

## A Wide Range of Basic Output Units for High Speed Output and Different Applications

- These Output Units receive the results of output instructions from the CPU Unit and perform ON/OFF control for external devices.
- High-speed Output models CJ1W-OD213 and CJ1W-OD234 can help to increase system throughput.



CJ1W-OD213



CJ1W-OD234

## Features

- High-speed output models are available, meeting versatile applications.  
ON Response Time: 15μs, OFF Response Time: 80μs
- Output Units are available with any of three output types: relay contact outputs, triac outputs, or transistor outputs.
- For transistor outputs, select from sinking outputs or sourcing outputs.
- Output Units with load short-circuit protection are also available. \*1
- Select the best interface for each application: Fujitsu connectors or MIL connectors. \*2
- A wide variety of Connector-Terminal Block Conversion Units are available to allow you to easily wire external output devices.

\*1. The following Units have load short-circuit protection: CJ1W-OC202, CJ1W-OD204, CJ1W-OD212, and CJ1W-OD232.






\*2. Available for models with 32 outputs or 64 outputs

## Ordering Information

### International Standards

- The standards are abbreviated as follows: U: UL, U1: UL (Class I Division 2 Products for Hazardous Locations), C: CSA, UC: cULus, UC1: cULus (Class I Division 2 Products for Hazardous Locations), CU: cUL, N: NK, L: Lloyd, and CE: EC Directives.
- Contact your OMRON representative for further details and applicable conditions for these standards.

## Output Units

Unit type	Product name	Specifications					No. of words allocated	Current consumption (A)		Model	Standards
		Output type	I/O points	Maximum switching capacity	Commons	External connection		5 V	24 V		
CJ1 Basic I/O Units	<b>Relay Contact Output Units</b> 	–	8 outputs	250 VAC/24 VDC, 2 A	Independent contacts	Removable terminal block	1 words	0.09	0.048 max.	<b>CJ1W-OC201</b>	UC1, N, L, CE
		–	16 outputs	250 VAC/24 VDC, 2 A	16 points, 1 common	Removable terminal block	1 words	0.11	0.096 max.	<b>CJ1W-OC211</b>	
	<b>Triac Output Unit</b> 	–	8 outputs	250 VAC, 0.6 A	8 points, 1 common	Removable terminal block	1 words	0.22	–	<b>CJ1W-OA201</b>	
	<b>Transistor Output Units</b>   	Sinking	8 outputs	12 to 24 VDC, 2 A	4 points, 1 common	Removable terminal block	1 words	0.09	–	<b>CJ1W-OD201</b>	N, L, CE
		Sinking	8 outputs	12 to 24 VDC, 0.5 A	8 points, 1 common	Removable terminal block	1 words	0.10	–	<b>CJ1W-OD203</b>	
		Sinking	16 outputs	12 to 24 VDC, 0.5 A	16 points, 1 common	Removable terminal block	1 words	0.10	–	<b>CJ1W-OD211</b>	
		Sinking	16 outputs (High speed)	24 VDC, 0.5 A	16 points, 1 common	Removable terminal block	1 words	0.15	–	<b>CJ1W-OD213</b>	UC1, N, L, CE
		Sinking	32 outputs	12 to 24 VDC, 0.5 A	16 points, 1 common	Fujitsu connector	2 words	0.14	–	<b>CJ1W-OD231</b>	
		Sinking	32 outputs	12 to 24 VDC, 0.5 A	16 points, 1 common	MIL connector	2 words	0.14	–	<b>CJ1W-OD233</b>	N, L, CE
		Sinking	32 outputs (High speed)	24 VDC, 0.5 A	16 points, 1 common	MIL connector	2 words	0.22	–	<b>CJ1W-OD234</b>	
		Sinking	64 outputs	12 to 24 VDC, 0.3 A	16 points, 1 common	Fujitsu connector	4 words	0.17	–	<b>CJ1W-OD261</b>	UC1, N, L, CE
		Sinking	64 outputs	12 to 24 VDC, 0.3 A	16 points, 1 common	MIL connector	4 words	0.17	–	<b>CJ1W-OD263</b>	
		Sourcing	8 outputs	24 VDC, 2 A Short-circuit protection	4 points, 1 common	Removable terminal block	1 words	0.11	–	<b>CJ1W-OD202</b>	
		Sourcing	8 outputs	24 VDC, 0.5 A Short-circuit protection	8 points, 1 common	Removable terminal block	1 words	0.10	–	<b>CJ1W-OD204</b>	
		Sourcing	16 outputs	24 VDC, 0.5 A Short-circuit protection	16 points, 1 common	Removable terminal block	1 words	0.10	–	<b>CJ1W-OD212</b>	
		Sourcing	32 outputs	24 VDC, 0.5 A Short-circuit protection	16 points, 1 common	MIL connector	2 words	0.15	–	<b>CJ1W-OD232</b>	
		Sourcing	64 outputs	12 to 24 VDC, 0.3 A	16 points, 1 common	MIL connector	4 words	0.17	–	<b>CJ1W-OD262</b>	

### Accessories

Connectors are not included for models with connectors. Either use one of the applicable connector listed below or use an applicable Connector-Terminal Block Conversion Unit or I/O Relay Terminal. For details on wiring methods, refer to *External Interface*.

## Applicable Connectors

Fujitsu Connectors for 32-input, 32-output, 64-input, 64-output, 32-input/32-output, and 16-input/16-output Units




Name	Connection	Remarks	Applicable Units	Model	Standards
40-pin Connectors	Soldered	FCN-361J040-AU FCN-360C040-J2 Connector Connector Cover	Fujitsu Connectors: CJ1W-ID231 (32 inputs): 1 per Unit CJ1W-ID261 (64 inputs): 2 per Unit CJ1W-OD231 (32 outputs): 1 per Unit CJ1W-OD261 (64 outputs): 2 per Unit CJ1W-MD261 (32 inputs, 32 outputs): 2 per Unit	C500-CE404	-
	Crimped	FCN-363J040 FCN-363J-AU FCN-360C040-J2 Housing Contact Connector Cover		C500-CE405	
	Pressure welded	FCN-367J040-AU/F		C500-CE403	
24-pin Connectors	Soldered	FCN-361J024-AU FCN-360C024-J2 Connector Connector Cover	Fujitsu Connectors: CJ1W-MD231 (16 inputs, 16 outputs): 2 per Unit	C500-CE241	
	Crimped	FCN-363J024 FCN-363J-AU FCN-360C024-J2 Socket Contact Connector Cover		C500-CE242	
	Pressure welded	FCN-367J024-AU/F		C500-CE243	

## MIL Connectors for 32-input, 32-output, 64-input, 64-output, 32-input/32-output, and 16-input/16-output Units

Name	Connection	Remarks	Applicable Units	Model	Standards
40-pin Connectors	Pressure welded	FRC5-AO40-3TOS	MIL Connectors: CJ1W-ID232/233 (32 inputs): 1 per Unit CJ1W-OD232/233/234 (32 outputs): 1 per Unit CJ1W-ID262 (64 inputs): 2 per Unit CJ1W-OD262/263 (64 outputs): 2 per Unit CJ1W-MD263/563 (32 inputs, 32 outputs): 2 per Unit	XG4M-4030-T	-
	Crimped	-		XG5N-401*	
20-pin Connectors	Pressure welded	FRC5-AO20-3TOS	MIL Connectors: CJ1W-MD232/233 (16 inputs, 16 outputs): 2 per Unit	XG4M-2030-T	-
	Crimped	-		XG5N-201*	

\* Crimp Contacts are also required. Refer to page 31 for details.

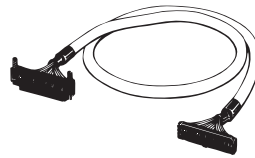
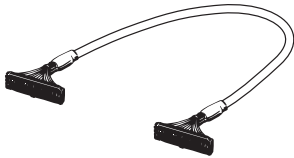
## Applicable Connector-Terminal Block Conversion Units

Type	Series	Number of poles	Wiring method	Terminal type	Size			Mounting		Common terminals	Bleeder resistance	Indicators	I/O Units	Model *	Standards
					Depth (mm)	Height (mm)	Width (mm)	DIN Track	Screws						
PLCs	XW2R	34	Phillips screw 	M3	50	48.05	130.7	Yes	No	No	No	No	CJ1W-OD231 CJ1W-OD261	XW2R-J34GD-C3	—
			Slotted screw (rise up) 	M3 (European type)	50	44.81	98.5						CJ1W-OD232 CJ1W-OD233 CJ1W-OD234 CJ1W-OD262 CJ1W-OD263	XW2R-J34GD-C4	
													CJ1W-OD231 CJ1W-OD261	XW2R-E34GD-C3	
													CJ1W-OD232 CJ1W-OD233 CJ1W-OD234 CJ1W-OD262 CJ1W-OD263	XW2R-E34GD-C4	
													CJ1W-OD231 CJ1W-OD261	XW2R-P34GD-C3	
			Push-in spring 	Clamp	50	44.81	98.5						CJ1W-OD232 CJ1W-OD233 CJ1W-OD234 CJ1W-OD262 CJ1W-OD263	XW2R-P34GD-C4	







**Note:** For the combination of Output Units with Connector-Terminal Block Conversion Units, refer to 2. *Connecting Connector-Terminal Block Conversion Units.*

\* Representative models only. For details, refer to the XW2R series catalog (Cat. No. G077).

## Connecting Cables for Connector-Terminal Block Conversion Units

Appearance	Connectors	Cable length [m]	Model
XW2Z-□□□PF 	One 40-pin Fujitsu Connector to One 40-pin MIL Connector	0.5	XW2Z-050PF
		1	XW2Z-100PF
		1.5	XW2Z-150PF
		2	XW2Z-200PF
		3	XW2Z-300PF
		5	XW2Z-500PF
XW2Z-□□□PM 	One 40-pin MIL Connector to One 40-pin MIL Connector	0.5	XW2Z-050PM
		1	XW2Z-100PM
		1.5	XW2Z-150PM
		2	XW2Z-200PM
		3	XW2Z-300PM
		5	XW2Z-500PM

## Applicable I/O Relay Terminals

Type	Series	Specifications						Size (horizontal mounting)			Mounting		Model	Standards												
		Classification		Polarity	Number of points	Rated ON current at contacts	Rated voltage	Horizontal (mm)	Vertical (mm)	Height (mm)	DIN Track	Screws														
Push-In Plus terminal block		Inputs	DC inputs	NPN	16 (SPSTNO × 16)	50 mA	24 VDC	143	90	56	Yes	Yes	G70V-SID16P *4	UC, CE (TÜV certified)												
				PNP									G70V-SID16P-1 *4													
				NPN									G70V-SID16P-C16 *5													
				PNP									G70V-SID16P-1-C16 *5													
		Outputs	Relay outputs	NPN	16 (SPDT × 16)	6 A/point, 10 A/ common							G70V-SOC16P *4													
				PNP									G70V-SOC16P-1 *4													
				NPN									G70V-SOC16P-C4 *6													
				PNP									G70V-SOC16P-1-C4 *6													
Standard		Inputs	AC inputs	NPN	16 (SPSTNO × 16)	1A	100/(110) VAC	182	85	68	Yes	No	G7TC-IA16 AC100/110	U, C												
			DC inputs				200/(220) VAC						G7TC-IA16 AC200/220													
							12 VDC						G7TC-ID16 DC12													
							24 VDC						G7TC-ID16 DC24													
		100/110 VDC		G7TC-ID16 DC100/110																						
		Outputs	Relay outputs	NPN	8 (SPSTNO × 8)	5A	12 VDC	102					182		G7TC-OC08 DC12											
					16 (SPSTNO × 16)		24 VDC								G7TC-OC08 DC24											
					PNP		16 (SPSTNO × 16)								24 VDC	G7TC-OC16 DC12										
							PNP								16 (SPSTNO × 16)	12 VDC	G7TC-OC16 DC24									
			PNP	16 (SPSTNO × 16)		24 VDC		G7TC-OC16-1 DC12																		
				PNP		16 (SPSTNO × 16)		24 VDC					G7TC-OC16-1 DC24													
					High-capacity socket			Inputs					Relay inputs		NPN/ PNP	16 (SPDT × 16 possible with G2R Relays)	100 mA	110 VDC max., 240 VAC max. *2	234	75	64	Yes	No	G70A-ZOC16-5	U, C, CE (VDE certified)	
Outputs	Relay outputs						NPN		10 A (Terminal block allowable)	24 VDC	G70A-ZOC16-3															
		PNP						G70A-ZOC16-4																		
			Space-saving	Vertical type G70D-V				Relay outputs	NPN	16 (SPSTNO × 16)	5 A or 3 A *3	24 VDC	135	46	81		Yes	Yes						G70D-VSOC16		U, C, CE (VDE certified)
											MOSFET relay outputs													0.3 A		
Flat type G70D				Outputs			Relay outputs	NPN	8 (SPSTNO × 8)	5 A	24 VDC	68	93	44	Yes		Yes	G70D-SOC08						-		
		PNP			16 (SPSTNO × 16)	3 A			G70D-SOC16																	
			PNP		16 (SPSTNO × 16)	3 A		G70D-SOC16-1																		
		MOSFET relay outputs			NPN	16 (SPSTNO × 16)		0.3 A	G70D-FOM16																	
			PNP			16 (SPSTNO × 16)		0.3 A	G70D-FOM16-1																	
		High-capacity, space-saving				Outputs		Relay outputs	NPN	8 (SPSTNO × 8)						10 A		24 VDC	136	93	55	Yes	Yes		G70R-SOC08 *7	-

\*1. G70A is a I/O terminal socket product. Relay is not provided with the socket. Be sure to order a relay, timer separately.

\*2. Each relay to be mounted must incorporate a coil that has proper specifications within the maximum rated voltage range.

\*3. Eight or fewer points ON: 5 A, Nine or more points ON: 3 A.

\*4. Internal common at terminal block: No internal connections

\*5. Internal common at terminal block: Internal IO common 16 points internally connected

\*6. Internal common at terminal block: Every 4 points internally connected at terminal block middle row.

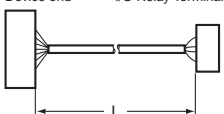
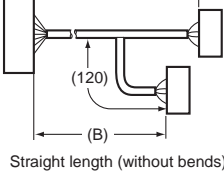
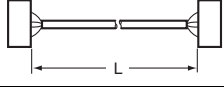
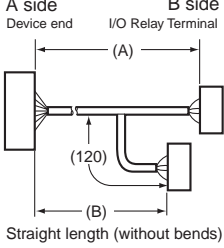
\*7. Product no longer available to order.

**Note:** 1. For the combination of Input Units with I/O Relay Terminal and Connecting Cables, refer to 3. *Connecting I/O Relay Terminals*.

2. Please refer to each Datasheet about details.

3. When the G7TC is used with an AC rated voltage, three rated currents can be used. If a coil voltage of 110 or 220 VAC is used, 50 Hz cannot be used.

## Cables for I/O Relay Terminals

Type	Name	I/O Classification	Appearance	Cable length L (mm)		Models
Fujitsu connectors (24 pins)	Cables with Connectors (1:1)  XW2Z-R□C	16 I/O points		1,000		XW2Z-R100C
				1,500		XW2Z-R150C
				2,000		XW2Z-R200C
				3,000		XW2Z-R300C
				5,000		XW2Z-R500C
Fujitsu connectors (40 pins)	Cables with Connectors (1:2)  XW2Z-RI□C-□ XW2Z-RO□C-□	32 input points		(A) 1,000	(B) 750	XW2Z-RI100C-75
		32 output points		(A) 1,500	(B) 1,250	XW2Z-RI150C-125
				(A) 2,000	(B) 1,750	XW2Z-RI200C-175
				(A) 3,000	(B) 2,750	XW2Z-RI300C-275
				(A) 5,000	(B) 4,750	XW2Z-RI500C-475
				(A) 1,000	(B) 750	XW2Z-RO100C-75
				(A) 1,500	(B) 1,250	XW2Z-RO150C-125
				(A) 2,000	(B) 1,750	XW2Z-RO200C-175
				(A) 3,000	(B) 2,750	XW2Z-RO300C-275
				(A) 5,000	(B) 4,750	XW2Z-RO500C-475
MIL connectors (20 pins)	Cables with Connectors (1:1)  XW2Z-RI□C XW2Z-RO□C	16 I/O points		250		XW2Z-RI25C
				500		XW2Z-RI50C
				250		XW2Z-RO25C
				500		XW2Z-RO50C
MIL connectors (40 pins)	Cables with Connectors (1:2)  XW2Z-RO□-□-D1, XW2Z-RI□-□-D1	32 I/O points		(A) 500	(B) 250	XW2Z-RO50-25-D1
				(A) 750	(B) 500	XW2Z-RO75-50-D1
				(A) 1,000	(B) 750	XW2Z-RO100-75-D1
				(A) 1,500	(B) 1,250	XW2Z-RO150-125-D1
				(A) 2,000	(B) 1,750	XW2Z-RO200-175-D1
				(A) 3,000	(B) 2,750	XW2Z-RO300-275-D1
				(A) 5,000	(B) 4,750	XW2Z-RO500-475-D1
				(A) 500	(B) 250	XW2Z-RI50-25-D1
				(A) 750	(B) 500	XW2Z-RI75-50-D1
				(A) 1,000	(B) 750	XW2Z-RI100-75-D1
				(A) 1,500	(B) 1,250	XW2Z-RI150-125-D1
				(A) 2,000	(B) 1,750	XW2Z-RI200-175-D1
				(A) 3,000	(B) 2,750	XW2Z-RI300-275-D1
				(A) 5,000	(B) 4,750	XW2Z-RI500-475-D1

**Note:** Refer to the Datasheet for the XW2Z-R Cables for I/O Relay Terminals (Cat. No. G126).

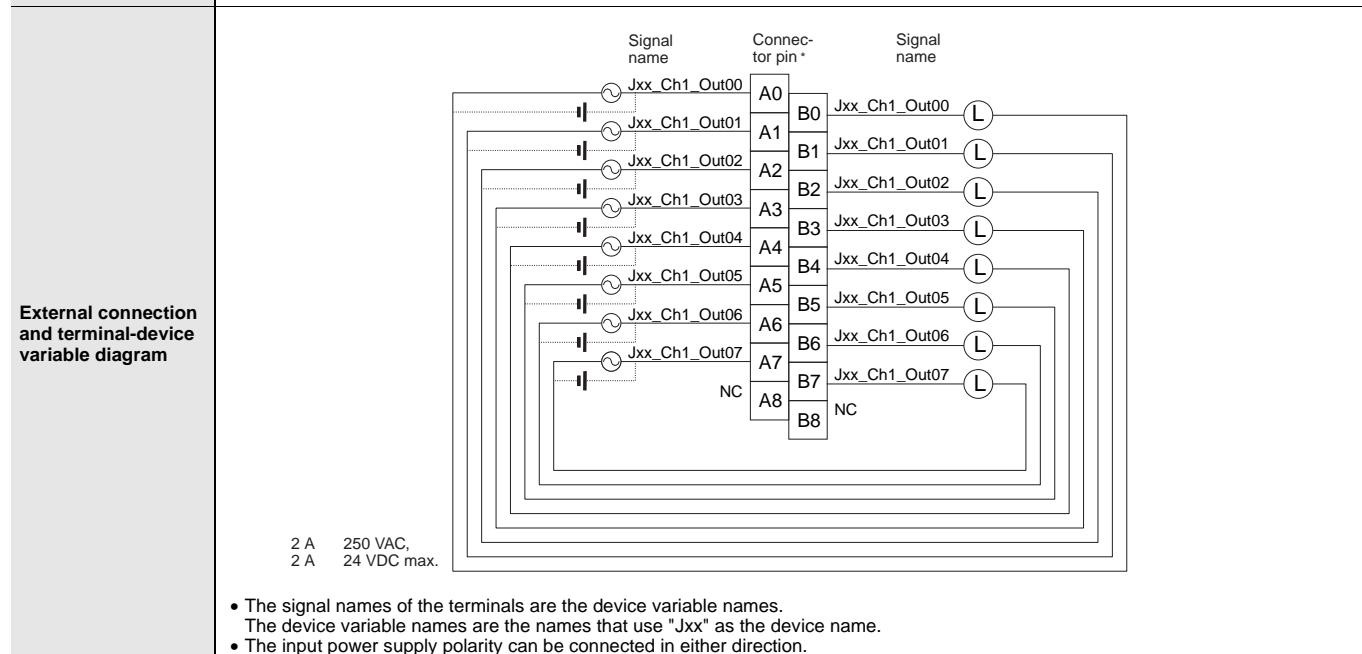
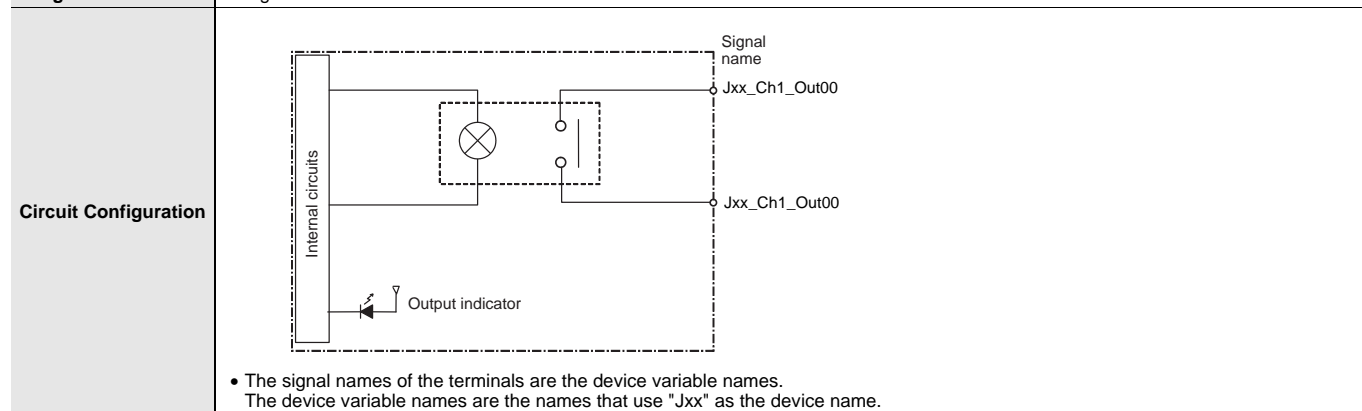
## Mountable Racks

Model	NJ system		CJ system (CJ1, CJ2)		CP1H system	NSJ system	
	CPU Rack	Expansion Rack	CPU Rack	Expansion Backplane	CP1H PLC	NSJ Controller	Expansion Backplane
CJ1W-OC201	10 Units	10 Units (Per Expansion Rack)	10 Units	10 Units (Per Expansion Backplane)	Not Supported	Not Supported	10 Units (Per Expansion Backplane)
CJ1W-OC211							
CJ1W-OA201							
CJ1W-OD201							
CJ1W-OD203							
CJ1W-OD211							
CJ1W-OD213							
CJ1W-OD231							
CJ1W-OD233							
CJ1W-OD234							
CJ1W-OD261							
CJ1W-OD263							
CJ1W-OD202							
CJ1W-OD204							
CJ1W-OD212							
CJ1W-OD232							
CJ1W-OD262							

## Specifications

### CJ1W-OC201 Contact Output Unit (Independent Relays, 8 Points)

<b>Name</b>	8-point Contact Output Unit with Terminal Block (Independent Relays)
<b>Model</b>	CJ1W-OC201
<b>Max. Switching Capacity</b>	2 A 250 VAC ( $\cos\phi = 1$ ), 2 A 250 VAC ( $\cos\phi = 0.4$ ), 2 A 24 VDC (16 A/Unit)
<b>Min. Switching Capacity</b>	1 mA 5 VDC
<b>Relays</b>	NY-24W-K-IE (Fujitsu Takamizawa Components, Ltd.), Cannot be replaced.
<b>Service Life of Relay</b>	Electrical: 150,000 operations (24 VDC, resistive load)/100,000 operations (240 VAC, $\cos\phi = 0.4$ , inductive load) Mechanical: 20,000,000 operations Service life will vary depending on the connected load.
<b>ON Response Time</b>	15 ms max.
<b>OFF Response Time</b>	15 ms max.
<b>Number of Circuits</b>	8 independent contacts
<b>Insulation Resistance</b>	20 M $\Omega$ between external terminals and the GR terminal (500 VDC)
<b>Dielectric Strength</b>	2,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.
<b>Internal Current Consumption</b>	90 mA 5 VDC max. 48 mA 24 VDC max. (6 mA $\times$ No. of ON points)
<b>Weight</b>	140 g max.

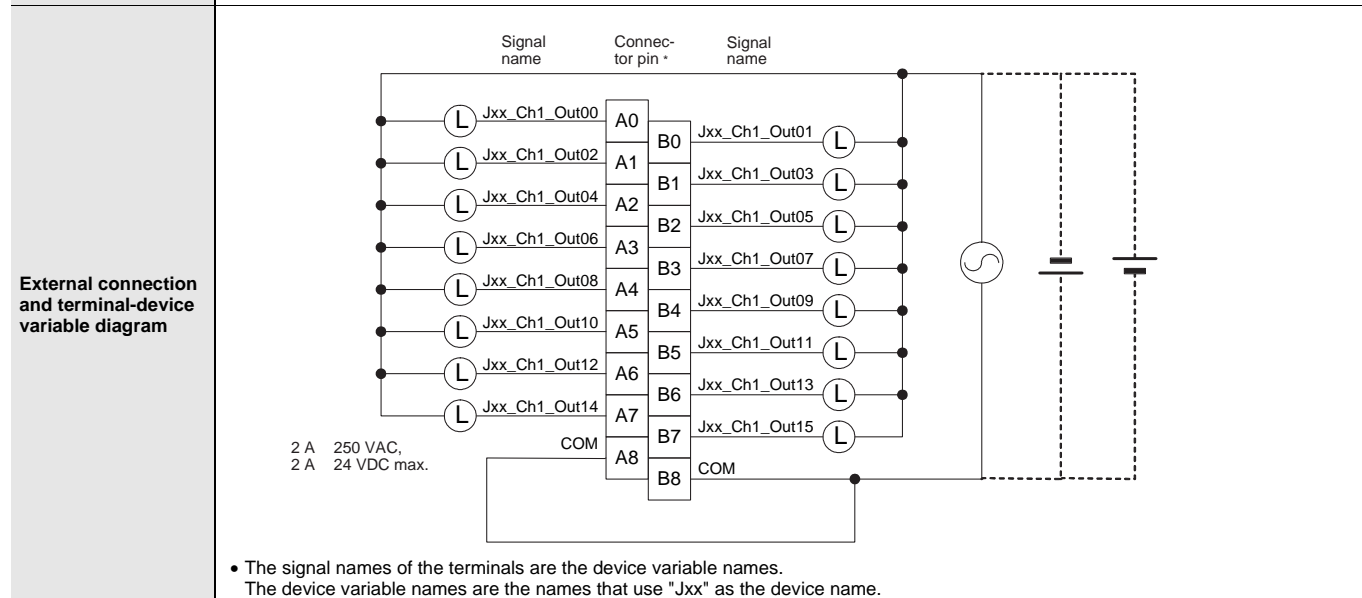
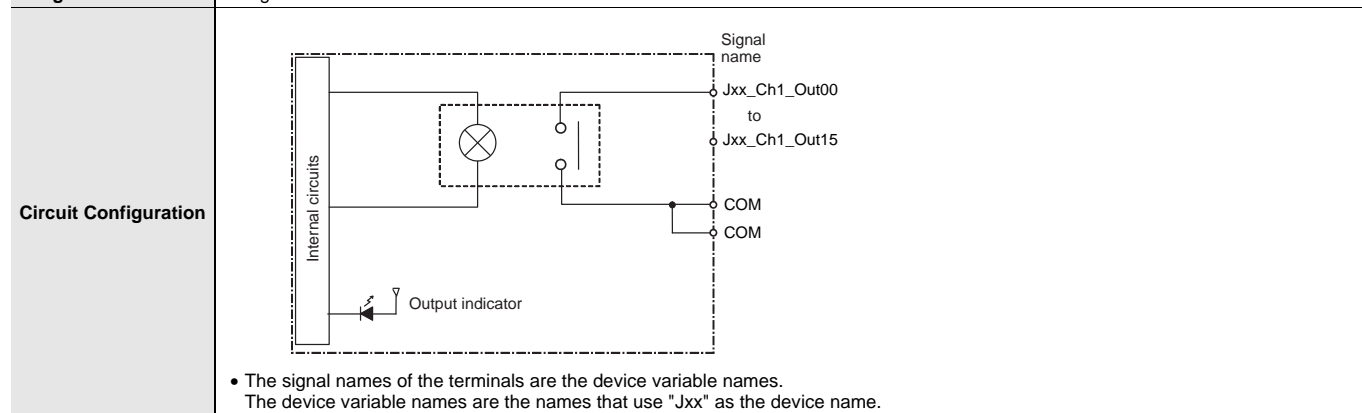


\* Terminal numbers A0 to A8 and B0 to B8 are used in the external connection and terminal-device variable diagrams. They are not printed on the Units.

**Note:** Although 16 I/O bits (1 word) are allocated, only 8 of these can be used for external I/O.

## CJ1W-OC211 Contact Output Unit (16 Points)

<b>Name</b>	16-point Contact Output Unit with Terminal Block
<b>Model</b>	CJ1W-OC211
<b>Max. Switching Capacity</b>	2 A 250 VAC ( $\cos\phi = 1$ ), 2 A 250 VAC ( $\cos\phi = 0.4$ ), 2 A 24 VDC (8 A/Unit)
<b>Min. Switching Capacity</b>	1 mA 5 VDC
<b>Relays</b>	NY-24W-K-IE (Fujitsu Takamizawa Components, Ltd.), Cannot be replaced.
<b>Service Life of Relay</b>	Electrical: 150,000 operations (24 VDC, resistive load)/ 100,000 operations (250 VAC, $\cos\phi = 0.4$ , inductive load) Mechanical: 20,000,000 operations Service life will vary depending on the connected load.
<b>ON Response Time</b>	15 ms max.
<b>OFF Response Time</b>	15 ms max.
<b>Number of Circuits</b>	16 points/common, 1 circuit
<b>Insulation Resistance</b>	20 M $\Omega$ between external terminals and the GR terminal (500 VDC)
<b>Dielectric Strength</b>	2,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.
<b>Internal Current Consumption</b>	110 mA 5 VDC max. 96 mA 24 VDC max. (6 mA $\times$ No. of ON points)
<b>Weight</b>	170 g max.



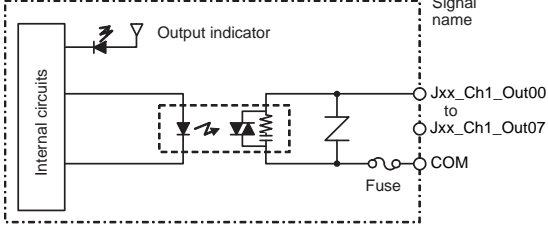
\* Terminal numbers A0 to A8 and B0 to B8 are used in the external connection and terminal-device variable diagrams. They are not printed on the Units.



CJ1W-OA201 Triac Output Unit (8 Points)

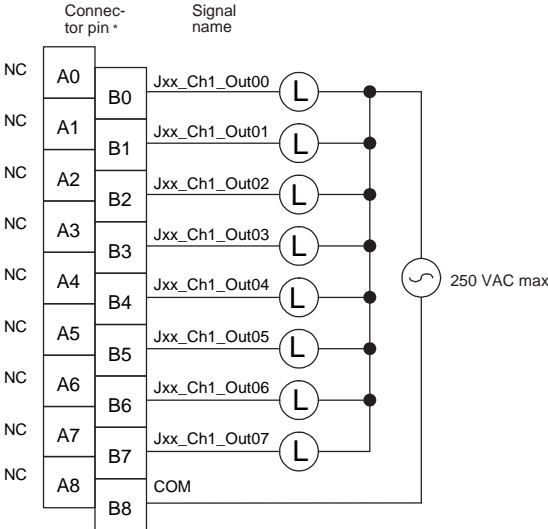
Name	8-point Triac Output Unit with Terminal Block
Model	CJ1W-OA201
Max. Switching Capacity	0.6 A 250 VAC, 50/60 Hz (2.4 A/Unit)
Max. Inrush Current	15 A (pulse width: 10 ms max.)
Min. Switching Capacity	50 mA 75 VAC
Leakage Current	1.5 mA (200 VAC) max.
Residual Voltage	1.6 VAC max.
ON Response Time	1 ms max.
OFF Response Time	1/2 of load frequency + 1 ms or less.
Number of Circuits	8 (8 points/common, 1 circuit)
Surge Protector	C.R Absorber + Surge Absorber
Fuses	5 A (1/common, 1 used) The fuse cannot be replaced by the user.
Insulation Resistance	20 MΩ between the external terminals and the GR terminal (500 VDC)
Dielectric Strength	2,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.
Internal Current Consumption	220 mA max.
Weight	150 g max.

Circuit Configuration



The diagram shows the internal circuitry of the CJ1W-OA201 Triac Output Unit. It includes an 'Internal circuits' block, an 'Output indicator' (LED), a triac, a fuse, and a common terminal 'COM'. The output terminals are labeled 'Jxx\_Ch1\_Out00' and 'Jxx\_Ch1\_Out07'. A note states: 'The signal names of the terminals are the device variable names. The device variable names are the names that use "Jxx" as the device name.'

External connection and terminal-device variable diagram



The diagram shows the external connection and terminal-device variable diagram. It includes a table of connector pins and signal names, and a circuit diagram showing the connection to a 250 VAC max. power source.

Connector pin *	Signal name
NC A0	B0 Jxx_Ch1_Out00
NC A1	B1 Jxx_Ch1_Out01
NC A2	B2 Jxx_Ch1_Out02
NC A3	B3 Jxx_Ch1_Out03
NC A4	B4 Jxx_Ch1_Out04
NC A5	B5 Jxx_Ch1_Out05
NC A6	B6 Jxx_Ch1_Out06
NC A7	B7 Jxx_Ch1_Out07
NC A8	B8 COM

The circuit diagram shows the connection to a 250 VAC max. power source. The power source is connected to the common terminal 'COM' (B8) and the output terminals (B0 to B7). Each output terminal is connected to a load (represented by a circle with 'L').

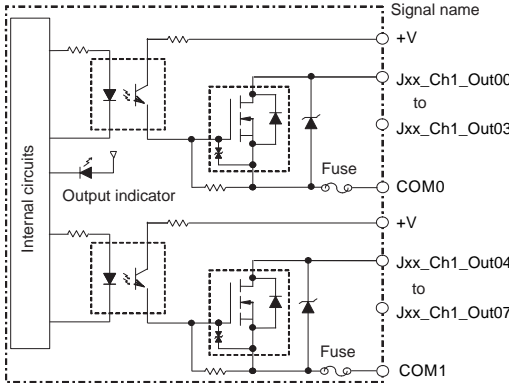
\* The signal names of the terminals are the device variable names.  
The device variable names are the names that use "Jxx" as the device name.

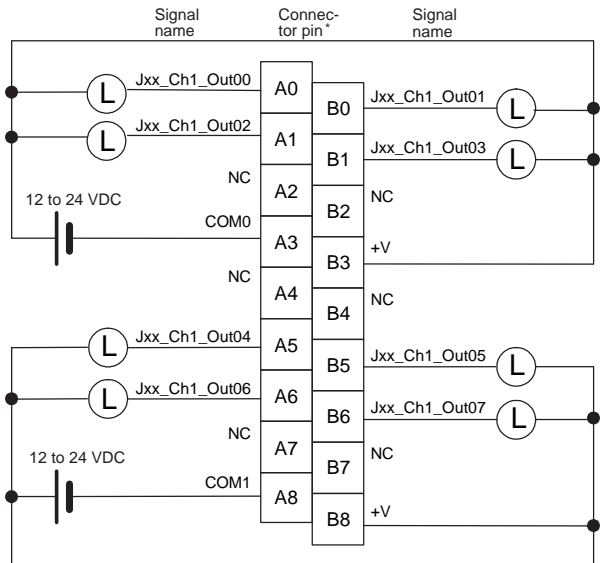
\* Terminal numbers A0 to A8 and B0 to B8 are used in the external connection and terminal-device variable diagrams. They are not printed on the Units.  
**Note:** Although 16 I/O bits (1 word) are allocated, only 8 of these can be used for external I/O.



## CJ1W-OD201 Transistor Output Unit (8 Points)

<b>Name</b>	8-point Transistor Output Unit with Terminal Block (Sinking Outputs)
<b>Model</b>	CJ1W-OD201
<b>Rated Voltage</b>	12 to 24 VDC
<b>Operating Load Voltage Range</b>	10.2 to 26.4 VDC
<b>Maximum Load Current</b>	2.0 A/point, 8.0 A/Unit
<b>Maximum Inrush Current</b>	10 A/point, 10 ms max.
<b>Leakage Current</b>	0.1 mA max.
<b>Residual Voltage</b>	1.5 V max.
<b>ON Response Time</b>	0.5 ms max.
<b>OFF Response Time</b>	1.0 ms max.
<b>Insulation Resistance</b>	20 MΩ between the external terminals and the GR terminal (100 VDC)
<b>Dielectric Strength</b>	1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.
<b>Number of Circuits</b>	8 (4 points/common, 2 circuits)
<b>Internal Current Consumption</b>	90 mA max.
<b>Fuse</b>	6.3 A (1/common, 2 used) The fuse cannot be replaced by the user.
<b>External Power Supply</b>	10.2 to 26.4 VDC, 10 mA min.
<b>Weight</b>	110 g max.

<b>Circuit Configuration</b>	 <p>• The signal names of the terminals are the device variable names. The device variable names are the names that use "Jxx" as the device name.</p>
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<b>External connection and terminal-device variable diagram</b>	 <p>• When wiring, pay careful attention to the polarity of the external power supply. The load may operate incorrectly if the polarity is reversed. • The signal names of the terminals are the device variable names. The device variable names are the names that use "Jxx" as the device name.</p>
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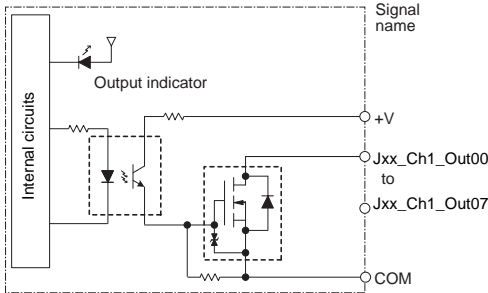
\* Terminal numbers A0 to A8 and B0 to B8 are used in the external connection and terminal-device variable diagrams. They are not printed on the Units.

**Note:** Although 16 I/O bits (1 word) are allocated, only 8 of these can be used for external I/O.

CJ1W-OD203 Transistor Output Unit (8 Points)

Name	8-point Transistor Output Unit with Terminal Block (Sinking Outputs)
Model	CJ1W-OD203
Rated Voltage	12 to 24 VDC
Operating Load Voltage Range	10.2 to 26.4 VDC
Maximum Load Current	0.5 A/point, 4.0 A/Unit
Maximum Inrush Current	4.0 A/point, 10 ms max.
Leakage Current	0.1 mA max.
Residual Voltage	1.5 V max.
ON Response Time	0.1 ms max.
OFF Response Time	0.8 ms max.
Insulation Resistance	20 MΩ between the external terminals and the GR terminal (100 VDC)
Dielectric Strength	1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.
Number of Circuits	8 (8 points/common, 1 circuit)
Internal Current Consumption	100 mA max.
Fuse	None
External Power Supply	10.2 to 26.4 VDC, 20 mA min.
Weight	110 g max.

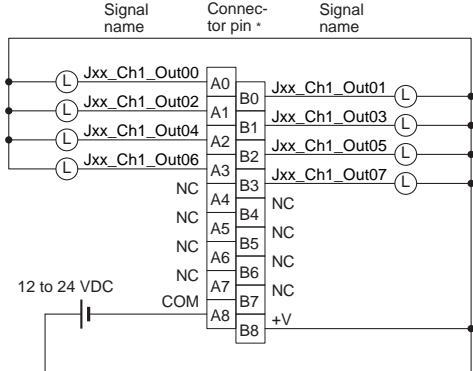
Circuit Configuration



The diagram shows the internal circuitry of the CJ1W-OD203 unit. It includes an 'Internal circuits' block, an 'Output indicator' LED, and a transistor switching circuit. The output terminals are labeled: '+V', 'Jxx\_Ch1\_Out00 to Jxx\_Ch1\_Out07', and 'COM'. A 'Signal name' label points to the output terminals.

- The signal names of the terminals are the device variable names.
- The device variable names are the names that use "Jxx" as the device name.

External connection and terminal-device variable diagram



The diagram shows the external connection of the unit. It features a terminal block with pins A0 through A8 and B0 through B8. A 12 to 24 VDC power supply is connected to the COM pin (A8) and the +V pin (B8). The output terminals are labeled: Jxx\_Ch1\_Out00, Jxx\_Ch1\_Out02, Jxx\_Ch1\_Out04, Jxx\_Ch1\_Out06, Jxx\_Ch1\_Out01, Jxx\_Ch1\_Out03, Jxx\_Ch1\_Out05, and Jxx\_Ch1\_Out07. The signal names are indicated above the output terminals.

- When wiring, pay careful attention to the polarity of the external power supply. The load may operate incorrectly if the polarity is reversed.
- The signal names of the terminals are the device variable names.
- The device variable names are the names that use "Jxx" as the device name.

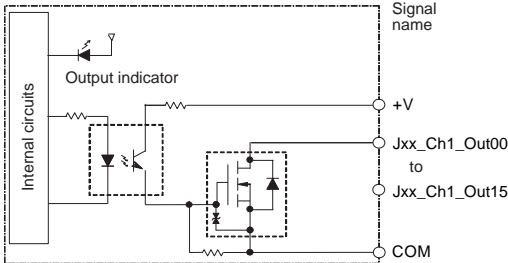
\* Terminal numbers A0 to A8 and B0 to B8 are used in the external connection and terminal-device variable diagrams. They are not printed on the Units.

**Note:** Although 16 I/O bits (1 word) are allocated, only 8 of these can be used for external I/O.

CJ1W-OD211 Transistor Output Unit (16 Points)

Name	16-point Transistor Output Unit with Terminal Block (Sinking Outputs)
Model	CJ1W-OD211
Rated Voltage	12 to 24 VDC
Operating Load Voltage Range	10.2 to 26.4 VDC
Maximum Load Current	0.5 A/point, 5.0 A/Unit
Maximum Inrush Current	4.0 A/point, 10 ms max.
Leakage Current	0.1 mA max.
Residual Voltage	1.5 V max.
ON Response Time	0.1 ms max.
OFF Response Time	0.8 ms max.
Insulation Resistance	20 MΩ between the external terminals and the GR terminal (100 VDC)
Dielectric Strength	1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.
Number of Circuits	16 (16 points/common, 1 circuit)
Internal Current Consumption	5 VDC 100 mA max.
Fuse	None
External Power Supply	10.2 to 26.4 VDC, 20 mA min.
Weight	110 g max.

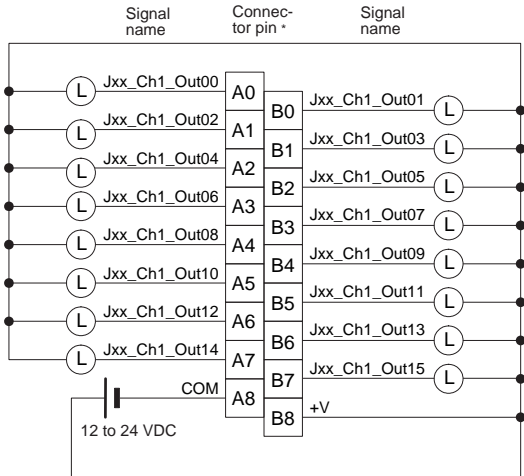
Circuit Configuration



The diagram shows the internal circuitry of the unit. It includes an 'Internal circuits' block, an 'Output indicator' (LED), and a transistor switching circuit. The output terminals are labeled: '+V', 'Jxx\_Ch1\_Out00 to Jxx\_Ch1\_Out15', and 'COM'. A 'Signal name' is indicated at the top right.

- The signal names of the terminals are the device variable names.
- The device variable names are the names that use "Jxx" as the device name.

External connection and terminal-device variable diagram



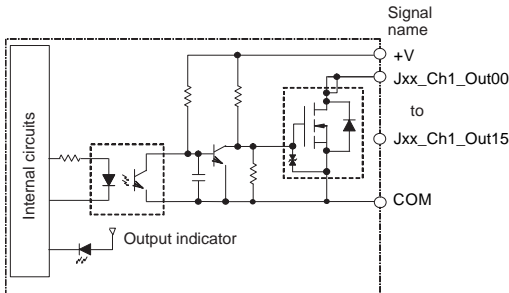
The diagram shows the terminal block with 16 points (A0 to A8 and B0 to B8) and a common terminal (COM). Each point is connected to a load (L) and a signal name (Jxx\_Ch1\_Out00 to Jxx\_Ch1\_Out15). The terminal block is labeled '12 to 24 VDC' and '+V'. A 'Signal name' and 'Connecc- tor pin \*' are indicated at the top.

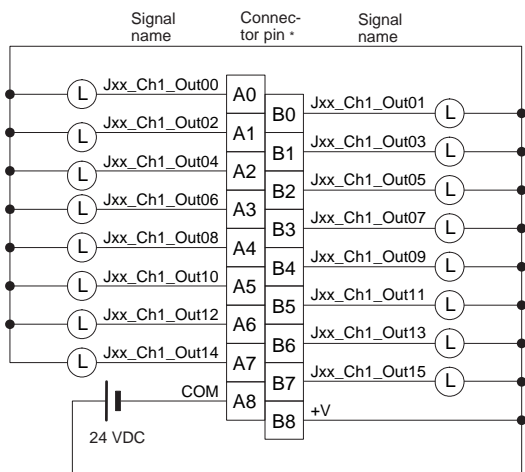
- When wiring, pay careful attention to the polarity of the external power supply. The load may operate incorrectly if the polarity is reversed.
- The signal names of the terminals are the device variable names.
- The device variable names are the names that use "Jxx" as the device name.

\* Terminal numbers A0 to A8 and B0 to B8 are used in the external connection and terminal-device variable diagrams. They are not printed on the Units.

## CJ1W-OD213 Transistor Output Unit (16 Points)

<b>Name</b>	16-point Transistor Output Unit with Terminal Block (Sinking Outputs)
<b>Model</b>	CJ1W-OD213
<b>Rated Voltage</b>	24 VDC
<b>Operating Load Voltage Range</b>	20.4 to 26.4 VDC
<b>Maximum Load Current</b>	0.5 A/point, 5.0 A/Unit
<b>Maximum Inrush Current</b>	4.0 A/point, 10 ms max.
<b>Leakage Current</b>	0.1 mA max.
<b>Residual Voltage</b>	1.5 V max.
<b>ON Response Time</b>	15 $\mu$ s max.
<b>OFF Response Time</b>	80 $\mu$ s max.
<b>Insulation Resistance</b>	20 M $\Omega$ between the external terminals and the GR terminal (100 VDC)
<b>Dielectric Strength</b>	1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.
<b>Number of Circuits</b>	16 (16 points/common, 1 circuit)
<b>Internal Current Consumption</b>	5 VDC 150 mA max.
<b>Fuse</b>	None
<b>External Power Supply</b>	20.4 to 26.4 VDC, 55 mA min.
<b>Weight</b>	110 g max.

<b>Circuit Configuration</b>	 <ul style="list-style-type: none"> <li>• The signal names of the terminals are the device variable names. The device variable names are the names that use "Jxx" as the device name.</li> </ul>
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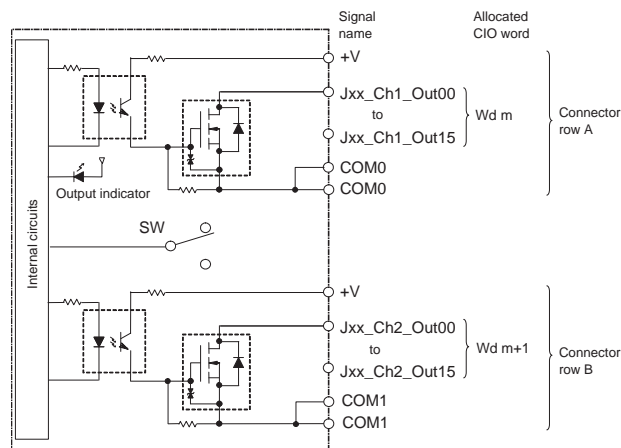
<b>External connection and terminal-device variable diagram</b>	 <ul style="list-style-type: none"> <li>• When wiring, pay careful attention to the polarity of the external power supply. The load may operate incorrectly if the polarity is reversed.</li> <li>• The signal names of the terminals are the device variable names. The device variable names are the names that use "Jxx" as the device name.</li> </ul>
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\* Terminal numbers A0 to A8 and B0 to B8 are used in the external connection and terminal-device variable diagrams. They are not printed on the Units.

## CJ1W-OD231 Transistor Output Unit (32 Points)

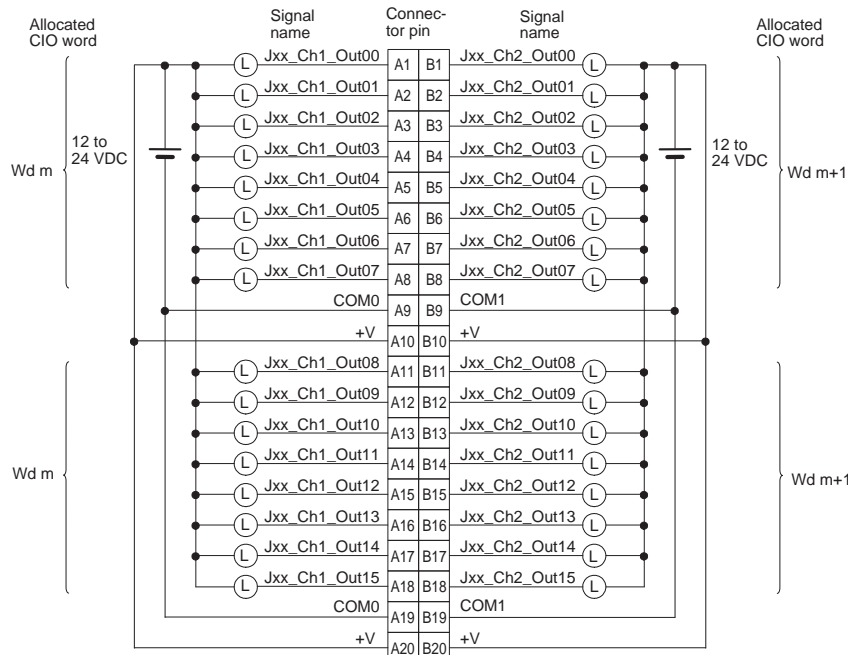
<b>Name</b>	32-point Transistor Output Unit with Fujitsu Connector (Sinking Outputs)
<b>Model</b>	CJ1W-OD231
<b>Rated Voltage</b>	12 to 24 VDC
<b>Operating Load Voltage Range</b>	10.2 to 26.4 VDC
<b>Maximum Load Current</b>	0.5 A/point, 2.0 A/common, 4.0 A/Unit
<b>Maximum Inrush Current</b>	4.0 A/point, 10 ms max.
<b>Leakage Current</b>	0.1 mA max.
<b>Residual Voltage</b>	1.5 V max.
<b>ON Response Time</b>	0.1 ms max.
<b>OFF Response Time</b>	0.8 ms max.
<b>Insulation Resistance</b>	20 MΩ between the external terminals and the GR terminal (100 VDC)
<b>Dielectric Strength</b>	1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.
<b>Number of Circuits</b>	32 (16 points/common, 2 circuits)
<b>Internal Current Consumption</b>	5 VDC 140 mA max.
<b>Fuse</b>	None
<b>External Power Supply</b>	10.2 to 26.4 VDC, 30 mA min.
<b>Weight</b>	70 g max.
<b>Accessories</b>	None

### Circuit Configuration



- The signal names of the terminals are the device variable names.  
The device variable names are the names that use "Jxx" as the device name.

### External connection and terminal-device variable diagram

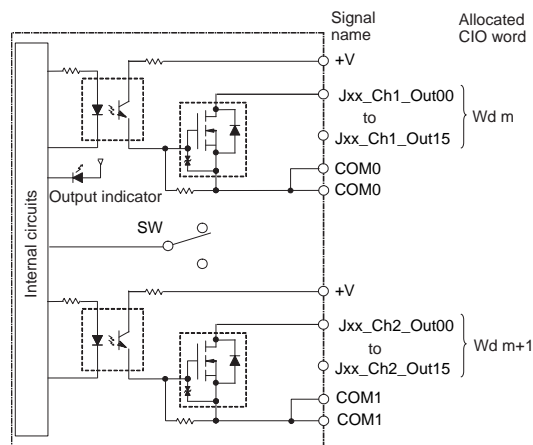


- When wiring, pay careful attention to the polarity of the external power supply. The load may operate incorrectly if the polarity is reversed.
- Be sure to wire both terminals A9 and A19 (COM0).
- Be sure to wire both terminals B9 and B19 (COM1).
- Be sure to wire both terminals A10 and A20 (+V).
- Be sure to wire both terminals B10 and B20 (+V).
- The signal names of the terminals are the device variable names.  
The device variable names are the names that use "Jxx" as the device name.

## CJ1W-OD233 Transistor Output Unit (32 Points)

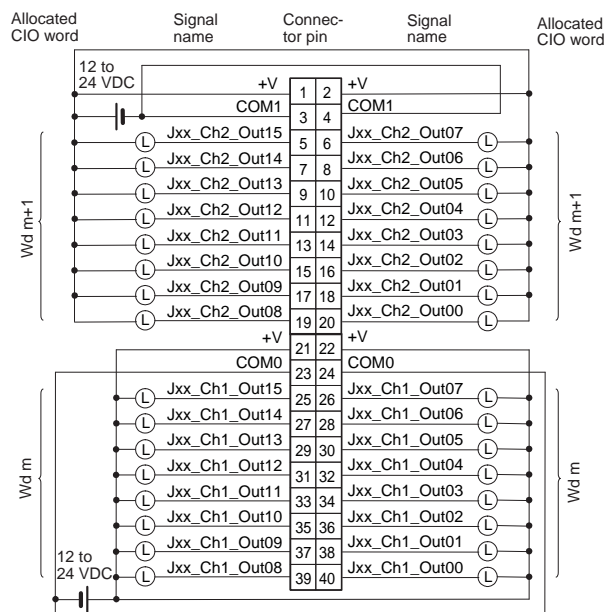
<b>Name</b>	32-point Transistor Output Unit with MIL Connector (Sinking Outputs)
<b>Model</b>	CJ1W-OD233
<b>Rated Voltage</b>	12 to 24 VDC
<b>Operating Load Voltage Range</b>	10.2 to 26.4 VDC
<b>Maximum Load Current</b>	0.5 A/point, 2 A/common, 4 A/Unit
<b>Maximum Inrush Current</b>	4.0 A/point, 10 ms max.
<b>Leakage Current</b>	0.1 mA max.
<b>Residual Voltage</b>	1.5 V max.
<b>ON Response Time</b>	0.1 ms max.
<b>OFF Response Time</b>	0.8 ms max.
<b>Insulation Resistance</b>	20 MΩ between the external terminals and the GR terminal (100 VDC)
<b>Dielectric Strength</b>	1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.
<b>Number of Circuits</b>	32 (16 points/common, 2 circuits)
<b>Internal Current Consumption</b>	140 mA max.
<b>Fuse</b>	None
<b>External Power Supply</b>	10.2 to 26.4 VDC, 30 mA min.
<b>Weight</b>	70 g max.

### Circuit Configuration



- The signal names of the terminals are the device variable names.  
The device variable names are the names that use "Jxx" as the device name.

### External connection and terminal-device variable diagram

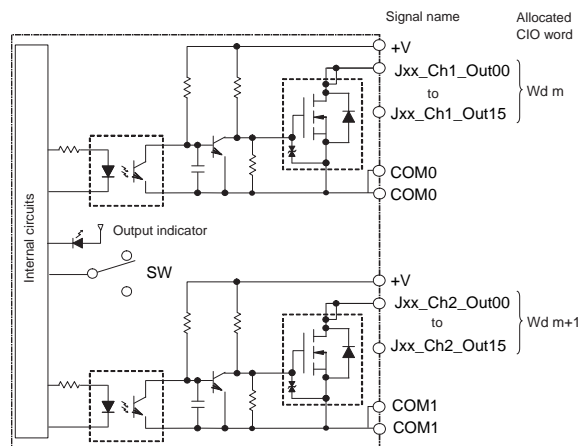


- When wiring, pay careful attention to the polarity of the external power supply. The load may operate incorrectly if the polarity is reversed.
- Be sure to wire both terminals 23 and 24 (COM0).
- Be sure to wire both terminals 3 and 4 (COM1).
- Be sure to wire both terminals 21 and 22 (+V).
- Be sure to wire both terminals 1 and 2 (+V).
- The signal names of the terminals are the device variable names.  
The device variable names are the names that use "Jxx" as the device name.

## CJ1W-OD234 Transistor Output Unit (32 Points)

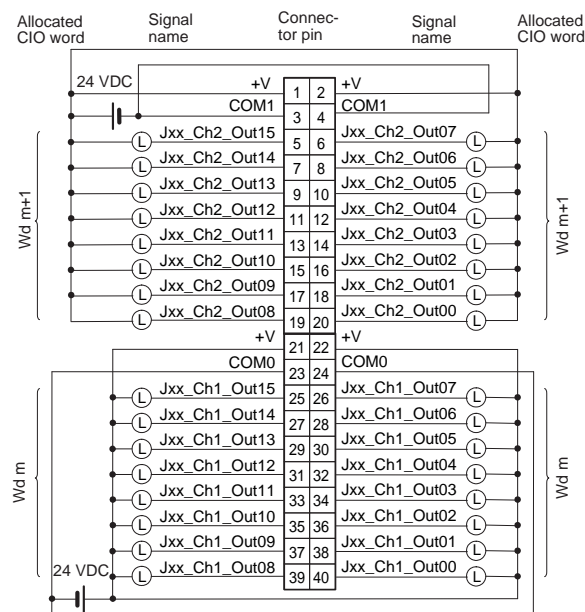
<b>Name</b>	32-point Transistor Output Unit with MIL Connector (Sinking Outputs)
<b>Model</b>	CJ1W-OD234
<b>Rated Voltage</b>	24 VDC
<b>Operating Load Voltage Range</b>	20.4 to 26.4 VDC
<b>Maximum Load Current</b>	0.5 A/point, 2 A/common, 4 A/Unit
<b>Maximum Inrush Current</b>	4.0 A/point, 10 ms max.
<b>Leakage Current</b>	0.1 mA max.
<b>Residual Voltage</b>	1.5 V max.
<b>ON Response Time</b>	15 $\mu$ s max.
<b>OFF Response Time</b>	80 $\mu$ s max.
<b>Insulation Resistance</b>	20 M $\Omega$ between the external terminals and the GR terminal (100 VDC)
<b>Dielectric Strength</b>	1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.
<b>Number of Circuits</b>	32 (16 points/common, 2 circuits)
<b>Internal Current Consumption</b>	220 mA max.
<b>Fuse</b>	None
<b>External Power Supply</b>	20.4 to 26.4 VDC, 110 mA min.
<b>Weight</b>	70 g max.

### Circuit Configuration



- The signal names of the terminals are the device variable names.  
The device variable names are the names that use "Jxx" as the device name.

### External connection and terminal-device variable diagram

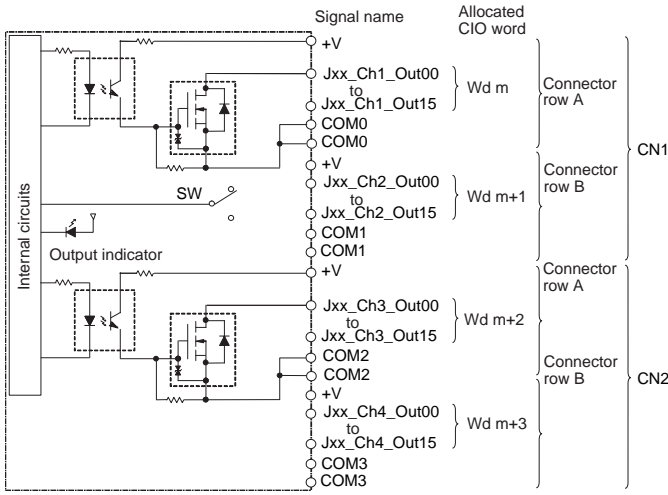


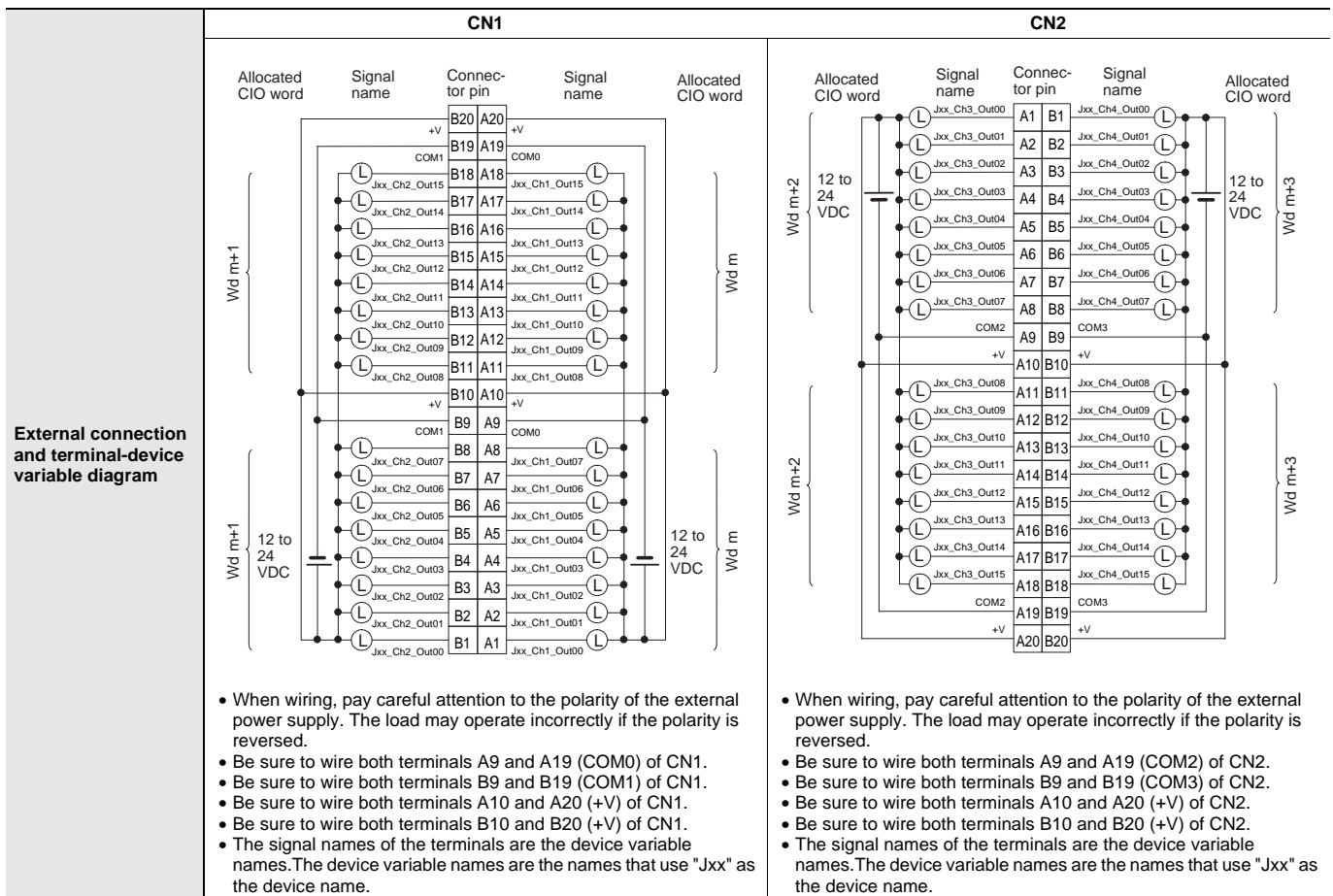
- When wiring, pay careful attention to the polarity of the external power supply. The load may operate incorrectly if the polarity is reversed.
- Be sure to wire both terminals 23 and 24 (COM0).
- Be sure to wire both terminals 3 and 4 (COM1).
- Be sure to wire both terminals 21 and 22 (+V).
- Be sure to wire both terminals 1 and 2 (+V).
- The signal names of the terminals are the device variable names.  
The device variable names are the names that use "Jxx" as the device name.



## CJ1W-OD261 Transistor Output Unit (64 Points)

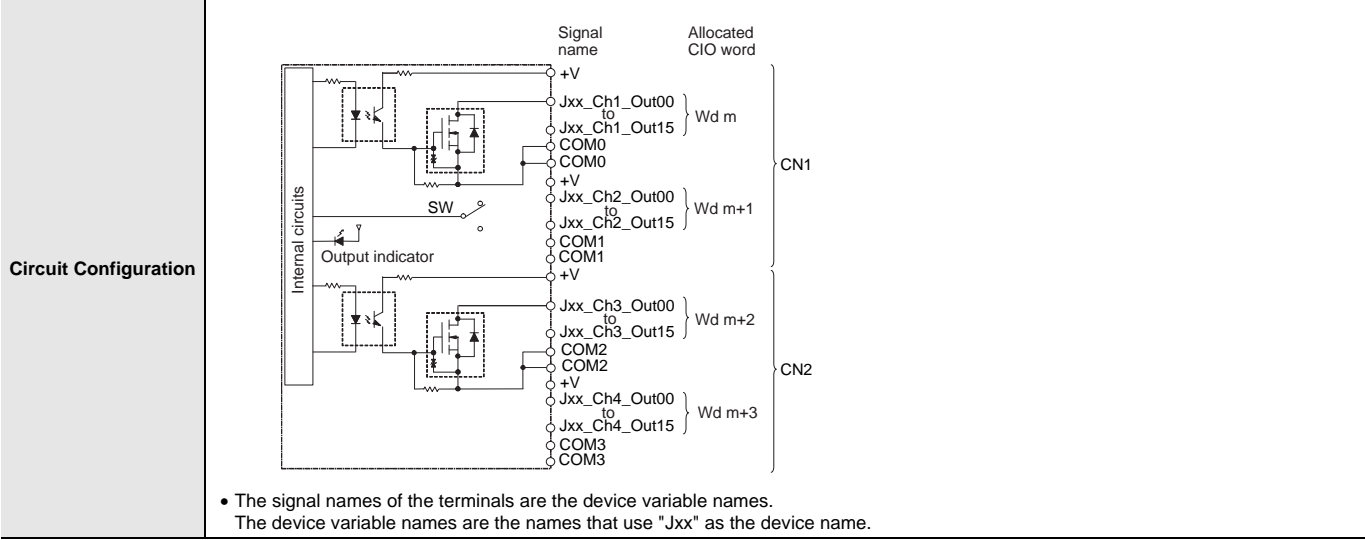
<b>Name</b>	64-point Transistor Output Unit with Fujitsu Connectors (Sinking Outputs)
<b>Model</b>	CJ1W-OD261
<b>Rated Voltage</b>	12 to 24 VDC
<b>Operating Load Voltage Range</b>	10.2 to 26.4 VDC
<b>Maximum Load Current</b>	0.3 A/point, 1.6 A/common, 6.4 A/Unit
<b>Maximum Inrush Current</b>	3.0 A/point, 10 ms max.
<b>Leakage Current</b>	0.1 mA max.
<b>Residual Voltage</b>	1.5 V max.
<b>ON Response Time</b>	0.5 ms max.
<b>OFF Response Time</b>	1.0 ms max.
<b>Insulation Resistance</b>	20 MΩ between the external terminals and the GR terminal (100 VDC)
<b>Dielectric Strength</b>	1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.
<b>Number of Circuits</b>	64 (16 points/common, 4 circuits)
<b>Internal Current Consumption</b>	5 VDC, 170 mA max.
<b>Fuse</b>	None
<b>External Power Supply</b>	10.2 to 26.4 VDC, 50 mA min.
<b>Weight</b>	110 g max.
<b>Accessories</b>	None

<b>Circuit Configuration</b>		
	<ul style="list-style-type: none"> <li>The signal names of the terminals are the device variable names.</li> <li>The device variable names are the names that use "Jxx" as the device name.</li> </ul>	



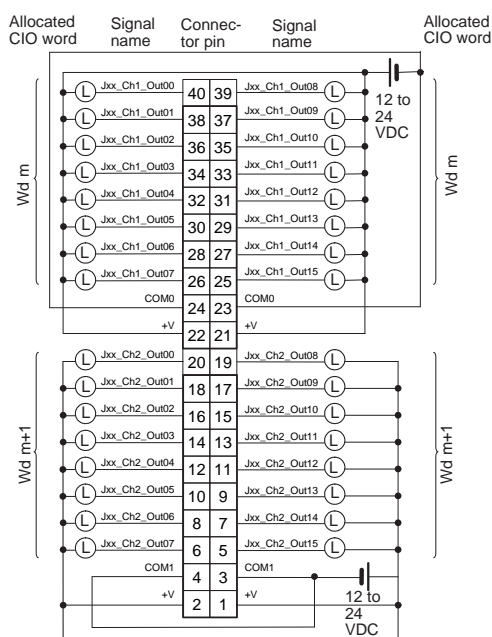
CJ1W-OD263 Transistor Output Unit (64 Points)

Name	64-point Transistor Output Unit with MIL Connectors (Sinking Outputs)
Model	CJ1W-OD263
Rated Voltage	12 to 24 VDC
Operating Load Voltage Range	10.2 to 26.4 VDC
Maximum Load Current	0.3 A/point, 1.6 A/common, 6.4 A/Unit
Maximum Inrush Current	3.0 A/point, 10 ms max.
Leakage Current	0.1 mA max.
Residual Voltage	1.5 V max.
ON Response Time	0.5 ms max.
OFF Response Time	1.0 ms max.
Insulation Resistance	20 MΩ between the external terminals and the GR terminal (100 VDC)
Dielectric Strength	1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.
Number of Circuits	64 (16 points/common, 4 circuits)
Internal Current Consumption	170 mA max.
Fuse	None
External Power Supply	10.2 to 26.4 VDC, 50 mA min.
Weight	110 g max.



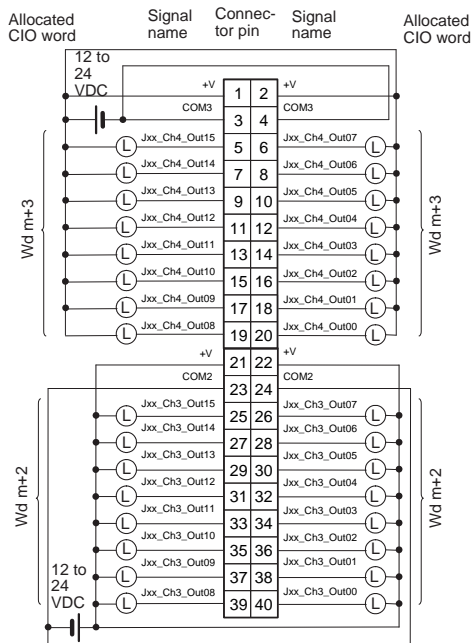
# External connection and terminal-device variable diagram

CN1



- When wiring, pay careful attention to the polarity of the external power supply. The load may operate incorrectly if the polarity is reversed.
- Be sure to wire both terminals 23 and 24 (COM0) of CN1.
- Be sure to wire both terminals 3 and 4 (COM1) of CN1.
- Be sure to wire both terminals 21 and 22 (+V) of CN1.
- Be sure to wire both terminals 1 and 2 (+V) of CN1.
- The signal names of the terminals are the device variable names. The device variable names are the names that use "Jxx" as the device name.

CN2



- When wiring, pay careful attention to the polarity of the external power supply. The load may operate incorrectly if the polarity is reversed.
- Be sure to wire both terminals 23 and 24 (COM2) of CN2.
- Be sure to wire both terminals 3 and 4 (COM3) of CN2.
- Be sure to wire both terminals 21 and 22 (+V) of CN2.
- Be sure to wire both terminals 1 and 2 (+V) of CN2.
- The signal names of the terminals are the device variable names. The device variable names are the names that use "Jxx" as the device name.

## CJ1W-OD202 Transistor Output Unit (8 Points)

<b>Name</b>	8-point Transistor Output Unit with Terminal Block (Sourcing Outputs)
<b>Model</b>	CJ1W-OD202
<b>Rated Voltage</b>	24 VDC
<b>Operating Load Voltage Range</b>	20.4 to 26.4 VDC
<b>Maximum Load Current</b>	2 A/point, 8 A/Unit
<b>Leakage Current</b>	0.1 mA max.
<b>Residual Voltage</b>	1.5 V max.
<b>ON Response Time</b>	0.5 ms max.
<b>OFF Response Time</b>	1.0 ms max.
<b>Load Short-circuit Protection</b>	Detection current: 6 A min. Automatic restart after error clearance.
<b>Line Disconnection Detection</b>	Detection current: 200 mA
<b>Insulation Resistance</b>	20 MΩ between the external terminals and the GR terminal (100 VDC)
<b>Dielectric Strength</b>	1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.
<b>Number of Circuits</b>	8 (4 points/common, 2 circuits)
<b>Internal Current Consumption</b>	110 mA max.
<b>Fuse</b>	None
<b>External Power Supply</b>	20.4 to 26.4 VDC, 50 mA min.
<b>Weight</b>	120 g max.

<b>Circuit Configuration</b>	<ul style="list-style-type: none"> <li>When overcurrent or line disconnection is detected, the ERR indicator will light, and the corresponding bit (two points per bit) in the Basic I/O Unit Information Area (A050 to A069) will change to TRUE.</li> <li>The signal names of the terminals are the device variable names. The device variable names are the names that use "Jxx" as the device name.</li> </ul>
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<b>External connection and terminal-device variable diagram</b>	<ul style="list-style-type: none"> <li>When wiring, pay careful attention to the polarity of the external power supply. The load may operate incorrectly if the polarity is reversed.</li> <li>The signal names of the terminals are the device variable names. The device variable names are the names that use "Jxx" as the device name.</li> </ul>
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\* Terminal numbers A0 to A8 and B0 to B8 are used in the external connection and terminal-device variable diagrams. They are not printed on the Units.

**Note:** Although 16 I/O bits (1 word) are allocated, only 8 of these can be used for external I/O.

# CJ1W-OD204 Transistor Output Unit (8 Points)

<b>Name</b>	8-point Transistor Output Unit with Terminal Block (Sourcing Outputs)
<b>Model</b>	CJ1W-OD204
<b>Rated Voltage</b>	24 VDC
<b>Operating Load Voltage Range</b>	20.4 to 26.4 VDC
<b>Maximum Load Current</b>	0.5 A/point, 4.0 A/Unit
<b>Leakage Current</b>	0.1 mA max.
<b>Residual Voltage</b>	1.5 V max.
<b>ON Response Time</b>	0.5 ms max.
<b>OFF Response Time</b>	1.0 ms max.
<b>Load Short-circuit Protection</b>	Detection current: 0.7 to 2.5 A Automatic restart after error clearance.
<b>Insulation Resistance</b>	20 MΩ between the external terminals and the GR terminal (100 VDC)
<b>Dielectric Strength</b>	1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.
<b>Number of Circuits</b>	8 (8 points/common, 1 circuit)
<b>Internal Current Consumption</b>	5 VDC, 100 mA max.
<b>Fuse</b>	None
<b>External Power Supply</b>	20.4 to 26.4 VDC, 40 mA min.
<b>Weight</b>	120 g max.

Circuit Configuration

Signal name  
COM (+V)  
Jxx\_Ch1\_Out00 to Jxx\_Ch1\_Out07  
0 V

Internal circuits  
Short-circuit protection  
Output indicator  
ERR indicator

- When overcurrent is detected, the ERR indicator will light, and the corresponding bit in the Basic I/O Unit Information Area (A050 to A069) will change to TRUE.
- The signal names of the terminals are the device variable names.  
The device variable names are the names that use "Jxx" as the device name.

External connection and terminal-device variable diagram

Signal name  
Jxx\_Ch1\_Out00  
Jxx\_Ch1\_Out02  
Jxx\_Ch1\_Out04  
Jxx\_Ch1\_Out06  
NC  
NC  
NC  
NC  
0 V

Conne-  
tor pin \*

Signal name  
Jxx\_Ch1\_Out01  
Jxx\_Ch1\_Out03  
Jxx\_Ch1\_Out05  
Jxx\_Ch1\_Out07  
NC  
NC  
NC  
NC  
COM (+V)  
24 VDC

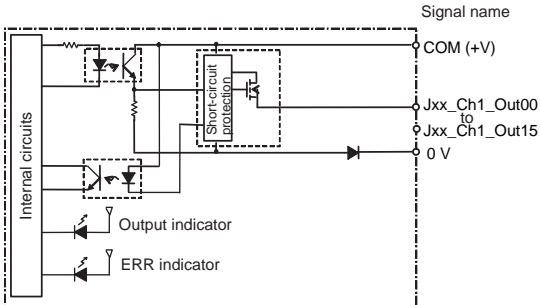
- When wiring, pay careful attention to the polarity of the external power supply. The load may operate incorrectly if the polarity is reversed.
- The signal names of the terminals are the device variable names.  
The device variable names are the names that use "Jxx" as the device name.

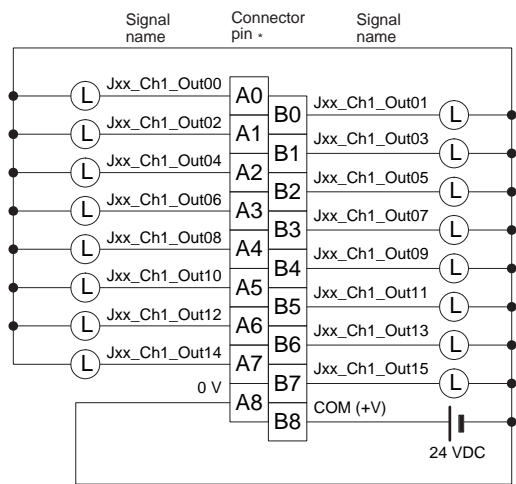
\* Terminal numbers A0 to A8 and B0 to B8 are used in the external connection and terminal-device variable diagrams. They are not printed on the Units.

**Note:** Although 16 I/O bits (1 word) are allocated, only 8 of these can be used for external I/O.

CJ1W-OD212 Transistor Output Unit (16 Points)

Name	16-point Transistor Output Unit with Terminal Block (Sourcing Outputs)
Model	CJ1W-OD212
Rated Voltage	24 VDC
Operating Load Voltage Range	20.4 to 26.4 VDC
Maximum Load Current	0.5 A/point, 5.0 A/Unit
Maximum Inrush Current	0.1 mA max.
Leakage Current	1.5 V max.
ON Response Time	0.5 ms max.
OFF Response Time	1.0 ms max.
Load Short-circuit Protection	Detection current: 0.7 to 2.5 A Automatic restart after error clearance.
Insulation Resistance	20 MΩ between the external terminals and the GR terminal (100 VDC)
Dielectric Strength	1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.
Number of Circuits	16 (16 points/common, 1 circuit)
Internal Current Consumption	5 VDC, 100 mA max.
External Power Supply	20.4 to 26.4 VDC, 40 mA min.
Weight	120 g max.

Circuit Configuration	<div><ul style="list-style-type: none"><li>• When overcurrent is detected, the ERR indicator will light, and the corresponding bit in the Basic I/O Unit Information Area (A050 to A069) will change to TRUE.</li><li>• The signal names of the terminals are the device variable names. The device variable names are the names that use "Jxx" as the device name.</li></ul></div>
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External connection and terminal-device variable diagram	<div><ul style="list-style-type: none"><li>• When wiring, pay careful attention to the polarity of the external power supply. The load may operate incorrectly if the polarity is reversed.</li><li>• The signal names of the terminals are the device variable names. The device variable names are the names that use "Jxx" as the device name.</li></ul></div>
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\* Terminal numbers A0 to A8 and B0 to B8 are used in the external connection and terminal-device variable diagrams. They are not printed on the Units.

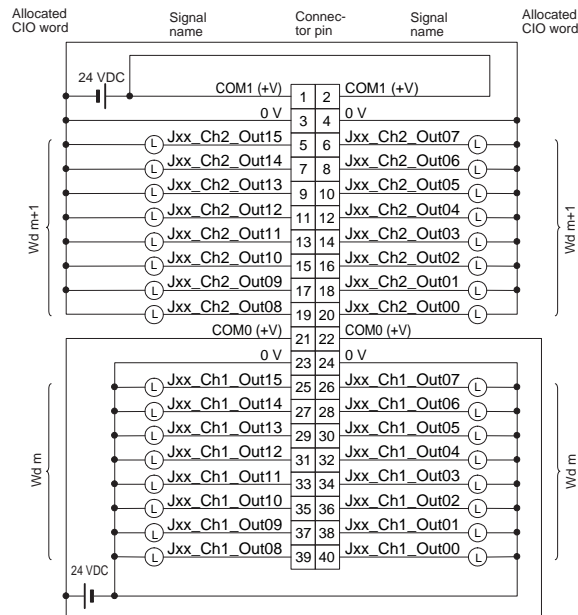


## CJ1W-OD232 Transistor Output Unit (32 Points)

<b>Name</b>	32-point Transistor Output Unit with MIL Connector (Sourcing Outputs)
<b>Model</b>	CJ1W-OD232
<b>Rated Voltage</b>	24 VDC
<b>Operating Load Voltage Range</b>	20.4 to 26.4 VDC
<b>Maximum Load Current</b>	0.5 A/point, 2.0 A/common, 4.0 A/Unit
<b>Leakage Current</b>	0.1 mA max.
<b>Residual Voltage</b>	1.5 V max.
<b>ON Response Time</b>	0.5 ms max.
<b>OFF Response Time</b>	1.0 ms max.
<b>Load Short-circuit Protection</b>	Detection current: 0.7 to 2.5 A Automatic restart after error clearance.
<b>Insulation Resistance</b>	20 MΩ between the external terminals and the GR terminal (100 VDC)
<b>Dielectric Strength</b>	1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.
<b>Number of Circuits</b>	32 (16 points/common, 2 circuits)
<b>Internal Current Consumption</b>	5 VDC 150 mA max.
<b>External Power Supply</b>	20.4 to 26.4 VDC, 70 mA min.
<b>Weight</b>	80 g max.
<b>Accessories</b>	None

<b>Circuit Configuration</b>	
	<ul style="list-style-type: none"> <li>When overcurrent is detected, the ERR indicator will light, and the corresponding bit (bit allocated for each common) in the Basic I/O Unit Information Area (A050 to A069) will change to TRUE.</li> <li>The signal names of the terminals are the device variable names. The device variable names are the names that use "Jxx" as the device name.</li> </ul>

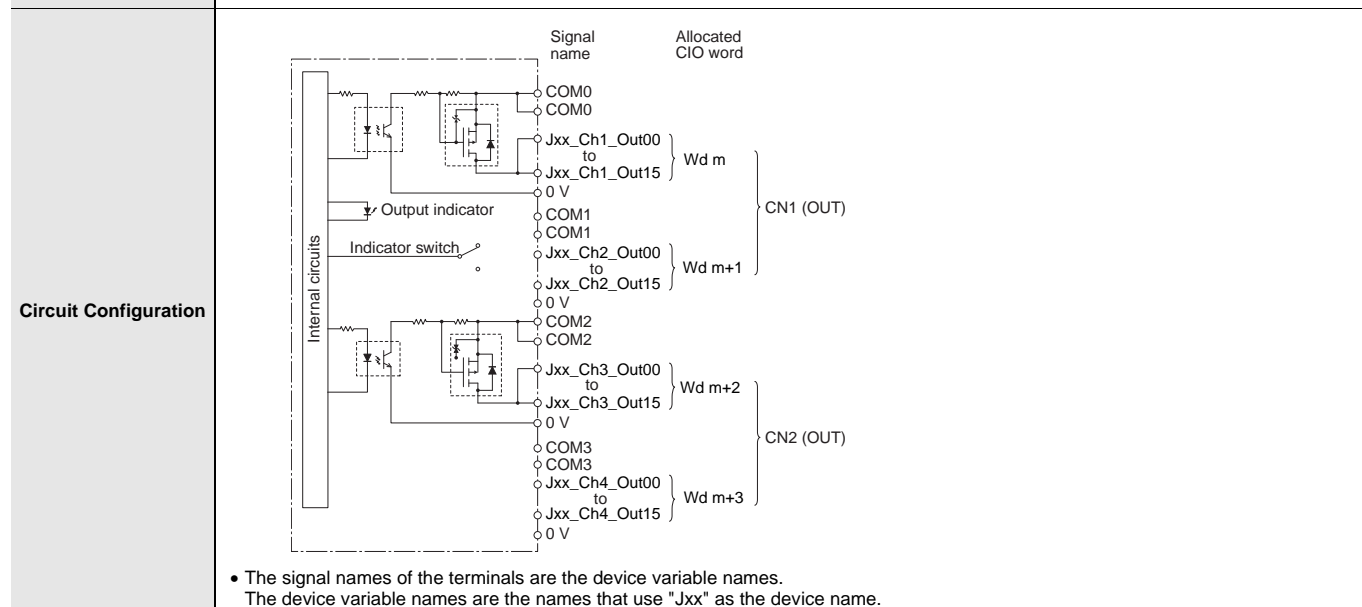
External connection  
and terminal-device  
variable diagram



- When wiring, pay careful attention to the polarity of the external power supply. The load may operate incorrectly if the polarity is reversed.
- Be sure to wire both terminals 21 and 22 (COM0 (+V)).
- Be sure to wire both terminals 1 and 2 (COM1 (+V)).
- Be sure to wire both terminals 3 and 4 (0 V).
- Be sure to wire both terminals 23 and 24 (0 V).
- The signal names of the terminals are the device variable names.  
The device variable names are the names that use "Jxx" as the device name.

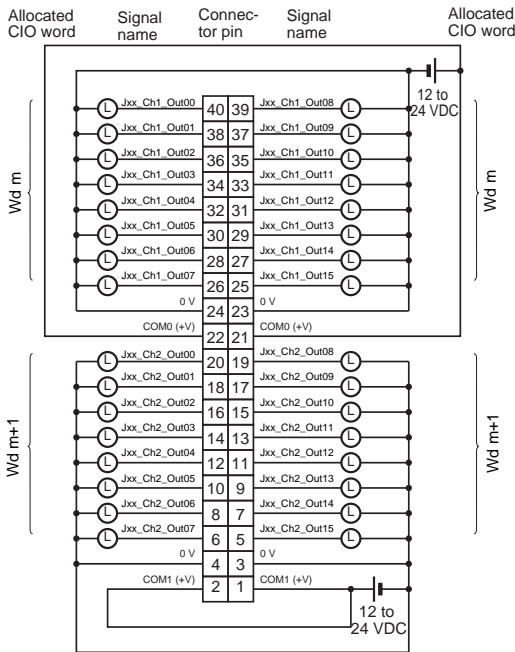
## CJ1W-OD262 Transistor Output Unit (64 Points)

<b>Name</b>	64-point Transistor Output Unit with MIL Connectors (Sourcing Outputs)
<b>Model</b>	CJ1W-OD262
<b>Rated Voltage</b>	12 to 24 VDC
<b>Operating Load Voltage Range</b>	10.2 to 26.4 VDC
<b>Maximum Load Current</b>	0.3 A/point, 1.6 A/common, 6.4 A/Unit
<b>Maximum Inrush Current</b>	3.0 A/point, 10 ms max.
<b>Leakage Current</b>	0.1 mA max.
<b>Residual Voltage</b>	1.5 V max.
<b>ON Response Time</b>	0.5 ms max.
<b>OFF Response Time</b>	1.0 ms max.
<b>Insulation Resistance</b>	20 MΩ between the external terminals and the GR terminal (100 VDC)
<b>Dielectric Strength</b>	1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.
<b>Number of Circuits</b>	64 (16 points/common, 4 circuits)
<b>Internal Current Consumption</b>	170 mA max. (5 VDC)
<b>Fuse</b>	None
<b>External Power Supply</b>	10.2 to 26.4 VDC, 50 mA min.
<b>Weight</b>	110 g max.
<b>Accessories</b>	None



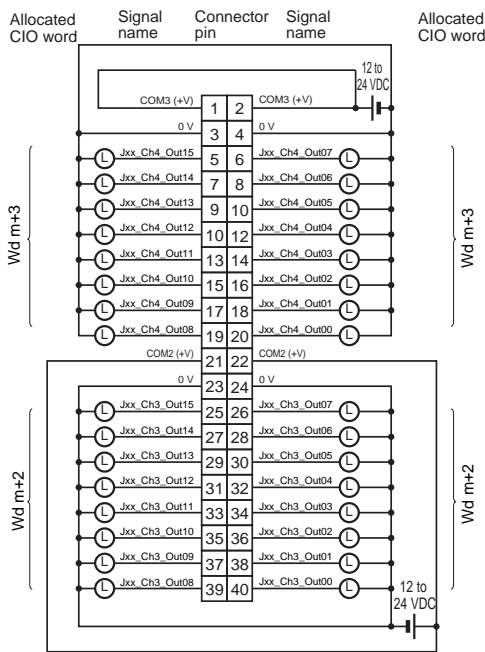
External connection  
and terminal-device  
variable diagram

CN1



- When wiring, pay careful attention to the polarity of the external power supply. The load may operate incorrectly if the polarity is reversed.
- Be sure to wire both terminals 21 and 22 (COM0 (+V)) of CN1.
- Be sure to wire both terminals 1 and 2 (COM1 (+V)) of CN1.
- Be sure to wire both terminals 23 and 24 (0 V) of CN1.
- Be sure to wire both terminals 3 and 4 (0 V) of CN1.
- The signal names of the terminals are the device variable names. The device variable names are the names that use "Jxx" as the device name.

CN2



- When wiring, pay careful attention to the polarity of the external power supply. The load may operate incorrectly if the polarity is reversed.
- Be sure to wire both terminals 21 and 22 (COM2 (+V)) of CN2.
- Be sure to wire both terminals 1 and 2 (COM3 (+V)) of CN2.
- Be sure to wire both terminals 23 and 24 (0 V) of CN2.
- Be sure to wire both terminals 3 and 4 (0 V) of CN2.
- The signal names of the terminals are the device variable names. The device variable names are the names that use "Jxx" as the device name.

## Bit Allocations for Output Unit

### 8-point Output Unit

Allocated CIO word		Signal name (CJ/NJ)
CIO	Bit	
Wd m (Output)	00	OUT0/Jxx_Ch1_Out00
	01	OUT1/Jxx_Ch1_Out01
	:	:
	06	OUT6/Jxx_Ch1_Out06
	07	OUT7/Jxx_Ch1_Out07
	08	—
	09	—
	:	:
	14	—
	15	—

### 32-point Output Unit

Allocated CIO word		Signal name (CJ/NJ)
CIO	Bit	
Wd m (Output)	00	OUT0/Jxx_Ch1_Out00
	01	OUT1/Jxx_Ch1_Out01
	:	:
	14	OUT14/Jxx_Ch1_Out14
	15	OUT15/Jxx_Ch1_Out15
Wd m+1 (Output)	00	OUT0/Jxx_Ch2_Out00
	01	OUT1/Jxx_Ch2_Out01
	:	:
	14	OUT14/Jxx_Ch2_Out14
	15	OUT15/Jxx_Ch2_Out15

### 16-point Output Unit

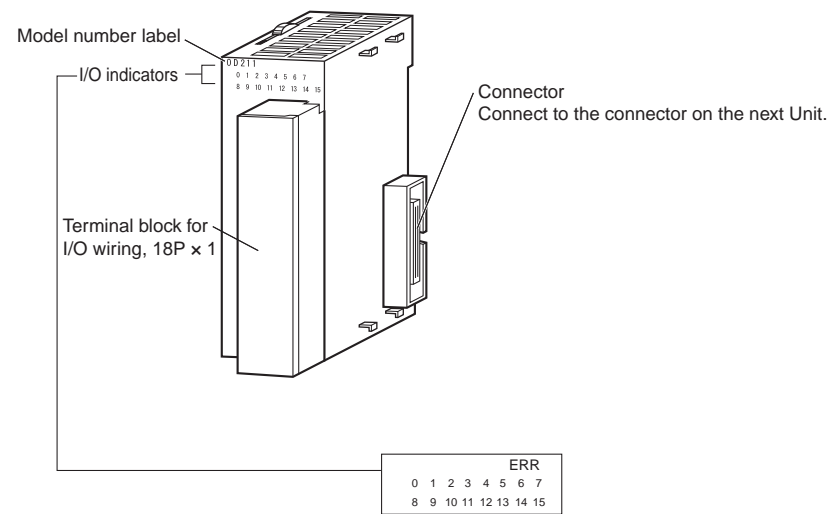
Allocated CIO word		Signal name (CJ/NJ)
CIO	Bit	
Wd m (Output)	00	OUT0/Jxx_Ch1_Out00
	01	OUT1/Jxx_Ch1_Out01
	:	:
	14	OUT14/Jxx_Ch1_Out14
	15	OUT15/Jxx_Ch1_Out15

### 64-point Output Unit

Allocated CIO word		Signal name (CJ/NJ)
CIO	Bit	
Wd m (Output)	00	OUT0/Jxx_Ch1_Out00
	01	OUT1/Jxx_Ch1_Out01
	:	:
	14	OUT14/Jxx_Ch1_Out14
	15	OUT15/Jxx_Ch1_Out15
Wd m+1 (Output)	00	OUT0/Jxx_Ch2_Out00
	01	OUT1/Jxx_Ch2_Out01
	:	:
	14	OUT14/Jxx_Ch2_Out14
	15	OUT15/Jxx_Ch2_Out15
Wd m+2 (Output)	00	OUT0/Jxx_Ch3_Out00
	01	OUT1/Jxx_Ch3_Out01
	:	:
	14	OUT14/Jxx_Ch3_Out14
	15	OUT15/Jxx_Ch3_Out15
Wd m+3 (Output)	00	OUT0/Jxx_Ch4_Out00
	01	OUT1/Jxx_Ch4_Out01
	:	:
	14	OUT14/Jxx_Ch4_Out14
	15	OUT15/Jxx_Ch4_Out15

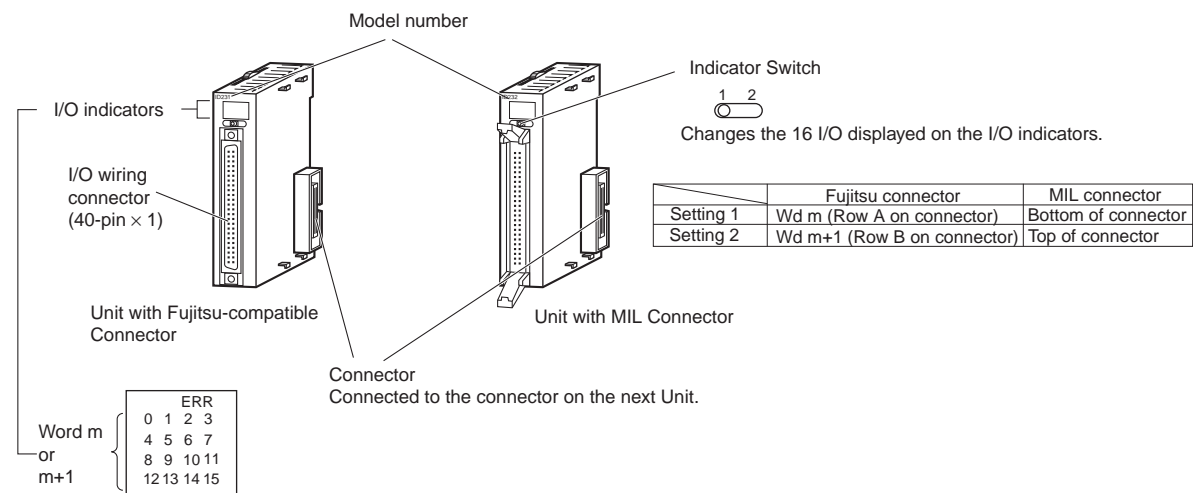
External Interface

8-point/16-point Units (18-point Terminal Blocks)



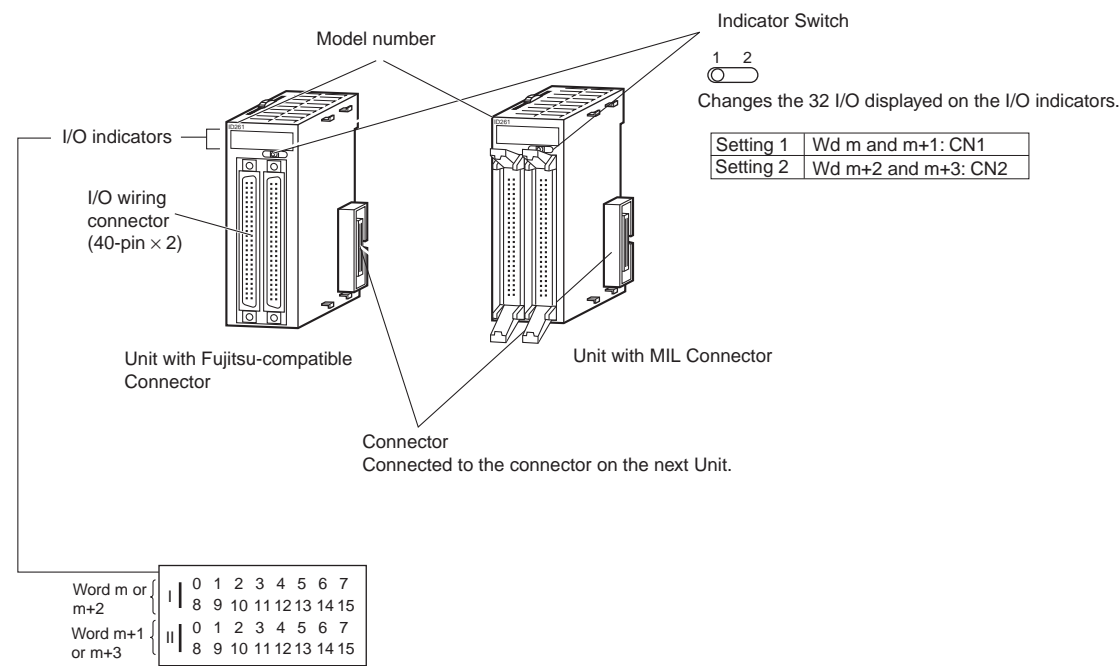
**Note:** The CJ1W-OD202, CJ1W-OD204, and CJ1W-OD212 also have an ERR indicator for the load short-circuit alarm.

32-point Units (Models with 40-point Fujitsu Connector or MIL Connector)



**Note:** Only the CJ1W-OD232 has an ERR indicator for the load short-circuit alarm.

64-point Units (Models with Two 40-point Fujitsu Connectors or MIL Connector)



Wiring Basic I/O Units with Terminal Blocks

Electric Wires

The following wire gauges are recommended.

Terminal Block Connector	Wire Size
18-terminal	AWG 22 to 18 (0.32 to 0.82 mm <sup>2</sup> )

Crimp terminals

Use crimp terminals (M3) having the dimensions shown below.



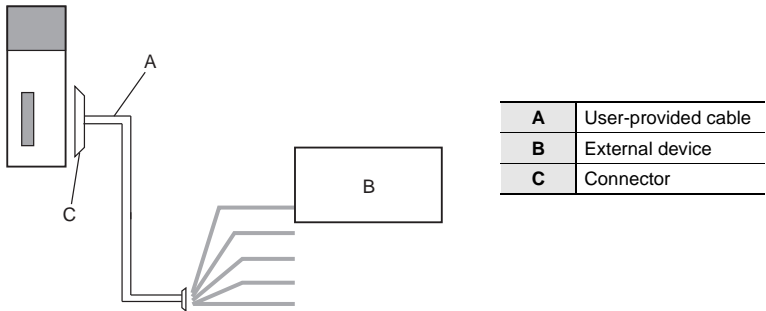


## I/O Unit Wiring Methods

An I/O Unit can be connected to an external device by any of the following three methods.

### 1. User-provided Cable

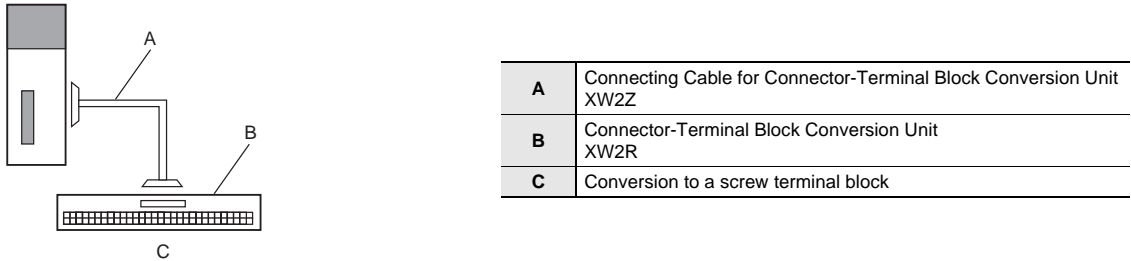
An I/O Unit can be directly connected to an external device by using a connector.



### 2. Connector-Terminal Block Conversion Unit

Use a Connecting Cable to connect to a Connector-Terminal Block Conversion Unit.

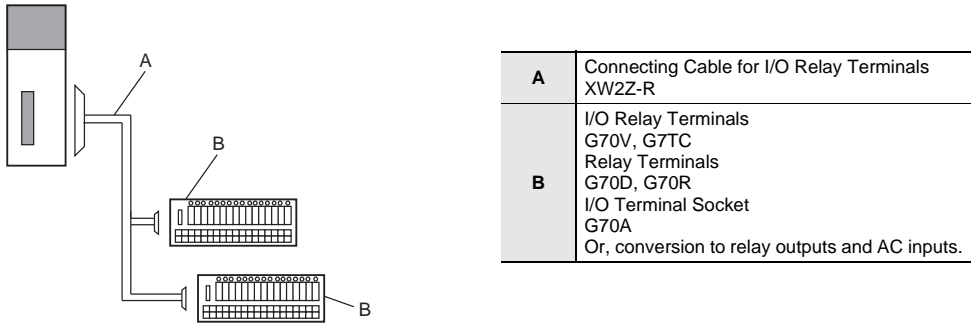
Converting the I/O Unit connector to a screw terminal block or push-in terminal block makes it easy to connect external devices.



### 3. I/O Relay Terminal

Use a Connecting Cable to connect to an I/O Relay Terminal.

The I/O specifications can be converted to relay outputs and AC inputs by connecting the I/O Relay Terminal to an I/O Unit.



# 1. Using User-made Cables with Connector

## Available Connectors

Use the following connectors when assembling a connector and cable.

### 32- and 64-point Basic I/O Units with Fujitsu-compatible Connectors

#### Applicable Units

Model	Specifications	Pins
CJ1W-OD231	Transistor Output Unit with Sinking Outputs, 32 outputs	40
CJ1W-OD261	Transistor Output Unit with Sinking Outputs, 64 outputs	

#### Applicable Cable-side Connectors

Connection	Pins	OMRON set	Fujitsu parts
Solder-type	40	C500-CE404	Socket: FCN-361J040-AU Connector cover: FCN-360C040-J2
Crimped	40	C500-CE405	Socket: FCN-363J040 Connector cover: FCN-360C040-J2 Contacts: FCN-363J-AU
Pressure-welded	40	C500-CE403	FCN-367J040-AU/F

### 32- and 64-point Basic I/O Units with MIL Connectors

#### Applicable Units

Model	Specifications	Pins
CJ1W-OD232	Transistor Output Unit with sourcing outputs, 32 outputs	40
CJ1W-OD262	Transistor Output Unit with sourcing outputs, 64 outputs	
CJ1W-OD233 CJ1W-OD234	Transistor Output Unit with sinking outputs, 32 outputs	
CJ1W-OD263	Transistor Output Unit with sinking outputs, 64 outputs	

#### Applicable Cable-side Connectors

Connection	Pins	OMRON set	DDK parts
Pressure-welded	40	XG4M-4030-T *1	FRC5-A040-3T0S
	40	XG5N-401 *2	HU-400S2-001
Crimped	—	Crimp Contacts for XG5N *3 XG5W-0232 (loose contacts: 100 pieces) XG5W-0232-R (reel contacts: 10,000 pieces)	HU-111S

\*1. Socket and Stain Relief set.

\*2. Crimp Contacts (XG5W-0232) are sold separately.

\*3. Applicable wire size is AWG 28 to 24. For applicable conductor construction and more information, visit the OMRON website.

## Wire Size

We recommend using cable with wire gauges of AWG 28 to 24 (0.08 to 0.2 mm<sup>2</sup>). Use cable with external wire diameters of 1.61 mm max.

## Crimping Tools

The following models are recommended for crimping tools and pressure-welding tools for Fujitsu connectors.

#### Tools for Crimped Connectors (Fujitsu Component)

Product Name	Model
Hand Crimping Tool	FCN-363T-T005/H
Contact Withdrawal Tool	FCN-360T-T001/H

#### Tools for Pressure-welded Connectors (Fujitsu Component)

Product Name	Model
Hand Press	FCN-707T-T101/H
Cable Cutter	FCN-707T-T001/H
Locator Plate	FCN-367T-T012/H

The following models are recommended for tools for OMRON MIL connectors.

#### Tools for Pressure-welded Connectors (OMRON)

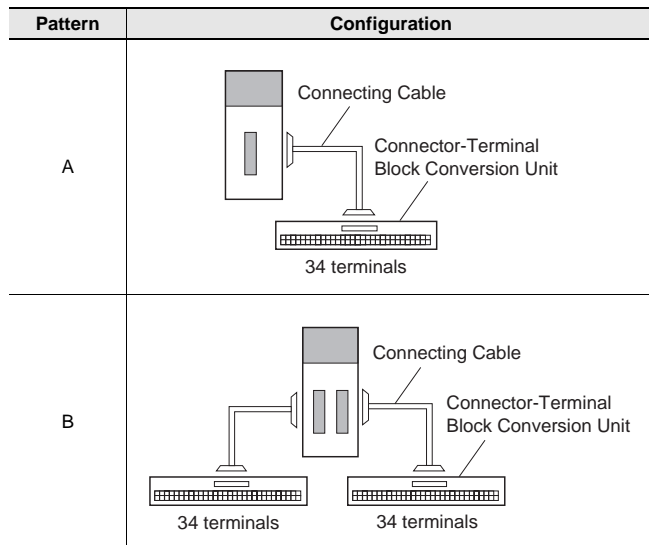
Product Name	Model
Pressure-welding Tool	XY2B-0002
Attachment	XY2B-1007

#### Tools for Crimped Connectors (OMRON)

Product Name	Model
Manual Crimping Tool	XY2B-7007

## 2. Connecting Connector-Terminal Block Conversion Units

### Connection Patterns for Connector-Terminal Block Conversion Units



### Combination of I/O Units with Connector-Terminal Block Conversion Units

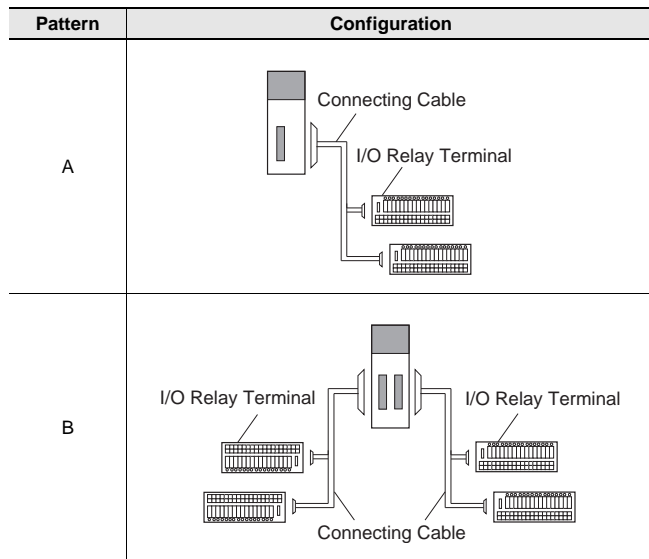
Unit	I/O capacity	Number of connectors	Polarity	Connection pattern	Connecting Cable *	Connector-Terminal Block Conversion Unit	Wiring method	Common terminals
CJ1W-OD231	32 outputs	1 Fujitsu connector	NPN	A	XW2Z-□□□PF	XW2R-J34G-C3	Phillips screw	No
						XW2R-E34G-C3	Slotted screw (rise up)	
						XW2R-P34G-C3	Push-in spring	
CJ1W-OD232	32 outputs	1 MIL connector	PNP	A	XW2Z-□□□PM	XW2R-J34G-C4	Phillips screw	No
						XW2R-E34G-C4	Slotted screw (rise up)	
						XW2R-P34G-C4	Push-in spring	
CJ1W-OD233	32 outputs	1 MIL connector	NPN	A	XW2Z-□□□PM	XW2R-J34G-C4	Phillips screw	No
						XW2R-E34G-C4	Slotted screw (rise up)	
						XW2R-P34G-C4	Push-in spring	
CJ1W-OD234	32 outputs	1 MIL connector	NPN	A	XW2Z-□□□PM	XW2R-J34G-C4	Phillips screw	No
						XW2R-E34G-C4	Slotted screw (rise up)	
						XW2R-P34G-C4	Push-in spring	
CJ1W-OD261	64 outputs	2 Fujitsu connectors	NPN	B	XW2Z-□□□PF (2 pcs)	XW2R-J34G-C3 (2 Units)	Phillips screw	No
						XW2R-E34G-C3 (2 Units)	Slotted screw (rise up)	
						XW2R-P34G-C3 (2 Units)	Push-in spring	
CJ1W-OD262	64 outputs	2 MIL connectors	PNP	B	XW2Z-□□□PM (2 pcs)	XW2R-J34G-C4 (2 Units)	Phillips screw	No
						XW2R-E34G-C4 (2 Units)	Slotted screw (rise up)	
						XW2R-P34G-C4 (2 Units)	Push-in spring	
CJ1W-OD263	64 outputs	2 MIL connectors	NPN	B	XW2Z-□□□PM (2 pcs)	XW2R-J34G-C4 (2 Units)	Phillips screw	No
						XW2R-E34G-C4 (2 Units)	Slotted screw (rise up)	
						XW2R-P34G-C4 (2 Units)	Push-in spring	

\* The box □ is replaced by the cable length.

**Note:** For details, refer to the XW2R series catalog (Cat. No. G077).

### 3. Connecting I/O Relay Terminals

#### Connection Patterns for I/O Relay Terminals



#### Combination of I/O Units with I/O Relay Terminals and Connecting Cables

I/O Units				Connection pattern	Connecting Cables		I/O Relay Terminals			
Model	I/O capacity	External connectors	Polarity		Model *1	Quantity required	Model	I/O points	Quantity required	Wiring method
CJ1W-OD231	32 outputs	1 Fujitsu connector (40 p)	Sinking (NPN)	A	XW2Z-RO□C-□	1	G70V-SOC16P(-C4)	16	2	Screw terminal
							G7TC-OC16	16		
							G70D-SOC/FOM16	16		
							G70D-VSOC16/VFOM16	16		
							G70A-ZOC16-3 *3	16		
							G70R-SOC08 *2	8		
CJ1W-OD232	32 outputs	1 MIL connector (40 p)	Sourcing (PNP)	A	XW2Z-RO□-□-D1	1	G70A-ZOC16-4 *3	16	2	Screw terminal
					XW2Z-RI□-□-D1	1	G70D-SOC/FOM16-1	16		
							G7TC-OC16-1	16		
CJ1W-OD233	32 outputs	1 MIL connector (40 p)	Sinking (NPN)	A	XW2Z-RO□-□-D1	1	G70V-SOC16P(-C4)	16	2	Screw terminal
							G7TC-OC16	16		
							G70D-SOC/FOM16	16		
							G70D-VSOC16/VFOM16	16		
							G70A-ZOC16-3 *3	16		
							G70R-SOC08 *2	8		
CJ1W-OD234	32 outputs	1 MIL connector (40 p)	Sinking (NPN)	A	XW2Z-RO□C-□	1	G70V-SOC16P(-C4)	16	2	Screw terminal
							G7TC-OC16	16		
							G70D-SOC/FOM16	16		
							G70D-VSOC16/VFOM16	16		
							G70A-ZOC16-3 *3	16		
							G70R-SOC08 *2	8		
CJ1W-OD261	64 outputs	2 Fujitsu connectors (40 p)	Sinking (NPN)	B	XW2Z-RO□C-□	2	G70V-SOC16P(-C4)	16	4	Screw terminal
							G7TC-OC16	16		
							G70D-SOC/FOM16	16		
							G70D-VSOC16/VFOM16	16		
							G70A-ZOC16-3 *3	16		
							G70R-SOC08 *2	8		
CJ1W-OD262	64 outputs	2 MIL connectors (40 p)	Sourcing (PNP)	B	XW2Z-RO□-□-D1	2	G70V-SOC16P-1(-C4)	16	4	Screw terminal
					XW2Z-RI□-□-D1	2	G70A-ZOC16-4 *3	16		
							G70D-SOC/FOM16-1	16		
							G7TC-OC16-1	16		
CJ1W-OD263	64 outputs	2 MIL connectors (40 p)	Sinking (NPN)	B	XW2Z-RO□-□-D1	2	G70V-SOC16P(-C4)	16	4	Screw terminal
							G7TC-OC16	16		
							G70D-SOC/FOM16	16		
							G70D-VSOC16/VFOM16	16		
							G70A-ZOC16-3 *3	16		
							G70R-SOC08 *2	8		

\*1. The box □ is replaced by the cable length.

\*2. In addition to the G70R-SOC08, 8-point output G7TC-OC08 and G70D-SOC08 models are available.

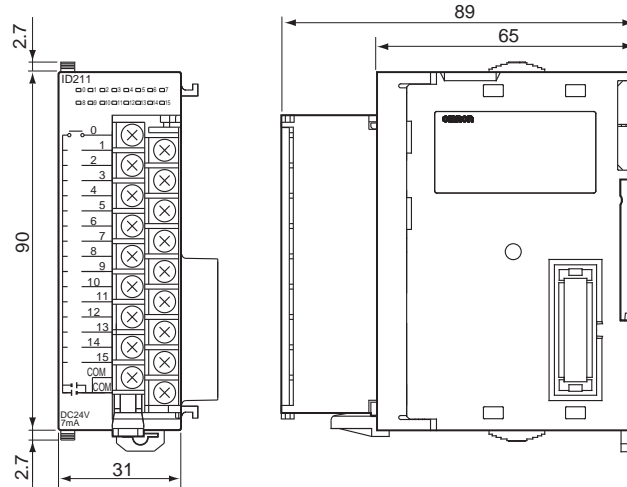
\*3. The G70A-ZOC16-3/4 has I/O terminal sockets. Mounted relays are sold separately. In addition, an G70A-ZOC16-3/4 will be SPDT × 16 points with G2R relays.

## Dimensions

(Unit: mm)

### 8-point/16-point Units (18-point Terminal Blocks)

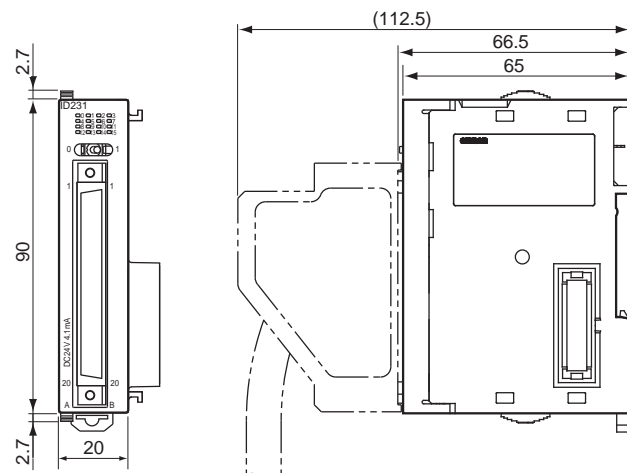
CJ1W-OC201/ OC211/ OA201/ OD201 / OD202/ OD203/ OD204/ OD211/ OD213 / OD212



### 32-point Unit (Output Units)

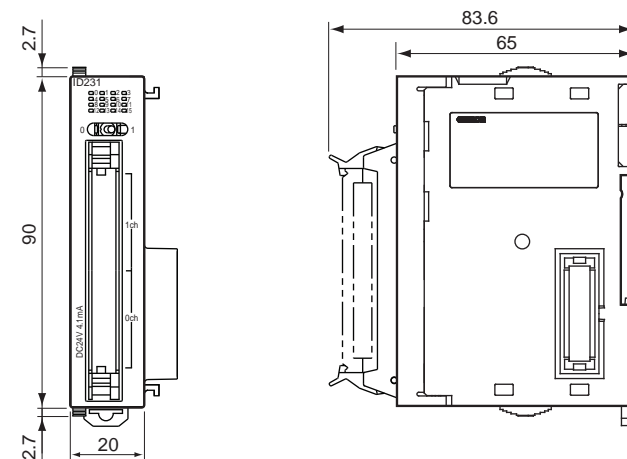
With Fujitsu-Compatible Connector (40-pin × 1)

CJ1W-OD231



With MIL Connector (40-pin × 1)

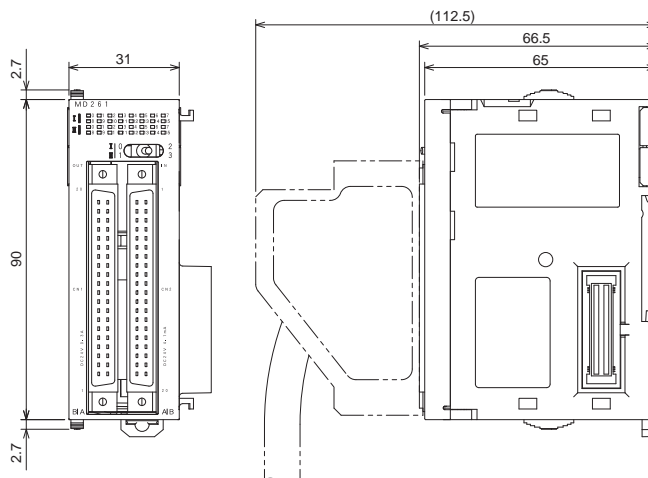
CJ1W-OD232 / OD233 / OD234



## 64-point Units (Output Units)

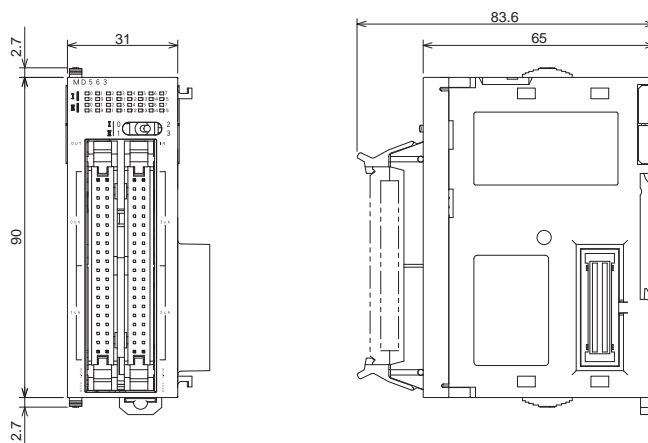
With Fujitsu-Compatible Connector (40-pin × 2)

CJ1W-OD261



With MIL Connector (40-pin × 2)

CJ1W-OD262 / OD263



## Related Manuals

Name	Cat. No.	Contents
CJ-series CJ2 CPU Unit Hardware User's Manual CJ2H-CPU6□-EIP CJ2H-CPU6□ CJ2M-CPU□□	W472	Describes the following for CJ2 CPU Units: <ul style="list-style-type: none"> <li>• Overview and features</li> <li>• Basic system configuration</li> <li>• Part nomenclature and functions</li> <li>• Mounting and setting procedure</li> <li>• Remedies for errors</li> <li>• Also refer to the <i>Software User's Manual</i> (W473).</li> </ul>
CJ Series CJ1H-CPU□□□H-R, CJ1G/H-CPU□□□H, CJ1G-CPU□□□P, CJ1G-CPU□□□, CJ1M-CPU□□□ Programmable Controllers Operation Manual	W393	Provides an outlines of and describes the design, installation, maintenance, and other basic operations for the CJ-series PLCs.
NJ-series CPU Unit Hardware User's Manual NJ501-□□□□	W500	An introduction to the entire NJ-series system is provided along with the following information on a Controller built with an NJ501 CPU Unit. <ul style="list-style-type: none"> <li>• Features and system configuration</li> <li>• Introduction</li> <li>• Part names and functions</li> <li>• General specifications</li> <li>• Installation and wiring</li> <li>• Maintenance and inspection</li> </ul> Use this manual together with the NJ-series CPU Unit Software User's Manual (Cat. No. W501).

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