# CJ1W-OC/OA/OD

CSM C.HW-OUTPUT DS F 8 2

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

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





CJ1W-OD213

CJ1W-OD234

#### **Features**

- High-speed output models are available, meeting versatile applications. ON Response Time: 15 $\mu$ s, OFF Response Time: 80 $\mu$ s
- Output Units are available with any of three output types: relay contact outputs, triac outputs, or transistor outputs.
- For transistor outputs, select from sinking outputs or sourcing outputs.
- Output Units with load short-circuit protection are also available. \*1
- Select the best interface for each application: Fujitsu connectors or MIL connectors. \*2
- A wide variety of Connector-Terminal Block Conversion Units are available to allow you to easily wire external output devices.
- \*1. The following Units have load short-circuit protection: CJ1W-OC202, CJ1W-OD204, CJ1W-OD212, and CJ1W-OD232.
- \*2. Available for models with 32 outputs or 64 outputs

## **Ordering Information**

#### **International Standards**

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

#### **Output Units**

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

#### **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	Rem	arks	Applicable Units	Model	Standards
40-pin Connectors	Soldered	FCN-361J040-AU FCN-360C040-J2	Connector Connector Cover	Fujitsu Connectors: CJ1W-ID231(32 inputs): 1 per Unit	C500-CE404	
	Crimped	FCN-363J040 FCN-363J-AU FCN-360C040-J2	Housing Contactor Connector Cover	CJ1W-ID261 (64 inputs): 2 per Unit CJ1W-OD231 (32 outputs): 1 per Unit CJ1W-OD261 (64 outputs): 2 per Unit	C500-CE405	
	Pressure welded	FCN-367J040-AU/F		CJ1W-MD261 (32 inputs, 32 outputs): 2 per Unit	C500-CE403	
	Soldered	FCN-361J024-AU FCN-360C024-J2	Connector Connector Cover		C500-CE241	_
24-pin Connectors	FCN-363J024 Crimped FCN-363J-AU FCN-360C024-J2		Socket Contactor Connector Cover	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	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	1030-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 31 for details.

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

							Size		Mou	nting		Di L							
Туре	Series	I/O	Number of poles	Wiring method	Terminal type	Depth (mm)	Height (mm)	Width (mm)	DIN Track	Screws	Common terminals	Bleeder resistance	Indicators	I/O Units	Model	Standards			
				Phillips screw										CJ1W-OD231 CJ1W-OD261	XW2R-J34G-C3				
								МЗ	50	48.35	130.7						CJ1W-OD232 CJ1W-OD233 CJ1W-OD234 CJ1W-OD262 CJ1W-OD263	XW2R-J34G-C4	
	PLCs XW2R Output 34				Slotted screw (rise up)									CJ1W-OD231 CJ1W-OD261	XW2R-E34G-C3				
PLCs				M3 (European type)	50	45.11	98.5	Yes	Yes	⁄es No	No	No	CJ1W-OD232 CJ1W-OD233 CJ1W-OD234 CJ1W-OD262 CJ1W-OD263	XW2R-E34G-C4	_				
			Push-in spring										CJ1W-OD231 CJ1W-OD261	XW2R-P34G-C3					
					Clamp	50	45.11	98.5						CJ1W-OD232 CJ1W-OD233 CJ1W-OD234 CJ1W-OD262 CJ1W-OD263	XW2R-P34G-C4				

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

### Applicable I/O Relay Terminals

				Specifications								tal	Mou	ınting							
Туре	Type Series		Classification Polarity		Polarity	Number of points	Rated ON current at contacts	Operation indicators	Terminal block for power supply wiring	Horizontal (mm)	Vertical (mm)	Height (mm)	DIN Track	Screws	Model	Standrads					
		Vertical	rtical e output e MOS oD-V relay		Relay outputs		16	5A or 3A								G70D-VSOC16					
	type G70D-V			MOSFET relay outputs	NPN	(SPST- NO × 16)	0.3A	Yes	Expandable	135	46	81	Yes	Yes	G70D-VFOM16	U, C, CE					
							8 (SPST- NO × 8)	5A			68	93	44			G70D-SOC08	-				
Space- saving		G70D	G70D	Flat	Outputs	Outputs Relay outputs	NPN	16 (SPST- NO × 16)	3A								G70D-SOC16				
					type	type		PNP	16 (SPST- NO × 16)	3A	Yes	_	156	51	39	Yes	Yes	G70D-SOC16-1			
			MOSFET relay	NPN	16 (SPST-	0.3A								G70D-FOM16							
									outputs	PNP	NO × 16)	0.3A								G70D-FOM16-1	_
High- capacity, space- saving	G70R		Outputs	Relay outputs	NPN	8 (SPST- NO × 8)	10A	Yes	_	136	93	55	Yes	Yes	G70R-SOC08	-					
		Inputs DC				AC inputs		16									G7TC-IA16				
				DC inputs	NPN	(SPST- NO × 16)	1A			182					G7TC-ID16						
Standard	G7TC	CZTC	0770	277.0						8 (SPST- NO × 8)		Yes	_	102	85	68	Yes	_	G7TC-OC08	U, C	
Glaridard			Outputs	Relay outputs	NPN	16 (SPST- NO × 16)	5A	163		182	. 00	00	163	_	G7TC-OC16						
					PNP	16 (SPST- NO × 16)				102					G7TC-OC16-1	_					
High-	consoit, G/UA			Relay	NPN	16 (SPDT × 16	10 A (Terminal			004	75				G70A-ZOC16-3 (Socket only) + Relay/SSR/ MOSFET Relay/ Timer	U, C,					
						cet only) Outp		Outputs Helay outputs		possible with G2R Relays)	block allowable current)	No	-	234	75	64	Yes	-	G70A-ZOC16-4 (Socket only) + Relay/SSR/ MOSFET Relay/ Timer	CE	

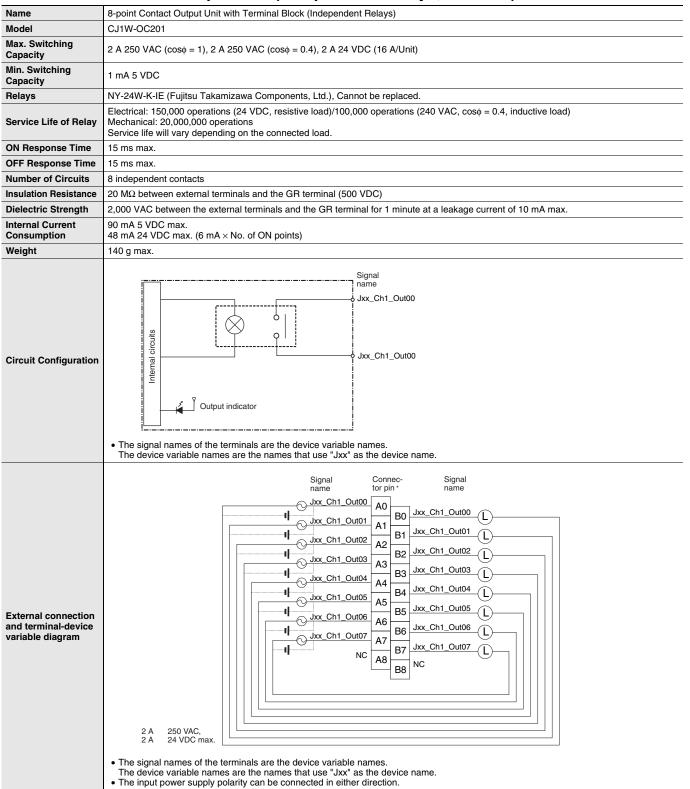
Note: For the combination of Output Units with I/O Relay Terminal and Connecting Cables, refer to 3. Connecting I/O Relay Terminals.

# **Mountable Racks**

	NJ s	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-OC201			10 Units	10 Units (Per Expansion Backplane)		Not Supported	10 Units (Per Expansion	
CJ1W-OC211								
CJ1W-OA201					Not Supported			
CJ1W-OD201								
CJ1W-OD203		10 Units (Per Expansion						
CJ1W-OD211								
CJ1W-OD213								
CJ1W-OD231								
CJ1W-OD233	10 Units							
CJ1W-OD234		Rack)					Backplane)	
CJ1W-OD261								
CJ1W-OD263								
CJ1W-OD202								
CJ1W-OD204								
CJ1W-OD212								
CJ1W-OD232								
CJ1W-OD262								

## **Specifications**

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



<sup>\*</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

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

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

2 A 250 VAC, 2 A 24 VDC max.

Name	16-point Contact Output Unit with Terminal Block						
Model	CJ1W-OC211						
Max. Switching Capacity	2 A 250 VAC (cosφ = 1), 2 A 250 VAC (cosφ = 0.4), 2 A 24 VDC (8 A/Unit)						
Min. Switching Capacity	1 mA 5 VDC						
Relays	NY-24W-K-IE (Fujitsu Takamizawa Components, Ltd.), Cannot be replaced.						
Service Life of Relay	Electrical: 150,000 operations (24 VDC, resistive load)/ 100,000 operations (250 VAC, cos\phi = 0.4, inductive load)  Mechanical: 20,000,000 operations  Service life will vary depending on the connected load.						
ON Response Time	15 ms max.						
OFF Response Time	15 ms max.						
Number of Circuits	16 points/common, 1 circuit						
Insulation Resistance	20 M $\Omega$ 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	110 mA 5 VDC max. 96 mA 24 VDC max. (6 mA × No. of ON points)						
Weight	170 g max.						
Circuit Configuration	Signal name  Jxx_Ch1_Out00  to  Jxx_Ch1_Out15  COM  COM  COM  The signal names of the terminals are the device variable names. The device variable names are the names that use "Jxx" as the device name.						
External connection and terminal-device variable diagram	Signal connector pin - Signal name  L Jxx_Ch1_Out00 A0 B0 Jxx_Ch1_Out01 L Jxx_Ch1_Out04 A2 B1 Jxx_Ch1_Out03 L B2 Jxx_Ch1_Out05 L Jxx_Ch1_Out08 A3 B3 Jxx_Ch1_Out07 L Jxx_Ch1_Out08 A4 B4 B4 B4 B4 B4						

B5 B6 B7

A8 B8

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

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

#### CJ1W-OA201 Triac Output Unit (8 Points) 8-point Triac Output Unit with Terminal Block Name Model CJ1W-OA201 Max. Switching 0.6 A 250 VAC, 50/60 Hz (2.4 A/Unit) Capacity 15 A (pulse width: 10 ms max.) Max. Inrush Current Min. Switching 50 mA 75 VAC Capacity Leakage Current 1.5 mA (200 VAC) max. **Residual Voltage** 1.6 VAC max. **ON Response Time** 1 ms max. **OFF Response Time** 1/2 of load frequency + 1 ms or less. **Number of Circuits** 8 (8 points/common, 1 circuit) Surge Protector C.R Absorber + Surge Absorber 5 A (1/common, 1 used) **Fuses** The fuse cannot be replaced by the user. Insulation Resistance 20 $M\Omega$ between the external terminals and the GR terminal (500 VDC) Dielectric Strength 2,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max. Internal Current Consumption Weight 150 g max. circuits Jxx\_Ch1\_Out00 OJXX\_Ch1\_Out07 **Circuit Configuration** Internal Fuse • 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 \* Signal name NC Α0 Jxx\_Ch1\_Out00 B0 NC Jxx\_Ch1\_Out01 **B1** NC Α2 Jxx\_Ch1\_Out02 R2 NC А3 Jxx Ch1 Out03 ВЗ **External connection** NC 250 VAC max. and terminal-device Α4 Jxx\_Ch1\_Out04 variable diagram B4 NC Α5 Jxx\_Ch1\_Out05 B5 NC A6 Jxx\_Ch1\_Out06 NC Α7 Jxx\_Ch1\_Out07 В7 NC Α8 СОМ B8

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

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

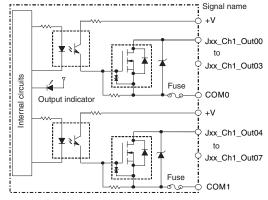
The device variable names are the names that use "Jxx" as the device name.

<sup>\*</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-OD201 Transistor Output Unit (8 Points)

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

## **Circuit Configuration**



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

#### Signal Connec-Signal tor pin Jxx\_Ch1\_Out00 Α0 Jxx\_Ch1\_Out01 B0 Α1 Jxx\_Ch1\_Out03 B1 A2 12 to 24 VDC NC B2 COM0 АЗ ВЗ NC Α4 **External connection** NC B4 and terminal-device Jxx\_Ch1\_Out04 variable diagram A5 Jxx\_Ch1\_Out05 L B5 Α6 В6 Α7 NC 12 to 24 VDC B7 COM1 Α8 +V B8

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

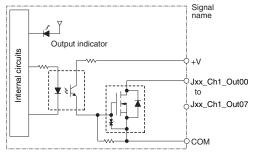
Note: Although 16 I/O bits (1 word) are allocated, only 8 of these can be used for external I/O.

<sup>\*</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

## CJ1W-OD203 Transistor Output Unit (8 Points)

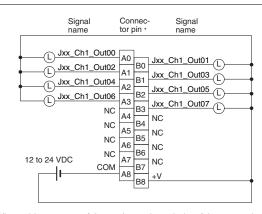
Name	8-point Transistor Output Unit with Terminal Block (Sinking Outputs)
Model	CJ1W-OD203
Rated Voltage	12 to 24 VDC
Operating Load Voltage Range	10.2 to 26.4 VDC
Maximum Load Current	0.5 A/point, 4.0 A/Unit
Maximum Inrush Current	4.0 A/point, 10 ms max.
Leakage Current	0.1 mA max.
Residual Voltage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

## Circuit Configuration



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

# External connection and terminal-device variable diagram



- When wiring, pay careful attention to the polarity of the external power supply. The load may operate incorrectly if the polarity is reversed.
- 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.

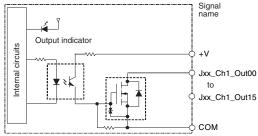
Note: Although 16 I/O bits (1 word) are allocated, only 8 of these can be used for external I/O.

<sup>\*</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-OD211 Transistor Output Unit (16 Points)

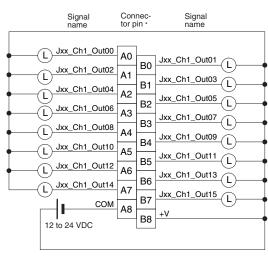
Name	16-point Transistor Output Unit with Terminal Block (Sinking Outputs)
Model	CJ1W-OD211
Rated Voltage	12 to 24 VDC
Operating Load Voltage Range	10.2 to 26.4 VDC
Maximum Load Current	0.5 A/point, 5.0 A/Unit
Maximum Inrush Current	4.0 A/point, 10 ms max.
Leakage Current	0.1 mA max.
Residual Voltage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

## **Circuit Configuration**



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

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



- When wiring, pay careful attention to the polarity of the external power supply. The load may operate incorrectly if the polarity is reversed.

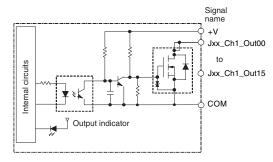
The signal names of the terminals are the device variable names.
 The device variable names are the names that use "Jxx" as the device name.

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

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

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

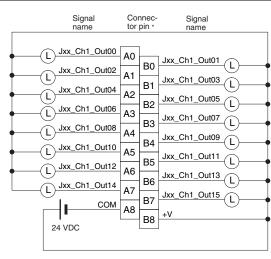
## Circuit Configuration



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

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

# External connection and terminal-device variable diagram



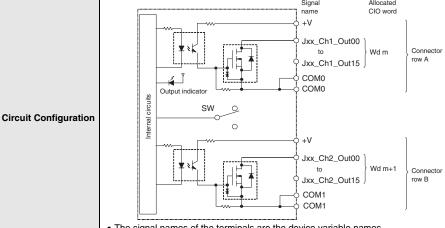
- When wiring, pay careful attention to the polarity of the external power supply. The load may operate incorrectly if the polarity is reversed.
- The signal names of the terminals are the device variable names.

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

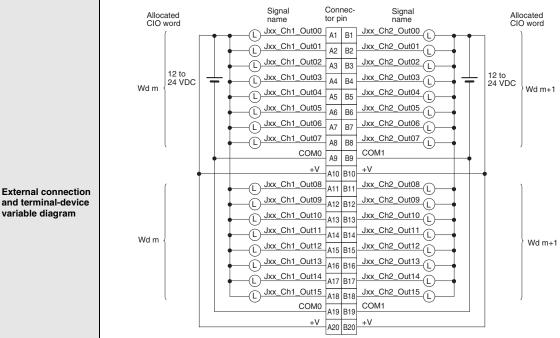
<sup>\*</sup> Terminal numbers A0 to A8 and B0 to B8 are used in the external connection and terminal-device variable diagrams. They are not printed on the Units.

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

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



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.



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

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

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

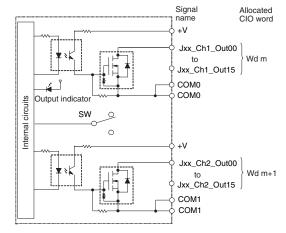
Name	32-point Transistor Output Unit with MIL Connector (Sinking Outputs)
Model	CJ1W-OD233
Rated Voltage	12 to 24 VDC
Operating Load Voltage Range	10.2 to 26.4 VDC
Maximum Load Current	0.5 A/point, 2 A/common, 4 A/Unit
Maximum Inrush Current	4.0 A/point, 10 ms max.
Leakage Current	0.1 mA max.
Residual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

## **Circuit Configuration**

**External connection** 

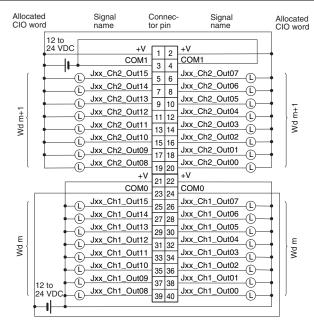
and terminal-device

variable diagram



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

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



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

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

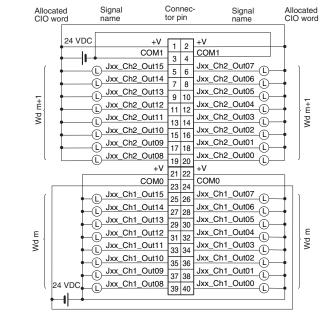
Name	32-point Transistor Output Unit with MIL Connector (Sinking Outputs)
Model	CJ1W-OD234
Rated Voltage	24 VDC
Operating Load Voltage Range	20.4 to 26.4 VDC
Maximum Load Current	0.5 A/point, 2 A/common, 4 A/Unit
Maximum Inrush Current	4.0 A/point, 10 ms max.
Leakage Current	0.1 mA max.
Residual Voltage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

Signal name

CIO word

#### Jxx\_Ch1\_Out00 Wd m Jxx\_Ch1\_Out15 COMO 5 сомо Internal circuits **Circuit Configuration** SW Jxx\_Ch2\_Out00 to Wd m+1 Jxx\_Ch2\_Out15 COM1 COM<sub>1</sub>

• 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.



- When wiring, pay careful attention to the polarity of the external power supply. The load may operate incorrectly if the polarity is reversed.
- Be sure to wire both terminals 23 and 24 (COM0).
- Be sure to wire both terminals 3 and 4 (COM1).
- Be sure to wire both terminals 21 and 22 (+V).

**External connection** 

and terminal-device

variable diagram

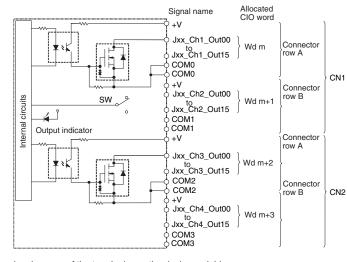
- Be sure to wire both terminals 1 and 2 (+V).
- The signal names of the terminals are the device variable names.

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

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

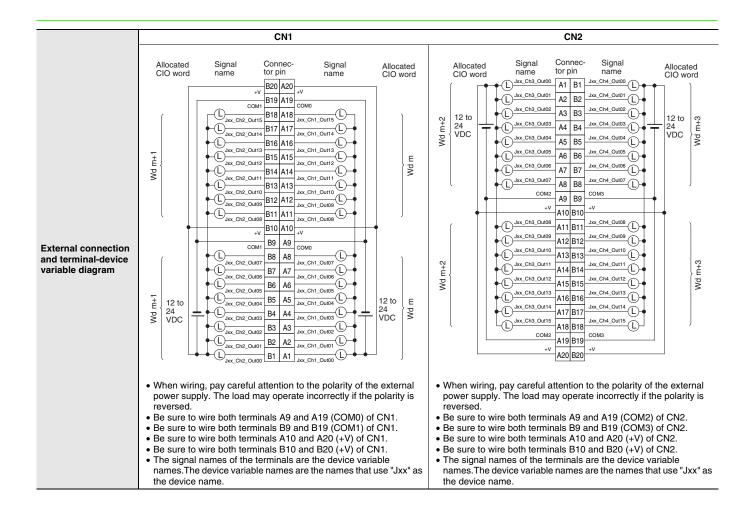
Circuit Configuration

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



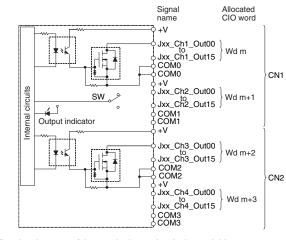
The signal names of the terminals are the device variable names.

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



## **CJ1W-OD263 Transistor Output Unit (64 Points)**

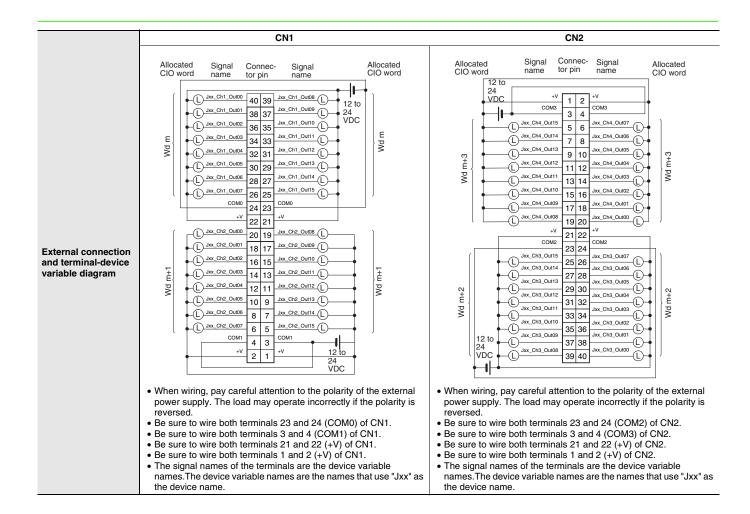
Name	64-point Transistor Output Unit with MIL Connectors (Sinking Outputs)		
Model	CJ1W-OD263		
Rated Voltage	12 to 24 VDC		
Operating Load Voltage Range	10.2 to 26.4 VDC		
Maximum Load Current	0.3 A/point, 1.6 A/common, 6.4 A/Unit		
Maximum Inrush Current	3.0 A/point, 10 ms max.		
Leakage Current	0.1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



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.



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

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

# Signal name Jxx\_Ch1\_Out00 to Jxx\_Ch1\_Out03 Internal circuits Output indicator COM1 (+V) **Circuit Configuration** Jxx\_Ch1\_Out04 Jxx\_Ch1\_Out07

- When overcurrent or line disconnection is detected, the ERR indicator will light, and the corresponding bit (two points per bit) in the Basic I/O Unit Information Area (A050 to A069) will change to TRUE.
- 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 name	Connec- Signal tor pin* name
External connection	Jxx_Ch1_Out00  L Jxx_Ch1_Out02  NC  0 V	B1   B2   DXx_Ch1_Out01   L   DXx_Ch1_Out03   DXX_Ch1_Out03   L   DXX_Ch1_Out03   DXX_
and terminal-device variable diagram	Jxx_Ch1_Out04  Jxx_Ch1_Out06	B5 Jxx_Ch1_Out05
	NC 0 V	A7 B6 NC 24 VDC
		B8 COMT (+V)

- When wiring, pay careful attention to the polarity of the external power supply. The load may operate incorrectly if the polarity is reversed.

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

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

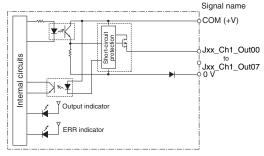
Note: Although 16 I/O bits (1 word) are allocated, only 8 of these can be used for external I/O.

<sup>\*</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

## CJ1W-OD204 Transistor Output Unit (8 Points)

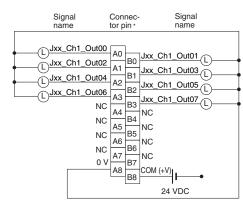
Name	8-point Transistor Output Unit with Terminal Block (Sourcing Outputs)	
Model	CJ1W-OD204	
Rated Voltage	24 VDC	
Operating Load Voltage Range	20.4 to 26.4 VDC	
Maximum Load Current	0.5 A/point, 4.0 A/Unit	
Leakage Current	0.1 mA max.	
Residual Voltage	1.5 V max.	
ON Response Time	0.5 ms max.	
OFF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

# Circuit Configuration



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

External connection and terminal-device variable diagram



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

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

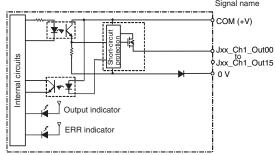
Note: Although 16 I/O bits (1 word) are allocated, only 8 of these can be used for external I/O.

<sup>\*</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-OD212 Transistor Output Unit (16 Points)

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

## **Circuit Configuration**



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

Connector pin \* Signal Signal Jxx Ch1 Out00 Α0 Jxx\_Ch1\_Out01 В0 В1 Α2 Jxx\_Ch1\_Out05 B2 Jxx\_Ch1\_Out07 ВЗ Jxx\_Ch1\_Out08 **External connection** Jxx\_Ch1\_Out09 В4 and terminal-device variable diagram Jxx Ch1 Out11 B5 (L) Jxx Ch1 Out12 Jxx\_Ch1\_Out13 L Jxx\_Ch1\_Out14 B6 Jxx\_Ch1\_Out15 B7 Α8 COM (+V) B8 24 VDC

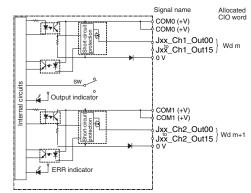
- When wiring, pay careful attention to the polarity of the external power supply. The load may operate incorrectly if the polarity is reversed.
  The signal names of the terminals are the device variable names.

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

<sup>\*</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.

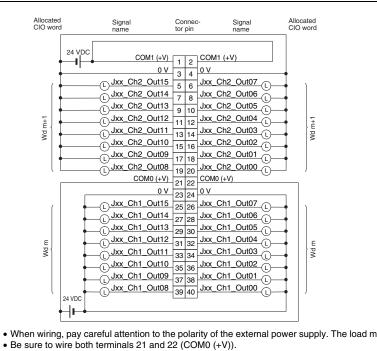
## CJ1W-OD232 Transistor Output Unit (32 Points)

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



### Circuit Configuration

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

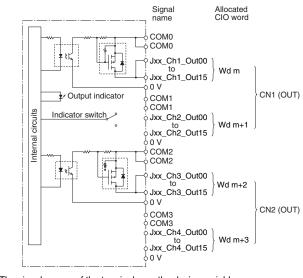


- **External connection** and terminal-device variable diagram
- When wiring, pay careful attention to the polarity of the external power supply. The load may operate incorrectly if the polarity is reversed.
- Be sure to wire both terminals 1 and 2 (COM1 (+V)). • Be sure to wire both terminals 3 and 4 (0 V).
- Be sure to wire both terminals 23 and 24 (0 V).
- The signal names of the terminals are the device variable names.

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

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

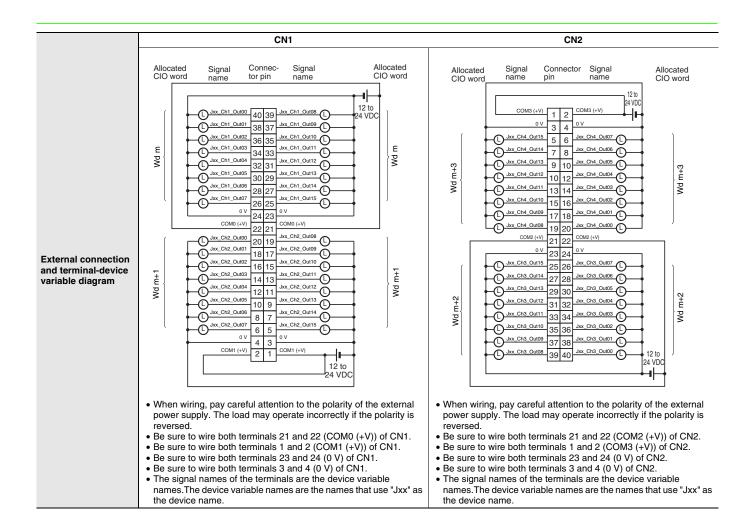
Name	64-point Transistor Output Unit with MIL Connectors (Sourcing Outputs)	
Model	CJ1W-OD262	
Rated Voltage	12 to 24 VDC	
Operating Load Voltage Range	10.2 to 26.4 VDC	
Maximum Load Current	0.3 A/point, 1.6 A/common, 6.4 A/Unit	
Maximum Inrush Current	3.0 A/point, 10 ms max.	
Leakage Current	0.1 mA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



## **Bit Allocations for Output Unit**

## 8-point Output Unit

Allocated	Ci (O I/N I)		
CIO	Bit	Signal name (CJ/NJ)	
	00	OUT0/Jxx_Ch1_Out00	
	01	OUT1/Jxx_Ch1_Out01	
	:	:	
	06	OUT6/Jxx_Ch1_Out06	
Wd m	07	OUT7/Jxx_Ch1_Out07	
(Output)	08	_	
	09	_	
	:	:	
	14	_	
	15	-	

### 32-point Output Unit

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

### **16-point Output Unit**

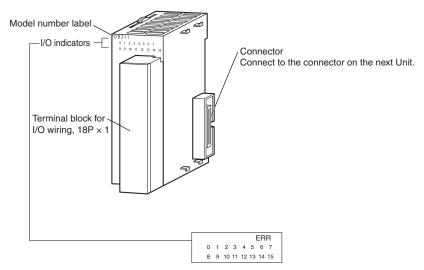
Allocated CIO word		Cianal name (C I/N I)
CIO	Bit	Signal name (CJ/NJ)
Wd m (Output)	00	OUT0/Jxx_Ch1_Out00
	01	OUT1/Jxx_Ch1_Out01
	:	:
	14	OUT14/Jxx_Ch1_Out14
	15	OUT15/Jxx_Ch1_Out15

### **64-point Output Unit**

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

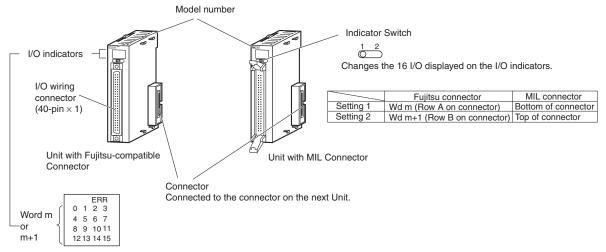
### **External Interface**

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



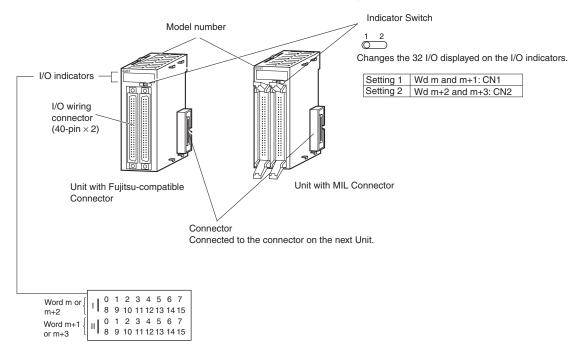
Note: The CJ1W-OD202, CJ1W-OD204, and CJ1W-OD212 also have an ERR indicator for the load short-circuit alarm.

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



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

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



## Wiring Basic I/O Units with Terminal Blocks

#### **Electric Wires**

The following wire gauges are recommended.

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

#### **Crimp terminals**

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

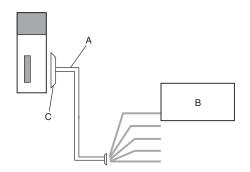


## I/O Unit Wiring Methods

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

#### 1. User-provided Cable

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

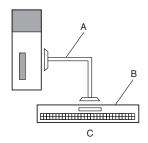


Α	User-provided cable
В	External device
С	Connector

#### 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 makes it easy to connect external devices.

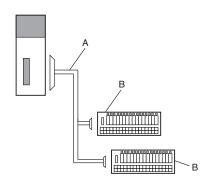


A	Connecting Cable for Connector-Terminal Block Conversion Unit XW2Z
В	Connector-Terminal Block Conversion Unit XW2R
С	Conversion to a screw terminal block

#### 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.



Α	G79 I/O Relay Terminal Connecting Cable
В	G7□□ I/O Relay Terminals 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-OD231	Transistor Output Unit with Sinking Outputs, 32 outputs	40
CJ1W-OD261	Transistor Output Unit with Sinking Outputs, 64 outputs	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-OD232	Transistor Output Unit with sourcing outputs, 32 outputs	
CJ1W-OD262	Transistor Output Unit with sourcing outputs, 64 outputs	
CJ1W-OD233 CJ1W-OD234	Transistor Output Unit with sinking outputs, 32 outputs	40
CJ1W-OD263	Transistor Output Unit with sinking outputs, 64 outputs	

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

Connection	Pins	OMRON set	DDK parts
Pressure-welded	40	XG4M-4030-T *1	FRC5-A040-3T0S
	40	XG5N-401 *2	HU-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 www.ia.omron.com.

# 2. Connecting Connector-Terminal Block Conversion Units

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

Pattern	Configuration	Number of Connectors
A	Connecting Cable  Connector-Terminal  Block Conversion Unit  34 terminals	1
В	Connecting Cable  Connector-Terminal  Block Conversion Unit  34 terminals  34 terminals	2

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

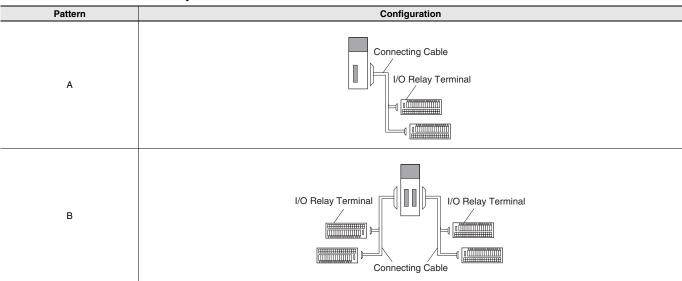
Unit	I/O capacity	Number of connectors	Polarity	Connection pattern	Connecting Cable	Connector-Terminal Block Conversion Unit	Wiring method	Common terminals								
						XW2R-J34G-C3	Phillips screw									
CJ1W- OD231	32 outputs	1 Fujitsu connector	NPN	Α	XW2Z-□□□B	XW2R-E34G-C3	Slotted screw (rise up)	No								
						XW2R-P34G-C3	Push-in spring									
						XW2R-J34G-C4	Phillips screw									
CJ1W- OD232	32 outputs	1 MIL connector	PNP	Α	XW2Z-□□□K	XW2R-E34G-C4	Slotted screw (rise up)	No								
	ODEOL OF THE COLOR					XW2R-P34G-C4	Push-in spring									
	CJ1W- 32 outputs 1 MIL connector		INDN	IPN A	XW2Z-□□□K	XW2R-J34G-C4	Phillips screw	No								
CJ1W- OD233		1 MIL connector				XW2R-E34G-C4	Slotted screw (rise up)									
											XW2R-P34G-C4	Push-in spring				
			NPN				XW2R-J34G-C4	Phillips screw								
CJ1W- OD234	32 outputs	1 MIL connector		Α	XW2Z-□□□K	XW2R-E34G-C4	Slotted screw (rise up)	No								
														XW2R-P34G-C4	Push-in spring	
		2 Fujitsu NPN			XW2R-J34G-C3 (2 Units)	Phillips screw										
CJ1W- OD261	64 outputs		NPN	В	XW2Z-□□B (2 Cables)	XW2R-E34G-C3 (2 Units)	Slotted screw (rise up)	No								
						XW2R-P34G-C3 (2 Units)	Push-in spring									
					XW2R-J34G-C4 (2 Units)	Phillips screw										
CJ1W- OD262	64 outputs	2 MIL connectors	I PNIP	В	XW2Z-□□□K (2 Cables)	XW2R-E34G-C4 (2 Units)	Slotted screw (rise up)	No								
	52252					XW2R-P34G-C4 (2 Units)	Push-in spring									
		outputs 2 MIL connectors NPN B XW2Z-□□K (2 Cables)					XW2R-J34G-C4 (2 Units)	Phillips screw								
CJ1W- OD263	64 outputs		NPN	В		XW2R-E34G-C4 (2 Units)	Slotted screw (rise up)	No								
			ectors	,	XW2R-P34G-C4 (2 Units)	Push-in spring										

#### **Types of Connecting Cables**

Appearance	Connectors	Model	Cable lenght [m]
XW2Z-□□□B		XW2Z-050B	0.5
		XW2Z-100B	1
	One 40-pin Connector Made by Fujitsu Component, Ltd.	XW2Z-150B	1.5
	to One 40-pin MIL Connector	XW2Z-200B	2
		XW2Z-300B	3
		XW2Z-500B	5
XW2Z-□□□K		XW2Z-C50K	0.5
		XW2Z-100K	1
	One 40 nin MII. Connector to One 40 nin MII. Connector	XW2Z-150K	1.5
	One 40-pin MIL Connector to One 40-pin MIL Connector	XW2Z-200K	2
		XW2Z-300K	3
		XW2Z-500K	5

# 3. Connecting I/O Relay Terminals

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



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

		-		•			
Unit	I/O capacity	Number of connectors	Polarity	Connection pattern	Number of branches	Connecting Cable	I/O Relay Terminal
				Α	2	G79-O□C-□	G7TC-OC16
				Α	2	G79-O□C-□	G7TC-OC08
				Α	2	G79-O□C-□	G70D-SOC16
CJ1W-OD231 32 outputs				Α	2	G79-O□C-□	G70D-FOM16
	32 outputs	s 1 Fujitsu connector	NPN	Α	2	G79-O□C-□	G70D-VSOC16
				Α	2	G79-O□C-□	G70D-VFOM16
				Α	2	G79-O□C-□	G70A-ZOC16-3 and Relay
				Α	2	G79-O□C-□	G70R-SOC08
				Α	2	G79-O□C-□	G70D-SOC08
		2 outputs 1 MIL connector PNF		Α	2	G79-I□-□-D1	G7TC-OC16-1
0 1414/ 0 0000	20 outputo		DND	Α	2	G79-O□-□-D1	G70D-SOC16-1
CJ1W-OD232	32 outputs		FINE	Α	2	G79-O□-□-D1	G70D-FOM16-1
				Α	2	G79-O□-□-D1	G70A-ZOC16-4 and Relay

Unit	I/O capacity	Number of connectors	Polarity	Connection pattern	Number of branches	Connecting Cable	I/O Relay Terminal
				Α	2	G79-O□-□-D1	G7TC-OC16
				Α	2	G79-O□-□-D1	G7TC-OC08
				Α	2	G79-O□-□-D1	G70D-SOC16
				Α	2	G79-O□-□-D1	G70D-FOM16
J1W-OD233	32 outputs	1 MIL connector	NPN	Α	2	G79-O□-□-D1	G70D-VSOC16
				Α	2	G79-O□-□-D1	G70D-VFOM16
				Α	2	G79-O□-□-D1	G70A-ZOC16-3 and Relay
				Α	2	G79-O□-□-D1	G70R-SOC08
				Α	2	G79-O□-□-D1	G70D-SOC08
				Α	2	G79-O□-□-D1	G7TC-OC16
				Α	2	G79-O□-□-D1	G7TC-OC08
				Α	2	G79-O□-□-D1	G70D-SOC16
				Α	2	G79-O□-□-D1	G70D-FOM16
CJ1W-OD234	32 outputs	1 MIL connector	NPN	Α	2	G79-O□-□-D1	G70D-VSOC16
				Α	2	G79-O□-□-D1	G70D-VFOM16
				Α	2	G79-O□-□-D1	G70A-ZOC16-3 and Relay
				Α	2	G79-O□-□-D1	G70R-SOC08
				Α	2	G79-O□-□-D1	G70D-SOC08
				В	2	G79-O□C-□	G7TC-OC16
				В	2	G79-O□C-□	G7TC-OC08
				В	2	G79-O□C-□	G70D-SOC16
				В	2	G79-O□C-□	G70D-FOM16
CJ1W-OD261	64 outputs	2 Fujitsu connectors	NPN	В	2	G79-O□C-□	G70D-VSOC16
				В	2	G79-O□C-□	G70D-VFOM16
				В	2	G79-O□C-□	G70A-ZOC16-3 and Relay
				В	2	G79-O□C-□	G70R-SOC08
				В	2	G79-O□C-□	G70D-SOC08
				В	2	G79-I□-□-D1	G7TC-OC16-1
		2 MIL connectors		В	2	G79-O□-□-D1	G70D-SOC16-1
CJ1W-OD262	64 outputs		PNP	В	2	G79-O□-□-D1	G70D-FOM16-1
				В	2	G79-O□-□-D1	G70A-ZOC16-4 and Relay
				В	2	G79-O□-□-D1	G7TC-OC16
				В	2	G79-O□-□-D1	G7TC-OC08
				В	2	G79-O□-□-D1	G70D-SOC16
				В	2	G79-O□-□-D1	G70D-FOM16
J1W-OD263	64 outputs	2 MIL connectors	NPN	В	2	G79-O□-□-D1	G70D-VSOC16
				В	2	G79-O□-□-D1	G70D-VFOM16
				В	2	G79-O□-□-D1	G70A-ZOC16-3 and Relay
				В	2	G79-O□-□-D1	G70R-SOC08
				В	2	G79-O□-□-D1	G70D-SOC08

### **Types of Connecting Cables**

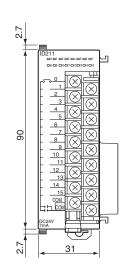
<i>,</i> .			
Cable length	G79-O□C-□	G79-O□-□-D1	G79-I□-□-D1
0.25m	_	_	_
0.5m	_	G79-O50-25-D1	G79-I50-25-D1
1.0m	G79-O100C-75	G79-O75-50-D1	G79-I75-50-D1
1.5m	G79-O150C-125	-	-
2.0m	G79-O200C-175	_	_
3.0m	G79-O300C-275	-	-
5.0m	G79-O500C-475	-	_

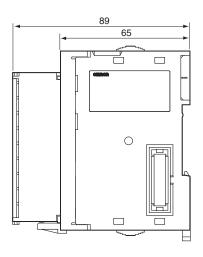
Dimensions (Unit: mm)

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

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



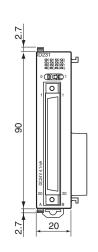


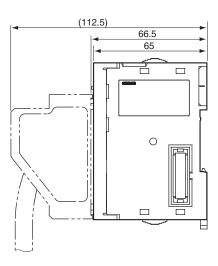


## 32-point Unit (Output Units)

With Fujitsu-Compatible Connector (40-pin  $\times$  1) CJ1W-OD231

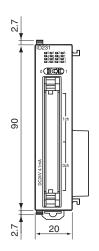


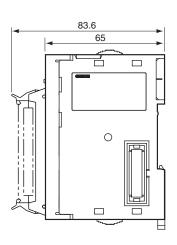




With MIL Connector (40-pin  $\times$  1) CJ1W-OD232 / OD233 / OD234



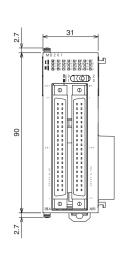


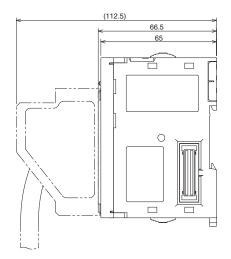


## **64-point Units (Output Units)**

With Fujitsu-Compatible Connector (40-pin  $\times$  2) CJ1W-OD261

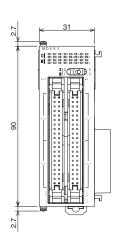


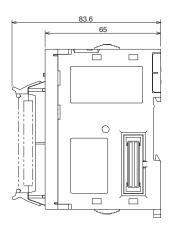




With MIL Connector (40-pin  $\times$  2) CJ1W-OD262 / OD263







# **Related Manuals**

Name	Cat. No.	Contents
CJ-series CJ2 CPU Unit Hardware User's Manual CJ2H-CPU6□-EIP CJ2H-CPU6□ CJ2M-CPU□□	W472	Describes the following for CJ2 CPU Units:  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).
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 warranty.

See http://www.omron.com/global/ 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.

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

2016.7

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

