Terminal Block Conversion Adapters

XW7G-CS□□-□

CSM_XW7G-CS__-__DS_E_1_1

Reuse Terminal Block Wiring When Replacing PLCs

32-point Terminal Block Conversion Adapters for Fujitsu Connectors XW7G-CS01-1/CS01-2/CS01-3

16-point Terminal Block Conversion Adapter for One-slot Unit XW7G-CS02

16-point Terminal Block Conversion Adapter for Two-slot Unit XW7G-CS03

32-point Terminal Block Conversion Adapter for Two-slot Unit XW7G-CS04

Overview

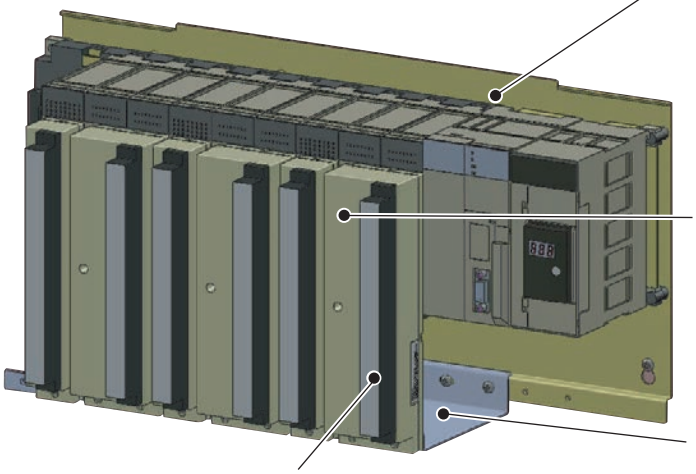
The XW7G-CS□□-□ Terminal Block Conversion Adapters allow you to reuse the terminal block wiring from existing C500-series Basic I/O Units when you replace C500, C1000H, C2000H, or CV/CVM1-series PLCs with CS-series PLCs.

These Adapters eliminate the need to redo all of the I/O wiring, which greatly reduces the time required for wiring, checking wiring, and trial operation.

Features

- Reuse C500-series terminal block wiring from existing Programmable Controllers.
- Mount C500-series terminal blocks directly to CS-series I/O Units.
- Minimize the additional space required to replace PLCs.

System Configuration



Special Plate for Mounting CS1 Backplanes

The previous C500 Backplane mounting holes are used to secure the Special Plate, and the CS1 Backplane is mounted to it.

Conversion Adapter

Spacer

The Spacer is a plate that supports the bottoms of the Conversion Adapters. It is secured to the Special Plate and Conversion Adapters with screws.

I/O Terminal Block

This is the C500-series terminal block from the previous Programmable Controller.

Terminal Block Conversion Adapters

Converting Input Units

Converting to DC Input Units

Converting 16-point DC Input Units to DC Input Units

Previous Unit		New Unit		Terminal Block Conversion Adapter	Standards
Model	Unit name (specifications)	Model	Unit name (specifications)	Model	
C500-ID112	16-point DC Input Unit (5 to 12 VDC, 16 mA)	CS1W-ID211	16-point DC Input Unit with Terminal Block (24 VDC, 7 mA)	XW7G-CS02	---
C500-ID213	16-point DC Input Unit (12 to 24 VDC, 10 mA)				---

Converting 32-point DC Input Units to DC Input Units

Previous Unit		New Unit		Terminal Block Conversion Adapter	Standards
Model	Unit name (specifications)	Model	Unit name (specifications)	Model	
C500-ID215	32-point DC Input Unit (12 to 24 VDC, 10 mA)	CS1W-ID231	32-point DC Input Unit with Connector (24 VDC, 6 mA)	XW7G-CS01-1	---
C500-ID218					---

Converting to AC Input Units

Converting 16-point AC Input Units to AC Input Units

Previous Unit		New Unit		Terminal Block Conversion Adapter	Standards
Model	Unit name (specifications)	Model	Unit name (specifications)	Model	
C500-IA121	16-point 100-VAC Input Unit (100 to 120 VAC, 10 mA)	CS1W-IA111	16-point AC Input Unit (100 to 120 VAC, 100 to 120 VDC)	XW7G-CS02	---
C500-IA222	16-point 200-VAC Input Unit (200 to 240 VAC, 10 mA)	CS1W-IA211	16-point AC Input Unit (200 to 240 VAC)		---

Converting 32-point AC Input Units to AC Input Units

Previous Unit		New Unit		Terminal Block Conversion Adapter	Standards
Model	Unit name (specifications)	Model	Unit name (specifications)	Model	
C500-IA122	32-point 100-VAC Input Unit (100 to 120 VAC, 10 mA)	Two CS1W-IA111 Units	16-point AC Input Unit (100 to 120 VAC, 100 to 120 VDC)	XW7G-CS04	---
C500-IA223	32-point 200-VAC Input Unit (200 to 240 VAC, 10 mA)	Two CS1W-IA211 Units	16-point AC Input Unit (200 to 240 VAC)		---

Converting Output Units

Converting to Transistor Output Units

Converting 16-point Transistor Output Units to Transistor Output Units

Previous Unit		New Unit		Terminal Block Conversion Adapter	Standards
Model	Unit name (specifications)	Model	Unit name (specifications)	Model	
C500-OD217	16-point Transistor Output Unit (12 to 24 VDC, 1 A)	CS1W-OD211	16-point Transistor Output Unit with Terminal Block (12 to 24 VDC, 0.5 A, NPN output)	XW7G-CS02	---
C500-OD411 *	16-point Transistor Output Unit (12 to 48 VDC, 1 A) Note: Application is possible from 12 to 24 VDC.				
C500-OD219	16-point Transistor Output Unit (12 to 24 VDC, 2.1 A)				

* Supply power to terminal 19 on the existing terminal block.

Terminal Block Conversion Adapters

Converting 32-point Transistor Output Units to Transistor Output Units

Previous Unit		New Unit		Terminal Block Conversion Adapter	Standards
Model	Unit name (specifications)	Model	Unit name (specifications)	Model	
C500-OD218	32-point Transistor Output Unit (12 to 24 VDC, 0.3 A)	CS1W-OD231	32-point Transistor Output Unit with Connector (12 to 24 VDC, 0.5 A, NPN output)	XW7G-CS01-2	---
C500-OD412 *	32-point Transistor Output Unit (12 to 48 VDC, 0.3 A) Note: Application is possible from 12 to 24 VDC.				
C500-OD414	32-point Transistor Output Unit (12 to 48 VDC, 0.3 A) Note: Application is possible from 12 to 24 VDC.				
C500-OD212	32-point Transistor Output Unit (12 to 24 VDC, 0.3 A, PNP output)	CS1W-OD232	32-point Transistor Output Unit with Connector (24 VDC, 0.5 A, PNP output)	XW7G-CS01-3	---

* Supply power to terminal A18 on the existing terminal block.

Converting to Triac Output Units

Converting 16-point Triac Output Units to Triac Output Units

Previous Unit		New Unit		Terminal Block Conversion Adapter	Standards
Model	Unit name (specifications)	Model	Unit name (specifications)	Model	
C500-OA121	16-point Triac Output Unit (132 VAC, 1 A)	CS1W-OA211	16-point Triac Output Unit (250 VAC, 0.5 A max.)	XW7G-CS02	---
C500-OA222	16-point Triac Output Unit (250 VAC, 1 A)				
C500-OA226	16-point Triac Output Unit (250 VAC, 1.2 A max.)				

Converting 24-point Triac Output Units to Triac Output Units

Previous Unit		New Unit		Terminal Block Conversion Adapter	Standards
Model	Unit name (specifications)	Model	Unit name (specifications)	Model	
C500-OA223	24-point Triac Output Unit (250 VAC, 1 A)	Two CS1W-OA211 Units	16-point Triac Output Unit (250 VAC, 0.5 A max.)	XW7G-CS04	---

Converting 32-point Triac Output Units to Triac Output Units

Previous Unit		New Unit		Terminal Block Conversion Adapter	Standards
Model	Unit name (specifications)	Model	Unit name (specifications)	Model	
C500-OA225	32-point Triac Output Unit (250 VAC, 1 A)	Two CS1W-OA211 Units	16-point Triac Output Unit (250 VAC, 0.5 A max.)	XW7G-CS04	---

Converting to Relay Contact Output Units

Converting 16-point Relay Contact Output Units to Relay Contact Output Units

Previous Unit		New Unit		Terminal Block Conversion Adapter	Standards
Model	Unit name (specifications)	Model	Unit name (specifications)	Model	
C500-OC221	16-point Relay Contact Output Unit (250 VAC or 24 VDC, 2 A)	CS1W-OC211	16-point Relay Contact Output Unit (250 VAC or 24 VDC, 2 A max., 120 VDC, 0.1 A max.)	XW7G-CS02	---
C500-OC223	16-point Relay Contact Output Unit (250 VAC or 24 VDC, 2 A, independent commons)	Two CS1W-OC201 Units	8-point Relay Contact Output Unit (250 VAC or 120 VDC, 2 A max., independent commons)	XW7G-CS03	---

Converting 32-point Relay Contact Output Units to Relay Contact Output Units

Previous Unit		New Unit		Terminal Block Conversion Adapter	Standards
Model	Unit name (specifications)	Model	Unit name (specifications)	Model	
C500-OC224	32-point Relay Contact Output Unit (250 VAC or 24 VDC, 2 A)	Two CS1W-OC211 Units	16-point Relay Contact Output Unit (250 VAC or 24 VDC, 2 A max., 120 VDC, 0.1 A max.)	XW7G-CS04	---

Terminal Block Conversion Adapters

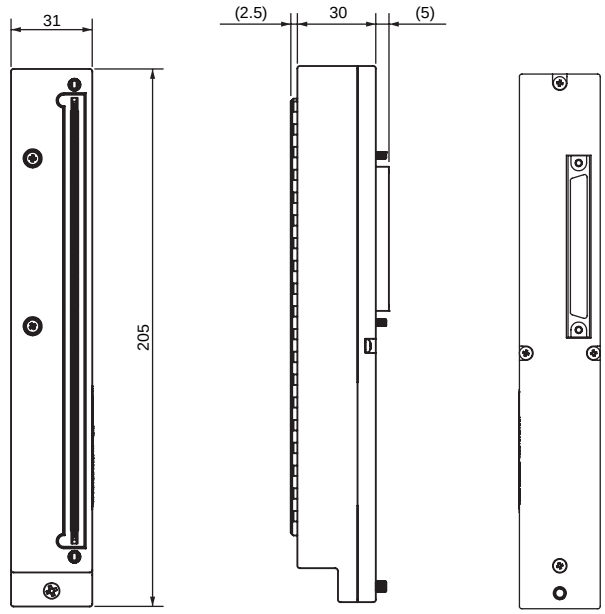
(Unit: mm)

Ordering Information

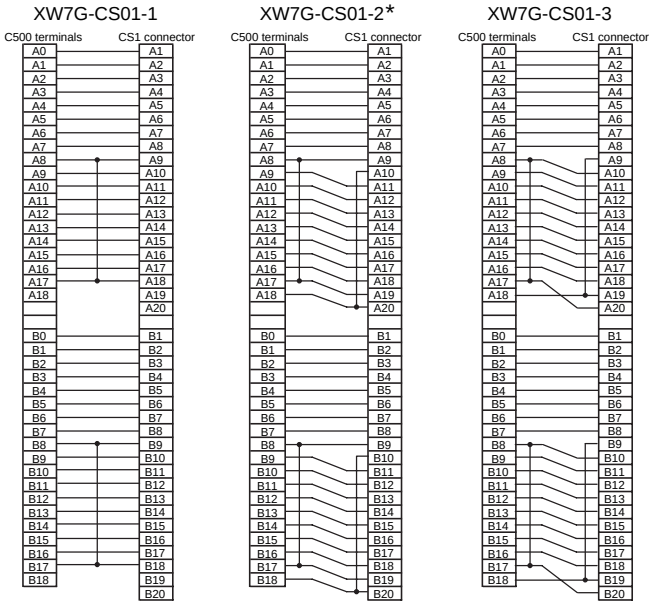
Model	Overview	Ratings
XW7G-CS01-1	32-point Terminal Block Conversion Adapters for Fujitsu Connectors	24 VDC, 0.5 A
XW7G-CS01-2		
XW7G-CS01-3		
XW7G-CS02	16-point Terminal Block Conversion Adapter for One-slot Unit	250 VAC, 2 A or 24 VDC, 2 A
XW7G-CS03	16-point Terminal Block Conversion Adapter for Two-slot Unit	250 VAC, 2 A or 24 VDC, 2 A
XW7G-CS04	32-point Terminal Block Conversion Adapter for Two-slot Unit	

Dimensions

XW7G-CS01-1, XW7G-CS01-2, and XW7G-CS01-3

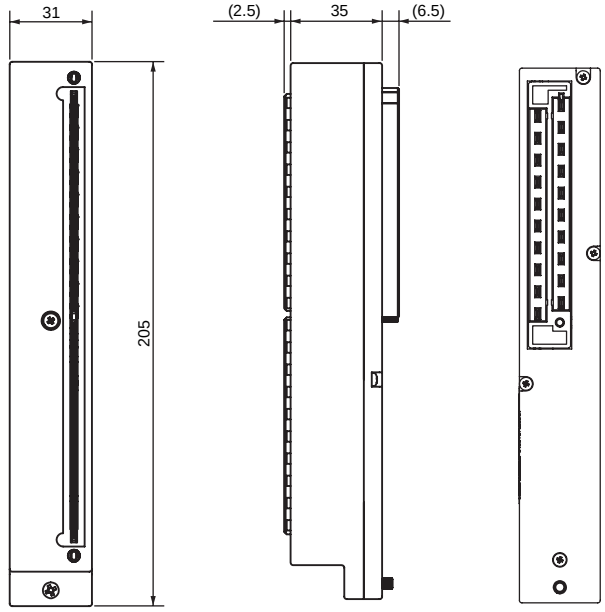


Wiring Diagrams

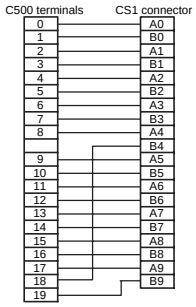


Note: If the previous Unit was the C500-OD412, supply power to terminal A18 on the existing terminal block.

XW7G-CS02



Wiring Diagram

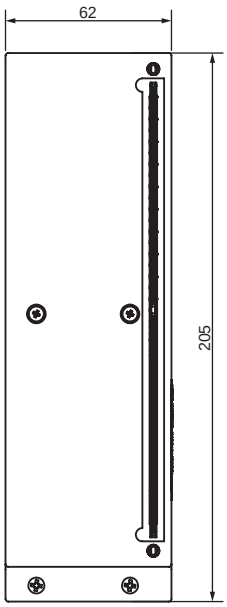


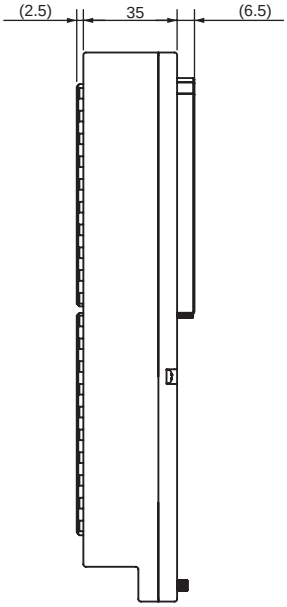
Note: If the previous Unit was the C500-OD411, supply power to terminal 19 on the existing terminal block.

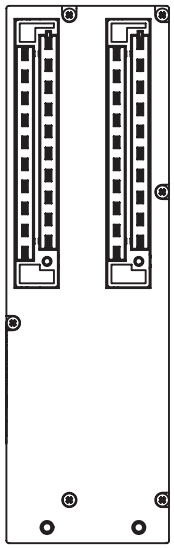
(Unit: mm)

Dimensions

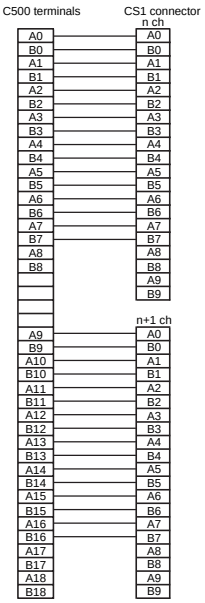
XW7G-CS03



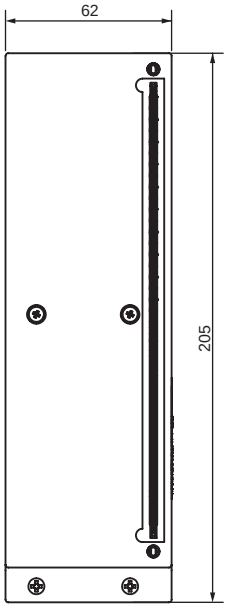


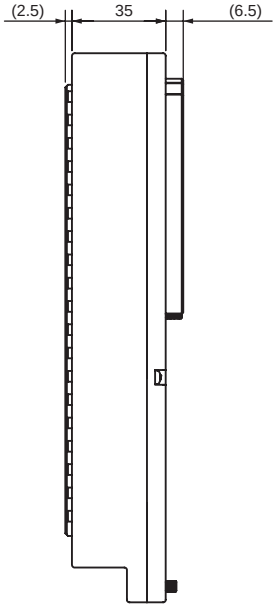


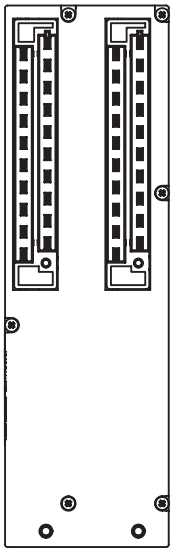
Wiring Diagram



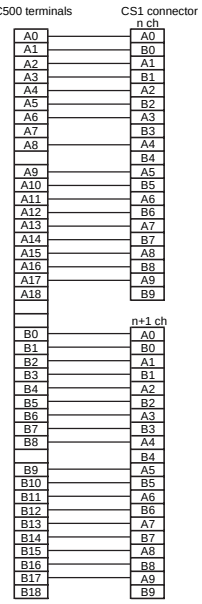
XW7G-CS04







Wiring Diagram

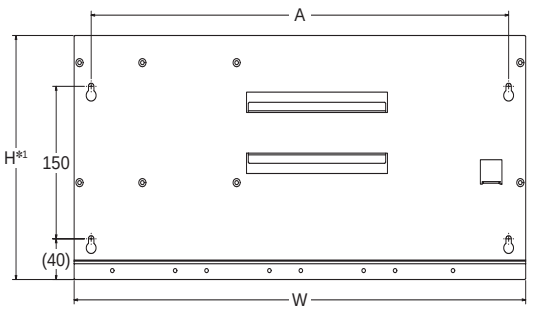


Accessories

(Unit: mm)

Model	Type (applicable number of slots)	Dimensions	
		W	A
XW7G-CSP1-3C	3	276 mm	255 mm
XW7G-CSP1-3CV		260 mm	221 mm
XW7G-CSP1-5C	5	375 mm	360 mm
XW7G-CSP1-5CV		330 mm	291 mm
XW7G-CSP1-8	8	480 mm	465 mm
XW7G-CSP1-10	10	503 mm	465 mm

* A Spacer and mounting screws are packed with the Special Plate.

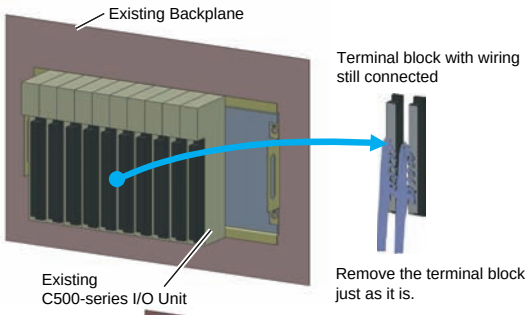


Example: XW7G-CSP1-10

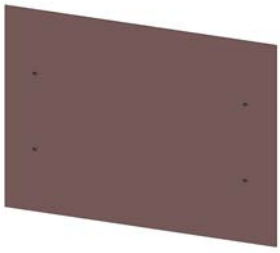
*1. H is 240 mm for the XW7G-CSP1-8/10 and 235 mm for the XW7G-CSP1-3C/3CV/5C/5CV.

Mounting Procedure for Terminal Block Conversion Adapters

1. Remove the terminal bock with all of the wiring attached from the existing C500-series Basic I/O Unit.

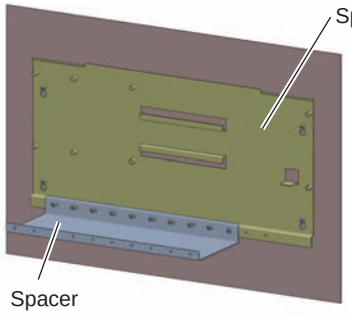


2. Remove the existing C500-series Units and Backplane.

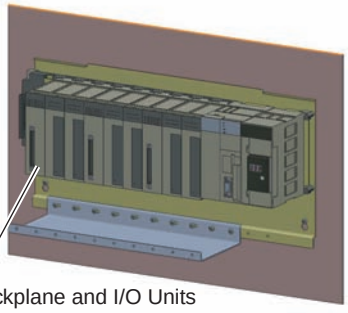


3. Mount the Special Plate with the Spacer attached using the same screws and holes as the C500-series Backplane.

   The tightening torque for the Spacer is 1.2 N·m.

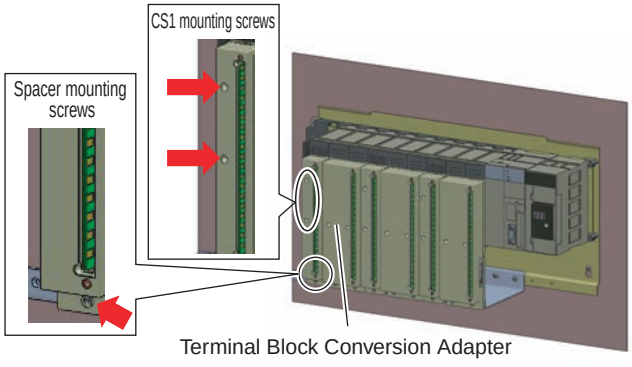


4. Mounting the CS-series Backplane and I/O Units.



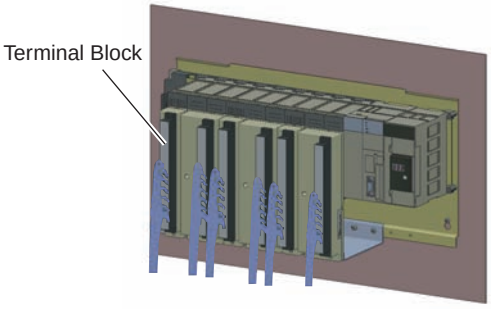
5. Attach the Terminal Block Conversion Adapters.
   The Adapters are designed so that there will be clearance between the Adapters and Spacer even when the mounting screws on the bottom of the Adapters (shown in the figure) are tightened.
   If you tighten them with excessive torque, the threads will be damaged.
   Use the following tightening torques.

Model / Location	XW7G-CS01-□	XW7G-CS02 XW7G-CS03 XW7G-CS04
CS1 mounting screws	0.2 N·m	0.5 N·m
Spacer mounting screws	0.5 N·m	0.5 N·m



6. Attach the terminal blocks.

   The tightening torque is 0.5 N·m.

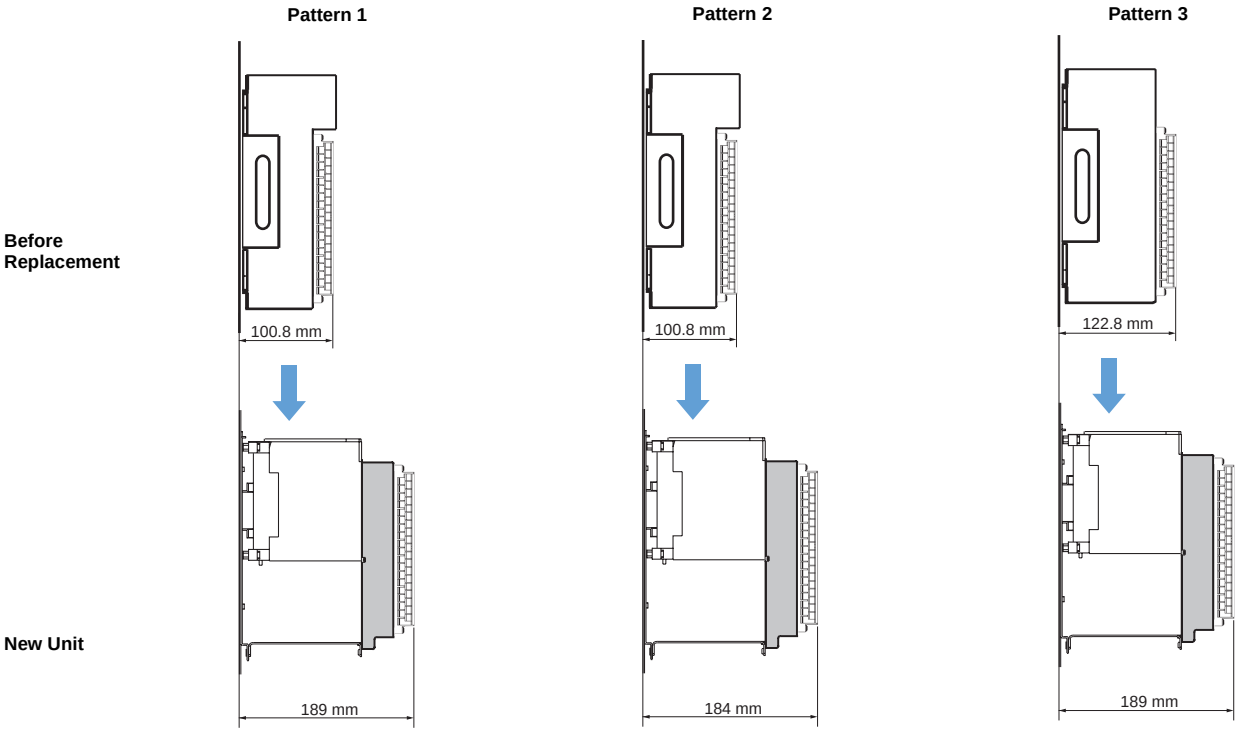


Note: When you reuse previously wired terminal blocks, make sure that there are no problems with the terminal block or wiring conditions.

- There must be no loose screws.
- The cables must not be damaged.
- There must be no rust or corrosion.
- The terminal block must not be damaged. (It must be possible to completely insert the terminal block and secure it.)

Changes in Depth

(Unit: mm)



Pattern 1

Previous dimension		New dimension	
Model	Depth	Model	Depth
C500-IA121	100.8 mm	CS1W-IA111	189 mm
C500-IA222		CS1W-IA211	
C500-ID112		CS1W-ID211	
C500-ID213		CS1W-ID211	
C500-OA121		CS1W-OA211	
C500-OA222		CS1W-OA211	
C500-OA223		Two CS1W-OA211 Units	
C500-OA225		Two CS1W-OA211 Units	
C500-OA226		CS1W-OA211	
C500-OC221		CS1W-OC211	
C500-OC223		Two CS1W-OC201 Units	
C500-OD217		CS1W-OD211	
C500-OD219		CS1W-OD211	
C500-OD411		CS1W-OD211	

Pattern 2

Previous dimension		New dimension	
Model	Depth	Model	Depth
C500-ID215	100.8 mm	CS1W-ID231	184 mm
C500-ID218		CS1W-ID231	
C500-OD212		CS1W-OD232	
C500-OD218		CS1W-OD231	
C500-OD412		CS1W-OD231	
C500-OD414		CS1W-OD231	

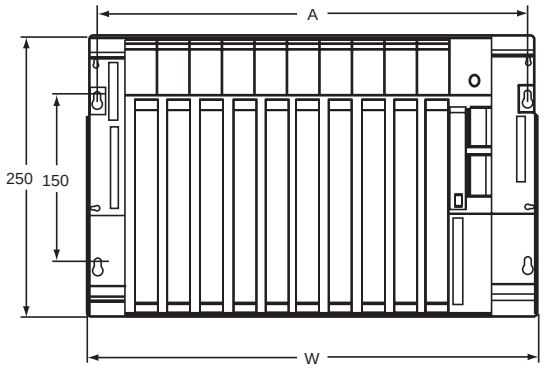
Pattern 3

Previous dimension		New dimension	
Model	Depth	Model	Depth
C500-IA122	122.8 mm	Two CS1W-IA111 Units	189 mm
C500-IA223		Two CS1W-IA211 Units	
C500-OC224		Two CS1W-OC211 Units	

Changes in Mounting Dimensions

(Unit: mm)

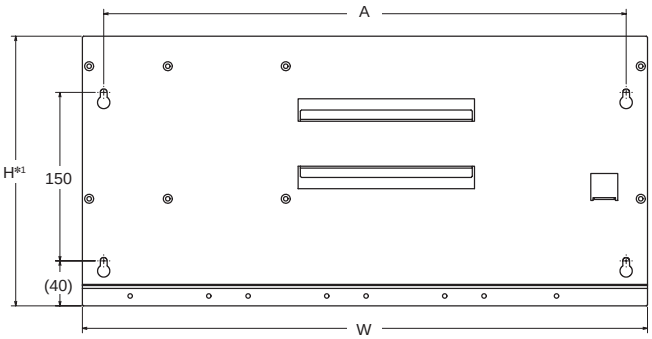
Before Replacement



Example: C/CV-series Backplane

CV500-BC101 W: 480 mm

After Replacement



Example: Plate

XW7G-CSP1-10 W: 503 mm, A: 465 mm

*1. H is 240 mm for the XW7G-CSP1-8/10 and 235 mm for the XW7G-CSP1-3C/3CV/5C/5CV.

Previous Unit			New Unit					
			First candidate			Second candidate (when there are not enough slots)		
C/CV-series Backplane	Dimension W	Dimension A	Plate	Dimension W	Dimension A	Plate	Dimension W	Dimension A
C500-BC091	486	465	**XW7G-CSP1-10** Mounting holes: Same	503	465	None	---	---
CV500-BC101	480							
CV500-BI111								
CV500-BI112								
C2000-BC001								
CVM1D-BC051	486							
CVM1-BC103	480							
CVM1-BC114								
CVM1D-BI101	486							
CVM1D-BI102								
C500-BC081	480	465	**XW7G-CSP1-8** Mounting holes: Same	480	465	**XW7G-CSP1-10** Mounting holes: Same	503	465
C500-BC082								
C500-BI081								
C2000-BC061								
C2000-BI082								
C2000-BI083								
C500-BC051	375	360	**XW7G-CSP1-5C** Mounting holes: Same	375	360	**XW7G-CSP1-8** Mounting holes: Different*	480	465
C500-BC052								
C500-BC061	381							
C500-BI051	375							
CV500-BC051	306	291	**XW7G-CSP1-5CV** Mounting holes: Same	330	291	**XW7G-CSP1-8** Mounting holes: Different*	480	465
CVM1-BC053								
CV500-BI062								
CVM1-BI064								
C500-BC031	276	255	**XW7G-CSP1-3C** Mounting holes: Same	276	255	**XW7G-CSP1-5CV** Mounting holes: Different*	330	291
CV500-BC031	236	221	**XW7G-CSP1-3CV** Mounting holes: Same	260	221	**XW7G-CSP1-5CV** Mounting holes: Different*	330	291
CV500-BI042								

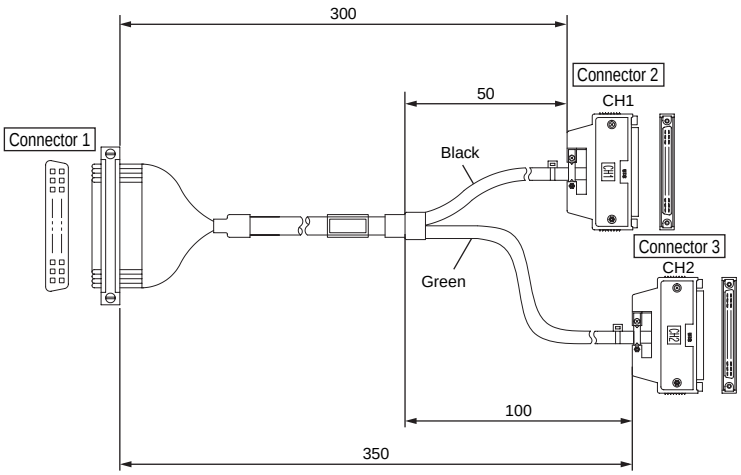
* You must thread the holes.
More space will be required.

Conversion Cables

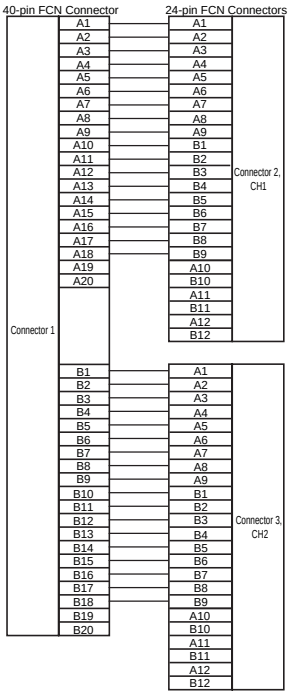
Model	Overview	Cable length (m)
XW2Z-S010	Conversion Cable from Two 24-pin Connectors to One 40-pin Connector for CS1W-ID231	0.3
XW2Z-S011	Conversion Cable from Two 24-pin Connectors to One 40-pin Connector for CS1W-OD231	

Dimensions

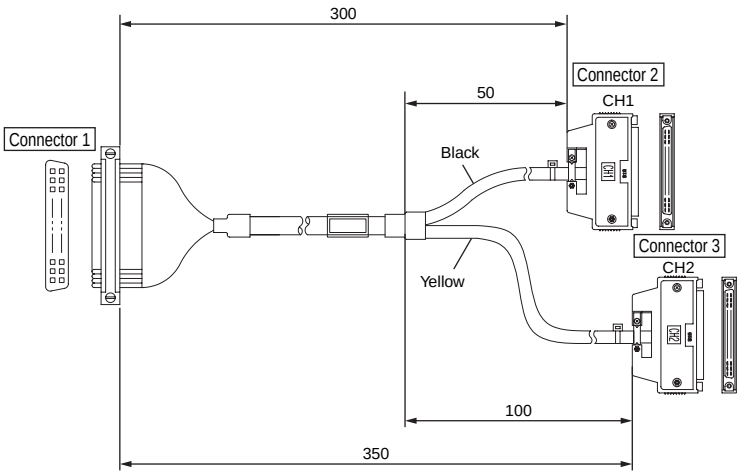
XW2Z-S010



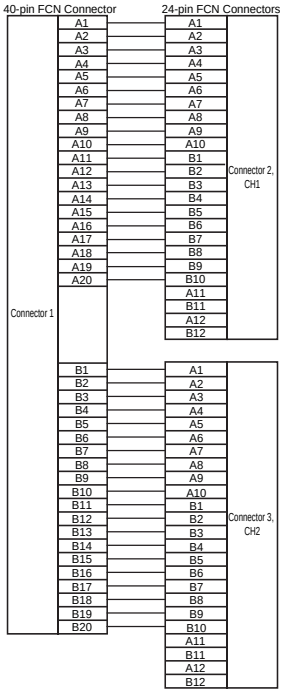
Wiring Diagram



XW2Z-S011

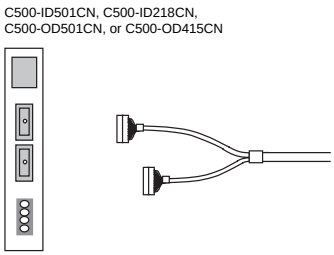


Wiring Diagram

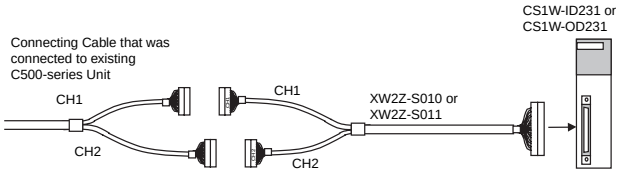


Connecting Procedure for Conversion Cable

(1) Remove the Cable that was connected to the existing C500-series I/O Unit.



(2) Connect the Conversion Cable to the CS-series Unit. Connect the Conversion Cable to the Cable that you removed in step 1.



Conversion Cables

Converting Input Units

Converting 32-point DC Input Units to DC Input Units

Previous Unit		New Unit		Conversion Cables	Standards
Model	**Unit name (specifications)**	**Model**	**Unit name (specifications)**	**Model**	
C500-ID501CN	**32-point TTL Input Unit (5 VDC, 3.5 mA)**	CS1W-MD561 (CN2: inputs)	32-point TTL I/O Unit (5 VDC, 3.5 mA)	**XW2Z-S010**	---
C500-ID218CN	**32-point DC Input Unit (12 to 24 VDC, 10 mA)**	CS1W-ID231	32-point DC Input Unit with Connector (24 VDC, 6 mA)		

Converting Output Units

Converting 32-point Transistor Output Units to Transistor Output Units

Previous Unit		New Unit		Conversion Cables	Standards
Model	**Unit name (specifications)**	**Model**	**Unit name (specifications)**	**Model**	
C500-OD501CN	**32-point TTL Output Unit (5 VDC, 35 mA)**	CS1W-MD561 (CN1: outputs)	32-point TTL I/O Unit (5 VDC, 35 mA)	**XW2Z-S011**	---
C500-OD415CN	**32-point Transistor Output Unit (12 to 48 VDC, 0.3 A)**	CS1W-OD231	32-point Transistor Output Unit with Connector (12 to 24 VDC, 0.5 A, NPN output)		

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