

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

- Receive ON/OFF signals from external devices into the PLC System to update I/O memory in the CPU Unit.
- New high-speed input models CJ1W-ID212 and CJ1W-ID233 are now available. These units can help to increase system throughput.



CJ1W-ID212



CJ1W-ID233

## Features

- High-speed input models are available, meeting versatile applications.  
ON Response Time: 15 $\mu$ s, OFF Response Time: 90 $\mu$ s
- Use 24-VDC, 100-VAC, and 200-VAC models to connect to devices with different types of outputs.
- The 24-VDC models can be connected to devices with either NPN or PNP outputs. There is no need to select the polarity. \*1
- A digital filter in the Unit can be set from 0 to 32 ms to reduce the influence of external noise.
- Either a Fujitsu / OTAX or MIL connector interface can be used. \*2
- Several models of Terminal Block Conversion Units are available, making it easy to connect to external devices.

\*1. The same polarity is used for the same common.




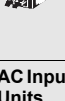

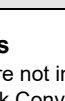

\*2. For models with 32 or 64 inputs.

## 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.

### Input Units

Unit type	Product name	Specifications					Current consumption (A)		Model	Standards
		I/O points	Input voltage and current	Commons	External connection	No. of words allocated	5 V	24 V		
CJ1 Basic I/O Units	<b>DC Input Units</b> 	8 inputs	12 to 24 VDC, 10 mA	Independent contacts	Removable terminal block	1 word	0.09	–	<b>CJ1W-ID201</b>	UC1, N, L, CE
		16 inputs	24 VDC, 7 mA	16 points, 1 common	Removable terminal block	1 word	0.08	–	<b>CJ1W-ID211</b>	
		16 inputs (High speed)	24 VDC, 7 mA	16 points, 1 common	Removable terminal block	1 word	0.13	–	<b>CJ1W-ID212</b>	N, L, CE
	    	32 inputs	24 VDC, 4.1 mA	16 points, 1 common	Fujitsu / OTAX connector	2 words	0.09	–	<b>CJ1W-ID231</b>	UC1, N, L, CE
		32 inputs	24 VDC, 4.1 mA	16 points, 1 common	MIL connector	2 words	0.09	–	<b>CJ1W-ID232</b>	
		32 inputs (High speed)	24 VDC, 4.1 mA	16 points, 1 common	MIL connector	2 words	0.20	–	<b>CJ1W-ID233</b>	N, L, CE
		64 inputs	24 VDC, 4.1 mA	16 points, 1 common	Fujitsu / OTAX connector	4 words	0.09	–	<b>CJ1W-ID261</b>	UC1, N, L, CE
		64 inputs	24 VDC, 4.1 mA	16 points, 1 common	MIL connector	4 words	0.09	–	<b>CJ1W-ID262</b>	
		<b>AC Input Units</b> 	8 inputs	200 to 24 VAC, 10 mA (200 V, 50 Hz)	8 points, 1 common	Removable Terminal Block	1 words	0.08	–	<b>CJ1W-IA201</b>
16 inputs	100 to 120 VAC, 7 mA (100 V, 50 Hz)		16 points, 1 common	Removable Terminal Block	1 words	0.09	–	<b>CJ1W-IA111</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 / OTAX 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	Connector Fujitsu FCN-361J040-AU Connector Cover Fujitsu FCN-360C040-J2 OTAX N360C040J2	Fujitsu / OTAX 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	Housing Fujitsu FCN-363J040 OTAX N363J040 Contactor Fujitsu FCN-363J-AU OTAX N363JAU Connector Cover Fujitsu FCN-360C040-J2 OTAX N360C040J2		C500-CE405	
	Pressure welded	Fujitsu FCN-367J040-AU/F		C500-CE403	
24-pin Connectors	Soldered	Connector Fujitsu FCN-361J024-AU Connector Cover Fujitsu FCN-360C024-J2 OTAX N360C024J2	Fujitsu / OTAX Connectors: CJ1W-MD231 (16 inputs, 16 outputs): 2 per Unit	C500-CE241	-
	Crimped	Socket Fujitsu FCN-363J024 OTAX N363J024 Contactor Fujitsu FCN-363J-AU OTAX N363JAU Connector Cover Fujitsu FCN-360C024-J2 OTAX N360C024J2		C500-CE242	
	Pressure welded	Fujitsu FCN-367J024-AU/F OTAX N367J024AUF		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 20 for details.

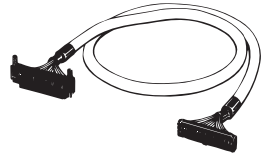
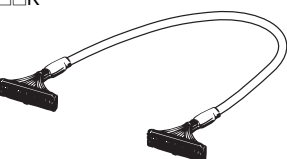
**Applicable Connector-Terminal Block Conversion Units**

Type	Series	Number of connector poles	Number of terminal block poles	Wiring method	Terminal type	Size			Mounting		Common terminals	I/O Units	Model *	Standards	
						Depth (mm)	Height (mm)	Width (mm)	DIN Track	Screws					
PLCs	XW2K	40	36	Push-In Plus 	Spring	75	39	40.8	-	-	No	CJ1W-ID231 CJ1W-ID261	XW2K-40G-O32A	-	
												CJ1W-ID232 CJ1W-ID233 CJ1W-ID262			XW2K-40G-O32C
		40	102	Push-In Plus 	Spring	124	52.7	40.8	-	-	Yes	CJ1W-ID231 CJ1W-ID261	XW2K-40G-O32A-IN		
												CJ1W-ID232 CJ1W-ID233 CJ1W-ID262	XW2K-40G-O32C-IN		
	XW2R	40	34	Phillips screw 	M3	130.7	50	48.05	-	-	Yes	No	CJ1W-ID231 CJ1W-ID261		XW2R-J34GD-C1
													CJ1W-ID232 CJ1W-ID233 CJ1W-ID262		XW2R-J34GD-C2
		40	34	Slotted screw (rise up) 	M3 (European type)	98.5	50	44.81	-	-	No	CJ1W-ID231 CJ1W-ID261	XW2R-E34GD-C1		
												CJ1W-ID232 CJ1W-ID233 CJ1W-ID262	XW2R-E34GD-C2		







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

\* Representative models only. For details, refer to the XW2K series Datasheet (Cat. No. G152) and XW2R series catalog (Cat. No. G077).

**Connecting Cables for Connector-Terminal Block Conversion Units**

Appearance	Connectors	Cable length [m]	Model
 XW2Z-□□□B	One 40-pin Fujitsu Connector to One 40-pin MIL Connector	0.5	XW2Z-050B
		1	XW2Z-100B
		1.5	XW2Z-150B
		2	XW2Z-200B
		3	XW2Z-300B
		5	XW2Z-500B
 XW2Z-□□□K	One 40-pin MIL Connector to One 40-pin MIL Connector	0.5	XW2Z-C50K
		1	XW2Z-100K
		1.5	XW2Z-150K
		2	XW2Z-200K
		3	XW2Z-300K
		5	XW2Z-500K

## 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	G70V 	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	G7TC 	Inputs	AC inputs	NPN	16 (SPSTNO × 16)	1A	100/(110) VAC	182	85	68	Yes	No	G7TC-IA16 AC100/110	U, C								
							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	182	102	85	68	Yes
		16 (SPSTNO × 16)		24 VDC	G7TC-OC08 DC24																	
		16 (SPSTNO × 16)		12 VDC	G7TC-OC16 DC12																	
		PNP		16 (SPSTNO × 16)	24 VDC	G7TC-OC16 DC24																
				16 (SPSTNO × 16)	12 VDC	G7TC-OC16-1 DC12																
				16 (SPSTNO × 16)	24 VDC	G7TC-OC16-1 DC24																
		High-capacity socket	G70A *1 (Socket only) 	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)						
24 VDC	G70A-ZOC16-3																					
Outputs	Relay outputs			NPN	G70A-ZOC16-4																	
				PNP																		
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	G70D-VFOM16							
		Outputs										Relay outputs		NPN	8 (SPSTNO × 8)	5 A	68	93	44	Yes	Yes	G70D-SOC08
														16 (SPSTNO × 16)	3 A	G70D-SOC16						
	MOSFET relay outputs		PNP	16 (SPSTNO × 16)	3 A		156	51	39	Yes	Yes	G70D-SOC16-1										
			NPN	16 (SPSTNO × 16)	0.3 A							G70D-FOM16										
	Flat type G70D 	Relay outputs	NPN	16 (SPSTNO × 16)	0.3 A							G70D-FOM16-1 *7										
			PNP	16 (SPSTNO × 16)	0.3 A																	
High-capacity, space-saving	G70R 	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
				(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
		32 output points		(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**

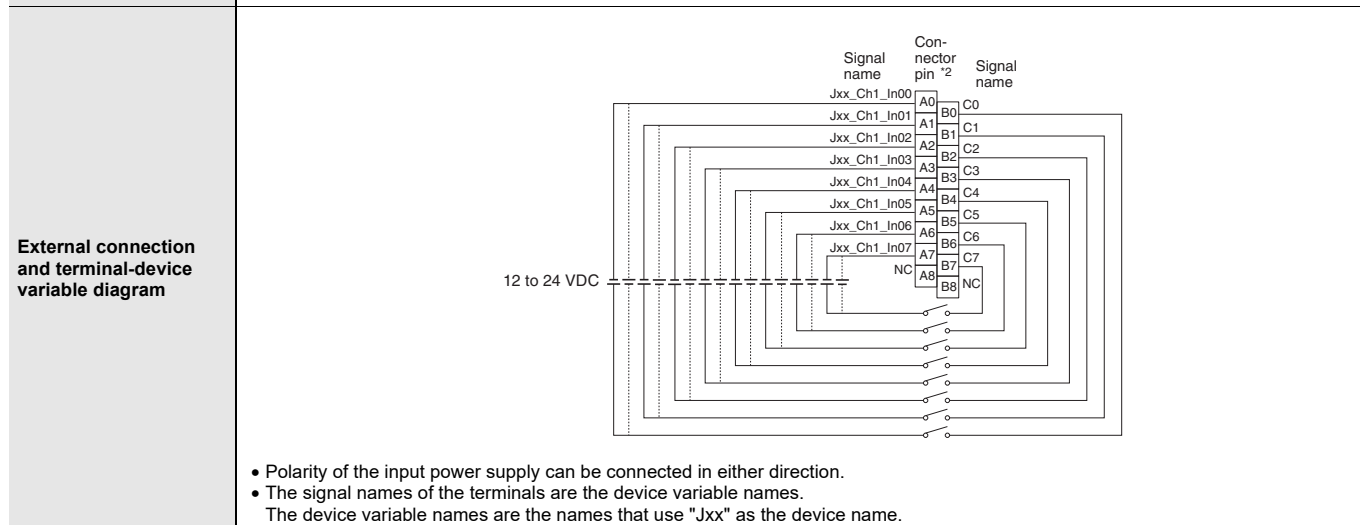
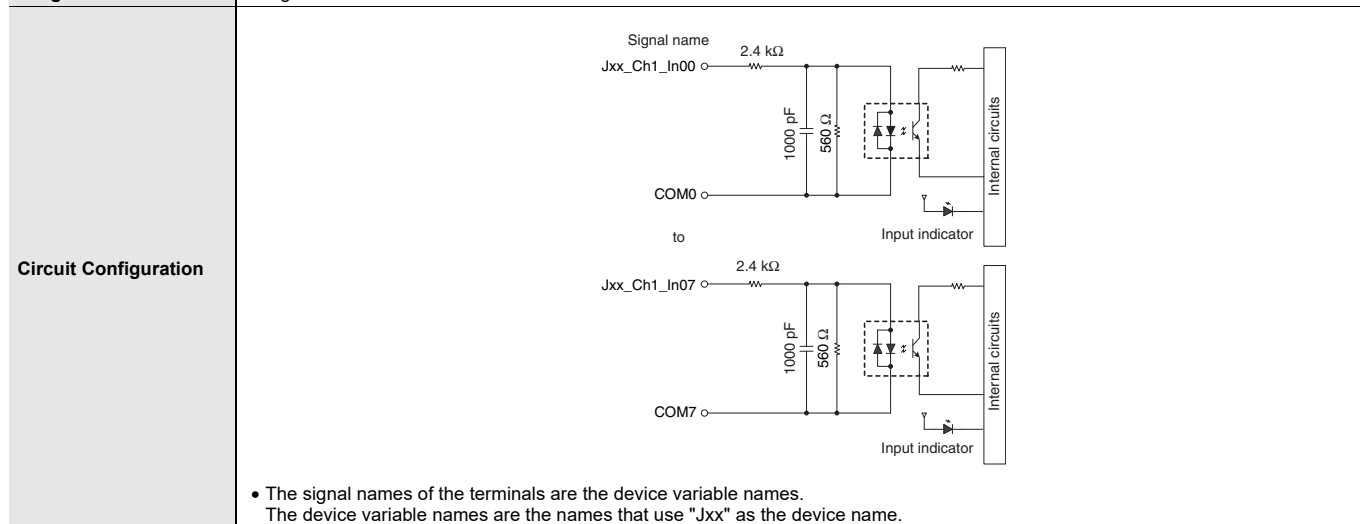
Model	NJ system		CJ system (CJ1, CJ2)		CP1H system	NSJ system *	
	CPU Rack	Expansion Rack	CPU Rack	Expansion Backplane	CP1H PLC	NSJ Controller	Expansion Backplane
CJ1W-ID201	10 Units	10 Units (per Expansion Rack)	10 Units	10 Units (per Expansion Backplane)	Not supported	Not supported	10 Units (per Expansion Backplane)
CJ1W-ID211							
CJ1W-ID212							
CJ1W-ID231							
CJ1W-ID232							
CJ1W-ID233							
CJ1W-ID261							
CJ1W-ID262							
CJ1W-IA201							
CJ1W-IA111							

\* Product no longer available to order.

# Specifications

## CJ1W-ID201 DC Input Unit (12 to 24-VDC, 8 Points)

<b>Name</b>	8-point DC Input Unit with Terminal Block
<b>Model</b>	CJ1W-ID201
<b>Rated Input Voltage</b>	12 to 24 VDC
<b>Rated Input Voltage Range</b>	10.2 to 26.4 VDC
<b>Input Impedance</b>	2.4 kΩ
<b>Input Current</b>	10 mA typical (at 24 VDC)
<b>ON Voltage/ON Current</b>	8.8 VDC min./3 mA min.
<b>OFF Voltage/OFF Current</b>	3 VDC max./1 mA max.
<b>ON Response Time</b>	8.0 ms max. (Can be set to between 0 and 32 ms in the Setup.) *1
<b>OFF Response Time</b>	8.0 ms max. (Can be set to between 0 and 32 ms in the Setup.) *1
<b>Number of Circuits</b>	8 independent circuits
<b>Number of Simultaneously ON Points</b>	100% simultaneously ON
<b>Insulation Resistance</b>	20 MΩ min. between 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>Internal Current Consumption</b>	80 mA max.
<b>Weight</b>	110 g max.



\*1. The ON response time will be 20 μs maximum and OFF response time will be 400 μs maximum even if the response time are set to 0 ms due to internal element delays.

\*2. 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-ID211 DC Input Unit (24 VDC, 16 Points)

<b>Name</b>	16-point DC Input Unit with Terminal Block
<b>Model</b>	CJ1W-ID211
<b>Rated Input Voltage</b>	24 VDC
<b>Rated Input Voltage Range</b>	20.4 to 26.4 VDC
<b>Input Impedance</b>	3.3 kΩ
<b>Input Current</b>	7 mA typical (at 24 VDC)
<b>ON Voltage/ON Current</b>	14.4 VDC min./3 mA min.
<b>OFF Voltage/OFF Current</b>	5 VDC max./1 mA max.
<b>ON Response Time</b>	8.0 ms max. (Can be set to between 0 and 32 ms in the Setup.) *1
<b>OFF Response Time</b>	8.0 ms max. (Can be set to between 0 and 32 ms in the Setup.) *1
<b>Number of Circuits</b>	16 (16 points/common, 1 circuit)
<b>Number of Simultaneously ON Points</b>	100% simultaneously ON (at 24 VDC) (Refer to the following illustration.)
<b>Insulation Resistance</b>	20 MΩ min. between 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>Internal Current Consumption</b>	80 mA max.
<b>Weight</b>	110 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**

• Polarity of the input power supply can be connected in either direction.  
• 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.

\*1. The ON response time will be 20 μs maximum and OFF response time will be 400 μs maximum even if the response time are set to 0 ms due to internal element delays.

\*2. 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-ID212 DC Input Unit (24 VDC, 16 Points)

<b>Name</b>	16-point DC Input Unit with Terminal Block
<b>Model</b>	CJ1W-ID212
<b>Rated Input Voltage</b>	24 VDC
<b>Rated Input Voltage Range</b>	20.4 to 26.4 VDC
<b>Input Impedance</b>	3.3 kΩ
<b>Input Current</b>	7 mA typical (at 24 VDC)
<b>ON Voltage/ON Current</b>	14.4 VDC min./3 mA min.
<b>OFF Voltage/OFF Current</b>	5 VDC max./1 mA max.
<b>ON Response Time</b>	8.0 ms max. (Can be set to between 0 and 32 ms in the Setup.) *1
<b>OFF Response Time</b>	8.0 ms max. (Can be set to between 0 and 32 ms in the Setup.) *1
<b>Number of Circuits</b>	16 (16 points/common, 1 circuit)
<b>Number of Simultaneously ON Points</b>	100% simultaneously ON (at 24 VDC) (Refer to the following illustration.)
<b>Insulation Resistance</b>	20 MΩ min. between 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>Internal Current Consumption</b>	130 mA max.
<b>Weight</b>	110 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**

• Polarity of the input power supply can be connected in either direction.  
• 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.

\*1. The ON response time will be 15 μs maximum and OFF response time will be 90 μs maximum even if the response time are set to 0 ms due to internal element delays.

\*2. 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-ID231 DC Input Unit (24 VDC, 32 Points)

<b>Name</b>	32-point DC Input Unit with Fujitsu / OTAX Connector
<b>Model</b>	CJ1W-ID231
<b>Rated Input Voltage</b>	24 VDC
<b>Rated Input Voltage Range</b>	20.4 to 26.4 VDC
<b>Input Impedance</b>	5.6 kΩ
<b>Input Current</b>	4.1 mA typical (at 24 VDC)
<b>ON Voltage/ON Current</b>	19.0 VDC min./3 mA min.
<b>OFF Voltage/OFF Current</b>	5 VDC max./1 mA max.
<b>ON Response Time</b>	8.0 ms max. (Can be set to between 0 and 32 in the Setup.) *
<b>OFF Response Time</b>	8.0 ms max. (Can be set to between 0 and 32 in the Setup.) *
<b>Number of Circuits</b>	32 (16 points/common, 2 circuits)
<b>Number of Simultaneously ON Points</b>	75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)
<b>Insulation Resistance</b>	20 MΩ min. between 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>Internal Current Consumption</b>	90 mA max.
<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.

Ambient Temperature (°C)	Number of Simultaneously ON points
0 - 40	32
40 - 48	32
48 - 55	12 (common)
55 - 60	10 (common)

**External connection and terminal-device variable diagram**

• The input power polarity can be connected in either direction.  
 • Be sure to wire both pins A9 and A18 (COM0), and set the same polarity for both pins.  
 • Be sure to wire both pins B9 and B18 (COM1), and set the same polarity for both pins.  
 • 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.

\* The ON response time will be 20 μs maximum and OFF response time will be 400 μs maximum even if the response times are set to 0 ms due to internal element delays.

**Note:** Observe the following restrictions when connecting to a 2-wire sensor.

- Make sure the input power supply voltage is larger than the ON voltage (19 V) plus the residual voltage of the sensor (approx. 3 V).
- Use a sensor with a minimum load current of 3 mA min.
- Connect bleeder resistance if you connect a sensor with a minimum load current of 5 mA or higher.

## CJ1W-ID232 DC Input Unit (24 VDC, 32 Points)

<b>Name</b>	32-point DC Input Unit with MIL Connector
<b>Model</b>	CJ1W-ID232
<b>Rated Input Voltage</b>	24 VDC
<b>Rated Input Voltage Range</b>	20.4 to 26.4 VDC
<b>Input Impedance</b>	5.6 kΩ
<b>Input Current</b>	4.1 mA typical (at 24 VDC)
<b>ON Voltage/ON Current</b>	19.0 VDC min./3 mA min.
<b>OFF Voltage/OFF Current</b>	5 VDC max./1 mA max.
<b>ON Response Time</b>	8.0 ms max. (Can be set to between 0 and 32 in the Setup.)*
<b>OFF Response Time</b>	8.0 ms max. (Can be set to between 0 and 32 in the Setup.)*
<b>Number of Circuits</b>	32 (16 points/common, 2 circuits)
<b>Number of Simultaneously ON Points</b>	75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)
<b>Insulation Resistance</b>	20 MΩ min. between 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>Internal Current Consumption</b>	90 mA max.
<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**

• The input power polarity can be connected in either direction.  
• Be sure to wire both pins 23 and 24 (COM0), and set the same polarity for both pins.  
• Be sure to wire both pins 3 and 4 (COM1), and set the same polarity for both pins.  
• 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.

\* The ON response time will be 20 μs maximum and OFF response time will be 400 μs maximum even if the response times are set to 0 ms due to internal element delays.

**Note:** Observe the following restrictions when connecting to a 2-wire sensor.

- Make sure the input power supply voltage is larger than the ON voltage (19 V) plus the residual voltage of the sensor (approx. 3 V).
- Use a sensor with a minimum load current of 3 mA min.
- Connect bleeder resistance if you connect a sensor with a minimum load current of 5 mA or higher.

## CJ1W-ID233 DC Input Unit (24 VDC, 32 Points)

<b>Name</b>	32-point DC Input Unit with MIL Connector
<b>Model</b>	CJ1W-ID233
<b>Rated Input Voltage</b>	24 VDC
<b>Rated Input Voltage Range</b>	20.4 to 26.4 VDC
<b>Input Impedance</b>	5.6 kΩ
<b>Input Current</b>	4.1 mA typical (at 24 VDC)
<b>ON Voltage/ON Current</b>	19.0 VDC min./3 mA min.
<b>OFF Voltage/OFF Current</b>	5 VDC max./1 mA max.
<b>ON Response Time</b>	8.0 ms max. (Can be set to between 0 and 32 in the Setup.) *
<b>OFF Response Time</b>	8.0 ms max. (Can be set to between 0 and 32 in the Setup.) *
<b>Number of Circuits</b>	32 (16 points/common, 2 circuits)
<b>Number of Simultaneously ON Points</b>	75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)
<b>Insulation Resistance</b>	20 MΩ min. between 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>Internal Current Consumption</b>	200 mA max.
<b>Weight</b>	70 g max.
<b>Accessories</b>	None

**Circuit Configuration**

The graph shows the relationship between ambient temperature and the number of simultaneously ON points. At 40°C, 32 points are available. At 48°C, 32 points are available. At 55°C, 12 points are available per common terminal. At 55°C, 10 points are available per common terminal.

- 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 input power polarity can be connected in either direction.
- Be sure to wire both pins 23 and 24 (COM0), and set the same polarity for both pins.
- Be sure to wire both pins 3 and 4 (COM1), and set the same polarity for both pins.
- 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.

\* The ON response time will be 15 μs maximum and OFF response time will be 90 μs maximum even if the response times are set to 0 ms due to internal element delays.

**Note:** Observe the following restrictions when connecting to a 2-wire sensor.

- Make sure the input power supply voltage is larger than the ON voltage (19 V) plus the residual voltage of the sensor (approx. 3 V).
- Use a sensor with a minimum load current of 3 mA min.
- Connect bleeder resistance if you connect a sensor with a minimum load current of 5 mA or higher.

## CJ1W-ID261 DC Input Unit (24 VDC, 64 Points)

<b>Name</b>	64-point DC Input Unit with Fujitsu / OTAX Connector
<b>Model</b>	CJ1W-ID261
<b>Rated Input Voltage</b>	24 VDC
<b>Rated Input Voltage Range</b>	20.4 to 26.4 VDC
<b>Input Impedance</b>	5.6 kΩ
<b>Input Current</b>	4.1 mA typical (at 24 VDC)
<b>ON Voltage/ON Current</b>	19.0 VDC min./3 mA min.
<b>OFF Voltage/OFF Current</b>	5 VDC max./1 mA max.
<b>ON Response Time</b>	8.0 ms max. (Can be set to between 0 and 32 in the Setup.)*
<b>OFF Response Time</b>	8.0 ms max. (Can be set to between 0 and 32 in the Setup.)*
<b>Number of Circuits</b>	64 (16 points/common, 4 circuits)
<b>Number of Simultaneously ON Points</b>	50% (16 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustrations.)
<b>Insulation Resistance</b>	20 MΩ min. between 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>Internal Current Consumption</b>	90 mA max.
<b>Weight</b>	110 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**

• The input power polarity can be connected in either direction.  
 • Be sure to wire both pins A9 and A18 (COM0) of CN1, and set the same polarity for both pins.  
 • Be sure to wire both pins B9 and B18 (COM1) of CN1, and set the same polarity for both pins.  
 • 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.

• The input power polarity can be connected in either direction.  
 • Be sure to wire both pins A9 and A18 (COM2) of CN2, and set the same polarity for both pins.  
 • Be sure to wire both pins B9 and B18 (COM3) of CN2, and set the same polarity for both pins.  
 • 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.

\* The ON response time will be 120 μs maximum and OFF response time will be 400 μs maximum even if the response times are set to 0 ms due to internal element delays.

**Note:** Observe the following restrictions when connecting to a 2-wire sensor.

- Make sure the input power supply voltage is larger than the ON voltage (19 V) plus the residual voltage of the sensor (approx. 3 V).
- Use a sensor with a minimum load current of 3 mA min.
- Connect bleeder resistance if you connect a sensor with a minimum load current of 5 mA or higher.

## CJ1W-ID262 DC Input Unit (24 VDC, 64 Points)

<b>Name</b>	64-point DC Input Unit with MIL Connector
<b>Model</b>	CJ1W-ID262
<b>Rated Input Voltage</b>	24 VDC
<b>Rated Input Voltage Range</b>	20.4 to 26.4 VDC
<b>Input Impedance</b>	5.6 kΩ
<b>Input Current</b>	4.1 mA typical (at 24 VDC)
<b>ON Voltage/ON Current</b>	19.0 VDC min./3 mA min.
<b>OFF Voltage/OFF Current</b>	5 VDC max./1 mA max.
<b>ON Response Time</b>	8.0 ms max. (Can be set to between 0 and 32 in the Setup.)*
<b>OFF Response Time</b>	8.0 ms max. (Can be set to between 0 and 32 in the Setup.)*
<b>Number of Circuits</b>	64 (16 points/common, 4 circuits)
<b>Number of Simultaneously ON Points</b>	50% (8 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustrations.)
<b>Insulation Resistance</b>	20 MΩ min. between 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>Internal Current Consumption</b>	90 mA max.
<b>Weight</b>	110 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.

**Number of Simultaneously ON Points vs. Ambient Temperature Characteristic**

**External connection and terminal-device variable diagram**

**CN1**

Allocated CIO word	Signal name	Connector pin	Signal name	Allocated CIO word
Wd m	Jxx_Ch1_In00	40	Jxx_Ch1_In08	Wd m
	Jxx_Ch1_In01	38	Jxx_Ch1_In09	
	Jxx_Ch1_In02	36	Jxx_Ch1_In10	
	Jxx_Ch1_In03	34	Jxx_Ch1_In11	
	Jxx_Ch1_In04	32	Jxx_Ch1_In12	
	Jxx_Ch1_In05	30	Jxx_Ch1_In13	
	Jxx_Ch1_In06	28	Jxx_Ch1_In14	
	Jxx_Ch1_In07	26	Jxx_Ch1_In15	
	COM0	24	COM0	
	NC	22	NC	
	Jxx_Ch2_In00	20	Jxx_Ch2_In08	Wd m+1
	Jxx_Ch2_In01	18	Jxx_Ch2_In09	
	Jxx_Ch2_In02	16	Jxx_Ch2_In10	
	Jxx_Ch2_In03	14	Jxx_Ch2_In11	
	Jxx_Ch2_In04	12	Jxx_Ch2_In12	
	Jxx_Ch2_In05	10	Jxx_Ch2_In13	
	Jxx_Ch2_In06	8	Jxx_Ch2_In14	
	Jxx_Ch2_In07	6	Jxx_Ch2_In15	
	COM1	4	COM1	
	NC	2	NC	

• The input power polarity can be connected in either direction.  
• Be sure to wire both pins 23 and 24 (COM0) of CN1, and set the same polarity for both pins.  
• Be sure to wire both pins 3 and 4 (COM1) of CN1, and set the same polarity for both pins.  
• 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**

Allocated CIO word	Signal name	Connector pin	Signal name	Allocated CIO word
Wd m+3	Jxx_Ch4_In15	5	Jxx_Ch4_In07	Wd m+3
	Jxx_Ch4_In14	6	Jxx_Ch4_In06	
	Jxx_Ch4_In13	7	Jxx_Ch4_In05	
	Jxx_Ch4_In12	9	Jxx_Ch4_In04	
	Jxx_Ch4_In11	11	Jxx_Ch4_In03	
	Jxx_Ch4_In10	13	Jxx_Ch4_In02	
	Jxx_Ch4_In09	15	Jxx_Ch4_In01	
	Jxx_Ch4_In08	17	Jxx_Ch4_In00	
	COM2	19	COM2	
	NC	21	NC	
	Jxx_Ch3_In15	25	Jxx_Ch3_In07	Wd m+2
	Jxx_Ch3_In14	27	Jxx_Ch3_In06	
	Jxx_Ch3_In13	29	Jxx_Ch3_In05	
	Jxx_Ch3_In12	31	Jxx_Ch3_In04	
	Jxx_Ch3_In11	33	Jxx_Ch3_In03	
	Jxx_Ch3_In10	35	Jxx_Ch3_In02	
	Jxx_Ch3_In09	37	Jxx_Ch3_In01	
	Jxx_Ch3_In08	39	Jxx_Ch3_In00	
	COM3	23	COM3	
	NC	21	NC	
	Jxx_Ch3_In15	25	Jxx_Ch3_In07	Wd m+2
	Jxx_Ch3_In14	27	Jxx_Ch3_In06	
	Jxx_Ch3_In13	29	Jxx_Ch3_In05	
	Jxx_Ch3_In12	31	Jxx_Ch3_In04	
	Jxx_Ch3_In11	33	Jxx_Ch3_In03	
	Jxx_Ch3_In10	35	Jxx_Ch3_In02	
	Jxx_Ch3_In09	37	Jxx_Ch3_In01	
	Jxx_Ch3_In08	39	Jxx_Ch3_In00	

• The input power polarity can be connected in either direction.  
• Be sure to wire both pins 23 and 24 (COM2) of CN2, and set the same polarity for both pins.  
• Be sure to wire both pins 3 and 4 (COM3) of CN2, and set the same polarity for both pins.  
• 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.

\* The ON response time will be 120 μs maximum and OFF response time will be 400 μs maximum even if the response times are set to 0 ms due to internal element delays.

**Note:** Observe the following restrictions when connecting to a 2-wire sensor.

- Make sure the input power supply voltage is larger than the ON voltage (19 V) plus the residual voltage of the sensor (approx. 3 V).
- Use a sensor with a minimum load current of 3 mA min.
- Connect bleeder resistance if you connect a sensor with a minimum load current of 5 mA or higher.

### CJ1W-IA201 AC Input Unit (200 VAC, 8 Points)

<b>Name</b>	8-point AC Input Unit with Terminal Block
<b>Model</b>	CJ1W-IA201
<b>Rated Input Voltage</b>	200 to 240 VAC 50/60 Hz
<b>Rated Input Voltage Range</b>	170 to 264 VAC
<b>Input Impedance</b>	21 kΩ (50 Hz), 18 kΩ (60 Hz)
<b>Input Current</b>	9 mA typical (at 200 VAC, 50 Hz), 11 mA typical (at 200 VAC, 60 Hz)
<b>ON Voltage/ON Current</b>	120 VAC min./4 mA min.
<b>OFF Voltage/OFF Current</b>	40 VAC max./2 mA max.
<b>ON Response Time</b>	18.0 ms max. (default setting: 8 ms) *1
<b>OFF Response Time</b>	48.0 ms max. (default setting: 8 ms) *1
<b>Number of Circuits</b>	8 (8 points/common, 1 circuit)
<b>Number of Simultaneously ON Points</b>	100% (8 points/common) simultaneously ON
<b>Insulation Resistance</b>	20 MΩ min. 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>	80 mA max.
<b>Weight</b>	130 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**

- 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.

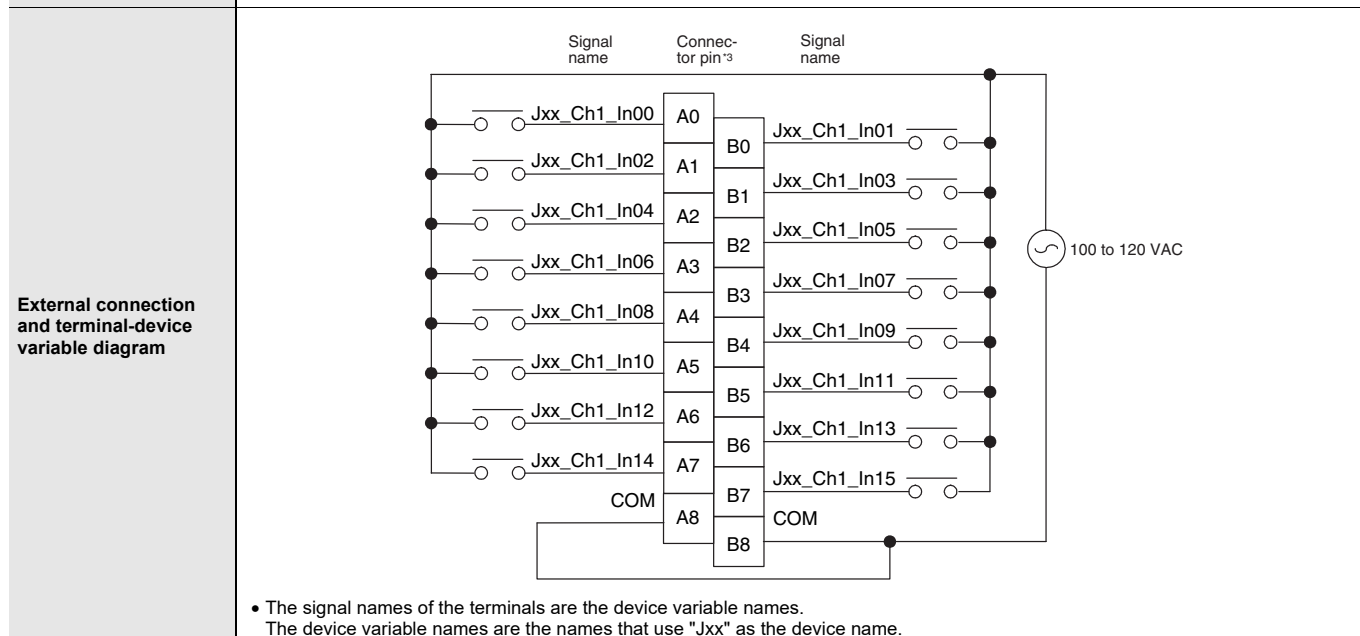
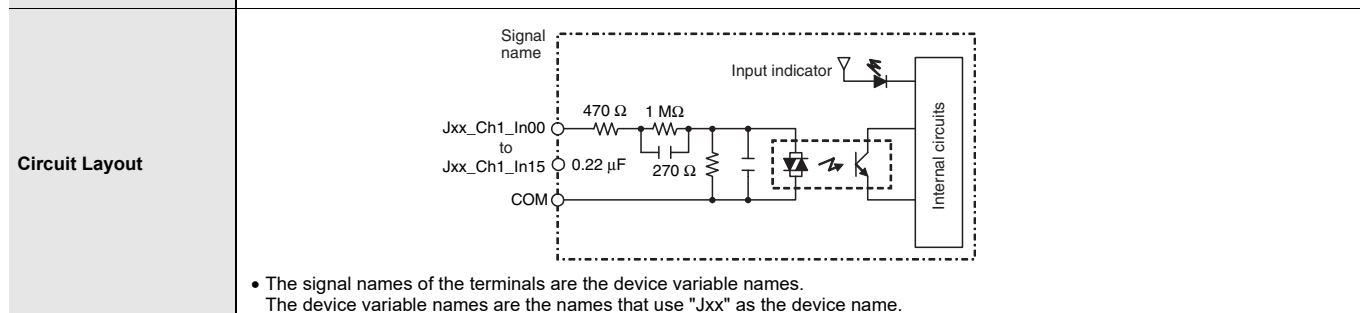
\*1. Can be set to 0 ms, 0.5 ms, 1 ms, 2 ms, 4 ms, 8 ms, 16 ms, or 32ms in the settings. When the response times have been set to 0 ms, the ON response time will be 10 ms maximum and the OFF response time will be 55 ms maximum due to internal element delays.

\*2. 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-IA111 AC Input Unit (100 VAC, 16 points)

<b>Name</b>	16-point AC Input Unit with Terminal Block
<b>Model</b>	CJ1W-IA111
<b>Rated input voltage</b>	100 to 120 VAC 50/60 Hz *2
<b>Rated Input Voltage Range</b>	85 to 132 VAC
<b>Input Impedance</b>	14.5 k $\Omega$ (50 Hz), 12 k $\Omega$ (60 Hz)
<b>Input Current</b>	7 mA typical (at 100 VAC, 50 Hz), 8 mA typical (at 100 VAC, 60 Hz)
<b>ON Voltage/ON Current</b>	70 VAC min./4 mA min
<b>OFF Voltage/OFF Current</b>	20 VAC max./2 mA max
<b>ON Response Time</b>	18 ms max. (default setting: 8 ms) *1
<b>OFF Response Time</b>	48 ms max. (default setting: 8 ms) *1
<b>Number of Circuits</b>	16 (16 points/common, 1 circuit)
<b>Number of Inputs ON Simultaneously</b>	100% simultaneously ON (16 points/common)
<b>Insulation Resistance</b>	20 M $\Omega$ min. 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 max.
<b>Weight</b>	130 g max.
<b>Accessories</b>	None



\*1. Can be set to 0 ms, 0.5 ms, 1 ms, 2 ms, 4 ms, 8 ms, 16 ms, or 32ms in the settings. When the response times have been set to 0 ms, the ON response time will be 10 ms maximum and the OFF response time will be 55 ms maximum due to internal element delays.

\*2. Use an input voltage of 90 VAC or higher when connecting 2-wire sensors.

\*3. 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.

## Bit Allocations for Input Unit

### 8-point Input Unit

Allocated CIO word		Signal name (CJ/NJ)
CIO	Bit	
Wd m (Input)	00	IN0/Jxx_Ch1_In00
	01	IN1/Jxx_Ch1_In01
	:	:
	06	IN6/Jxx_Ch1_In06
	07	IN7/Jxx_Ch1_In07
	08	—
	09	—
	:	:
	14	—
15	—	

### 32-point Input Unit

Allocated CIO word		Signal name (CJ/NJ)
CIO	Bit	
Wd m (Input)	00	IN0/Jxx_Ch1_In00
	01	IN1/Jxx_Ch1_In01
	:	:
	14	IN14/Jxx_Ch1_In14
	15	IN15/Jxx_Ch1_In15
Wd m+1 (Input)	00	IN0/Jxx_Ch2_In00
	01	IN1/Jxx_Ch2_In01
	:	:
	14	IN14/Jxx_Ch2_In14
	15	IN15/Jxx_Ch2_In15

### 16-point Input Unit

Allocated CIO word		Signal name (CJ/NJ)
CIO	Bit	
Wd m (Input)	00	IN0/Jxx_Ch1_In00
	01	IN1/Jxx_Ch1_In01
	:	:
	14	IN14/Jxx_Ch1_In14
	15	IN15/Jxx_Ch1_In15

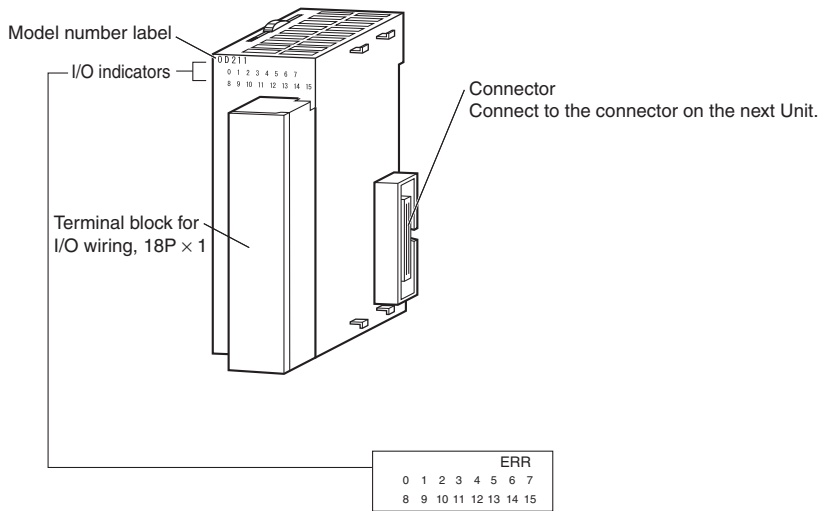
### 64-point Input Unit

Allocated CIO word		Signal name (CJ/NJ)
CIO	Bit	
Wd m (Input)	00	IN0/Jxx_Ch1_In00
	01	IN1/Jxx_Ch1_In01
	:	:
	14	IN14/Jxx_Ch1_In14
	15	IN15/Jxx_Ch1_In15
Wd m+1 (Input)	00	IN0/Jxx_Ch2_In00
	01	IN1/Jxx_Ch2_In01
	:	:
	14	IN14/Jxx_Ch2_In14
	15	IN15/Jxx_Ch2_In15
Wd m+2 (Input)	00	IN0/Jxx_Ch3_In00
	01	IN1/Jxx_Ch3_In01
	:	:
	14	IN14/Jxx_Ch3_In14
	15	IN15/Jxx_Ch3_In15
Wd m+3 (Input)	00	IN0/Jxx_Ch4_In00
	01	IN1/Jxx_Ch4_In01
	:	:
	14	IN14/Jxx_Ch4_In14
	15	IN15/Jxx_Ch4_In15

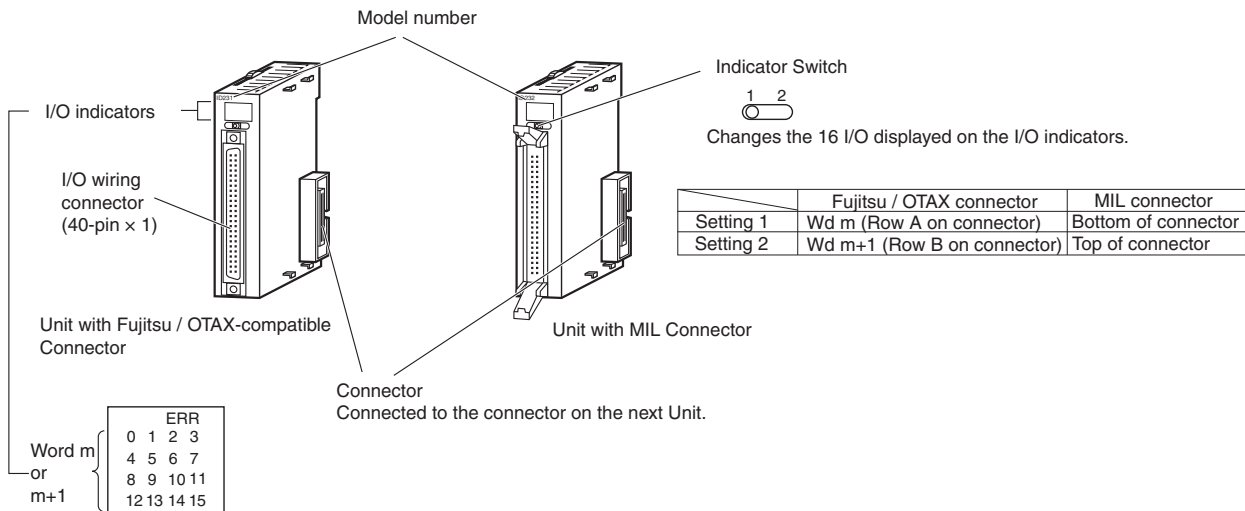


## External Interface

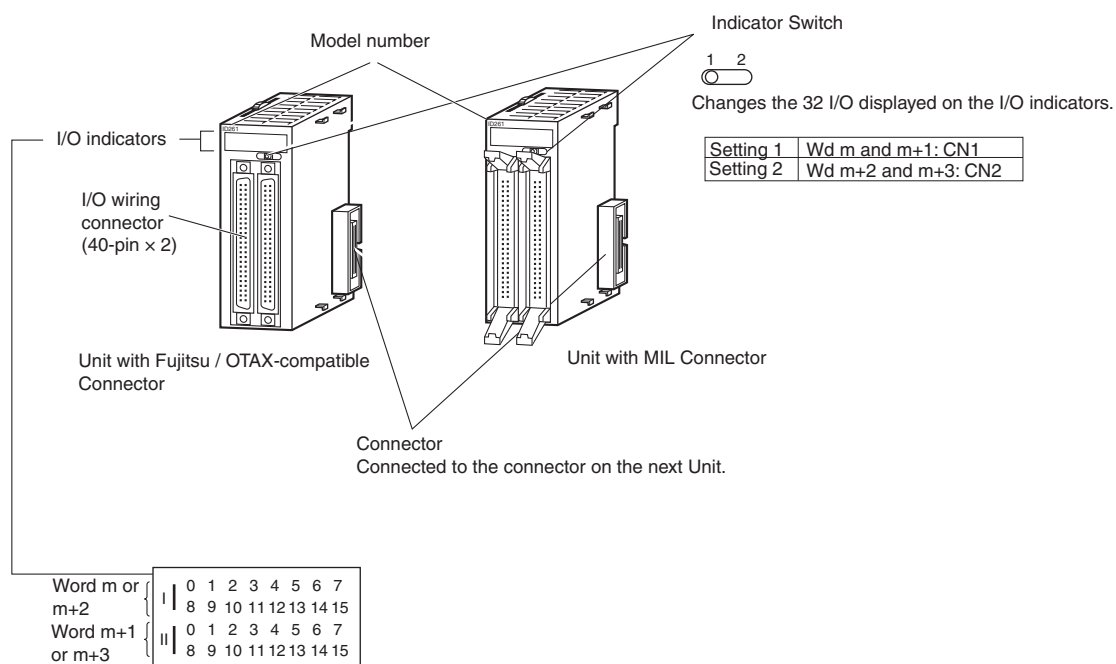
### 8-point/16-point Units (18-point Terminal Blocks)



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



## 64-point Units (Models with Two 40-point Fujitsu / OTAX 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.

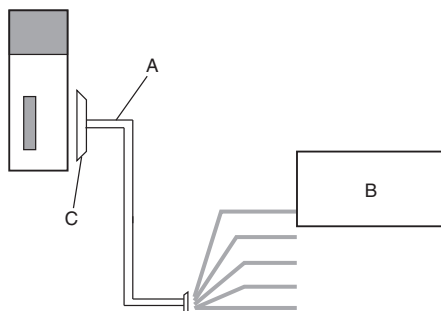


## I/O Unit Wiring Methods

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.

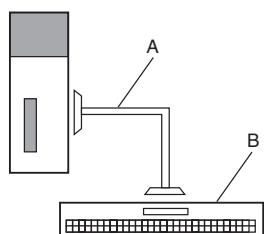


<b>A</b>	User-provided cable
<b>B</b>	External device
<b>C</b>	Connector

### 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.

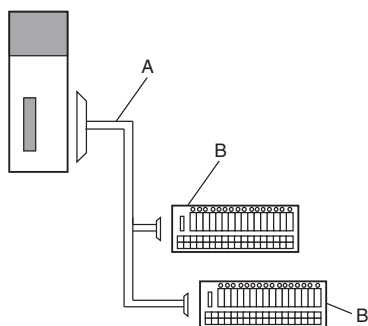


<b>A</b>	Connecting Cable for Connector-Terminal Block Conversion Unit XW2Z
<b>B</b>	Connector-Terminal Block Conversion Unit XW2□

### 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.



<b>A</b>	Connecting Cable for I/O Relay Terminals XW2Z-R
<b>B</b>	I/O Relay Terminals G70V, G7TC Relay Terminals G70D, G70R I/O Terminal Socket G70A Or, conversion to relay outputs and AC inputs.

# 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 / OTAX-compatible Connectors

#### Applicable Units

Model	Specifications	Pins
CJ1W-ID231	Input Unit, 24 VDC, 32 inputs	40
CJ1W-ID261	Input Unit, 24 VDC, 64 inputs	

#### Applicable Cable-side Connectors

Connection	Pins	OMRON set	Fujitsu / OTAX parts
Solder-type	40	C500-CE404	Socket: Fujitsu FCN-361J040-AU Connector cover: Fujitsu FCN-360C040-J2 OTAX N360C040J2
Crimped	40	C500-CE405	Socket: Fujitsu FCN-363J040 OTAX N363J040 Connector cover: Fujitsu FCN-360C040-J2 OTAX N360C040J2 Contacts: Fujitsu FCN-363J-AU OTAX N363JAU
Pressure-welded	40	C500-CE403	Fujitsu FCN-367J040-AU/F

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

#### Applicable Units

Model	Specifications	Pins
CJ1W-ID232 CJ1W-ID233	Input Unit, 24 VDC, 32 inputs	40
CJ1W-ID262	Input Unit, 24 VDC, 64 inputs	

#### 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 at [www.ia.omron.com](http://www.ia.omron.com).

## 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 / OTAX 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)

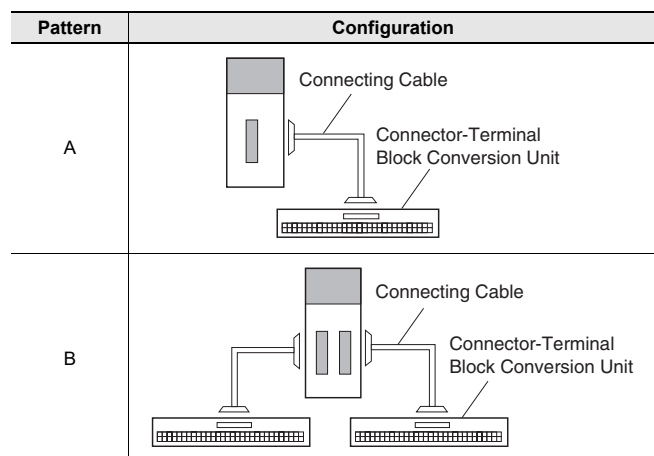
Product Name	Model
Pressure-welding Tool	XY2B-0002
Attachment	XY2B-1007

#### 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

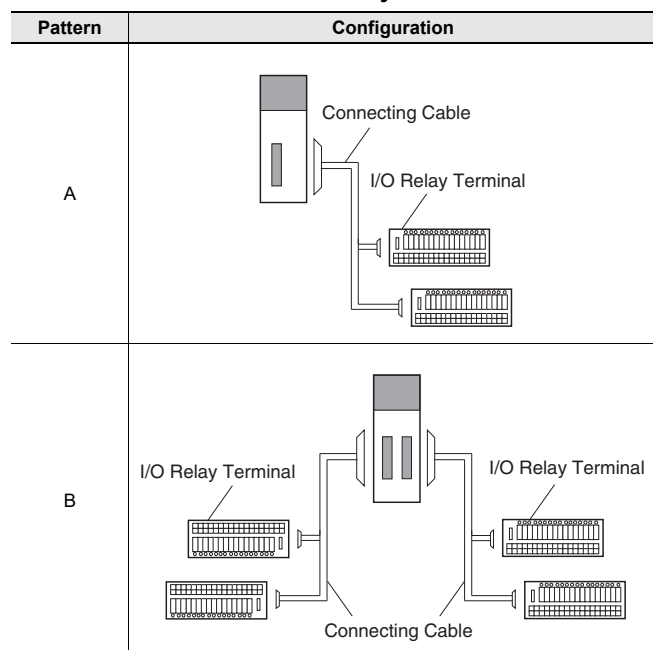
Unit	I/O capacity	Number of connectors	Polarity	Connection pattern	Connecting Cable *	Connector-Terminal Block Conversion Unit	Wiring method	Common terminals
CJ1W-ID231	32 inputs	1 Fujitsu / OTAX connector	NPN/PNP	A	XW2Z-□□□B	XW2K-40G-O32A	Push-In Plus	No
						XW2K-40G-O32A-IN	Push-In Plus	Yes
						XW2R-J34GD-C1	Phillips screw	No
						XW2R-E34GD-C1	Slotted screw (rise up)	No
CJ1W-ID232	32 inputs	1 MIL connector	NPN/PNP	A	XW2Z-□□□K	XW2K-40G-O32C	Push-In Plus	No
						XW2K-40G-O32C-IN	Push-In Plus	Yes
						XW2R-J34GD-C2	Phillips screw	No
						XW2R-E34GD-C2	Slotted screw (rise up)	No
CJ1W-ID233	32 inputs	1 MIL connector	NPN/PNP	A	XW2Z-□□□K	XW2K-40G-O32C	Push-In Plus	No
						XW2K-40G-O32C-IN	Push-In Plus	Yes
						XW2R-J34GD-C2	Phillips screw	No
						XW2R-E34GD-C2	Slotted screw (rise up)	No
CJ1W-ID261	64 inputs	2 Fujitsu / OTAX connectors	NPN/PNP	B	XW2Z-□□□B (2 pcs)	XW2K-40G-O32A (2 Units)	Push-In Plus	No
						XW2K-40G-O32A-IN (2 Units)	Push-In Plus	Yes
						XW2R-J34GD-C1 (2 Units)	Phillips screw	No
						XW2R-E34GD-C1 (2 Units)	Slotted screw (rise up)	No
CJ1W-ID262	64 inputs	2 MIL connectors	NPN/PNP	B	XW2Z-□□□K (2 pcs)	XW2K-40G-O32C (2 Units)	Push-In Plus	No
						XW2K-40G-O32C-IN (2 Units)	Push-In Plus	Yes
						XW2R-J34GD-C2 (2 Units)	Phillips screw	No
						XW2R-E34GD-C2 (2 Units)	Slotted screw (rise up)	No

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

**Note:** For details, refer to the XW2K series Datasheet (Cat. No. G152) and 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-ID231	32 inputs	1 Fujitsu / OTAX connector (40 p)	Sinking/ Sourcing (NPN/PNP)	A	XW2Z-RI□C-□	1	G70V-SID16P(-1)(-C16) *2	16	2	Push-in spring
							G7TC-ID/IA16	16		Screw terminal
							G70A-ZIM16-5 *3	16		
CJ1W-ID232	32 inputs	1 MIL connector (40 p)	Sinking/ Sourcing (NPN/PNP)	A	XW2Z-RO□-□-D1	1	G70V-SID16P(-1)(-C16) *2	16	2	Push-in spring
							G7TC-ID/IA16	16		Screw terminal
							G70A-ZIM16-5	16		
CJ1W-ID233	32 inputs	1 MIL connector (40 p)	Sinking/ Sourcing (NPN/PNP)	A	XW2Z-RO□-□-D1	1	G70V-SID16P(-1)(-C16) *2	16	2	Push-in spring
							G7TC-ID/IA16	16		Screw terminal
							G70A-ZIM16-5*3	16		
CJ1W-ID261	64 inputs	2 Fujitsu / OTAX connectors (40 p)	Sinking/ Sourcing (NPN/PNP)	B	XW2Z-RI□C-□	2	G70V-SID16P(-1)(-C16) *2	16	4	Push-in spring
							G7TC-ID/IA16	16		Screw terminal
							G70A-ZIM16-5 *3	16		
CJ1W-ID262	64 inputs	2 MIL connectors (40 p)	Sinking/ Sourcing (NPN/PNP)	B	XW2Z-RO□-□-D1	2	G70V-SID16P(-1)(-C16) *2	16	4	Push-in spring
							G7TC-ID/IA16	16		Screw terminal
							G70A-ZIM16-5 *3	16		

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

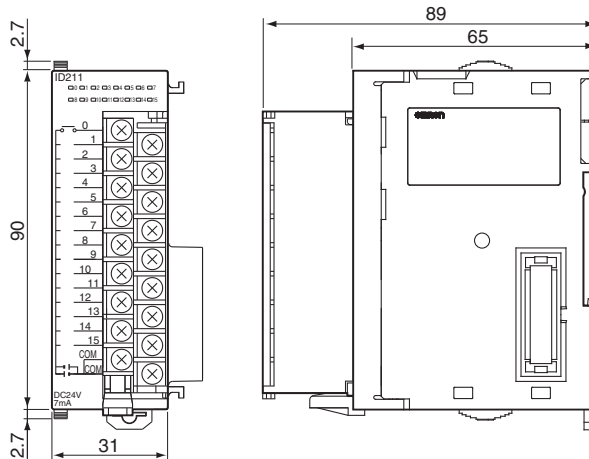
\*2. Either NPN inputs or PNP inputs can be used.

\*3. G70A-ZIM16-5 is a I/O terminal socket products. Relay is not provided with the socket. Be sure to order a relay, timer separately. (with G2R Relays mounted: SPDT × 16)

## Dimensions

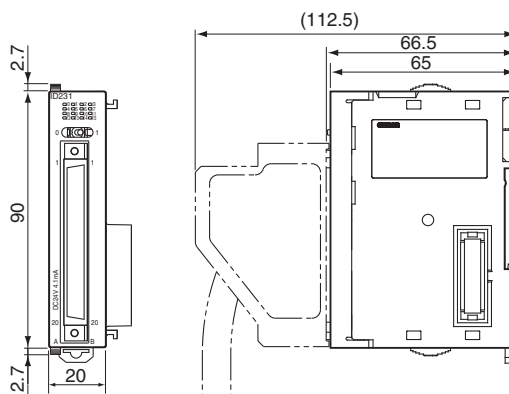
### 8-point/16-point Units (18-point Terminal Blocks)

- CJ1W-ID201
- CJ1W-ID211
- CJ1W-ID212
- CJ1W-IA201
- CJ1W-IA111



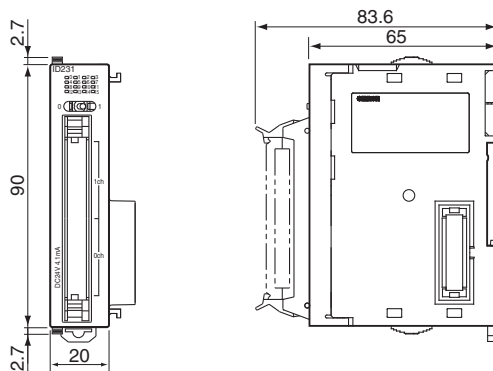
### 32-point Units (Input Units)

- With Fujitsu / OTAX-compatible Connector (40-pin × 1)
- CJ1W-ID231



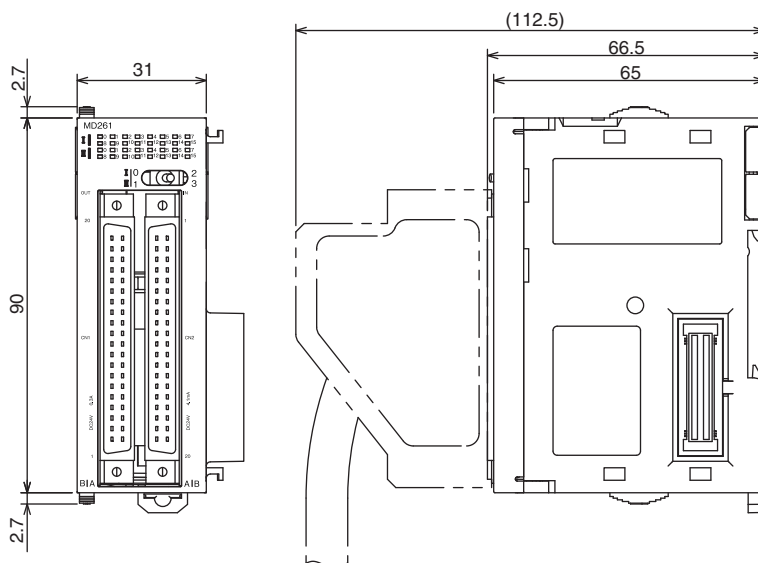
### With MIL Connector (40-pin × 1)

- CJ1W-ID232
- CJ1W-ID233

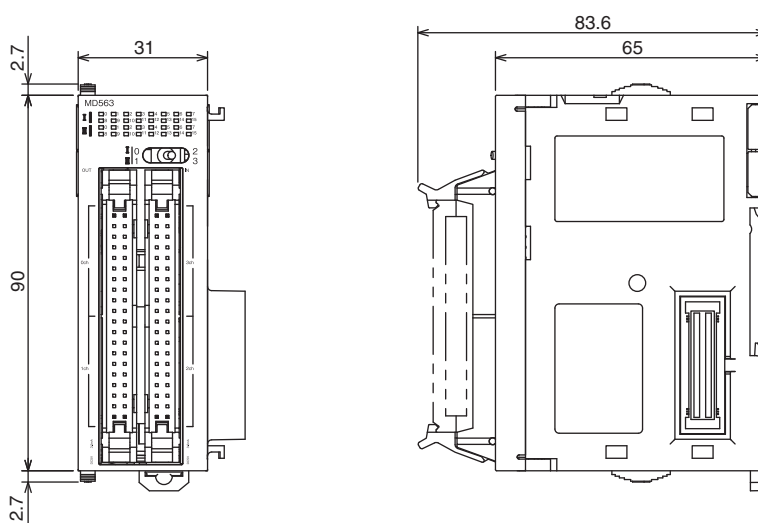


## 64-point Units (Input Units)

With Fujitsu / OTAX-compatible Connector (40-pin × 2)  
CJ1W-ID261



With MIL Connector (40-pin × 2)  
CJ1W-ID262



## 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> </ul> • Also refer to the <i>Software User's Manual</i> (W473).
SYSMAC 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 <i>NJ-series CPU Unit Software User's Manual</i> (Cat. No. W501).



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