unit. Refer to the following manuals for details:

CS1: CS1G/H-CPU□□H CS Series Programmable Controllers OPERATION MANUAL (Cat. No. W339) C200HX/HG/HE: C200HX/C200HG/C200HE-CPU□□E/-ZE INSTALLATION GUIDE (Cat. No. W302)

#### < CPU Rack >

Unit name	C200H-series Unit	CS1-series Unit	Description
CPU Unit (*)	C200HE-CPU11(-Z) C200HE-CPU32(-Z) C200HE-CPU42(-Z)	CS1G-CPU42H	UM 10K steps
	C200HG-CPU33(-Z) C200HG-CPU43(-Z) C200HG-CPU53(-Z) C200HG-CPU63(-Z)	CS1G-CPU43H	UM 20K steps
	C200HX-CPU34(-Z) C200HX-CPU44(-Z) C200HX-CPU54(-Z) C200HX-CPU64(-Z)	CS1G-CPU44H	UM 30K steps
	C200HX-CPU65-Z C200HX-CPU85-Z	CS1G-CPU45H	UM 60K steps
Memory Cassette	C200HW-ME□□K C200HS-MP16K	HMC-EF===	
Power Supply Unit	C200HW-PA=== C200HW-PD===	C200HW-PA=== C200HW-PD===	The C200H-series Power Supply Units can be used with the CS1-series CPU Unit if its capacity is larger enough for the total current consumption.
CPU Backplane	C200HW-BC031 C200HW-BC051 C200HW-BC081-V1 C200HW-BC101-V1	CS1W-BC033/BC032 CS1W-BC053/BC052 CS1W-BC083/BC082 CS1W-BC103/BC102	The mounting hole dimensions are the same.  Note: CS1W-BC□□2 cannot be used with C200H-series Units.
Communications Board	C200HW-COM01	Unnecessary*	*The Communication Board for SYSMAC LINK and SYSMAC NET Link Unit is not required.
	C200HW-COM02(-V1)	CS1W-SCB21-V1	
	C200HW-COM03(-V1)	CS1W-SCB41-V1	
	C200HW-COM04(-V1)	CS1W-SCB21-V1	
	C200HW-COM05(-V1) C200HW-COM06(-V1)	CS1W-SCB21-V1 CS1W-SCB41-V1	
Insulation Plate for CPU Backplane	C200H-ATT31 C200H-ATT51 C200H-ATT81 C200H-ATTA1	Unnecessary*	*The CS1-series Backplane has an installation structure to be insulated from the control panel. The Insulation Plate for CPU Backplane is not required.

<sup>(\*)</sup> The built-in serial port of the CS1-series CPU Unit has the same functionality as that of C200HX/HG/HE-series CPU Unit. Refer to the related manuals for details because specifications differ between the two series. Use the communications board/unit if required for the application where the built-in port is used.

< Expansion Rack >

Unit name	C200H-series Unit	CS1-series Unit	Description
• • • • • • • • • • • • • • • • • • • •			
Power Supply Unit	C200HW-PA	C200HW-PA	The C200H-series Power Supply Units can
	C200HW-PD	C200HW-PD <sub>□□□</sub>	be used with the CS1-series CPU Unit if its
			capacity is larger enough for the total current
			consumption.
Backplane	C200HW-BI031	C200HW-BI031	The C200H I/O Expansion Backplane can be
(Expansion Backplane)	C200HW-BI051	C200HW-BI051	used with the CS1-series CPU Unit.
	C200HW-BI081-V1	C200HW-BI081-V1	When the CS1-series Unit is used, use the
	C200HW-BI101-V1	C200HW-BI101-V1	CS1W-Bl□□□ CS1-series Expansion
		or	Backplane instead.
		CS1W-BI033/BI032	<b>Note:</b> The mounting hole dimensions of the
		CS1W-BI053/BI052	CS-series Expansion Backplane vary
		CS1W-BI083/BI082	depending on the number of slots (3, 5, 8 or
		CS1W-BI103/BI102	10 slots).
			CS1W-BC□□2 cannot be used with
			C200H-series Units.
Connecting Cable for	C200H-CN□□1	CS1W-CN□□3	Connects a CS1-series Expansion
Expansion Backplane			Backplane to a CPU Backplane or another
			CS1-series Expansion Backplane.
		CS1W-CN□□1	Connects a C200HW-BI□□1 Expansion I/O
			Backplane to a CPU Backplane or CS-series
			Expansion Backplane.
		C200H-CN□□1	Connetcts two C200HW-BI□□1 Expansion
			I/O Backplanes.
Backplane Insulation	C200HW-ATT32	[For C200H Expansion I/O	*The CS1-series Backplane has an
Plate	C200HW-ATT52	Backplanes]	installation structure to be insulated from the
	C200HW-ATT82	C200HW-ATT32	control panel. The Insulation Plate for
	C200HW-ATTA2	C200HW-ATT52	Backplane is not required.
		C200HW-ATT82	
		C200HW-ATTA2	
		[For CS1 Expansion	
		Backplanes]	
		Unnecessary*	

### Mounting hole dimensions of Expansion Backplane



Model	A/W		Model	A/W
C200HW-BI031	175 / 189	$\rightarrow$	CS1W-BI033	246 / 260
C200HW-BI051	245 / 259	$\rightarrow$	CS1W-BI053	316 / 330
C200HW-BI081-V1	350 / 364	$\rightarrow$	CS1W-BI083	421 / 435
C200HW-BI101-V1	420 / 434	$\rightarrow$	CS1W-BI103	491 / 505

#### < I/O Units and CPU Bus Units>

Units and CPU B	C200H-series Unit	CS1-series Unit	Description
Basic I/O Unit	C200H-Series Unit	C200H-I	C200H-series Basic I/O Units can be used
Dasic I/O Unit	C200H-IDDD	C200H-I=== C200H-O===	with CS1-series CPU Units can be used
	C200H-O	C200H-O===	
	C200H-IVILLL	or	Refer to Appendix E. Table of Input/Output Units for CS1-series Basic I/O Units
		CS1W-I	corresponding to C200H-series Basic I/O
		CS1W-0000	Units.
		CS1W-M000	To facilitate maintenance, we recommend
		OOT WINDED	you to use CS-series Basic I/O Units
			instead.
Special I/O Unit	C200H-0000	C200H-000	C200H-series Special I/O Units can be used
Special I/O Still	020011 8888	or	with CS1-series CPU Units. However, there
		CS1W-000	are some remarks to be followed.
			To improve the system performance and to
			facilitate maintenance, we recommend you
			to use the CS-series Special I/O Units
			instead.
Communication Unit	[SYSMAC LINK]	[SYSMAC LINK]	C200HW-SLK□□ cannot be used with the
	Coaxial: C200HW-SLK23/24	Coaxial: CS1W-SLK21	CS1-series CPU Unit.
	Optical: C200HW-SLK13/14	Optical: CS1W-SLK11	Refer to the SYSMAC CS1W-SLK11/21
		or	SYSMAC LINK Units OPERATION MANUAL
		[Controller Link]	(Cat. No. W367) for details about SYSMAC
		Wired: CS1W-CLK23	LINK.
		Optical: CS1W-CLK13/53	We recommend you to use Controller Link
			instead.
			Refer to the Controller Link Units Operation
			Manual (Cat. No. W309) and Optical Ring
			Controller Link Units Operation Manual (Cat.
	[SYSMAC NET]	ICYCMAC NETI	No. W370) for details.  SYSMAC NET cannot be used with the
	C200HS-SNT32	[SYSMAC NET]	
	C200H3-5IN132	None [Controller Link]	CS1-series CPU Unit. We recommend you to use Controller Link
		Wired: CS1W-CLK23	instead.
		Optical: CS1W-CLK13/53	Refer to the Controller Link Units Operation
		Optioni: 001W 02IVI0/00	Manual (Cat. No. W309) and Optical Ring
			Controller Link Units Operation Manual (Cat.
			No. W370) for details.
ĺ	[Controller Link]	[Controller Link]	C200HW-CLK21 cannot be used with the
	Wired: C200HW-CLK21	Wired: CS1W-CLK23	CS1-series CPU Unit. To use the CS1-series
			Unit, change the related areas including the
			Status Area.
			Refer to the Controller Link Units Operation
			Manual (Cat. No. W309) for details.
	[Host Link]	[Serial Communications]	C200H-series Host Link Units cannot be
			used with the CS1-series CPU Unit.
			Refer to the SYSMAC CS/CJ Series Serial
			Communications Boards/Units OPERATION
	00001111/1015	1	MANUAL (Cat. No. W336) for details.
	C200H-LK101-PV1	None	The CS1 Series does not have an
		CCAW COLICA VA	Optical-type Serial Communications
		CS1W-SCU21-V1	Board/Unit. Use the wired type instead or use an external optical link module.
	C200H-LK201-V1	(+ optical link module) CS1W-SCU21-V1	Use one of the left CS1-series Units/Boards.
	C20011-LN201-V1	CS1W-SCB21-V1	Use one of the left UST-Series Offits/Doafds.
		CS1W-SCB21-V1	
		Host Link port built in the	
		CPU Unit	
	C200H-LK202-V1	CS1W-SCU31-V1	Use one of the left CS1-series Units/Boards.
		CS1W-SCB41-V1	
	[PC Link]	[PC Link]	The PC Link Unit can be used with the
	C200H-LK401	C200H-LK401	CS1-series CPU Unit. However, the Link
			Area allocation must be changed.
		[Controller Link]	We recommend you to use Controller Link
		Wired: CS1W-CLK23	instead.
		Optical: CS1W-CLK13/53	Refer to the Controller Link Units Operation
			Manual (Cat. No. W309) and Optical Ring
			Controller Link Units Operation Manual (Cat.
			No. W370) for details.

#### < I/O Units and CPU Bus Units>

I/O Units and CPU B	us Units>		
Unit name	C200H-series Unit	CS1-series Unit	Description
Communication Unit	[CompoBus/S] C200HW-SRM21(-V1)	[CompoBus/S] C200HW-SRM21(-V1) or CS1W-SRM21	C200HW-SRM21(-V1) can be used with the CS1-series CPU Unit. However, I/O allocation must be changed. There are also some remarks to be followed when CS1W-SRM21 is used. Refer to the C200HW/CS1W/CJ1W/CQM1/SRT1/SRT2 CompoBus/S OPERATION MANUAL (Cat. No. W266) for details.
	[DeviceNet] C200HW-DRM21(-V1)	[DeviceNet] C200HW-DRM21(-V1) or CS1W-DRM21-V1	C200HW-DRM21 (-V1) can be used with the CS1-series CPU Unit. However, I/O allocation must be changed. There are also some remarks to be followed when CS1W-DRM21-V1 is used. Refer to the CS1W-DRM21(-V1),CJ1W-DRM21 CS/CJ SERIES DeviceNet UNITS OPERATION MANUAL (Cat. No. W380) for details
	[SYSMAC BUS] Wired: C200H-RM201 Optical: C200H-RM001-PV1	[SYSMAC BUS] Wired: C200H-RM201 Optical: C200H-RM001-PV1  [CompoNet] CS1W-CRM21 [DeviceNet] CS1W-DRM21-V1 [CompoBus/S] CS1W-SRM21	SYSMAC BUS can be used with the CS1-series CPU Unit. However, area allocation must be changed. To improve the system performance and to facilitate maintenance, we recommend you to use left networks instead. Refer to the CS/CJ series CompoNet Master Units OPERATION MANUAL (Cat. No. W456) and CompoNet Slave Units and Repeater Unit OPERATION MANUAL (Cat. No. W457) for details of CompoNet. Refer to the CS1W-DRM21(-V1),CJ1W-DRM21 CS/CJ SERIES DeviceNet UNITS OPERATION MANUAL (Cat. No. W380) for details of DeviceNet. Refer to the C200HW/CS1W/CJ1W/CQM1/SRT1/SRT2 CompoBus/S OPERATION MANUAL (Cat. No. W266) for details of CompoBus/S.
	[PC Card Unit] C200HW-PCU01 C200HW-PCS01-V1	[PC Card Unit] None [Memory card] HMC-EF  [Ethernet] CS1W-ETN21 [EtherNet/IP] CS1W-EIP21	The PC Card Unit cannot be used with the CS1-series CPU Unit. Insert the memory card into the CS1-series CPU Unit to transfer data in PLC memory between the CPU Unit and memory card. Moreover, communications can be made with the Ethernet Unit or EtherNet/IP Unit.

< Support Software and Peripheral Devices >

Name	C200H-series Unit	CS1-series Unit	Description
Support Software	SYSMAC Support Software CX-Programmer	CX-One CXONE-AL□□C-V□/ AL□□D-V□ (CX-Programmer Ver.3.0 or higher)	SYSMAC Support Software cannot be used with the CS1-series CPU Unit.
Peripheral Interface Unit, Connecting Cable	CQM1-CIF02	CS1W-CN226/626	
Programming Console	C200H-PRO27 (+C200H-CN□□2) CQM1-PRO01	C200H-PRO27 (+CS1W-CNuu4) CQM1-PRO01 (+CS1W-CN114)	CS1W-CN□□4 is a Programming Console Connecting Cable.

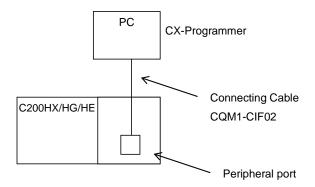
#### Other remarks

- (1) The PFP-50N/100N/100N2 DIN Track and C200H-DIN01 Mounting Bracket can be used for the CS1-series Backplane.
- (2) The I/O Unit Mounting Bracket cannot be used with the CS1-series Backplane. CS1-series Units can be secured with screws. They do not require brackets.

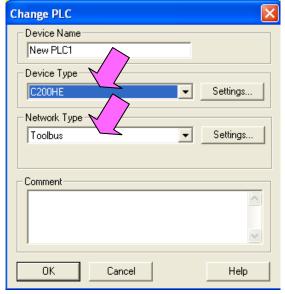
#### 4. Reading data from C200HX/HG/HE

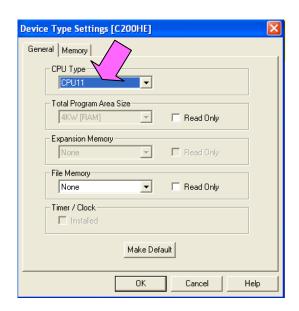
Load the ladder program, PLC settings, and Data Memory from 200HX/HG/HE using the CX-Programmer.

Required items	Support Software (PC)	CX-One (CXONE-ALaaC-Va, CXONE-ALaaD-Va) or CX-Programmer (WS02-CXPCa-Va)
		CX-Programmer (WS02-CXPC□-V□)
	Connecting Cable	CQM1-CIF02



- (1) Connect C200HX/HG/HE and a PC using a connecting cable.
- (2) Start up the CX-Programmer. (Select *All Program OMRON CX-One CX-Programmer CX-Programmer* from the Windows Start Menu.)
- (3) Select C200HX/HG/HE for the Device Type. (Select *New* from the File Menu to display the below dialog box.)





- (4) Select Work Online from the PLC Menu to go online.
- (5) 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.

Upload Options

PLC: NewPLC1
Include:

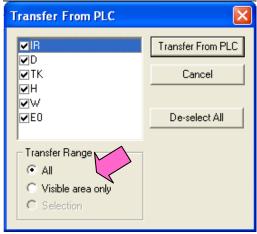
Settings
Settings
I to table

Transfer END instruction together with the program.

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



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

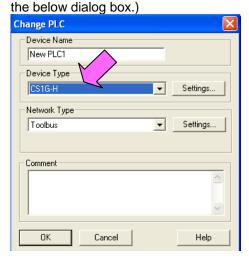


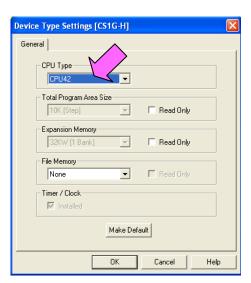
- (7) Select Work Online from the PLC Menu to go offline.
- (8) Save the program with a new project name. (Select Save As from the File Menu.)

#### 5. Converting the program for CS1

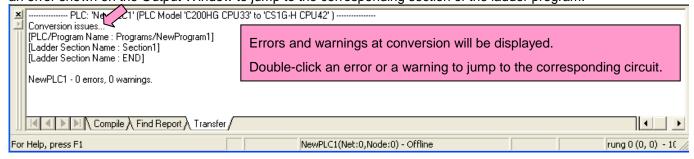
On the CX-Programmer, convert the program for CS1.

- (1) Start the CX-Programmer and open the saved program file for C200HX/HG/HE. (Select *Open* from the File Menu.)
- (2) Change the Device Type from C200HX/HG/HE to CS1. (Select *Change Model* from the PLC Menu to display





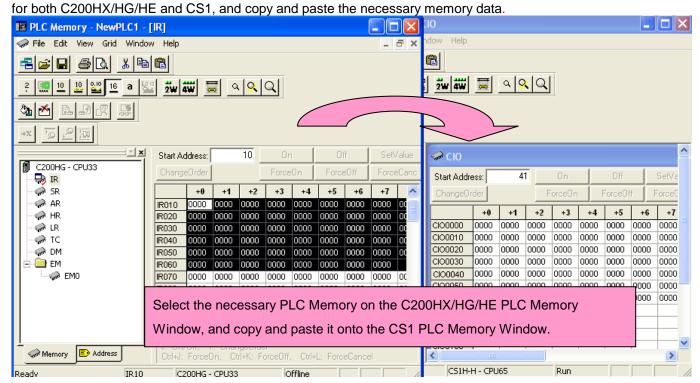
(3) The instructions are automatically converted. The Output Window shows the conversion results. Double-click an error shown on the Output Window to jump to the corresponding section of the ladder program.



Some instructions cannot be converted. Modify the ladder program by referring to *Appendix A. Instructions* converted by Change Model on CX-Programmer.

You can check the program by selecting *Compile* from the Program Menu. The Output Window shows the checking results.

(4) The PLC memory data cannot be maintained when the PLC model is changed. Open the PLC Memory Window

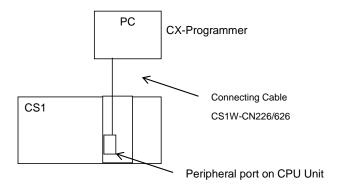


- (5) The I/O allocation of C200HX/HG/HE is partly different from that of CS1. Refer to *Appendix B. Change of unit area allocation* and modify the ladder program.
- (6) The PLC settings of C200HX/HG/HE are partly different from those of CS1. Refer to *Appendix C. Change in PLC settings* and change the PLC settings.
- (7) Select Compile from the Program Menu to check the program. If an error is detected, correct it.
- (8) Save the program with a new project name. (Select **Save As** from the File Menu.)

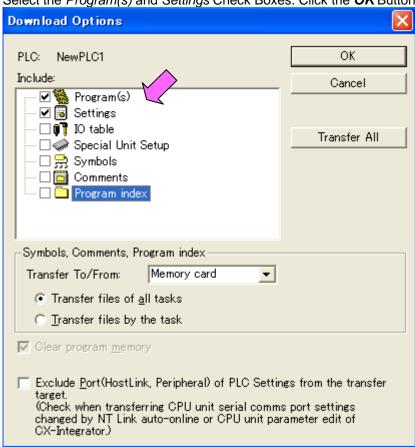
#### 6. Writing data to CS1

Transfer the converted and modified program, PLC settings, and Data Memory to CS1.

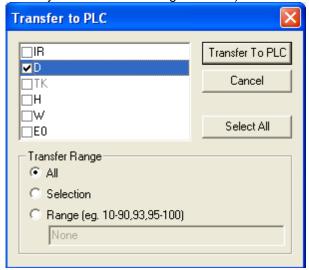
Transfer the convent	Transfer the converted and meanied program, i Le continge, and Bata Memory to Cor.					
Required items	Support Software	CX-One				
	(PC)	CXONE-ALooC-Vo/ ALooD-Vo				
		(CX-Programmer)				
	Connecting Cable	CS1W-CN226/626				



- (1) Connect CS1 with a PC.
- (2) Start the CX-Programmer and open the converted program file for CS1.
- (3) Go online with CS1.
- (4) Transfer the ladder program and PLC settings to the CS1. (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 and Holding Area: HR) and click the *Transfer to PLC* Button to start transfer.



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

#### 7. Appendix

Appendix A. Instructions converted by Change Model on CX-Programmer

- (1) The data type of operand is changed from BCD to binary for some instructions.
- (2) The number of operands is changed for some instructions.
- (3) Interrupt control instructions must be changed. (Use MSKS, MSKR, CLI, DI, and EI).

Refer to the list below for details. The table lists the instructions which differ between before and after conversion. The other instructions remain unchanged after conversion.

Instruction for C200HX/HG/HE	Instruction for CS1	Operand	Number of operands
JMP(04)	JMP(004) or JMP0(515)	When #0 is set to the operand, JMP is converted to JMP0 and the operand is deleted. If a value other than #0 is set, the operand is the same.	#0: Changed from 1 to 0 <> #0: Same
JME(05)	JME(005) or JME0(516)	When #0 is set to the operand, JME is converted to JME0 and the operand is deleted. If a value other than #0 is set, the operand is the same.	#0: Changed from 1 to 0 <> #0: Same
FAL(06)	FAL(006)	#0 is added to the second operand. FAL N → FAL N #0	Changed from 1 to 2.
FALS(07)	FALS(007)	#0 is added to the second operand. FALS N → FALS N #0	Changed from 1 to 2.
STEP(08)	STEP(008)	The Work Area (WR) or Index Register (indirect) can be used to specify the operand. Change the operand.	Same
SNXT(09)	SNXT(009)	The Work Area (WR) or Index Register (indirect) can be used to specify the operand. Change the operand.	Same
SCAN(18)	Not supported	Set a minimum cycle time in the PLC Setup.	
ADD(30)	+BC(406)	Same as C200HX/HG/HE	Same
SUB(31)	-BC(416)	Same as C200HX/HG/HE	Same
MUL(32)	*B(424)	Same as C200HX/HG/HE	Same
DIV(33)	/B(434)	Same as C200HX/HG/HE	Same
INC(38)	++B(452)	Same as C200HX/HG/HE	Same
DEC(39)	B(454)	Same as C200HX/HG/HE	Same
MSG(46)	MSG(046)	#0 is added to the first operand.  MSG FM → MSG #0 M  The number of characters (words) to be registered from	Changed from 1 to 2.
		the first message word is changed from 16 characters (8 words) to 32 characters (16 words).	
LMSG(47)	Not supported	Use MSG (046) instead.	
TERM(48)	Not supported	To execute the keyboard mapping function, use the function	on on the touch panel.
ADB(50)	+C(402)	Same as C200HX/HG/HE	Same
SBB(51)	-C(412)	Same as C200HX/HG/HE	Same
MLB(52)	*U(422)	Same as C200HX/HG/HE	Same
DVB(53)	/U(432)	Same as C200HX/HG/HE	Same
ADDL(54)	+BCL(407)	Same as C200HX/HG/HE	Same
SUBL(55)	-BCL(417)	Same as C200HX/HG/HE	Same
MULL(56)	*BL(425)	Same as C200HX/HG/HE	Same
DIVL(57)	/BL(435)	Same as C200HX/HG/HE	Same
MPRF(61)	Not supported	Use IORF (097) instead.	
LINE(63)	LINE(063)	The data type of the second operand is changed from BCD to binary. When a constant is specified, "#" is automatically converted to "&". When a word address is specified, change the data type of the word from BCD to binary.	Same
COLM(64)	COLM(064)	The data type of the third operand is changed from BCD to binary.  When a constant is specified, "#" is automatically converted to "&".  When a word address is specified, change the data type of the word from BCD to binary.	Same

Instruction for C200HX/HG/HE	Instruction for CS1	Operand	Number of operands
BCNT(67)	BCNTC(621)	Same as C200HX/HG/HE	Same
XFER(70)	XFERC(565)	Same as C200HX/HG/HE	Same
DIST(80)	DISTC(566)	Same as C200HX/HG/HE	Same
COLL(81)	COLLC(567)	Same as C200HX/HG/HE	Same
MOVB(82)	MOVBC(568)	Same as C200HX/HG/HE	Same
TTIM(87)	TTIM(087)	The third operand (reset bit) is deleted. Add the reset input. (See the figure below).  TTIM(87) 000 #3000 200.00  TTIM(087) 000 #3000	Changed from 3 to 2.
INT(89)	Not supported	Use the following instructions for each function: SET INTERRUPT MASK: MSKS(690) CLEAR INTERRUPT: CLI(691) READ INTERRUPT MASK: MSKR(692) DISABLE INTERRUPTS: DI(693) ENABLE INTERRUPTS: EI(694) Scheduled Interrupt Interval: Set in the PLC Setup	
SEND(90)	SEND(090)	The specification of the first control word (third operand) is changed. Refer to the manual to change the settings.	Same
WDT(94)	WDT(094)	The specification of the operand is changed. Refer to the manual to change the settings.	Same
RECV(98)	RECV(098)	The specification of the first control word (third operand) is changed. Refer to the manual to change the settings.	Same
BXFR(125)	Not supported	Use XFER(070) or XFERC(565) instead.	
FCS(180)	FCS(180)	The specification of the first control word (first operand) is changed. Refer to the manual to change the settings.	Same
SRCH(181)	SRCH(181)	The specification of the first control word (first operand) is changed. Refer to the manual to change the settings.	Same
MAX(182)	MAX(182)	The specification of the first control word (first operand) is changed. Refer to the manual to change the settings.	Same
MIN(183)	MIN(183)	The specification of the first control word (first operand) is changed. Refer to the manual to change the settings.	Same
SUM(184)	SUM(184)	The specification of the first control word (first operand) is changed. Refer to the manual to change the settings.	Same
PID(190)	PID(190)	The specification of the first parameter word (second operand) is changed. Refer to the manual to change the settings.	Same
AVG(195)	AVG(195)	The data type of the second operand is changed from BCD to binary. When a constant is specified, "#" is automatically converted to "&". When a word address is specified, change the data type of the word from BCD to binary.	Same
DSW(210)	DSW(210)	The fourth and fifth operands are added. The fourth operand specifies the number of digits that will be read. Check if the number of digits after conversion is the same as the number specified by this operand. The fifth operand specifies a work word used by this instruction. As this word cannot be used for any other purpose, change to another area when the area assigned by conversion is the area used for another purpose.	Changed from 3 to 5.
HKY(212)	HKY(212)	The fourth operand is added. The fourth operand specifies a work word used by this instruction. As this word cannot be used for any other purpose, change to another area when the area assigned by conversion is the area used for another purpose.	Changed from 3 to 4.

Instruction for C200HX/HG/HE	Instruction for CS1	Operand	Number of operands
MTR(213)	MTR(213)	The fourth operand is added. The fourth operand specifies a work word used by this instruction. As this word cannot be used for any other purpose, change to another area when the area assigned by conversion is the area used for another purpose.	Changed from 3 to 4.
7SEG(214)	7SEG(214)	The fourth operand is added. The fourth operand specifies a work word used by this instruction. As this word cannot be used for any other purpose, change to another area when the area assigned by conversion is the area used for another purpose.	Changed from 3 to 4.
IORD(222)	IORD(222)	The specifications of the operands are changed.	Same
IOWR(223)	IOWR(223)	The specifications of the operands are changed.	Same
RXD(235)	RXD(235)	This instruction cannot specify the peripheral port. The data type of the number of bytes to store (third operand) is changed from BCD to binary. When a constant is specified, "#" is automatically converted to "&". When a word address is specified, change the data type of the word from BCD to binary.	Same
TXD(236)	TXD(236)	This instruction cannot specify the peripheral port. The data type of the number of bytes (third operand) is changed from BCD to binary. When a constant is specified, "#" is automatically converted to "&". When a word address is specified, change the data type of the word from BCD to binary.	Same
STUP(237)	STUP(237)	The specification of the control word (port) (first operand) is changed. Refer to the manual to change the settings.	Same
PMCR(260)	PMCR(260)	The specification of the control word 1 (first operand) is changed. Refer to the manual to change the settings.	Changed from 3 to 4.
CMCR(261)	Not supported	Insert the memory card into the CPU Unit and use FREAD instead.	
FPD(269)	FPD(269)	The data types of the FAL number of the control word (first operand) and monitoring time (second operand) are changed from BCD to binary.	Same
XDMR(280)	Not supported	Use XFER(070) or XFERC(565) instead.	
EMBC(281)	EMBC(281)	The data type of the operand is changed from BCD to binary.  When a constant is specified, "#" is automatically converted to "&".  When a word address is specified, change the data type of the word from BCD to binary.	Same
TST(350)	TST(350)	The data type of the second operand is changed from BCD to binary.  When a constant is specified, "#" is automatically converted to "&".  When a word address is specified, change the data type of the word from BCD to binary.	Same
TSTN(351)	TSTN(351)	The data type of the second operand is changed from BCD to binary. When a constant is specified, "#" is automatically converted to "&". When a word address is specified, change the data type of the word from BCD to binary.	Same
ADBL(480)	+CL(403)	Same as C200HX/HG/HE	Same
SBBL(481)	-CL(413)	Same as C200HX/HG/HE	Same
MBSL(482)	*L(421)	Same as C200HX/HG/HE	Same
DBSL(483)	/L(431)	Same as C200HX/HG/HE	Same
MBS(484)	*(420)	Same as C200HX/HG/HE	Same
DBS(485)	/(430)	Same as C200HX/HG/HE	Same
BXF2	Not supported	Use XFER(070) or XFERC(565) instead.	
XFR2	Not supported	Use XFER(070) or XFERC(565) instead.	
IEMS	Not supported	Specify another address by using an Index Register.	
NEG()	NEG(160)	Same as C200HX/HG/HE However, if NEG Flag UF (25405) is used, change the Condition flags to P_N (Negative Flag).	Same
NEGL()	NEGL(161)	Same as C200HX/HG/HE However, if NEGL Flag UF (25405) is used, change the Condition flags to P_N (Negative Flag).	Same

Appendix B. Change of unit area allocation
This section describes the differences in unit area allocation between C200HX/HG/HE and CS1.
Refer to related manuals for details.

Item	C200HX/HG/HE	CS1	Description
I/O allocation Basic I/O	"Free location and fixed word allocation"	"Free location and free word allocation" Change the word and bit addresses used in the program.	For CS1, it is necessary to register the I/O table.
I/O allocation Special I/O	IR 100 to IR 199 IR 400 to IR 459 (10 words allocated for each Unit No.) DM 1000 to DM 2599 (100 words allocated for each Unit No.)	CIO 2000 to CIO 2199 (10 words allocated for each Unit No.) D20000 to D21999 (100 words allocated for each Unit No.) Change the word and bit addresses used in the program.	Refer to the CS1G/H-CPU□□H CS Series Programmable Controllers OPERATION MANUAL (Cat. No. W339) for details on I/O allocation.
I/O allocation Group-2 High-density I/O	IR 030 to IR 049 IR 330 to IR 341 (2 or 4 words allocated for each I/O word)	The allocation is decided in the same way as Basic I/O Units depending on the installed position (rack and slot). Change the word and bit addresses used in the program.	
Link Relay Area (LR)	LR 00 to LR 63	CIO 1000 to CIO 1199	
Special Relay Area (SR)	SR 236 to SR 255 SR 256 to SR 299	(1) Auxiliary Area and bits Change the word and bit addresses used in the program.	In CS1, operation flags and condition flags are specified by labels.
Auxiliary Relay Area (AR)	AR 00 to AR 27	(2) Condition flags and clock pulses Change the arithmetic flags in the program to the condition flags. Clock pulses are specified using global symbols, such as "P_0.1ms" and "P_1ms".	
PLC Link Words	SR 247 to SR 250 (In SR Area)	CIO 0247 to 0250 A442	
Optical I/O Unit and I/Terminal Area	IR 200 to IR 231	CIO 3100 to CIO 3131	
DeviceNet Area and SYSMAC BUS Area	IR 050 to IR 099 IR 350 to IR 399	[DeviceNet Area] CIO 0050 to CIO 0099 CIO 0350 to CIO 0399 [SYSMAC BUS Area] CIO 3000 to CIO 3079 Change the word and bit addresses used in the program.	
Work/Internal I/O Area	IR 310 to IR 329 IR 342 to IR 349 IR 460 to IR 511	CIO 1200 to CIO 1499 CIO 3800 to CIO 6143 W000 to W511	
Temporary Relay Area (TR)	TR 00 to TR 07	TR 00 to TR 15	
Holding Relay Area (HR)	HR 00 to HR 99	H 000 to H 511	
Error Log Area	DM 6000 to DM 6030	A100 to A199	Change the program if the Error Log Area is read in the program.

Appendix C. Change in PLC Settings

-1-	parrame or occasing a series of a series of a							
Item		C200HX/HG/HE	CS1	Description				
	PLC Setup	Always uses the DM Area (DM 6600 to	Uses dedicated area for PLC settings	Refer to related manuals for				
		DM 6655	(there is no address for setting by	details.				
			users).					

Appendix D. Change of execution timing etc.

Item	C200HX/HG/HE	CS1	Description
Interrupt execution method and execution timing	Write interrupt programs in subroutines.	Write interrupt programs in interrupt tasks.	In CS1, interrupt tasks are executed even when an instruction is being executed or I/O is being refreshed.
I/O table registration	Not required	Required I/O tables must be created with the CX-Programmer or other programming device.	
Cycle time	-	The cycle time is shortened with CS1. If the system operation is affected by cycle time, check the operation after conversion.	To keep the same cycle time as C200HX/HG/HE, set Minimum Cycle Time in the PLC Setup.

#### Appendix E. Table of Input/Output Units

#### ■ Input Unit

- (1) If a different type of terminal block or connector is used, change the wiring.
- (2) If the input specifications differ, make sure that the system operates correctly.
- (3) If the number of circuits increases, rewire the terminals to each common terminal.
- (4) If internal current consumption is different, make sure the power supply capacity is large enough.
- (5) C200H-series Units can be used with CS1-series CPU Units.
- (6) Refer to the related manuals for details. Although CS-series Units have basic functions of C200H-series Units, some specifications may differ.

< DC Input Units >

C200H-series Unit	Corresponding CS-series Unit	Description	Difference
C200H-ID211	CS1W-ID211	DC Input Unit with terminal	1) Terminal block
12 to 24 VDC, 10 mA, Terminal block, 8 inputs	24 VDC, 7 mA, Terminal block, 16 inputs	block for 8 inputs. Replace this unit with a DC Input Unit with 16 inputs.	2) Input points (8 points → 16 points) 3) Input circuit specifications Input voltage range (12 to 24 VDC → 24VDC) Input impedance (2 kΩ → 3.3 kΩ) ON voltage (10.2 VDC → 14.4 VDC) OFF voltage (3 VDC → 5 VDC) 4) Internal current consumption (5 VDC: 10 mA → 100 mA)
C200H-ID212	CS1W-ID211	DC Input Unit with terminal	1) Terminal block
24 VDC, 7 mA, Terminal block, 16 inputs	24 VDC, 7 mA, Terminal block, 16 inputs	block for 16 inputs.	<ul> <li>2) No. of circuits (16 points/common x 1 circuit         → 8 points/common x 2 circuits)</li> <li>3) Input circuit specification         Input impedance (3 kΩ → 3.3 kΩ)</li> <li>4) Internal current consumption         (5 VDC: 10 mA → 100 mA)</li> </ul>
C200H-ID215	CS1W-ID231	DC Input Unit with connector	1) Connector
24 VDC, 4.1 mA, Connector, 32 inputs (Special I/O)	24 VDC, 6 mA, Connector, 32 inputs	for 32 inputs.	Use the XW2Z-S010 Conversion Cable to reuse the connecting cable.  2) No. of circuits (8 points/common x 4 circuits → 16 points/common x 2 circuits)  3) Input circuit specifications Input impedance (5.6 kΩ → 3.9 kΩ) ON voltage(14.4 VDC → 15.4 VDC)  4) Internal current consumption (5 VDC: 130 mA → 150 mA)
C200H-ID216	CS1W-ID231	DC Input Unit with connector	1) No. of circuits (32 points/common x 1 circuit
24 VDC, 4.1 mA, Connector, 32 inputs (Group-2)	24 VDC, 6 mA, Connector, 32 inputs	for 32 inputs.	<ul> <li>→ 16 points/common x 2 circuits)</li> <li>2) Input circuit specifications         Input impedance (5.6 kΩ → 3.9 kΩ)         ON voltage (14.4 VDC → 15.4 VDC)</li> <li>3) Internal current consumption         (5 VDC: 100 mA → 150 mA)</li> </ul>
C200H-ID218	CS1W-ID231	DC Input Unit with connector	1) No. of circuits (32 points/common x 1 circuit
24 VDC, 6 mA, Connector, 32 inputs (Group-2)	24 VDC, 6 mA, Connector, 32 inputs	for 32 inputs.	<ul> <li>→ 16 points/common x 2 circuits)</li> <li>2) Internal current consumption</li> <li>(5 VDC: 100 mA → 150 mA)</li> </ul>
C200H-ID111	CS1W-ID261	DC Input Unit with connector	1) No. of circuits (32 points/common x 2 circuits
12 VDC, 4.1 mA, Connector, 64 inputs (Group-2)	24 VDC, 6 mA, Connector, 64 inputs	for 64 inputs.	<ul> <li>→ 16 points/common x 4 circuits)</li> <li>2) Input circuit specifications         Input voltage (12 VDC → 24 VDC)         Input impedance (2.7 kΩ → 3.9 kΩ)         ON voltage (8 VDC → 15.4 VDC)         OFF voltage (3 VDC → 5 VDC)         3) Internal current consumption         (5 VDC: 120 mA → 150 mA)</li> </ul>
C200H-ID217	CS1W-ID261	DC Input Unit with connector	1) No. of circuits (32 points/common x 2 circuits
24 VDC, 4.1 mA, Connector, 64 inputs (Group-2)	24 VDC, 6 mA, Connector, 64 inputs	for 64 inputs.	<ul> <li>→ 16 points/common x 4 circuits)</li> <li>2) Input circuit specifications         Input impedance (5.6 kΩ → 3.9 kΩ)         ON voltage (14.4 VDC → 15.4 VDC)     </li> <li>3) Internal current consumption         (5 VDC: 120 mA → 150 mA)     </li> </ul>
C200H-ID219	CS1W-ID261	DC Input Unit with connector	1) No. of circuits (32 points/common x 2 circuits
24 VDC, 6 mA, Connector, 64 inputs (Group-2)	24 VDC, 6 mA, Connector, 64 inputs	for 64 inputs.	<ul> <li>→ 16 points/common x 4 circuits)</li> <li>2) Internal current consumption</li> <li>(5 VDC: 120 mA → 150 mA)</li> </ul>

< TTL Input Unit >

C200H-series Unit	Corresponding CS-series Unit	Description	Difference
C200H-ID501	<u>.                                      </u>	•	or 32 inputs. The CS Series does not have the
5 VDC, 3.5 mA, Connector, 32 inputs (Special I/O)	No replacement model	same type of Unit. Use C200H-ID501 with CS1 or CS1W-MD561 TTL I/O Unit ins	use the CS1W-ID231 24-VDC Input Unit or tead.

< AC Input Units >

C200H-series Unit	Corresponding CS-series Unit	Description	Difference
C200H-IA121  100 to 120 VAC/10 mA, Terminal block, 8 inputs	CS1W-IA111  100 to 120 VAC/10 mA, 100 to 120 VDC/1.5 mA, Terminal block, 16 inputs	100 VAC Input Unit with terminal block for 8 inputs. Replace this unit with a 100 VAC Input Unit with 16 inputs.	<ol> <li>Terminal block</li> <li>Input points (8 points → 16 points)</li> <li>Input circuit specifications</li> <li>Input impedance</li> <li>(9.7 kΩ/50 Hz → 10 kΩ/50 Hz)</li> <li>ON voltage (60 VAC → 65 VAC)</li> <li>Internal current consumption</li> <li>VDC: 10 mA → 110 mA)</li> </ol>
C200H-IA221 200 to 240 VAC, 10 mA, Terminal block, 8 inputs	CS1W-IA211 200 to 240 VAC, 10 mA, Terminal block, 16 inputs	200 VAC Input Unit with terminal block for 8 inputs. Replace this unit with a 200 VAC Input Unit with 16 inputs.	1) Terminal block 2) Input points (8 points → 16 points) 3) Internal current consumption (5 VDC: 10 mA → 110 mA)
C200H-IA122/IA122V  100 to 120 VAC/10 mA, Terminal block, 16 inputs, IA122V: Complying with EC Directive	CS1W-IA111  100 to 120 VAC/10 mA, 100 to 120 VDC/1.5 mA, Terminal block, 16 inputs	100 VAC Input Unit with terminal block for 16 inputs.	1) Terminal block 2) No. of circuits (16 points/common x 1 circuit  → 8 points/common x 2 circuits) 3) Input circuit specifications Input impedance (9.7 kΩ/50 Hz→ 10 kΩ/50 Hz) ON voltage (60 VAC → 65 VAC) 4) Internal current consumption (5 VDC: 10 mA → 110 mA)
C200H-IA222/IA222V 200 to 240 VAC, 10 mA, Terminal block, 16 inputs, IA222V: Complying with EC Directive	CS1W-IA211 200 to 240 VAC, 10 mA, Terminal block, 16 inputs	200 VAC Input Unit with terminal block for 16 inputs.	1) Terminal block 2) No. of circuits (16 points/common x 1 circuit  → 8 points/common x 2 circuits) 3) Internal current consumption (5 VDC: 10 mA → 110 mA)

< AC/DC Input Units >

C200H-series Unit	Corresponding CS-series Unit	Description	Difference
C200H-IM211	CS1W-ID211	AC/DC Input Unit with	1) Terminal block
12 to 24 VAC/VDC, Terminal block, 8 inputs	24 VDC, 7 mA, Terminal block, 16 inputs	terminal block for 8 inputs. Replace this unit with a DC Input Unit with 16 inputs. *The CS Series does not have an AC/DC Input Unit. If this Unit is used with AC inputs, use this C200H-series Unit with CS1 or change the wiring for DC inputs.	<ul> <li>2) Input points (8 points → 16 points)</li> <li>3) Input circuit specifications Input voltage range (12 to 24 VAC/VDC → 24 VDC) Input impedance (2 kΩ → 3.3 kΩ) ON voltage (10.2 VDC → 14.4 VDC) OFF voltage (3 VDC → 5 VDC)</li> <li>4) Internal current consumption (5 VDC: 10 mA → 100 mA)</li> </ul>
C200H-IM212 24 VAC/VDC, Terminal block, 16 inputs	CS1W-ID211  24 VDC, 7 mA, Terminal block, 16 inputs	AC/DC Input Unit with terminal block for 16 inputs. Replace this unit with a DC Input Unit with 16 inputs. *The CS Series does not have an AC/DC Input Unit. If this Unit is used with AC inputs, use this C200H-series Unit with CS1 or change the wiring for DC inputs.	<ol> <li>Terminal block</li> <li>No. of circuits (16 points/common x 1 circuit         → 8 points/common x 2 circuits)</li> <li>Input circuit specifications         Input voltage range (24 VAC/VDC → 24 VDC)         Input impedance (3 kΩ→ 3.3 kΩ)</li> <li>Internal power consumption         (5 VDC: 10 mA → 100 mA)</li> </ol>

#### **■** Output Unit

- (1) If a different type of terminal block or connector is used, change the wiring.
- (2) If the number of circuits increases, rewire the terminals to each common terminal.
- (3) If the output specifications differ, make sure that the system operates correctly.
- (4) The relay lifetime may vary depending on usage when the different relay is used. Refer to *About Contact Output Units* under *Appendix A Specifications of Basic I/O Units and High-density I/O Units* in the CS1G/H-CPU

  CS Series Programmable Controllers OPERATION MANUAL (Cat. No. W339) for details.
- (5) If internal current consumption is different, make sure the power supply capacity is large enough.
- (6) If the voltage and current consumption of the external power supply differ, make sure the power supply capacity is large enough.
- (7) C200H-series Units can be used with CS1-series CPU Units.
- (8) Refer to the related manuals for details. Although CS-series Units has basic functions of C200H-series Units, some specifications may differ.

< Relay Output Units >

C200H-series Unit	Corresponding CS-series Unit	Description	Difference
C200H-OC223	CS1W-OC201	Relay Output Unit with	1) Terminal block
250 VAC/24 VDC, 2 A, Terminal block, 5 outputs (independent contacts)	250 VAC/120 VDC, 2 A, Terminal block, 8 outputs (independent contacts)	terminal block for 5 outputs (independent contacts). Replace this unit with a Relay Output Unit with 8 outputs (independent contacts).	<ul> <li>2) Output points (independent contacts 5 points → 8 points)</li> <li>3) Output circuit specifications ON/OFF response time (10 ms → 15 ms) Used relay</li> <li>4) Internal current consumption (5 VDC: 10 mA → 100 mA, 26 VDC: 46 mA → 48 mA)</li> </ul>
C200H-OC224	CS1W-OC201	Relay Output Unit with	1) Terminal block
250 VAC/24 VDC, 2 A, Terminal block, 8 outputs (independent contacts)	250 VAC/120 VDC, 2 A, Terminal block, 8 outputs (independent contacts)	terminal block for 8 outputs (independent contacts).	<ul> <li>2) Output circuit specifications ON/OFF response time (10 ms → 15 ms) Used relay</li> <li>3) Internal current consumption (5 VDC: 10 mA → 100 mA, 26 VDC: 75 mA → 48 mA)</li> </ul>
C200H-OC224V, OC224N	CS1W-OC201	Relay Output Unit with	1) Terminal block
250 VAC/24 VDC, 2 A, Terminal block, 8 outputs (independent contacts)	250 VAC/120 VDC, 2 A, Terminal block, 8 outputs (independent contacts)	terminal block for 8 outputs (independent contacts).	<ul> <li>2) Output circuit specification         Used relay</li> <li>3) Internal current consumption         (5 VDC: 10 mA →100 mA,         26 VDC: 90 mA → 48 mA)</li> </ul>
C200H-OC221	CS1W-OC211	Relay Output Unit with	1) Terminal block
250 VAC/24 VDC, 2 A, Terminal block, 8 outputs	250 VAC/120 VDC, 2 A, Terminal block, 16 outputs	terminal block for 8 outputs. Replace this unit with a Relay Output Unit with 16 outputs.	<ul> <li>2) Output points (8 points → 16 points)</li> <li>3) Output circuit specifications ON/OFF response time (10 ms → 15 ms) Used relay</li> <li>4) Internal current consumption (5 VDC: 10 mA → 100 mA, 26 VDC: 75 mA → 96 mA)</li> </ul>
C200H-OC222	CS1W-OC211	Relay Output Unit with	1) Terminal block
250 VAC/24 VDC, 2 A, Terminal block, 12 outputs	250 VAC/120 VDC, 2 A, Terminal block, 16 outputs	terminal block for 12 outputs. Replace this unit with a Relay Output Unit with 16 outputs.	<ul> <li>2) Output points (12 points → 16 points)</li> <li>3) No. of circuits (12 points/common x 1 circuit → 8 points/common x 2 circuits)</li> <li>4) Output circuit specifications ON/OFF response time (10 ms → 15 ms) Used relay</li> <li>5) Internal current consumption (5 VDC: 10 mA → 100 mA, 26 VDC: 75 mA → 96 mA)</li> </ul>
C200H-OC222V, OC222N	CS1W-OC211	Relay Output Unit with	1) Terminal block
250 VAC/24 VDC, 2 A, Terminal block, 12 outputs	250 VAC/120 VDC, 2 A, Terminal block, 16 outputs	terminal block for 12 outputs. Replace this unit with a Relay Output Unit with 16 outputs.	<ul> <li>2) Output points (12 points → 16 points)</li> <li>3) No. of circuits (12 points/common x 1 circuit → 8 points/common x 2 circuits)</li> <li>4) Output circuit specification Used relay</li> <li>5) Internal current consumption (5 VDC: 10 mA → 100 mA, 26 VDC: 90 mA → 96 mA)</li> </ul>

< Relay Output Units >

C200H-series Unit	Corresponding CS-series Unit	Description	Difference
C200H-OC225	CS1W-OC211	Relay Output Unit with	1) Terminal block
250 VAC/24 VDC, 2 A, Terminal block, 16 outputs	250 VAC/120 VDC, 2 A, Terminal block, 16 outputs	terminal block for 16 outputs.	<ul> <li>2) No. of circuits (16 points/common x 1 circuit → 8 points/common x 2 circuits)</li> <li>3) Output circuit specifications ON/OFF response time (10 ms →15 ms) Used relay</li> <li>4) Internal current consumption (5 VDC: 10 mA → 100 mA, 26 VDC: 75 mA → 96 mA)</li> </ul>
C200H-OC226, OC226N	CS1W-OC211	Relay Output Unit with	1) Terminal block
250 VAC/24 VDC, 2 A, Terminal block, 16 outputs	250 VAC/120 VDC, 2 A, Terminal block, 16 outputs	terminal block for 16 outputs.	<ul> <li>2) No. of circuits (16 points/common x 1 circuit         → 8 points/common x 2 circuits)</li> <li>3) Output circuit specification         Used relay</li> <li>4) Internal current consumption         (5 VDC: 10 mA → 100 mA,         26 VDC: 90 mA → 96 mA)</li> </ul>

< Transistor Output Units >

< Transistor Output Units > C200H-series Unit	Corresponding CS-series Unit	Description	Difference
C200H-OD411  12 to 48 VDC, 1 A, Sinking, Terminal block, 8 outputs	CS1W-OD211  12 to 24 VDC, 0.5 A, Sinking, Terminal block, 16 outputs	Transistor Output Unit with terminal block for 8 outputs. Replace this unit with a Transistor Output Unit with 16 outputs.	1) Terminal block 2) Output points (8 points→ 16 points) 3) Output circuit specifications Output capacity (1 A/point, 3 A/Unit → 0.5 A/point, 8 A/Unit) Voltage range (12 to 48 VDC → 12 to 24VDC) Residual voltage (1.4 V → 1.5 V) ON response time (0.2 ms → 0.5 ms) OFF response time (0.2 ms → 1.0 ms) 4) Internal current consumption (5 VDC: 140 mA → 170 mA)
C200H-OD213	CS1W-OD211	Transistor Output Unit with	1) Terminal block
24 VDC, 2.1 A, Sinking, Terminal block, 8 outputs	12 to 24 VDC, 0.5 A, Sinking, Terminal block, 16 outputs	terminal block for 8 outputs. Replace this unit with a Transistor Output Unit with 16 outputs.	<ul> <li>2) Output points (8 points → 16 points)</li> <li>3) Output circuit specifications     Output capacity     (2.1 A/point, 5.2 A/Unit → 0.5 A/point, 8 A/Unit)     Residual voltage (1.4 V → 1.5 V)     ON response time (0.2 ms → 0.5 ms)     OFF response time (0.3 ms → 1.0 ms)</li> <li>4) Internal current consumption     (5 VDC: 140 mA → 170 mA)</li> </ul>
C200H-OD214	CS1W-OD212	Transistor Output Unit with	1) Terminal block
24 VDC, 0.8 A, Sourcing, Terminal block, Load short circuit protection, 8 outputs	12 to 24 VDC, 0.5 A, Sourcing, Terminal block, Load short circuit protection, 16 outputs	terminal block for 8 outputs. Replace this unit with a Transistor Output Unit with 16 outputs.	<ul> <li>2) Output points (8 points → 16 points)</li> <li>3) Output circuit specifications Output capacity (0. 8A/point, 2.4 A/Unit → 0.5 A/point, 5 A/Unit) ON response time (1 ms → 0.5 ms)</li> <li>4) Internal current consumption (5 VDC: 140 mA → 170 mA)</li> </ul>
C200H-OD216	CS1W-OD212	Transistor Output Unit with	1) Terminal block
5 to 24 VDC, 0.3 A, Sourcing, Terminal block, 8 outputs	12 to 24 VDC, 0.5 A, Sourcing, Terminal block, Load short circuit protection, 16 outputs	terminal block for 8 outputs. Replace this unit with a Transistor Output Unit with 16 outputs.	<ul> <li>2) Output points (8 points → 16 points)</li> <li>3) Output circuit specification Output voltage range (5 to 24 VDC → 24 VDC)</li> <li>4) Internal current consumption (5 VDC: 10 mA → 170 mA, 26 VDC: 75 mA → 0 mA)</li> <li>5) External power supply (Not required → 24 VDC/40 mA)</li> </ul>
C200H-OD211	CS1W-OD211	Transistor Output Unit with	1) Terminal block
24 VDC, 0.3 A, Sinking, Terminal block, 12 outputs	12 to 24 VDC, 0.5 A, Sinking, Terminal block, 16 outputs	terminal block for 12 outputs. Replace this unit with a Transistor Output Unit with 16 outputs.	<ul> <li>2) Output points (12 points → 16 points)</li> <li>3) No. of circuits (12 points/common x 1 circuit → 8 points/common x 2 circuits)</li> <li>4) Output circuit specifications Residual voltage (1.4 V → 1.5 V) ON response time (0.2 ms → 0.5 ms) OFF response time (0.3 ms → 1.0 ms)</li> <li>5) Internal current consumption (5 VDC: 160 mA → 170 mA)</li> </ul>

< Transistor Output Units >

< Transistor Output Units >			
C200H-series Unit	Corresponding CS-series Unit	Description	Difference
C200H-OD217 5 to 24 VDC, 0.3 A, Sourcing, Terminal block, 12 outputs	CS1W-OD212  12 to 24 VDC, 0.5 A, Sourcing, Terminal block, Load short circuit protection, 16 outputs	Transistor Output Unit with terminal block for 12 outputs. Replace this unit with a Transistor Output Unit with 16 outputs.	<ol> <li>Terminal block</li> <li>Output points (12 points → 16 points)</li> <li>No. of circuits (12 points/common x 1 circuit → 8 points/common x 2 circuits)</li> <li>Output circuit specification         Output voltage range (5 to 24 VDC → 24 VDC)</li> <li>Internal current consumption         (5 VDC: 10 mA → 170 mA, 26 VDC: 75 mA → 0 mA)</li> </ol>
			6) External power supply (Not required → 24 VDC: 40 mA)
C200H-OD212  24 VDC, 0.3 A, Sinking, Terminal block, 16 outputs	CS1W-OD211  12 to 24 VDC, 0.5 A, Sinking, Terminal block, 16 outputs	Transistor Output Unit with terminal block for 16 outputs.	<ol> <li>Terminal block</li> <li>No. of circuits (16 points/common x 1 circuit → 8 points/common x 2 circuits)</li> <li>Output circuit specifications         Residual voltage (1.4 V → 1.5 V)         ON response time (0.2 ms → 0.5 ms)         OFF response time (0.3 ms → 1.0 ms)</li> </ol>
C200H-OD21A	CS1W-OD212	Transistor Output Unit with	1) Terminal block
24 VDC, 1.0 A, Sourcing, Terminal block, Load short circuit protection, 16 outputs	12 to 24 VDC, 0.5 A, Sourcing, Terminal block, Load short circuit protection, 16 outputs	terminal block for 16 outputs.	2) No. of circuits (16 points/common x 1 circuit  → 8 points/common x 2 circuits)  3) Output circuit specifications Output capacity (1 A/point, 4 A/Unit → 0.5 A/point, 5 A/Unit) Residual voltage (0.8 V → 1.5 V) ON response time (0.1 ms → 0.5 ms) OFF response time (0.3 ms → 1.0 ms) 4) Internal current consumption (5 VDC: 160 mA → 170 mA) 5) External power supply (24 VDC: 35 mA → 40 mA) 6) Alarm output (Supported → Not supported)
C200H-OD218	CS1W-OD231	Transistor Output Unit with	1) No. of circuits (32 points/common x 1 circuit
4.5 to 26.3 VDC, 0.1A, Sinking, Connector, 32 outputs (Group-2)	12 to 24 VDC, 0.5A, Sinking, Connector, 32 outputs	connector for 32 outputs.	→ 16 points/common x 2 circuits)  2) Output circuit specifications Output voltage range (5 to 24 VDC → 12 to 24 VDC) Residual voltage (0.8 V → 1.5 V) ON response time (0.1 ms → 0.5 ms) OFF response time (0.4 ms → 1.0 ms) 3) Internal current consumption (5 VDC: 180 mA → 270 mA) 4) External power supply (5 to 24 VDC: 110 mA → 12 to 24 VDC: 50 mA)
C200H-OD215	CS1W-OD231	Transistor Output Unit with	1) Connector
4.5 to 26.3 VDC, 0.1 A, Sinking, Connector, 32 outputs (Special I/O)	12 to 24 VDC, 0.5A, Sinking, Connector, 32 outputs	connector for 32 outputs. *The CS1-series Unit does not support dynamic outputs. Use this C200H-series Unit with CS1 or change the wiring for static outputs.	Use the XW2Z-S011 Conversion Cable to reuse the connecting cable.  2) Output method (Dynamic or static mode → Static mode only) Based on specifications in static output mode 3) No. of circuits (8 points/common x 4 circuits → 16 points/common x 2 circuits)  4) Output circuit specifications Output voltage range (5 to 24 VDC → 12 to 24 VDC) Residual voltage (0.7 V → 1.5 V) ON response time (0.2 ms → 0.5 ms) OFF response time (0.6 ms → 1.0 ms) 5) Internal current consumption (5 VDC: 220 mA → 270 mA) 6) External power supply (5 to 24 VDC: 90 mA → 12 to 24 VDC: 50 mA)
C200H-OD21B	CS1W-OD232	Transistor Output Unit with	1) No. of circuits (32 points/common x 1 circuit
24 VDC, 0.5 A, Sourcing, Connector, Load short circuit protection, 32 outputs (Group-2)	12 to 24 VDC, 0.5 A, Sourcing, Connector, Load short circuit protection, 32 outputs	connector for 32 outputs.	<ul> <li>→ 16 points/common x 2 circuits)</li> <li>2) Output circuit specifications</li> <li>Output capacity (0.5 A/point, 5 A/Unit</li> <li>→ 0.5 A/point, 2.5 A/common, 5 A/Unit)</li> <li>Residual voltage (0.8 V → 1.5 V)</li> <li>ON response time (0.1 ms → 0.5 ms)</li> <li>OFF response time (0.3 ms → 1.0 ms)</li> <li>3) Internal current consumption</li> <li>(5 VDC: 180 mA → 270 mA)</li> </ul>

< Transistor Output Units >

C200H-series Unit	Corresponding CS-series Unit	Description	Difference
C200H-OD219	CS1W-OD261	Transistor Output Unit with	1) No. of circuits (32 points/common x 2 circuits
4.5 to 26.3 VDC, 0.1 A, Sinking, Connector, 64 outputs (Group-2)	12 to 24 VDC, 0.3 A, Sinking, Connector, 64 outputs	connector for 64 outputs	→ 16 points/common x 4 circuits)  2) Output circuit specifications Output voltage range (5 to 24 VDC → 12 to 24 VDC) Residual voltage (0.8 V → 1.5 V) ON response time (0.1 ms → 0.5 ms) OFF response time (0.4 ms → 1.0 ms)  3) Internal current consumption (5 VDC: 270 mA → 390 mA)

< TTL Output Unit >

C200H-series Unit	Corresponding CS-series Unit	Description	Difference
C200H-OD501		TTL Output Unit with connector	for 32 outputs. The CS Series does not have the
5 VDC, 35 mA, Connector, 32 outputs (Special I/O)	No replacement model	same type of Unit. Use C200H-OD501 with CS1 or use the CS1W-OD231 Transistor Output Unit of CS1W-MD561 TTL I/O Unit instead.	

< Triac Output Units >

< Triac Output Units > C200H-series Unit	Corresponding CS-series Unit	Description	Difference
C200H-OA223	CS1W-OA201	Triac Output Unit with	1) Terminal block
250 VAC, 1.2 A, Terminal block, 8 outputs		terminal block for 8 outputs.	<ul> <li>2) Output circuit specification Max. inrush current (15 A: Pulse width 100 ms, 30 A: Pulse width 10 ms → 10 A: Pulse width 100 ms, 20 A: Pulse width 10 ms)</li> <li>3) Internal current consumption (5 VDC: 180 mA → 230 mA)</li> </ul>
C200H-OA221	CS1W-OA201	Triac Output Unit with terminal block for 8 outputs.	1) Terminal block
250 VAC, 1.2 A, Terminal block, 8 outputs	250 VAC, 1.2 A, Terminal block, 8 outputs	terminai biock for 8 outputs.	2) Output circuit specifications  Max. inrush current (No regulation → 10 A:  Pulse width 100 ms, 20 A: Pulse width 10 ms)  Residual voltage (1.2 VAC →  50 to 1200 mA: 1.5 VAC, 10 to 50 mA: 5 VAC)  OFF response time (1/2 of load frequency or less → 1/2 of load frequency + 1 ms or less)  3) Internal current consumption  (5 VDC: 140 mA → 230 mA)
C200H-OA224	CS1W-OA211	Triac Output Unit with	1) Terminal block
250 VAC, 0.5 A, Terminal block, 12 outputs	250 VAC, 0.5 A, Terminal block, 16 outputs	terminal block for 12 outputs. Replace this unit with a Triac Output Unit with 16 outputs.	2) Output points (12 points → 16 points) 3) No. of circuits (12 points/common x 1 circuit → 8 points/common x 2 circuits) 4) Output circuit specifications Max. switching capacity (250 VAC 0.5 A/point, 2 A/Unit → 0.5 A/point, 2 A/common, 4 A/Unit) Max. inrush current (10A: Pulse width 100 ms, 20A: Pulse width 10 ms → 15A: Pulse width 10 ms) Min. switching capacity (10 VAC: 100 mA, 24 VAC: 50 mA, 100 VAC: 10 mA →75 VAC: 50 mA) Residual voltage (50 to 500 mA: 1.5 VAC, 10 to 50 mA: 5 VAC → 1.6 VAC 5) Internal current consumption (5 VDC: 270 mA → 406 mA)
C200H-OA222V	CS1W-OA211	Triac Output Unit with	1) Terminal block
250 VAC, 0.3 A, Terminal block, 12 outputs (CE marked)	250 VAC, 0.5 A, Terminal block, 16 outputs	terminal block for 12 outputs. Replace this unit with a Triac Output Unit with 16 outputs.	2) Output points (12 points → 16 points) 3) No. of circuits (12 points/common x 1 circuit → 8 points/common x 2 circuits) 4) Output circuit specifications Max. inrush current (No regulation → 15 A: Pulse width 10 ms) Min. switching capacity (10 VAC: 10 mA (resistive load)/40 mA (inductive load) → 75 VAC: 50 mA) Residual voltage (1.2 VAC → 1.6 VAC) ON response time (1/2 of load frequency or less → 1 ms or less) OFF response time (1/2 of load frequency or less → 1/2 of load frequency + 1 ms or less) 5) Internal current consumption (5 VDC: 200 mA → 406 mA)

#### ■ I/O Unit

- (1) The CS Series has two I/O Units: CS1W-MD261 and CS1W-MD561. The word allocation of the CS-series Unit is different from that of the C200H-series Unit since the number of inputs and outputs of the CS-series unit is 32 points each.
- (2) C200H-series Units can be used with CS1-series CPU Units.
- (3) Refer to the related manuals for details. Although CS-series Units have basic functions of C200H-series Units, some specifications may differ.

< DC Input/Transistor Output Units >

C200H-series Unit	Corresponding CS-series Unit	Description	Difference	
C200H-MD115		I/O Unit with connector for 16 inputs and 16 outputs. The CS Series does not have the same type of Unit. Use this Unit with CS1 or use CS1W-MD261 or CS1W-MD561 instead.		
12 VDC/16 inputs, 12 VDC/16 outputs (Sinking), Connector (Special I/O)	No replacement model			
C200H-MD215		I/O Unit with connector for 16 inputs and 16 outputs. The CS Series does not		
24 VDC/16 inputs, 5 to 24 VDC/16 outputs (Sinking), Connector (Special I/O)	No replacement model	have the same type of Unit. Use this Unit with CS1 or use C	CS1W-MD261 or CS1W-MD561 instead.	

#### < TTL I/O Unit >

C200H-series Unit	Corresponding CS-series Unit	Description	Difference
C200H-MD501		I/O Unit with connector for 16 inputs and 16 outputs. The CS Series does not	
5 VDC/16 inputs, 5 VDC/16 outputs, Connector (Special I/O)		have the same type of Unit. Use this Unit with CS1 or use CS1W-MD261 or CS1W-MD561 instead.	

**OMRON Corporation Industrial Automation Company** 

Tokyo, JAPAN

Contact: www.ia.omron.com

Regional Headquarters OMRON EUROPE B.V. Wegalaan 67-69, 2132 JD Hoofddorp The Netherlands Tel: (31)2356-81-300/Fax: (31)2356-81-388

OMRON ASIA PACIFIC PTE. LTD.

No. 438A Alexandra Road # 05-05/08 (Lobby 2), Alexandra Technopark, Singapore 119967 Tel: (65) 6835-3011/Fax: (65) 6835-2711

OMRON ELECTRONICS LLC 2895 Greenspoint Parkway, Suite 200 Hoffman Estates, IL 60169 U.S.A Tel: (1) 847-843-7900/Fax: (1) 847-843-7787

OMRON (CHINA) CO., LTD.
Room 2211, Bank of China Tower,
200 Yin Cheng Zhong Road,
PuDong New Area, Shanghai, 200120, China
Tel: (86) 21-5037-2222/Fax: (86) 21-5037-2200

**Authorized Distributor:** 

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