## **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 / 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 torna	Product		Sį	pecifications			consu	rent mption A)	Model	Standards		
Unit type	name	I/O points	Input voltage and current	Commons	External connection	No. of words allocated	5 V	24 V	Wodel			
	<b>DOI</b>	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 / OTAX 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		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 / OTAX connector	4 words	0.09	-	CJ1W-ID261	
	Wall	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 / 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
	Soldered	Connector Fujitsu FCN-361J040-AU Connector Cover Fujitsu FCN-360C040-J2 OTAX N360C040J2		C500-CE404	
40-pin Connectors	Crimped	Housing Fujitsu FCN-363J040 OTAX N363J040 Contactor Fujitsu FCN-363J-AU OTAX N363JAU Connector Cover Fujitsu FCN-360C040-J2 OTAX N360C040J2	CJ1W-ID231(32 inputs): 1 per Unit CJ1W-ID261 (64 inputs): 2 per Unit CJ1W-OD231 (32 outputs): 1 per Unit	C500-CE405	_
	Pressure welded	Fujitsu FCN-367J040-AU/F		C500-CE403	
24-pin Connectors	Soldered	Connector Fujitsu FCN-361J024-AL Connector Cover Fujitsu FCN-360C024-J2 OTAX N360C024J2		C500-CE241	
Connectors	Pressure welded	Fujitsu FCN-367J024-AU/F OTAX N367J024AUF	C31vv-wiD231 (10 iliputs, 10 outputs). 2 per Offit	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	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	
Connectors	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 of	Number of	Wiring	Terminal		Size			nting	Common				
Туре	Series	connector poles	terminal block poles	mothod	type	Depth (mm)	Height (mm)	Width (mm)	DIN Track	Screws	terminals	I/O Units	Model *	Standards	
				Push-In Plus								CJ1W-ID231 CJ1W-ID261	XW2K-40G-O32A		
	XW2K	40	36		Spring	75	39	40.8				CJ1W-ID232 CJ1W-ID233 CJ1W-ID262	XW2K-40G-O32C		
	AVVZK			Push-In Plus						_		CJ1W-ID231 CJ1W-ID261	XW2K-40G-O32A-IN		
		40	102		Spring	124	52.7	40.8				Yes	CJ1W-ID232 CJ1W-ID233 CJ1W-ID262	XW2K-40G-O32C-IN	
PLCs				Phillips screw					Yes			CJ1W-ID231 CJ1W-ID261	XW2R-J34GD-C1	_	
		40	34		M3	130.7	50	48.05					CJ1W-ID232 CJ1W-ID233 CJ1W-ID262	XW2R-J34GD-C2	
	XW2R			Slotted screw (rise up)	МЗ								CJ1W-ID231 CJ1W-ID261	XW2R-E34GD-C1	
		40	34		(European type)	98.5	50	44.81					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.

## Connecting Cables for Connector-Terminal Block Conversion Units

Appearance	Connectors	Cable lenght [m]	Model
XW2Z-□□□B		0.5	XW2Z-050B
		1	XW2Z-100B
	One 40 min FON Composter to One 40 min MII Composter	1.5	XW2Z-150B
	One 40-pin FCN Connector to One 40-pin MIL Connector	2	XW2Z-200B
		3	XW2Z-300B
		5	XW2Z-500B
(W2Z-□□□K		0.5	XW2Z-C50K
		1	XW2Z-100K
	One 40 sin MIL Connector to One 40 sin MIL Connector	1.5	XW2Z-150K
	One 40-pin MIL Connector to One 40-pin MIL Connector	2	XW2Z-200K
		3	XW2Z-300K
		5	XW2Z-500K

<sup>\*</sup> Representative models only. For details, refer to the XW2K series Datasheet (Cat. No. G152) and XW2R Datasheet.

### Applicable I/O Relay Terminals

				S	pecifications	3		Size (hor	izontal m	ounting)	Mou	inting						
Туре	Series	Classi	ification	Polarity	Number of points	Rated ON current at contacts	Rated voltage	Horizontal (mm)	Vertical (mm)	Height (mm)	DIN Track	Screws	Model	Standards				
				NPN									G70V-SID16P *4					
			DC	PNP	16	50 mA							G70V-SID16P-1 *4					
G70V Push-In	Inputs	inputs	NPN	(SPSTNO × 16)	50 MA		143	90	56	Yes		G70V-SID16P-C16 *5	UC, CE					
Plus				PNP		24 VDC					Yes	G70V-SID16P-1-C16 *5						
terminal	terminal block	Outputs	Outpute		NPN				143	90	50	165	165	G70V-SOC16P *4	(TÜV certified)			
DIOCK				Outpute	Relay	PNP	16	6 A/point, 10 A/							G70V-SOC16P-1 *4			
	Outputs	outputs	NPN	(SPDT × 16)	common							G70V-SOC16P-C4 *6						
				PNP									G70V-SOC16P-1-C4 *6					
			AC				100/(110) VAC						G7TC-IA16 AC100/110					
			inputs		40		200/(220) VAC						G7TC-IA16 AC200/220					
		Inputs	DO	NPN	16 (SPSTNO × 16)	1A	12 VDC	182					G7TC-ID16 DC12					
G7TC Standard			DC inputs		(0. 00 / 10)		24 VDC						G7TC-ID16 DC24					
						100/110 VDC						G7TC-ID16 DC100/110						
				8		12 VDC	102	85 68	68	Yes	No	G7TC-OC08 DC12	U, C					
	A COMPANIES	MARIO BASA			333		NPN	(SPSTNO × 8)		24 VDC	102					G7TC-OC08 DC24		
	Outp	Outputs	Relay	INFIN	16 (SPSTNO × 16)	5A	12 VDC						G7TC-OC16 DC12					
		Outputs	outputs			3A	24 VDC	182					G7TC-OC16 DC24					
				PNP	16		12 VDC						G7TC-OC16-1 DC12					
				1 111	(SPSTNO × 16)		24 VDC						G7TC-OC16-1 DC24					
High-	G70A *1 (Socket only)	only) Inputs	cket only) Inputs	Relay inputs	NPN/ PNP	16 (SPDT × 16	100 mA	110 VDC max., 240 VAC max. *2						G70A-ZOC16-5	U, C, CE			
capacity socket				Relay	NPN	possible with G2R Relays)	10 A (Ter- minal	0411/D0	234	75	64	Yes	No	G70A-ZOC16-3	(VDE certified)			
	4	Outputs	outputs	PNP		block al- lowable	24 VDC						G70A-ZOC16-4					
	Vertical type G70D-V		Relay outputs			5 A or 3 A *3							G70D-VSOC16	0. 05				
					MOSFET relay outputs	NPN	16 (SPSTNO × 16)	0.3 A		135	46	81	Yes	Yes	G70D-VFOM16	U, C, CE (VDE certified)		
Space-	Flat type G70D	Outputs		NDN	8 (SPSTNO×8)	5 A	24 VDC	68	93	44			G70D-SOC08					
saving	HILLIAM		Relay outputs	NPN	16 (SPSTNO × 16)	3 A							G70D-SOC16					
arrent .			PNP	16 (SPSTNO × 16)	3 A		156	51	39	Yes	Yes	G70D-SOC16-1	-					
		THE PARTY NAMED IN					MOSFET NPN relay	NPN	16	0.3 A							G70D-FOM16	
	The Table		outputs PNP		(SPSTNO × 16)								G70D-FOM16-1 *7					
High- capacity, space- saving	G70R	Outputs	Relay outputs	NPN	8 (SPSTNO×8)	10 A	24 VDC	136	93	55	Yes	Yes	G70R-SOC08 *7	_				

<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.

<sup>\*7.</sup> 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.

<sup>2.</sup> 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/OTAX connectors (24 pins)	(1:1)	16 I/O points		2,0	000	XW2Z-R200C
001111001010 (2 1 pinto)	XW2Z-R□C			3,0	000	XW2Z-R300C
			L	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) 2,000	(B) 1,750	XW2Z-RI200C-175
	Cables with Connectors			(A) 3,000	(B) 2,750	XW2Z-RI300C-275
Fujitsu/OTAX	(1:2)			(A) 5,000	(B) 4,750	XW2Z-RI500C-475
connectors (40 pins)	XW2Z-RI□C-□		(120)	(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
NAU (00 -i)	(1:1) XW2Z-RI□C XW2Z-RO□C	16 I/O points	Device end I/O Relay Terminal	50	00	XW2Z-RI50C
MIL connectors (20 pins)		10 I/O points		25	50	XW2Z-RO25C
			L	500		XW2Z-RO50C
				(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 side B side	(A) 1,500	(B) 1,250	XW2Z-RO150-125-D1
			Device end I/O Relay Terminal (A) →	(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	NJ system		(CJ1, CJ2)	CP1H system	NSJ system *	
Model	CPU Rack	Expansion Rack	CPU Rack	Expansion Backplane	CP1H PLC	NSJ Controller	Expansion Backplane
CJ1W-ID201							
CJ1W-ID211			10 Units	10 Units (per Expansion Backplane)	Not supported	Netsumented	10 Units (per Expansion Backplane)
CJ1W-ID212							
CJ1W-ID231							
CJ1W-ID232	10 Units	10 Units					
CJ1W-ID233	10 Units	(per Expansion Rack)				Not supported	
CJ1W-ID261							. ,
CJ1W-ID262							
CJ1W-IA201							
CJ1W-IA111							

<sup>\*</sup> Product no longer available to order.

## **Specifications**

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

	o input out (12 to 21 to 25, or outs)
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	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	8 independent circuits
Number of Simultaneously ON Points	100% simultaneously ON
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 name  Jxx_Ch1_In00 o  Lo  Jxx_Ch1_In07 o  Lo  Jxx_Ch1_In07 o  Lo  Jxx_Ch1_In07 o  Lo  Input indicator  Lo  Input indicator  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.  Polarity of the input power supply can be connected in either direction.  Polarity of the terminals are the device variable names.  The signal names of the terminals are the device variable names.  The device variable names are the names that use "Ixx" 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)

00144-10211 0	C 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 kΩ
	7 mA typical (at 24 VDC)
	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	80 mA max.
Weight	110 g max.
Circuit Configuration	Signal name 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 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)

	16-point DC Input Unit with Terminal Block							
	CJ1W-ID212							
' '	24 VDC							
Range	20.4 to 26.4 VDC							
· · · · · · · · · · · · · · · · · · ·	3.3 kΩ							
-	7 mA typical (at 24 VDC)							
	14.4 VDC min./3 mA min.							
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							
	16 (16 points/common, 1 circuit)							
	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)							
	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 name 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.

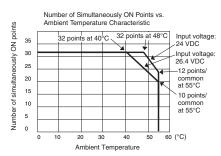
## CJ1W-ID231 DC Input Unit (24 VDC, 32 Points)

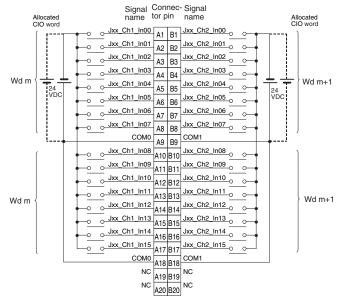
Name	32-point DC Input Unit with Fujitsu / OTAX Connector						
Model	CJ1W-ID231						
Rated Input Voltage	24 VDC						
Rated Input Voltage Range	20.4 to 26.4 VDC						
Input Impedance	$5.6~\mathrm{k}\Omega$						
Input Current	4.1 mA typical (at 24 VDC)						
ON Voltage/ON Current	19.0 VDC min./3 mA 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	$20~\text{M}\Omega$ 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	90 mA max.						
Weight	70 g max.						
Accessories	None						
	Allocated Signal CIO word name Number of Simultaneously ON Points vs.  Ambient Temperature Characteristic						

# 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.

5.6 kΩ





#### **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)

	C input Offit (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 OFF Voltage/OFF Current	19.0 VDC min./3 mA min. 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 $Ω$ 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	Number of Simultaneously ON Points vs. Ambient Temperature Characteristic  Number of Simultaneously ON Points vs. Ambient Temperature Characteristic  Input voltage: 24 VDC Input voltage: 24 VDC Input voltage: 24 VDC Input voltage: 25 VD Input voltage: 26 VDC Input voltage: 26 VDC Input voltage: 26 VDC Input voltage: 27 VDC Input voltage: 28 VDC Input voltage: 28 VDC Input voltage: 29 VDC Input voltage: 20 VDC Input	
External connection and terminal-device variable diagram	Allocated CIO word    Signal   Connec   Signal   Allocated   CIO word	
	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.	

<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 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)

Marie   32-point DC Input Uptings   24 VDC   Rated Input Violage Range   20 4 to 26 4 VDC   Input Impedance Input Gurrent   4-1 mA hybrid (at 24 VDC)   ON VoltageON Current   50 VDC man /3 m A min.  ON Response Time   50 VDC min /3 m A min /3 m		C input Unit (24 VDC, 32 Points)	
Rated input Voltage Rated input Voltage Rated input United Rated Input United Rated Input United Rated Input United Rated Rate	Name	32-point DC Input Unit with MIL Connector	
Read input Voltage Rings Input Current  OR Conversions Time  OR Response Time  Sumber of Circuits  Sumber of Sumbalaneously  OR Response Time  Sumber of Circuits  Sumber of Sumbalaneously  OR Post of Circuits  Sumber of Sumbalaneously  OR Association  20 Mid min. between external terminals and the GR terminal (100 VDC)  Diselectic Strength  Internal Current  Consumption  William  Accessories  Circuit Configuration  Circuit Configuration  Figure  Consumption  Allocated  Cons			
Input Unpred   5,6 kΩ   Imput Current   4.1 m M Syeal (at 24 VDC)	<u> </u>	24 VDC	
Injust Current ON Voltage/ON (2014) ON Voltage/ON (2014) ON Voltage/OFF Current OFF Response Time S on smax. (Can be set to between 0 and 32 in the Setup.)* ON Points ON	Rated Input Voltage Range	20.4 to 26.4 VDC	
DN VoltageON Current For VoltageOFF Corrent Voltage	Input Impedance	$5.6~\mathrm{k}\Omega$	
DFF VoltageOFF Current DN Response Time 0. 8.0 ms max. (Can be set to between 0 and 32 in the Setup.)* 3.2 (16 points/common, 2 circuits) 3.2 (16 points/common, 2 circuits) 3.2 (16 points/common, 2 circuits) 3.3 (16 points/common, 2 circuits) 3.4 (16 points/common, 2 circuits) 3.5 (16 points/common, 2 circuits) 3.5 (16 points/common, 2 circuits) 3.5 (16 points/common, 2 circuits) 3.6 Mill min. between external terminals and the GR terminal (100 VDC) 3.6 Mill min. between external terminals and the GR terminal (100 VDC) 3.6 Mill min. between external terminals and the GR terminal (100 VDC) 3.6 Mill min. between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.  4.6 Cessories  None  Circuit Configuration  Circuit Configuration  Circuit Configuration  The dovice variable manus of the terminals are the device variable names.  The dovice variable manus are the terminals are the device variable names.  The dovice variable manus are the terminals are the device variable names.  The dovice variable manus are the manus that use "Java" are the device name.  Accessories  None  Accessories  Accessories  None  Accessories  None  Accessories  None  Accessories  Accessories  None  Accessories  None  Accessories  None  Accessories  None  Accessories  None  Accessories  Accessories  None  Accessories  None  Accessories  None  Accessories  Accessories  None  Accessories  Accessories  Accessories  Accessories  Accessories  None  Accessories  Accessories	Input Current	4.1 mA typical (at 24 VDC)	
De Response Time  3.0 ms max. (Can be set to between 0 and 32 in the Setup.)*  1.00 PF Response Time  3.0 ms max. (Can be set to between 0 and 32 in the Setup.)*  32 (16 points/common, 2 circuits)  32 (16 points/common, 2 circuits)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at	ON Voltage/ON Current	19.0 VDC min./3 mA min.	
De Response Time  3.0 ms max. (Can be set to between 0 and 32 in the Setup.)*  1.00 PF Response Time  3.0 ms max. (Can be set to between 0 and 32 in the Setup.)*  32 (16 points/common, 2 circuits)  32 (16 points/common, 2 circuits)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  75% (12 points/common) simultaneously ON (at	OFF Voltage/OFF Current		
Number of Circuits 32 (16 points/common, 2 circuits) 33 (16 points/common, 2 circuits) 34 (10 points/common, 2 circuits) 35 (10 points/common, 2 circuits) 36 (10 points/common, 2 circuits) 37 (10 points/common, 2 circuits) 37 (10 points/common, 2 circuits) 38 (10 points/common, 2 circuits) 39 (10 points/common, 2 circuits) 30 (10 points/common, 2 circuits) 31 (10 points/common, 2 circuits) 32 (10 points/common, 2 circuits) 33 (10 points/common, 2 circuits) 34 (10 points/common,		8.0 ms max. (Can be set to between 0 and 32 in the Setup.) *	
Number of Circuits  Number of Simultaneously No Points  175% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.)  20 MD min. between external terminals and the GR terminal (100 VDC)  1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.  200 mA max.  200 mA max.  200 mA max.  None  Accessories  None  Circuit Configuration  1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.  Consumption  200 mA max.  None  Consumption  None  Consumption  1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.  Accessories  None  Consumption  1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.  Accessories  None  Consumption  1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.  Accessories  None  Consumption  1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.  Accessories  None  Consumption  1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.  Accessories  None  Consumption  1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.  Accessories  None  Consumption  1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.  Accessories  None  Consumption  1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.  Accessories  None  Consumption  1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.  Accessories  1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.  Accessories  1,000 VAC between the external terminals and the GR terminal for 1 minute		· · · · · · · · · · · · · · · · · · ·	
Number of Simultaneously No Points N	•	17	
Since the content of the terminal forms and the GR terminal (100 VDC)  Dielectric Strength Internal Current 1,000 VAC between the external terminals and the GR terminal (100 VDC)  200 mA max.  Accessories  None  None  Allocated Converted or annual content of 10 mA max.  None  Accessories  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.  Allocated CO word  Anherer Tomporature  Allocated  Anherer Tomporature  Allocated  Allocated  Allocated  Anherer Tomporature  Anhere	Number of Simultaneously		
Delectric Strength  1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.  200 mA max.  200 mA max.  Accessories  None  Accessories  None  Accessories  None  Accessories  None  Accessories  None  Accessories  None  Accessories  Accessories  None  Accessories  Accessories  Accessories  None  Accessories  Accessori			
And the company of th		· · ·	
200 mAx max.  Accessories  None  Althought  Accessories  None  Althought  Connection  Wid mill  Jac, Cht. Info  COMM  Commodity  Mill Jac, Cht. Info  COMM  Antibert Temperature  Wid mail  Antibert Temperature  Antibert Temperature  Wid mail  Antibert Temperature  Antibert Temperature  Wid mail  Antibert Temperature  Wid mail  Antibert Temperature  Antibert Temperature  Wid mail  Antibert T		1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max.	
Accessories  None  Alternation  Alternation  Alternation  Alternation  The signal names of the terminals are the device variable names.  Alternation  Alternation		200 mA max.	
Alicrated Cornector (now A control of the terminals are the device variable names. The device variable names are the names that use "Jos" as the device variable names are the names that use "Jos" as the device variable names.  Alicrated Signal Advances (now A national Temperature Characteristic Common of the terminals are the device variable names. The device variable names are the names that use "Jos" as the device name.  Alicrated Common of the terminals are the device variable names. The device variable names are the names that use "Jos" as the device name. The device variable names are the names that use "Jos" as the device name. The device variable names are the names that use "Jos" as the device name. The device variable names are the names that use "Jos" as the device name. The device variable names are the names that use "Jos" as the device name. The device variable names are the names that use "Jos" as the device name. The device variable names are the names that use "Jos" as the device name. The device variable names are the names that use "Jos" as the device name. The device variable names are the names that use "Jos" as the device name. The device variable names are the names that use "Jos" as the device name. The device variable names are the names that use "Jos" as the device name. The device variable names are the names that use "Jos" as the device name. The device variable names are the names that use "Jos" as the device name. The device variable names are the names that use "Jos" as the device name. The device variable names are the names that use "Jos" as the device name. The device variable names are the names that use "Jos" as the device name. The device variable names are the names that use "Jos" as the device name. The device variable names are the names that use "Jos" as the device name. The device variable names. The device variable names are the names that use "Jos" as the device name. The device variable names. The device variable names. The device variable names. The device variable n	·		
Allocated CiO word signal range of the terminals are the device variable names.  **The signal names of the terminals are the device variable names are the n	<del>_</del>		
Connector of the terminals are the device variable names.  The device variable names are the names that use "J.xx" as the device name.  Allocated City word	Accessories	None	
Connector Wid must Charles are the device variable names.  The device variable names are the names that use "Jox" cas the device name.  External connection and terminal-device variable diagram  Wid must Charles are the device variable names.  Alticoated Cilo word  Wid must Charles are the device variable names.  Alticoated Cilo word  Wid must Charles are the device variable names.  Alticoated Cilo word  Alticoated Cilo word  Wid must Charles are the names that use "Jox" as the device name.  External connection and terminal-device variable names are the names that use "Jox" as the device name.  External connection and terminal-device variable names are the names that use "Jox" as the device name.  External connection and terminal-device variable names variable n		All and the second seco	
External connection and terminal-device variable diagram  Wd m	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  Number of Simultaneously ON Points vs. Ambient Temperature Characteristic  Input voltage: 24 VDC Input voltage: 24 VDC Input voltage: 24 VDC Input voltage: 26 VDC 12 points/common at 55°C  10 points/common at 55°C  The signal names of the terminals are the device variable names.	
<ul> <li>The input power polarity can be connected in either direction.</li> <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> </ul>	and terminal-device	Wd m+1  Wd m+1	
		The device variable names are the names that use "Jxx" as the device name.	

<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)

	- mpat om (2: 120, 0:: omo)	
Name	64-point DC Input Unit with Fujitsu / OTAX Connector	
Model	CJ1W-ID261	
Rated Input Voltage	4 VDC	
Rated Input Voltage Range	0.4 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	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	$20~\mathrm{M}\Omega$ 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	110 g max.	
Accessories	None	
Circuit Configuration	Allocated Signal CIO word name  COnnector Wd Jxx_Ch1_In00  Connector row A  CN1  CN1  CN1  Connector Wd Jxx_Ch2_In00  Connector row B  CN2  CN2  CN2  CN2  CN2  CN3  CN4  CN4  CN5  CN5  CN6  CN6  CN7  CN8  CN8  CN8  CN8  CN8  CN8  CN8	
External connection and terminal-device variable diagram	Allocated CIO word  Alloca	
* The ON response time	The device variable names are the names that use "Jxx" as the device name.  The device variable names are the names that use "Jxx" as the device name.  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	

<sup>\*</sup> 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)

Name	64-point DC Input Unit with MIL Connector			
Model	CJ1W-ID262			
Rated Input Voltage	24 VDC			
Rated Input Voltage	20.44-00.41/D0			
Range	20.4 to 26.4 VDC			
Input Impedance	5.6 kΩ	5 6 kO		
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	ne following illustrations.)		
Insulation Resistance	20 M $\Omega$ min. between external terminals and the GR terminal (100 V	nc)		
	`	,		
Dielectric Strength	1,000 VAC between the external terminals and the GR terminal for	i minute at a leakage current of 10 mA max.		
Internal Current	90 mA max.			
Consumption				
Weight	110 g max.			
Accessories	None			
Circuit Configuration	Allocated Signal name  Allocated Signal name  Signal Signal Signal Signal Signal Signal Name  CIO word Signal Name  Wd m 1	Number of Simultaneously ON Points vs. Ambient Temperature Characteristic  70 64 points at 25°C 64 points at 35°C 64 points at 47°C  10 10 10 10 10 10 10 10 10 10 10 10 10		
External connection and terminal-device variable diagram	Allocated CIO word name corp pin name and pin name cio pin nam	Allocated CIO word name tor pin name Allocated CIO word name CIO word na		
	The device variable names are the names that use "Jxx" as the device name.	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		

<sup>\*</sup> 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)

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 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	• 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	Connector pin **2 Signal name  NC A0  NC A1  B0  Jxx_Ch1_In00  Jxx_Ch1_In01  NC A2  B2  NC A3  B3  Jxx_Ch1_In03  NC A4  B4  NC A5  Jxx_Ch1_In04  Jxx_Ch1_In05  200 to 240 VAC		
	B5 B5 SX_SIT_IIIS O		

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.

NC A8

NC A6

NC A7

В6

В7

B8

\*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 40 ms maximum due to internal element delays.

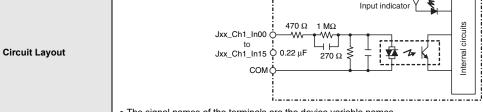
СОМ

\*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.

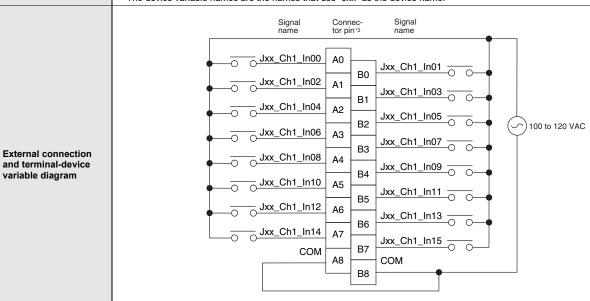
## CJ1W-IA111 AC Input Unit (100 VAC, 16 points)

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	18 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	
	Signal name  Input indicator  Jxx_Ch1_In00  W  W  Jxx_Ch1_In00  Jxx_Ch1_In00  Input indicator	



• 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 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 40 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 (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		Signal 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_ln14
	15	IN15/Jxx_Ch1_In15

## 32-point Input Unit

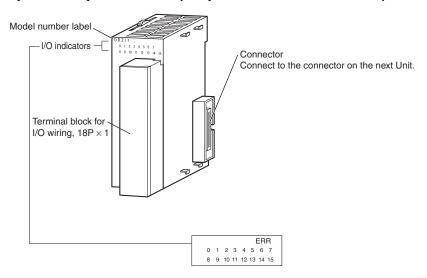
Allocated CIO word		Signal name (CJ/NJ)
CIO	Bit	Signal name (CJ/NJ)
	00	IN0/Jxx_Ch1_In00
	01	IN1/Jxx_Ch1_ln01
Wd m (Input)	:	:
(p.a.)	14	IN14/Jxx_Ch1_In14
	15	IN15/Jxx_Ch1_In15
Wd m+1 (Input)	00	IN0/Jxx_Ch2_In00
	01	IN1/Jxx_Ch2_In01
	:	:
(par)	14	IN14/Jxx_Ch2_In14
	15	IN15/Jxx_Ch2_In15

## **64-point Input Unit**

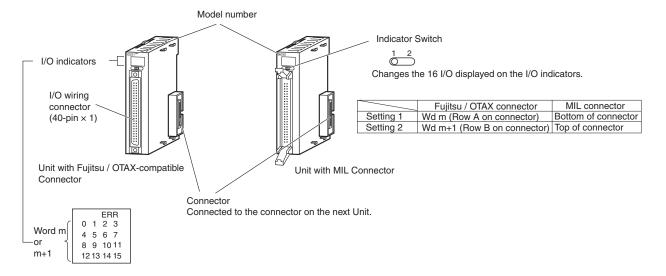
Allocated CIO word		0:
CIO	Bit	Signal name (CJ/NJ)
	00	IN0/Jxx_Ch1_In00
	01	IN1/Jxx_Ch1_ln01
Wd m (Input)	:	:
(mpat)	14	IN14/Jxx_Ch1_In14
	15	IN15/Jxx_Ch1_In15
	00	IN0/Jxx_Ch2_In00
	01	IN1/Jxx_Ch2_In01
Wd m+1 (Input)	:	:
(par)	14	IN14/Jxx_Ch2_In14
	15	IN15/Jxx_Ch2_In15
	00	IN0/Jxx_Ch3_In00
	01	IN1/Jxx_Ch3_In01
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)	:	:
(mpat)	14	IN14/Jxx_Ch4_In14
	15	IN15/Jxx_Ch4_In15

## **External Interface**

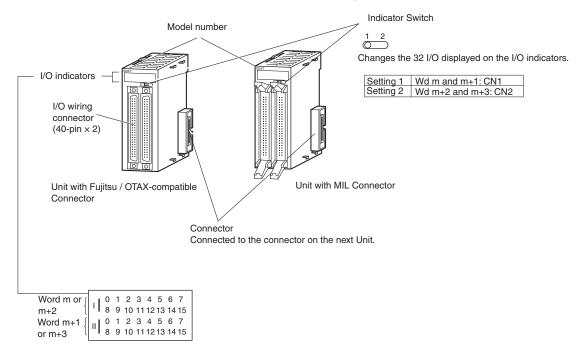
## 8-point/16-point Units (18-point Terminal Blocks)



## 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.

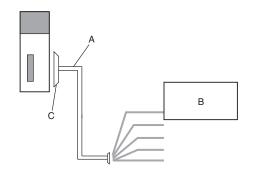


## I/O Unit Wiring Methods

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.

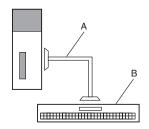


Α	User-provided cable
В	External device
С	Connector

#### 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.

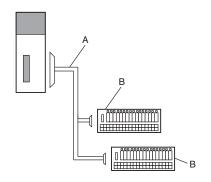


Α	Connecting Cable for Connector-Terminal Block Conversion Unit XW2Z
В	Connector-Terminal Block Conversion Unit XW2□

### 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.



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 / 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	40

#### **Applicable Cable-side Connectors**

Connection	Pins	OMRON set		Fujitsu / OTAX parts
Solder-type	40	C500-CE404		Fujitsu FCN-361J040-AU Fujitsu FCN-360C040-J2 OTAX N360C040J2
Crimped	40	C500-CE405	Connector cover:	Fujitsu FCN-363J040 OTAX N363J040 Fujitsu FCN-360C040-J2 OTAX N360C040J2 Fujitsu FCN-363J-AU OTAX N363JAU
Pressure-welded	40	C500-CE403	Fujitsu FCN-367J0	040-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 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		

<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 www.ia.omron.com.

## 2. Connecting Connector-Terminal Block Conversion Units

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

Pattern	Configuration
Α	Connecting Cable  Connector-Terminal Block Conversion Unit
В	Connecting Cable  Connector-Terminal  Block Conversion Unit

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

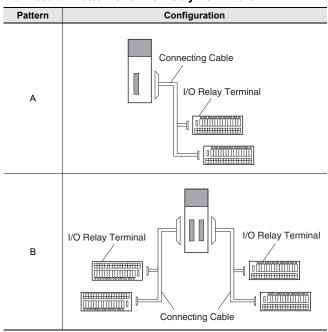
Unit	I/O capacity	Number of connectors	Polarity	Connection pattern	Connecting Cable *	Connector-Terminal Block Conversion Unit	Wiring method	Common terminals
		1 Fujitsu / OTAX connector	NPN/PNP	A	XW2Z-□□B	XW2K-40G-O32A	Push-In Plus	No
CJ1W-ID231	22 innuts					XW2K-40G-O32A-IN	Push-In Plus	Yes
CJ IW-ID23 I	32 inputs					XW2R-J34GD-C1	Phillips screw	No
						XW2R-E34GD-C1	Slotted screw (rise up)	No
						XW2K-40G-O32C	Push-In Plus	No
CJ1W-ID232	22 innuts	1 MIL	NPN/PNP	A	V14/27 □□□L	XW2K-40G-O32C-IN	Push-In Plus	Yes
CJ 177-1D232	32 inputs	connector			XW2Z-□□□K	XW2R-J34GD-C2	Phillips screw	No
						XW2R-E34GD-C2	Slotted screw (rise up)	No
	32 inputs	1 MIL connector	NPN/PNP	A	XW2Z-□□□K	XW2K-40G-O32C	Push-In Plus	No
CJ1W-ID233						XW2K-40G-O32C-IN	Push-In Plus	Yes
C3 1W-ID233						XW2R-J34GD-C2	Phillips screw	No
						XW2R-E34GD-C2	Slotted screw (rise up)	No
		2 Fujitsu / OTAX connectors	NPN/PNP	В	XW2Z-□□□B	XW2K-40G-O32A (2 Units)	Push-In Plus	No
CJ1W-ID261	64 inputs					XW2K-40G-O32A-IN (2 Units)	Push-In Plus	Yes
C3 1 W-1D20 1						XW2R-J34GD-C1 (2 Units)	Phillips screw	No
						XW2R-E34GD-C1 (2 Units)	Slotted screw (rise up)	No
			s NPN/PNP			XW2K-40G-O32C (2 Units)	Push-In Plus	No
CJ1W-ID262	64 inputs	2 MIL connectors		В	XW2Z-□□□K (2 pcs)	XW2K-40G-O32C-IN (2 Units)	Push-In Plus	Yes
CJ1W-ID262	64 inputs					XW2R-J34GD-C2 (2 Units)	Phillips screw	No
						XW2R-E34GD-C2 (2 Units)	Slotted screw (rise up)	No

\* The box  $\square$  is replaced by the cable length.

Note: For details, refer to the XW2K series Datasheet (Cat. No. G152) and XW2R Datasheet.

## 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				0	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
CJ1W-ID231	32 inputs	1 Fujitsu / OTAX connector (40 p)	Sinking/ Sourcing (NPN/PNP)	А	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)	А	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)	В	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)	В	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		

<sup>\*1.</sup> 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 separetely. (with G2R Relays mounted: SPDT × 16)

Dimensions (Unit: mm)

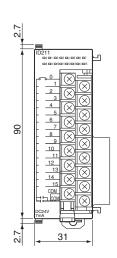
## 8-point/16-point Units (18-point Terminal Blocks)

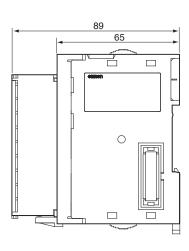
CJ1W-ID201 CJ1W-ID211

CJ1W-ID212 CJ1W-IA201

CJ1W-IA111



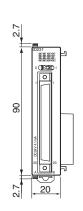


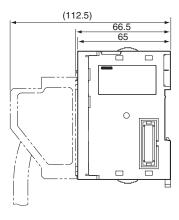


## 32-point Units (Input Units)

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

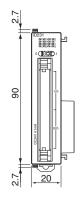


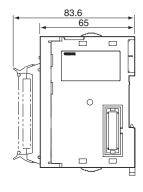




With MIL Connector (40-pin  $\times$  1) CJ1W-ID232 CJ1W-ID233



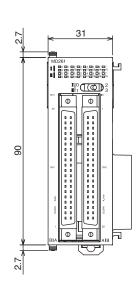


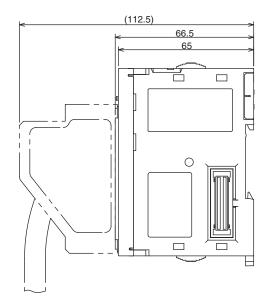


## **64-point Units (Input Units)**

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

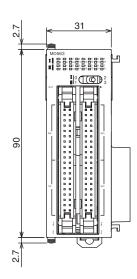


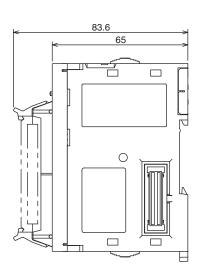




With MIL Connector (40-pin  $\times$  2) CJ1W-ID262







## **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	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).

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