# **CJ-series Input Units**

# CJ1W-ID/IA

# 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-ID233

#### **Features**

- High-speed input models are available, meeting versatile applications. ON Response Time: 15µs, OFF Response Time: 90µs
- 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 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		Sį		consu	rent mption A)	Model	Standards		
Onit type	name	I/O points	Input voltage and current	Commons	External connection	No. of words allocated	5 V	24 V	- Model	Standards
		8 inputs	12 to 24 VDC, 10 mA	Independent contacts	Removable terminal block	1 word	0.09	-	CJ1W-ID201	UC1, N, L,
DC Input Units		16 inputs	24 VDC, 7 mA	16 points, 1 common	Removable terminal block	1 word	0.08	_	CJ1W-ID211	CE
		16 inputs (High speed)	24 VDC, 7 mA	16 points, 1 common	Removable terminal block	1 word	0.13	_	CJ1W-ID212	N, L, CE
		32 inputs	24 VDC, 4.1 mA	16 points, 1 common	Fujitsu connector	2 words	0.09	-	CJ1W-ID231	UC1, N, L,
		32 inputs	24 VDC, 4.1 mA	16 points, 1 common	MIL connector	2 words	0.09	-	CJ1W-ID232	CE
CJ1 Basic I/O Units	35	32 inputs (High speed)	24 VDC, 4.1 mA	16 points, 1 common	MIL connector	2 words	0.20	-	CJ1W-ID233	N, L, CE
		64 inputs	24 VDC, 4.1 mA	16 points, 1 common	Fujitsu connector	4 words	0.09	_	CJ1W-ID261	
	AMIL	64 inputs	24 VDC, 4.1 mA	16 points, 1 common	MIL connector	4 words	0.09	-	CJ1W-ID262	
	AC Input Units	8 inputs	200 to 24 VAC, 10 mA (200 V, 50 Hz)	8 points, 1 common	Removable Terminal Block	1 words	0.08	-	CJ1W-IA201	UC1, N, L, CE
		16 inputs	100 to 120 VAC, 7 mA (100 V, 50 Hz)	16 points, 1 common	Removable Terminal Block	1 words	0.09	-	CJ1W-IA111	

#### **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
	Soldered			Fujitsu Connectors: CJ1W-ID231(32 inputs): 1 per Unit	C500-CE404	
	Crimped	FCN-363J-AU Cont	ntactor nnector	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-CE405	
	Pressure welded	FCN-367J040-AU/F			C500-CE403	
	Soldered		nnector nnector ver		C500-CE241	_
24-pin Connectors	Crimped		ntactor nnector	Fujitsu Connectors: CJ1W-MD231 (16 inputs, 16 outputs): 2 per Unit	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	XG4M-4030-T		
	Crimped	-	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	XG5N-401*		
20-pin	Pressure welded	FRC5-AO20-3TOS	MIL Connectors:	XG4M-2030-T		
Connectors	Crimped	_	CJ1W-MD232/233 (16 inputs, 16 outputs): 2 per Unit	XG5N-201*	_	

<sup>\*</sup> Crimp Contacts are also required. Refer to page 20 for details.

#### **Applicable Connector-Terminal Block Conversion Units**

		Number	Wiring	Terminal		Size			nting	Common	Bleeder				
Туре		of poles	method	type	Depth (mm)	Height (mm)	Width (mm)	DIN Track	Screws	terminals	resistance	Indicators	I/O Units	Model *	Standards
			Phillips screw										CJ1W-ID231 CJ1W-ID261	XW2R-J34GD-C1	
				МЗ	50	48.05	130.7						CJ1W-ID232 CJ1W-ID233 CJ1W-ID262	XW2R-J34GD-C2	
			Slotted screw (rise up)				CJ1W-ID231 CJ1W-ID261	XW2R-E34GD-C1							
PLCs	XW2R	34	4 M3 (European type) 50 44.81 98.5 Yes No No No	No	140	CJ1W-ID232 CJ1W-ID233 CJ1W-ID262	XW2R-E34GD-C2	-							
			Push-in spring										CJ1W-ID231 CJ1W-ID261	XW2R-P34GD-C1	
				Clamp	50	44.81	98.5						CJ1W-ID232 CJ1W-ID233 CJ1W-ID262	XW2R-P34GD-C2	

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

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

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

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

#### Applicable I/O Relay Terminals

				S	pecifications	<b>.</b>		Size (horizontal mounting) Mour			Mounting																
Туре	Series	Classification		Polarity Number of points		Rated ON current at contacts	Rated voltage	Horizontal (mm)	Vertical (mm)	Height (mm)	DIN Track	Screws	Model	Standards													
		Inputs		NPN									G70V-SID16P *4														
			DC	PNP	16	50 A							G70V-SID16P-1 *4														
Push-In	G70V		inputs	NPN	(SPSTNO × 16)	50 mA							G70V-SID16P-C16 *5														
Plus	Plus			PNP			04.VDC	140	90	56	Vaa	Vaa	G70V-SID16P-1-C16 *5	UC, CE (TÜV													
terminal				NPN			24 VDC	143	90	56	Yes	Yes	G70V-SOC16P *4	certified)													
block		Outputs	Relay	PNP	16	6 A/point,							G70V-SOC16P-1 *4	1													
		Outputs	outputs	NPN	(SPDT × 16) 10 A	common							G70V-SOC16P-C4 *6														
			PNP			Sillinon						G70V-SOC16P-1-C4 *6															
			AC				100/(110) VAC						G7TC-IA16 AC100/110														
			inputs				200/(220) VAC						G7TC-IA16 AC200/220														
		Inputs	20	NPN	16 (SPSTNO × 16)	1A	12 VDC	182					G7TC-ID16 DC12														
G7TC		DC inputs		(6. 66 × 10)		24 VDC						G7TC-ID16 DC24															
			pato				100/110 VDC						G7TC-ID16 DC100/110	U, C													
Standard					8		12 VDC	102	85	68	Yes	No	G7TC-OC08 DC12														
	annimine.	Outputs	Outputs	Outputs		NPN	(SPSTNO × 8)		24 VDC	102					G7TC-OC08 DC24												
	95-7				Outputs	Relay	INIIN	16	5A	12 VDC						G7TC-OC16 DC12	1										
		Outputs	outputs		(SPSTNO × 16)	34	24 VDC	182					G7TC-OC16 DC24														
				PNP	16		12 VDC	102					G7TC-OC16-1 DC12														
				I INI	(SPSTNO × 16)		24 VDC						G7TC-OC16-1 DC24														
High-	G70A *1 (Socket only)	Inputs	Relay inputs		16 (SPDT × 16	100 mA	110 VDC max., 240 VAC max. *2						G70A-ZOC16-5	U, C, CE													
capacity socket		Outputs	Outpute	Outputs	Outnute	Outnute	Outnuts	Outnuts	Outputs	Outputs	Outputs	Outnuts	Relay	NPN	possible with G2R Relays)	10 A (Ter- minal	04.1/00	234	75	64	Yes No	No	G70A-ZOC16-3	(VDE certified)			
	4		outputs	PNP		block allowable	24 VDC						G70A-ZOC16-4														
	Vertical type G70D-V															Relay outputs			5 A or 3 A *3							G70D-VSOC16	U, C, CE
			MOSFET relay outputs	NPN	16 (SPSTNO × 16)	0.3 A		135	46	81	Yes	Yes	G70D-VFOM16	(VDE certified)													
Space- saving	Flat type G70D	Outputs		NPN	8 (SPSTNO×8)	5 A	24 VDC	68	93	44			G70D-SOC08														
Saving	HILLIAM		Relay outputs	INFIN	16 (SPSTNO × 16)	3 A							G70D-SOC16														
The state of the s	The state of the s			PNP	16 (SPSTNO × 16)	3 A		156	51	39	Yes	Yes	G70D-SOC16-1	_													
			MOSFET	NPN	16								G70D-FOM16														
	THE THE PARTY OF T		relay outputs	PNP	(SPSTNO × 16)	0.3 A	4						G70D-FOM16-1	_													
High- capacity, space- saving	G70R	Outputs	Relay outputs	NPN	8 (SPSTNO×8)	10 A	24 VDC	136	93	55	Yes	Yes	G70R-SOC08	_													

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

<sup>\*2.</sup> 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.

<sup>\*4.</sup> Internal common at terminal block: No internal connections

<sup>\*5.</sup> Internal common at terminal block: Internal IO common 16 points internally connected

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

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.

<sup>3.</sup> 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

Туре	Name	I/O Classification	Appearance	Cable leng	gth L (mm)	Models
			A side B side	1,0	000	XW2Z-R100C
	Cables with Connectors		Device end I/O Relay Terminal	1,5	500	XW2Z-R150C
Fujitsu connectors (24 pins)	(1:1)	16 I/O points		2,0	000	XW2Z-R200C
	XW2Z-R□C			3,000		XW2Z-R300C
				5,0	000	XW2Z-R500C
				(A) 1,000	(B) 750	XW2Z-RI100C-75
			A side B side	(A) 1,500	(B) 1,250	XW2Z-RI150C-125
		32 input points	Device end I/O Relay Terminal   (A) →	(A) 2,000	(B) 1,750	XW2Z-RI200C-175
	Cables with Connectors			(A) 3,000	(B) 2,750	XW2Z-RI300C-275
Fujitsu connectors (40 pins)	(1:2)			(A) 5,000	(B) 4,750	XW2Z-RI500C-475
i ujitsu connectors (40 piris)	XW2Z-RI□C-□			(A) 1,000	(B) 750	XW2Z-RO100C-75
	XW2Z-RO□C-□	32 output points	(120)	(A) 1,500	(B) 1,250	XW2Z-RO150C-125
			(B)	(A) 2,000	(B) 1,750	XW2Z-RO200C-175
			Straight length (without bends)	(A) 3,000	(B) 2,750	XW2Z-RO300C-275
				(A) 5,000	(B) 4,750	XW2Z-RO500C-475
	Cables with Connectors		A side B side	25	50	XW2Z-RI25C
MII (00 : .)	(1:1)	10.1/0	Device end I/O Relay Terminal	50	00	XW2Z-RI50C
MIL connectors (20 pins)	XW2Z-RI□C	16 I/O points		25	50	XW2Z-RO25C
	XW2Z-RO□C		L	500		XW2Z-RO50C
				(A) 500	(B) 250	XW2Z-RO50-25-D1
			İ	(A) 750	(B) 500	XW2Z-RO75-50-D1
			İ	(A) 1,000	(B) 750	XW2Z-RO100-75-D1
			A side B side	(A) 1,500	(B) 1,250	XW2Z-RO150-125-D1
			Device end I/O Relay Terminal	(A) 2,000	(B) 1,750	XW2Z-RO200-175-D1
	Cables with Connectors		(A)	(A) 3,000	(B) 2,750	XW2Z-RO300-275-D1
MIL connectors (40 pins)	(1:2)	22 I/O pointo		(A) 5,000	(B) 4,750	XW2Z-RO500-475-D1
MIL connectors (40 pins)	XW2Z-RO□-□-D1,	32 I/O points		(A) 500	(B) 250	XW2Z-RI50-25-D1
	XW2Z-RI□-□-D1		(120)	(A) 750	(B) 500	XW2Z-RI75-50-D1
			(B)	(A) 1,000	(B) 750	XW2Z-RI100-75-D1
			Straight length (without bends)	(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**

	NJ sy	ystem	CJ system	(CJ1, CJ2)	CP1H system	NSJ system	
Model	CPU Rack	Expansion Rack	CPU Rack	Expansion Backplane	CP1H PLC	NSJ Controller	Expansion Backplane
CJ1W-ID201				10 Units (per Expansion Backplane)		No.	
CJ1W-ID211		10 Units	40 Units				10 Units (per Expansion Backplane)
CJ1W-ID212							
CJ1W-ID231							
CJ1W-ID232	10 Units						
CJ1W-ID233	10 Offics	(per Expansion Rack)	10 Units		Not supported	Not supported	
CJ1W-ID261		,		. ,			
CJ1W-ID262							
CJ1W-IA201							
CJ1W-IA111							

# **Specifications**

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

	- input Grit (12 to 24 450, 0 1 Grits)							
Name	8-point DC Input Unit with Terminal Block							
Model	CJ1W-ID201							
Rated Input Voltage	12 to 24 VDC							
Rated Input Voltage Range	10.2 to 26.4 VDC							
Input Impedance	2.4 kΩ							
Input Current	10 mA typical (at 24 VDC)							
ON Voltage/ON Current	8.8 VDC min./3 mA min.							
OFF Voltage/OFF Current	3 VDC max./1 mA max.							
ON Response Time	3.0 ms max. (Can be set to between 0 and 32 ms in the Setup.) *1							
OFF Response Time	8.0 ms max. (Can be set to between 0 and 32 ms in the Setup.) *1							
Number of Circuits	8 independent circuits							
Number of Simultaneously ON Points	100% simultaneously ON							
Insulation Resistance	$20~\text{M}\Omega$ min. between 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.							
Internal Current Consumption	80 mA max.							
Weight	110 g max.							
Circuit Configuration	Signal name  Jxx_Ch1_In00 o  Lo  Lo  Lo  Lo  Lo  Lo  Lo  Lo  Lo							
External connection and terminal-device variable diagram	Polarity of the input power supply can be connected in either direction.  • 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 "lyx" as the device name.							

<sup>\*1.</sup> 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.

The device variable names are the names that use "Jxx" as the device name.

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

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

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

<sup>\*1.</sup> 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)

00111110	C input Unit (24 VDC, 16 Points)
Name	16-point DC Input Unit with Terminal Block
Model	CJ1W-ID212
Rated Input Voltage	24 VDC
Rated Input Voltage Range	20.4 to 26.4 VDC
Input Impedance	3.3 kΩ
Input Current	7 mA typical (at 24 VDC)
ON Voltage/ON Current	14.4 VDC min./3 mA min.
OFF Voltage/OFF Current	5 VDC max./1 mA max.
ON Response Time	8.0 ms max. (Can be set to between 0 and 32 ms in the Setup.) *1
OFF Response Time	8.0 ms max. (Can be set to between 0 and 32 ms in the Setup.) *1
Number of Circuits	16 (16 points/common, 1 circuit)
Number of Simultaneously ON Points	100% simultaneously ON (at 24 VDC) (Refer to the following illustration.)
Insulation Resistance	$20~\text{M}\Omega$ min. between 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.
Internal Current Consumption	130 mA max.
Weight	110 g max.
Circuit Configuration	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    Signal name   Signal name   Signal name

<sup>\*1.</sup> 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.

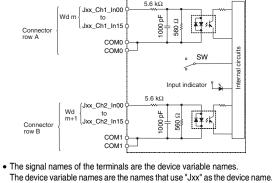
\*2. Terminal numbers A0 to A8 and B0 to B8 are used in the external connection and terminal-device variable diagrams. They are not printed on

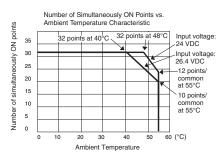
the Units.

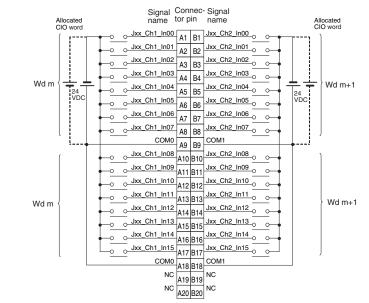
### CJ1W-ID231 DC Input Unit (24 VDC, 32 Points)

Name	32-point DC Input Unit with Fujitsu Connector					
Model	CJ1W-ID231					
Rated Input Voltage	24 VDC					
Rated Input Voltage Range	20.4 to 26.4 VDC					
Input Impedance	$5.6~\mathrm{k}\Omega$					
Input Current	4.1 mA typical (at 24 VDC)					
ON Voltage/ON Current	19.0 VDC min./3 mA min.					
OFF Voltage/OFF Current	5 VDC max./1 mA max.					
ON Response Time	8.0 ms max. (Can be set to between 0 and 32 in the Setup.) *					
OFF Response Time	8.0 ms max. (Can be set to between 0 and 32 in the Setup.) *					
Number of Circuits	32 (16 points/common, 2 circuits)					
Number of Simultaneously ON Points	75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)					
Insulation Resistance	20 M $\Omega$ min. between 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.					
Internal Current Consumption	90 mA max.					
Weight	70 g max.					
Accessories	None					
	Allocated Signal CIO word name Number of Simultaneously ON Points vs.					

# Circuit Configuration







- **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.

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.

<sup>\*</sup> 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.

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

C01W-1D232 D	ic input unit (24 VDC, 32 Points)
Name	32-point DC Input Unit with MIL Connector
Model	CJ1W-ID232
Rated Input Voltage	24 VDC
Rated Input Voltage Range	20.4 to 26.4 VDC
Input Impedance	5.6 kΩ
Input Current	4.1 mA typical (at 24 VDC)
ON Voltage/ON Current	19.0 VDC min./3 mA min.
OFF Voltage/OFF Current	5 VDC max./1 mA max.
ON Response Time	8.0 ms max. (Can be set to between 0 and 32 in the Setup.) *
OFF Response Time	8.0 ms max. (Can be set to between 0 and 32 in the Setup.) *
Number of Circuits	32 (16 points/common, 2 circuits)
Number of Simultaneously ON Points	75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)
Insulation Resistance	20 M $\Omega$ min. between 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.
Internal Current Consumption	90 mA max.
Weight	70 g max.
Accessories	None
Circuit Configuration	Allocated ClO word name  Connector row A  Connector row B
External connection and terminal-device variable diagram	Allocated CIO word    Voc
	<ul> <li>Be sure to wire both pins 23 and 24 (COMU), and set the same polarity for both pins.</li> <li>Be sure to wire both pins 3 and 4 (COM1), and set the same polarity for both pins.</li> <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>

<sup>\*</sup> 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)

	le input unit (24 VDC, 32 Points)
Name	32-point DC Input Unit with MIL Connector
Model	CJ1W-ID233
Rated Input Voltage	24 VDC
Rated Input Voltage Range	20.4 to 26.4 VDC
nput Impedance	5.6 kΩ
nput Current	4.1 mA typical (at 24 VDC)
ON Voltage/ON Current	19.0 VDC min./3 mA min.
OFF Voltage/OFF Current	5 VDC max./1 mA max.
ON Response Time	8.0 ms max. (Can be set to between 0 and 32 in the Setup.) *
OFF Response Time	8.0 ms max. (Can be set to between 0 and 32 in the Setup.) *
Number of Circuits	32 (16 points/common, 2 circuits)
Number of Simultaneously ON Points	75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)
nsulation Resistance	20 M $\Omega$ min. between 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.
nternal Current Consumption	200 mA max.
Weight	70 g max.
Accessories	None
Circuit Configuration	Number of Simultaneously ON Points vs. Ambient Temperature Characteristic  Number of Simultaneously ON Points vs. Ambient Temperature Characteristic  Number of Simultaneously ON Points vs. Ambient Temperature Characteristic  10 points of Simultaneously ON Points vs. Ambient Temperature Characteristic  10 points of Simultaneously ON Points vs. Ambient Temperature Characteristic  10 points of Simultaneously ON Points vs. Ambient Temperature Characteristic  10 points of Simultaneously ON Points vs. Ambient Temperature Characteristic  10 points of Simultaneously ON Points vs. Ambient Temperature Characteristic  10 points of Simultaneously ON Points vs. Ambient Temperature Characteristic  10 points of Simultaneously ON Points vs. Ambient Temperature Characteristic  10 points of Simultaneously ON Points vs. Ambient Temperature Characteristic  10 points of Simultaneously ON Points vs. Ambient Temperature Characteristic  10 points of Simultaneously ON Points vs. Ambient Temperature Characteristic  10 points of Simultaneously ON Points vs. Ambient Temperature Characteristic  10 points of Simultaneously ON Points vs. Ambient Temperature Characteristic  10 points of Simultaneously ON Points vs. Ambient Temperature Characteristic  10 points of Simultaneously ON Points vs. Ambient Temperature Characteristic  10 points of Simultaneously ON Points vs. Ambient Temperature Characteristic  10 points of Simultaneously ON Points vs. Ambient Temperature Characteristic  10 points of Simultaneously ON Points vs. Ambient Temperature  10 points of Simultaneously ON Points vs. Ambient Temperature  10 points of Simultaneously ON Points vs. Ambient Temperature  10 points of Simultaneously ON Points vs. Ambient Temperature  10 points of Simultaneously ON Points vs. Ambient Temperature  10 points of Simultaneously ON Points vs. Ambient Temperature  10 points of Simultaneously ON Points vs. Ambient Temperature  10 points of Simultaneously ON Points vs. Ambient Temperature  10 points of Simultaneously ON Points vs. Ambient Temperature  10 poi
External connection and terminal-device variable diagram	Allocated CIO word    Signal   Connection   Signal   Connection   Signal   CiO word
	<ul> <li>Be sure to wire both pins 23 and 24 (COM0), and set the same polarity for both pins.</li> <li>Be sure to wire both pins 3 and 4 (COM1), and set the same polarity for both pins.</li> <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>

<sup>\*</sup> 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 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)

	to input offit (24 vbo, 04 Folints)	
Name	64-point DC Input Unit with Fujitsu Connector	
Model Rated Input Voltage	CJ1W-ID261	
Rated Input Voltage Range	24 VDC 20.4 to 26.4 VDC	
Input Impedance	5.6 kΩ	
Input Current	4.1 mA typical (at 24 VDC)	
ON Voltage/ON Current	19.0 VDC min./3 mA min.	
OFF Voltage/OFF Current	5 VDC max./1 mA max.	
ON Response Time	8.0 ms max. (Can be set to between 0 and 32 in the Setup.) *	
OFF Response Time	8.0 ms max. (Can be set to between 0 and 32 in the Setup.) *	
Number of Circuits	64 (16 points/common, 4 circuits)	
Number of Simultaneously ON Points	50% (16 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustrations.)	
Insulation Resistance	20 MΩ min. between 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.	
Internal Current Consumption	90 mA max.	
Weight	110 g max.	
Accessories	None	
Circuit Configuration	Allocated Signal CIO word name  COnnector Wd Jxx_Ch1_In00  M Jxx_Ch1_In15  COMMO  Connector row B  COMMO  C	
External connection and terminal-device variable diagram	Allocated CIO word  Allocated CIO word  No. B20 AD AC  No. B19 A19 No.  COMM B18 A18 COMM  B19 A19 No.  COMM B18 A18 COMM  COMM B19 A19 No.  COMM B18 A18 ACCRI, M15 O O O ACCRI, M15 O O O ACCRI, M15 O O O ACCRI, M15 O O O O ACCRI, M15 O O O O ACCRI, M15 O O O O ACCRI, M15 O O O O ACCRI, M15 O O O O O ACCRI, M15 O O O O O ACCRI, M15 O O O O O ACCRI, M15 O O O O O ACCRI, M15 O O O O O ACCRI, M15 O O O O O O ACCRI, M15 O O O O O O ACCRI, M15 O O O O O O O ACCRI, M15 O O O O O O O O O O O O O O O O O O O	
* The ON response time	e 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)

Nama	Consist DO Invest Heit with MIL Comparts	
Name Model	64-point DC Input Unit with MIL Connector CJ1W-ID262	
Rated Input Voltage	24 VDC	
Rated Input Voltage		
Range	20.4 to 26.4 VDC	
Input Impedance	5.6 kΩ	
Input Current	4.1 mA typical (at 24 VDC)	
ON Voltage/ON Current	19.0 VDC min./3 mA min.	
OFF Voltage/OFF Current	5 VDC max./1 mA max.	
ON Response Time	8.0 ms max. (Can be set to between 0 and 32 in the Setup.) *	
OFF Response Time	8.0 ms max. (Can be set to between 0 and 32 in the Setup.) *	
Number of Circuits	64 (16 points/common, 4 circuits)	
Number of Simultaneously ON Points	50% (8 points/common) simultaneously ON (at 24 VDC) (Refer to the	e following illustrations.)
Insulation Resistance	20 $M\Omega$ min. between external terminals and the GR terminal (100 VI	DC)
Dielectric Strength	1,000 VAC between the external terminals and the GR terminal for 1	I minute at a leakage current of 10 mA max.
Internal Current	90 mA max.	
Consumption	110 % 2004	
Weight Accessories	110 g max. None	
Accessories	None	
Circuit Configuration	Allocated Signal CIO word name  Wd m   Jxx_Ch1_In00	Number of Simultaneously ON Points vs. Ambient Temperature Characteristic  64 points at 25°C 64 points at 35°C, 64 points at 47°C  15 points at 47°C  16 put voltage: 20,4 VDC  12 points/common (total: 45 points) at 55°C  18 points/common (total: 26 points max.) at 55°C  10 put voltage: 20,4 VDC  12 points/common (total: 26 points max.) at 55°C  10 put voltage: 20 points/common (total: 26 points max.) at 55°C  10 put voltage: 20 points/common (total: 26 points max.) at 55°C
	CN1	CN2
External connection and terminal-device variable diagram	Allocated CIO word	Allocated CIO word    24 VDC
	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.	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	e 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

The ON response time will be 120  $\mu$ s maximum and OFF response time will be 400  $\mu$ s 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)

Name	8-point AC Input Unit with Terminal Block		
Model	CJ1W-IA201		
Rated Input Voltage	200 to 240 VAC 50/60 Hz		
Rated Input Voltage Range	170 to 264 VAC		
Input Impedance	21 kΩ (50 Hz), 18 kΩ (60 Hz)		
Input Current	9 mA typical (at 200 VAC, 50 Hz), 11 mA typical (at 200 VAC, 60 Hz)		
ON Voltage/ON Current	120 VAC min./4 mA min.		
OFF Voltage/OFF Current	40 VAC max./2 mA max.		
ON Response Time	18.0 ms max. (default setting: 8 ms) *1		
OFF Response Time	48.0 ms max. (default setting: 8 ms) *1		
Number of Circuits	8 (8 points/common, 1 circuit)		
Number of Simultaneously ON Points	100% (8 points/common) simultaneously ON		
Insulation Resistance	$20~\text{M}\Omega$ min. between 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	80 mA max.		
Weight	130 g max.		
Accessories	None		
Circuit Configuration	Signal name  Jxx_Ch1_In00  Jxx_Ch1_In07  O.15 μF  Z20 Ω  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.		
	Connector pin *2 Signal name  NC A0 B0 Jxx_Ch1_In00  NC A1 B1 Jxx_Ch1_In01		
	NC A2 B2 Jxx_Ch1_ln02		
External contion	NC A3 B3 Jxx_Ch1_In03 200 to 240 VAC		
External connection and terminal-device variable diagram	NC A4 B4 Jxx_Ch1_ln04 O		
	NC A5 B5 Jxx_Ch1_ln05		
	NC   A6   Jxx_Ch1_in06		

\*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.

СОМ

В6

B8

NC A8

The device variable names are the names that use "Jxx" as the device name.

• The signal names of the terminals are the device variable names.

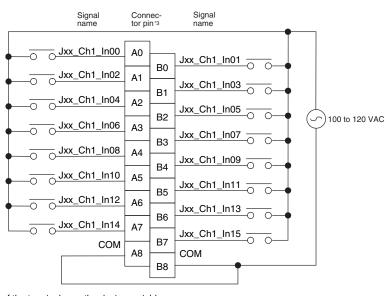
Note: Although 16 I/O bits (1 word) are allocated, only 8 of these can be used for external I/O.

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

Name	16-point AC Input Unit with Terminal Block	
Model	CJ1W-IA111	
Rated input voltage	100 to 120 VAC 50/60 Hz *2	
Rated Input Voltage Range	85 to 132 VAC	
Input Impedance	14.5 kΩ (50 Hz), 12 kΩ (60 Hz)	
Input Current	7 mA typical (at 100 VAC, 50 Hz), 8 mA typical (at 100 VAC, 60 Hz)	
ON Voltage/ON Current	70 VAC min./4 mA min	
OFF Voltage/OFF Current	20 VAC max./2 mA max	
ON Response Time	18 ms max. (default setting: 8 ms) *1	
OFF Response Time	48 ms max. (default setting: 8 ms) *1	
Number of Circuits	16 (16 points/common, 1 circuit)	
Number of Inputs ON Simultaneously	100% simultaneously ON (16 points/common)	
Insulation Resistance	20 M $\Omega$ min. between 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	90 mA max.	
Weight	130 g max.	
Accessories	None	
Circuit Layout	Signal name  Jxx_Ch1_In00  470 Ω 1 MΩ  Jxx_Ch1_In15 0.22 μF 270 Ω  • 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.	
	Signal Connec- Signal name tor pin 3 name	





- 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. 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		Cianal name (C I/N I)
CIO	Bit	Signal name (CJ/NJ)
	00	IN0/Jxx_Ch1_In00
	01	IN1/Jxx_Ch1_In01
	:	:
	06	IN6/Jxx_Ch1_In06
Wd m	07	IN7/Jxx_Ch1_In07
(Input)	08	_
	09	_
	:	:
	14	_
	15	_

### 16-point Input Unit

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

### 32-point Input Unit

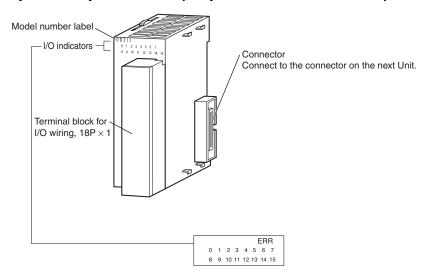
Allocated CIO word		Cianal name (C I/N I)
CIO	Bit	Signal name (CJ/NJ)
	00	IN0/Jxx_Ch1_In00
	01	IN1/Jxx_Ch1_In01
Wd m (Input)	:	:
(pat)	14	IN14/Jxx_Ch1_In14
	15	IN15/Jxx_Ch1_In15
	00	IN0/Jxx_Ch2_In00
Wd m+1 (Input)	01	IN1/Jxx_Ch2_In01
	:	:
(put)	14	IN14/Jxx_Ch2_In14
	15	IN15/Jxx_Ch2_In15

### **64-point Input Unit**

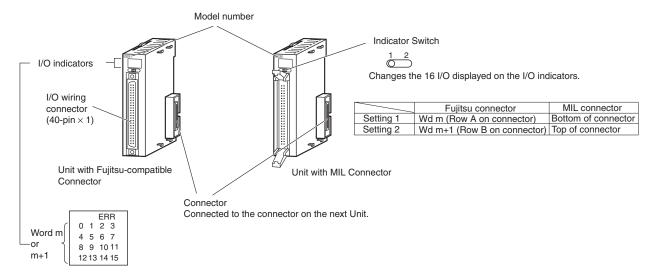
Allocated CIO word		6:
CIO	Bit	Signal name (CJ/NJ)
	00	IN0/Jxx_Ch1_In00
	01	IN1/Jxx_Ch1_In01
Wd m (Input)	:	:
(pat)	14	IN14/Jxx_Ch1_In14
	15	IN15/Jxx_Ch1_In15
	00	IN0/Jxx_Ch2_In00
	01	IN1/Jxx_Ch2_In01
Wd m+1 (Input)	:	:
(pat)	14	IN14/Jxx_Ch2_In14
	15	IN15/Jxx_Ch2_In15
	00	IN0/Jxx_Ch3_In00
	01	IN1/Jxx_Ch3_In01
Wd m+2 (Input)	:	:
(mpat)	14	IN14/Jxx_Ch3_In14
	15	IN15/Jxx_Ch3_In15
	00	IN0/Jxx_Ch4_In00
	01	IN1/Jxx_Ch4_In01
Wd m+3 (Input)	:	:
(iiipat)	14	IN14/Jxx_Ch4_In14
	15	IN15/Jxx_Ch4_In15

### **External Interface**

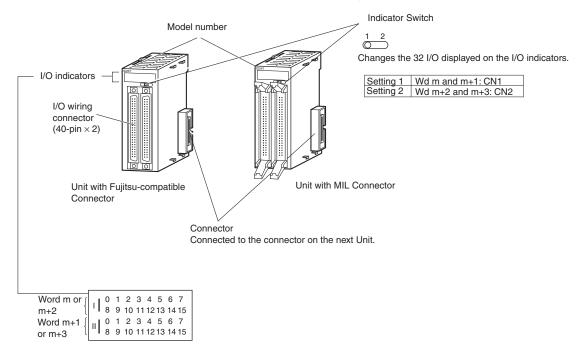
### 8-point/16-point Units (18-point Terminal Blocks)



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



### 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 mm²)

#### **Crimp terminals**

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

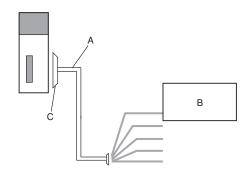


### I/O Unit Wiring Methods

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.

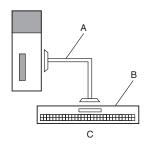


Α	User-provided cable
В	External device
С	Connector

#### 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.

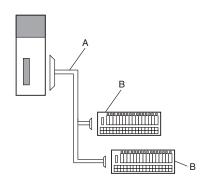


Α	Connecting Cable for Connector-Terminal Block Conversion Unit XW2Z
В	Connector-Terminal Block Conversion Unit XW2R
С	Conversion to a screw terminal block

#### 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.



A	Connecting Cable for I/O Relay Terminals XW2Z-R
В	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-compatible Connectors Applicable Units

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

#### **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-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-40OS2-001
Crimped	-	Crimp Contacts for XG5N *3 XG5W-0232 (loose contacts: 100 pieces) XG5W-0232-R (reel contacts: 10,000 pieces)	HU-111S

<sup>\*1.</sup> Socket and Stain Relief set.

#### Wire Size

We recommend using cable with wire gauges of AWG 28 to 24 (0.08 to 0.2 mm²). 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)**

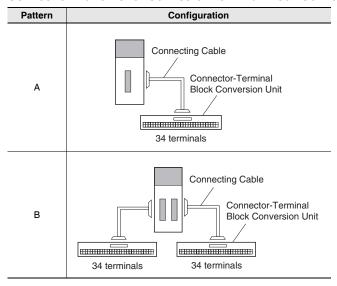
Product Name	Model
Manual Crimping Tool	XY2B-7007

<sup>\*2.</sup> Crimp Contacts (XG5W-0232) are sold separately.

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

### 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

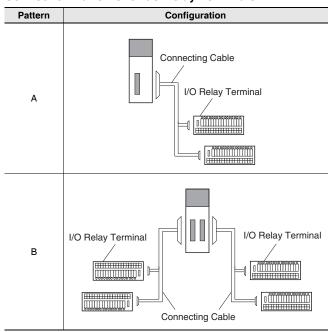
Unit	I/O capacity	Number of connectors	Polarity	Connection pattern	Connecting Cable *	Connector-Terminal Block Conversion Unit	Wiring method	Common terminals	
						XW2R-J34GD-C1	Phillips screw		
CJ1W-ID231	32 inputs	1 Fujitsu connector	NPN/PNP	Α	XW2Z-□□□PF	XW2R-E34GD-C1	Slotted screw (rise up)	No	
						XW2R-P34GD-C1	Push-in spring		
						XW2R-J34GD-C2	Phillips screw		
CJ1W-ID232	32 inputs	1 MIL connector	NPN/PNP	Α	XW2Z-□□□PM	XW2R-E34GD-C2	Slotted screw (rise up)	No	
						XW2R-P34GD-C2	Push-in spring		
						XW2R-J34GD-C2	Phillips screw		
CJ1W-ID233	32 inputs	uts 1 MIL connector	NPN/PNP	Α	XW2Z-□□□PM	XW2R-E34GD-C2	Slotted screw (rise up)	No	
						XW2R-P34GD-C2	Push-in spring		
						XW2R-J34GD-C1 (2 Units)	Phillips screw		
CJ1W-ID261	64 inputs	2 Fujitsu connectors	NPN/PNP	В	XW2Z-□□□PF (2 pcs)	XW2R-E34GD-C1 (2 Units)	Slotted screw (rise up)	No	
		000010.0			(2 600)	XW2R-P34GD-C1 (2 Units)	Push-in spring		
						XW2R-J34GD-C2 (2 Units)	Phillips screw		
CJ1W-ID262	64 inputs	2 MIL NPN/PNF	NPN/PNP B	В	XW2Z-□□PM (2 pcs)	XW2R-E34GD-C2 (2 Units)	Slotted screw (rise up)	No	
		1100.0.0			(= P00)	XW2R-P34GD-C2 (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	Connecting Cables		I/O Relay Terminals											
Model	I/O capacity	External connectors	Polarity	Connection pattern	Model *1	Quantity required	Model	I/O points	Quantity required	Wiring method								
		1 Fujitsu	Sinking/				G70V-SID16P(-1)(-C16) *2	16		Push-in spring								
CJ1W-ID231	32 inputs	connector	Sourcing	Α	XW2Z-RI□C-□	1	G7TC-ID/IA16	16	2	Screw terminal								
		(40 p)	(NPN/PNP)				G70A-ZIM16-5 *3	16		Screw terminal								
		1 MIL	Sinking/				G70V-SID16P(-1)(-C16) *2	16		Push-in spring								
CJ1W-ID232	32 inputs	connector	Sourcing	Α	XW2Z-RO□-□-D1	1	G7TC-ID/IA16	16	2	Screw terminal								
	(40)	(40 p) (f	(NPN/PNP)	(NPN/PNP)	(NPN/PNP)	(NPN/PNP)	(NPN/PNP)	(NPN/PNP)	(NPN/PNP)	(NPN/PNP)	(NPN/PNP)				G70A-ZIM16-5	16		Screw terminal
	32 inputs		1 MIL	1 MII	Sinking/				G70V-SID16P(-1)(-C16) *2	16		Push-in spring						
CJ1W-ID233		32 inputs connector Sc	nnector Sourcing	Α	Α	XW2Z-RO□-□-D1	A XW2Z-RO□-□-D1	1	G7TC-ID/IA16	16	2	Carou tarminal						
				(NPN/PNP)	(NPN/PNP)	(NPN/PNP)	(NPN/PNP)	(NPN/PNP)	(NPN/PNP)	(NPN/PNP)	(NPN/PNP)				G70A-ZIM16-5*3	16		Screw terminal
		2 Fujitsu	Sinking/				G70V-SID16P(-1)(-C16) *2	16		Push-in spring								
CJ1W-ID261	64 inputs	connectors	Sourcing	В	XW2Z-RI□C-□	2	G7TC-ID/IA16	16	4	Screw terminal								
		(40 p)	(NPN/PNP)				G70A-ZIM16-5 *3	16		Screw terminal								
		2 MIL	Sinking/				G70V-SID16P(-1)(-C16) *2	16		Push-in spring								
CJ1W-ID262	64 inputs			64 inputs con	64 inputs   connectors   Sc	tors Sourcing B	B XW2Z-RO□-□-D1	2	G7TC-ID/IA16	16	4	Caracu tarminal						
		(40 p)	(NPN/PNP)				G70A-ZIM16-5 *3	16		Screw terminal								

<sup>\*1.</sup> The box  $\square$  is replaced by the cable length.

<sup>\*2.</sup> Either NPN inputs or PNP inputs can be used.

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

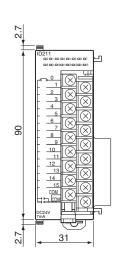
Dimensions (Unit: mm)

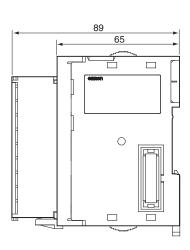
### 8-point/16-point Units (18-point Terminal Blocks)

CJ1W-ID201 CJ1W-ID211 CJ1W-ID212

CJ1W-IA201 CJ1W-IA111



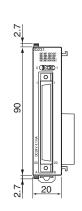


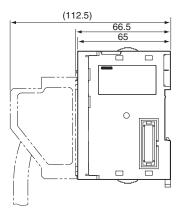


### 32-point Units (Input Units)

With Fujitsu-compatible Connector (40-pin  $\times$  1) CJ1W-ID231

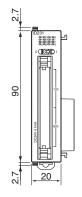


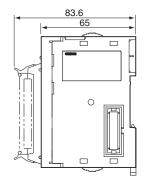




With MIL Connector (40-pin  $\times$  1) CJ1W-ID232 CJ1W-ID233



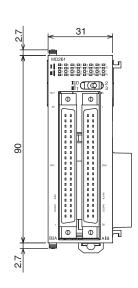


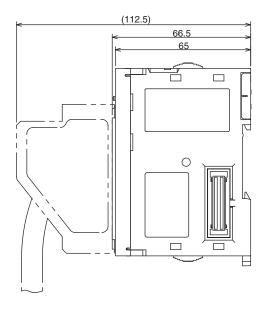


### **64-point Units (Input Units)**

With Fujitsu-compatible Connector (40-pin  $\times$  2) CJ1W-ID261

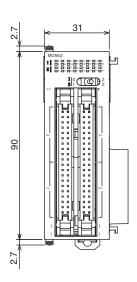


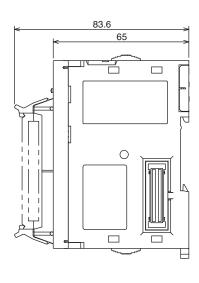




With MIL Connector (40-pin  $\times$  2) CJ1W-ID262







### **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:  Overview and features Basic system configuration Part nomenclature and functions Mounting and setting procedure Remedies for errors Also refer to the Software User's Manual (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.  • Features and system configuration  • Introduction  • Part names and functions  • General specifications  • Installation and wiring  • Maintenance and inspection Use this manual together with the NJ-series CPU Unit Software User's Manual (Cat. No. W501).

#### Terms and Conditions Agreement

#### Read and understand this catalog.

Please read and understand this catalog before purchasing the products. Please consult your OMRON representative if you have any questions or comments.

#### Warranties.

- (a) Exclusive Warranty. Omron's exclusive warranty is that the Products will be free from defects in materials and workmanship for a period of twelve months from the date of sale by Omron (or such other period expressed in writing by Omron). Omron disclaims all other warranties, express or implied.
- (b) Limitations. OMRON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCTS. BUYER ACKNOWLEDGES THAT IT ALONE HAS DETERMINED THAT THE

PRODUCTS WILL SUITABLY MEET THE REQUIREMENTS OF THEIR INTENDED USE.

Omron further disclaims all warranties and responsibility of any type for claims or expenses based on infringement by the Products or otherwise of any intellectual property right. (c) Buyer Remedy. Omron's sole obligation hereunder shall be, at Omron's election, to (i) replace (in the form originally shipped with Buyer responsible for labor charges for removal or replacement thereof) the non-complying Product, (ii) repair the non-complying Product, or (iii) repay or credit Buyer an amount equal to the purchase price of the non-complying Product; provided that in no event shall Omron be responsible for warranty, repair, indemnity or any other claims or expenses regarding the Products unless Omron's analysis confirms that the Products were properly handled, stored, installed and maintained and not subject to contamination, abuse, misuse or inappropriate modification. Return of any Products by Buyer must be approved in writing by Omron before shipment. Omron Companies shall not be liable for the suitability or unsuitability or the results from the use of Products in combination with any electrical or electronic components, circuits, system assemblies or any other materials or substances or environments. Any advice, recommendations or information given orally or in writing, are not to be construed as an amendment or addition to the above warrantv.

See <a href="http://www.omron.com/global/">http://www.omron.com/global/</a> or contact your Omron representative for published information.

#### Limitation on Liability; Etc.

OMRON COMPANIES SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCTS, WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, NEGLIGENCE OR STRICT LIABILITY.

Further, in no event shall liability of Omron Companies exceed the individual price of the Product on which liability is asserted.

#### Suitability of Use.

Omron Companies shall not be responsible for conformity with any standards, codes or regulations which apply to the combination of the Product in the Buyer's application or use of the Product. At Buyer's request, Omron will provide applicable third party certification documents identifying ratings and limitations of use which apply to the Product. This information by itself is not sufficient for a complete determination of the suitability of the Product in combination with the end product, machine, system, or other application or use. Buyer shall be solely responsible for determining appropriateness of the particular Product with respect to Buyer's application, product or system. Buyer shall take application responsibility in all cases.

NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY OR IN LARGE QUANTITIES WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT(S) IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

#### Programmable Products.

Omron Companies shall not be responsible for the user's programming of a programmable Product, or any consequence thereof.

#### Performance Data.

Data presented in Omron Company websites, catalogs and other materials is provided as a guide for the user in determining suitability and does not constitute a warranty. It may represent the result of Omron's test conditions, and the user must correlate it to actual application requirements. Actual performance is subject to the Omron's Warranty and Limitations of Liability.

#### Change in Specifications.

Product specifications and accessories may be changed at any time based on improvements and other reasons. It is our practice to change part numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the Product may be changed without any notice. When in doubt, special part numbers may be assigned to fix or establish key specifications for your application. Please consult with your Omron's representative at any time to confirm actual specifications of purchased Product.

Errors and Omissions. Information presented by Omron Companies has been checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical or proofreading errors or omissions.

2017.11

In the interest of product improvement, specifications are subject to change without notice.

