

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

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



CJ1W-ID212



CJ1W-ID233

Features

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

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




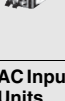





*2. For models with 32 or 64 inputs.

Ordering Information

International Standards

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

Input Units

| Unit type | Product name | Specifications | | | | | Current consumption (A) | | Model | Standards |
|---------------------|--|------------------------|-------------------------------------|----------------------|--------------------------|------------------------|-------------------------|-------------------|-------------------|---------------|
| | | I/O points | Input voltage and current | Commons | External connection | No. of words allocated | 5 V | 24 V | | |
| CJ1 Basic I/O Units | DC Input Units         | 8 inputs | 12 to 24 VDC, 10 mA | Independent contacts | Removable terminal block | 1 word | 0.09 | – | CJ1W-ID201 | UC1, N, L, CE |
| | | 16 inputs | 24 VDC, 7 mA | 16 points, 1 common | Removable terminal block | 1 word | 0.08 | – | CJ1W-ID211 | |
| | | 16 inputs (High speed) | 24 VDC, 7 mA | 16 points, 1 common | Removable terminal block | 1 word | 0.13 | – | CJ1W-ID212 | N, L, CE |
| | | 32 inputs | 24 VDC, 4.1 mA | 16 points, 1 common | Fujitsu connector | 2 words | 0.09 | – | CJ1W-ID231 | UC1, N, L, CE |
| | | 32 inputs | 24 VDC, 4.1 mA | 16 points, 1 common | MIL connector | 2 words | 0.09 | – | CJ1W-ID232 | |
| | | 32 inputs (High speed) | 24 VDC, 4.1 mA | 16 points, 1 common | MIL connector | 2 words | 0.20 | – | CJ1W-ID233 | N, L, CE |
| | | 64 inputs | 24 VDC, 4.1 mA | 16 points, 1 common | Fujitsu connector | 4 words | 0.09 | – | CJ1W-ID261 | UC1, N, L, CE |
| | 64 inputs | 24 VDC, 4.1 mA | 16 points, 1 common | MIL connector | 4 words | 0.09 | – | CJ1W-ID262 | | |
| | AC Input Units  | 8 inputs | 200 to 24 VAC, 10 mA (200 V, 50 Hz) | 8 points, 1 common | Removable Terminal Block | 1 words | 0.08 | – | CJ1W-IA201 | UC1, N, L, CE |
| | | 16 inputs | 100 to 120 VAC, 7 mA (100 V, 50 Hz) | 16 points, 1 common | Removable Terminal Block | 1 words | 0.09 | – | CJ1W-IA111 | |

Accessories

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

Applicable Connectors

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




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

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

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

* Crimp Contacts are also required. Refer to page 20 for details.

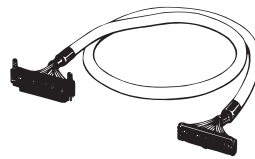
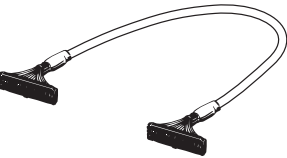
Applicable Connector-Terminal Block Conversion Units

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







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

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

Connecting Cables for Connector-Terminal Block Conversion Units

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

Applicable I/O Relay Terminals

| Type | Series | Specifications | | | | | Size (horizontal mounting) | | | Mounting | | Model | Standards | | | | | | | | | | |
|-----------------------------|---|----------------------|---|------------------|------------------------------|-------------------------|----------------------------|---|-------------|------------|--------|-------|----------------------|---------------------------------|---------------------|----------------|--------------|--------------------------|-----|-----|----------------|---------------|--------------------------|
| | | Classification | Polarity | Number of points | Rated ON current at contacts | Rated voltage | Horizontal (mm) | Vertical (mm) | Height (mm) | DIN Track | Screws | | | | | | | | | | | | |
| Push-In Plus terminal block |  G70V | Inputs | DC inputs | NPN | 16 (SPSTNO × 16) | 50 mA | 24 VDC | 143 | 90 | 56 | Yes | Yes | G70V-SID16P *4 | UC, CE (TÜV certified) | | | | | | | | | |
| | | | | PNP | | | | | | | | | G70V-SID16P-1 *4 | | | | | | | | | | |
| | | | | NPN | | | | | | | | | G70V-SID16P-C16 *5 | | | | | | | | | | |
| | | | | PNP | | | | | | | | | G70V-SID16P-1-C16 *5 | | | | | | | | | | |
| | | Outputs | Relay outputs | NPN | 16 (SPDT × 16) | 6 A/point, 10 A/ common | | | | | | | G70V-SOC16P *4 | | | | | | | | | | |
| | | | | PNP | | | | | | | | | G70V-SOC16P-1 *4 | | | | | | | | | | |
| | | | | NPN | | | | | | | | | G70V-SOC16P-C4 *6 | | | | | | | | | | |
| | | | | PNP | | | | | | | | | G70V-SOC16P-1-C4 *6 | | | | | | | | | | |
| Standard |  G7TC | Inputs | AC inputs | NPN | 16 (SPSTNO × 16) | 1A | 24 VDC | 182 | 85 | 68 | Yes | No | G7TC-IA16 AC100/110 | U, C | | | | | | | | | |
| | | | | | | | | | | | | | 200/220 VAC | | G7TC-IA16 AC200/220 | | | | | | | | |
| | | | | | | | | | | | | | 12 VDC | | G7TC-ID16 DC12 | | | | | | | | |
| | | | 24 VDC | | | | | | | | | | G7TC-ID16 DC24 | | | | | | | | | | |
| | | | 100/110 VDC | | | | | | | | | | G7TC-ID16 DC100/110 | | | | | | | | | | |
| | | | Outputs | | | | | | | | | | Relay outputs | | NPN | 8 (SPSTNO × 8) | 5A | 12 VDC | 102 | 182 | G7TC-OC08 DC12 | | |
| | | 16 (SPSTNO × 16) | | 24 VDC | G7TC-OC08 DC24 | | | | | | | | | | | | | | | | | | |
| | | 16 (SPSTNO × 16) | | 12 VDC | G7TC-OC16 DC12 | | | | | | | | | | | | | | | | | | |
| | | PNP | | 16 (SPSTNO × 16) | 24 VDC | G7TC-OC16 DC24 | | | | | | | | | | | | | | | | | |
| | | | | 12 VDC | G7TC-OC16-1 DC12 | | | | | | | | | | | | | | | | | | |
| | | | | 24 VDC | G7TC-OC16-1 DC24 | | | | | | | | | | | | | | | | | | |
| | | High-capacity socket |  G70A *1 (Socket only) | Inputs | Relay inputs | NPN/ PNP | | 16 (SPDT × 16 possible with G2R Relays) | 100 mA | 24 VDC | 234 | 75 | 64 | | Yes | No | G70A-ZOC16-5 | U, C, CE (VDE certified) | | | | | |
| Outputs | Relay outputs | | | | | | NPN | | | | | | | 10 A (Terminal block allowable) | | | G70A-ZOC16-3 | | | | | | |
| | | | | PNP | | G70A-ZOC16-4 | | | | | | | | | | | | | | | | | |
| Space-saving |  Vertical type G70D-V | | | Relay outputs | NPN | 16 (SPSTNO × 16) | 5 A or 3 A *3 | | 24 VDC | | | | | 135 | | | 46 | | 81 | Yes | Yes | G70D-VSOC16 | U, C, CE (VDE certified) |
| | | MOSFET relay outputs | 0.3 A | | | | | G70D-VFOM16 | | | | | | | | | | | | | | | |
| | | Outputs | Relay outputs | 8 (SPSTNO × 8) | | | | 5 A | | G70D-SOC08 | | | | | | | | | | | | | |
| | | | | 16 (SPSTNO × 16) | | | | 3 A | | G70D-SOC16 | | | | | | | | | | | | | |
| |  Flat type G70D | Outputs | Relay outputs | PNP | 16 (SPSTNO × 16) | 3 A | 156 | 51 | | 39 | Yes | Yes | G70D-SOC16-1 | - | | | | | | | | | |
| | | | | | MOSFET relay outputs | 0.3 A | | | | | | | G70D-FOM16 | | | | | | | | | | |
| | | |  G70R | Outputs | Relay outputs | NPN | | | | | | | 8 (SPSTNO × 8) | | 10 A | 24 VDC | 136 | 93 | 55 | Yes | Yes | G70R-SOC08 *7 | - |
| | | | | | | | | | | | | | | | | | | | | | | | |

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

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

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

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

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

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

*7. Product no longer available to order.

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

2. Please refer to each Datasheet about details.

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

Cables for I/O Relay Terminals

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

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

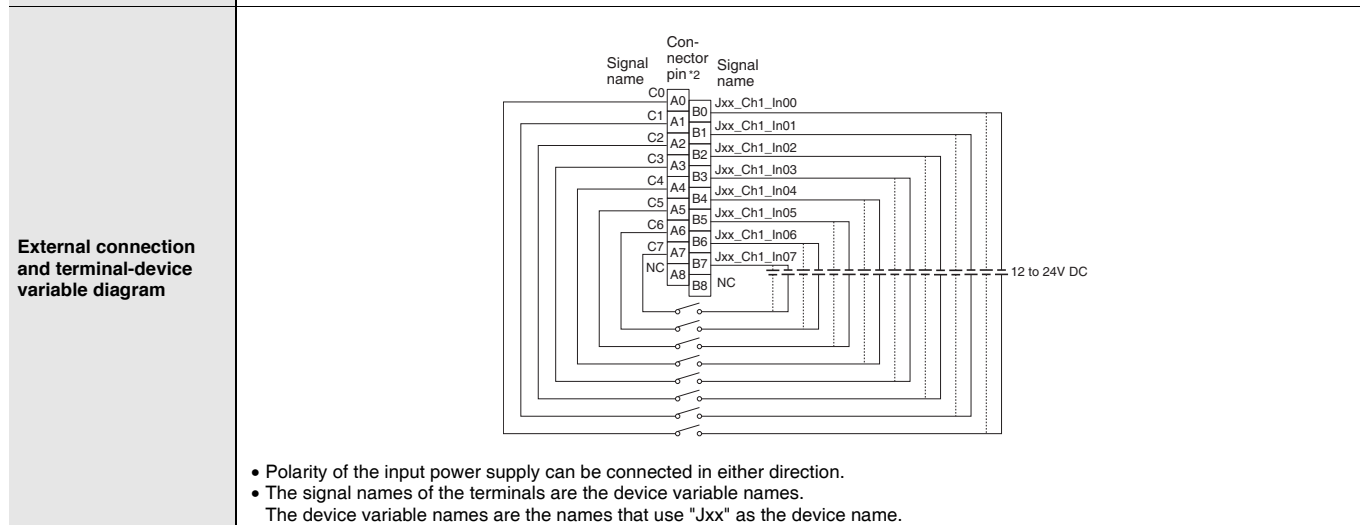
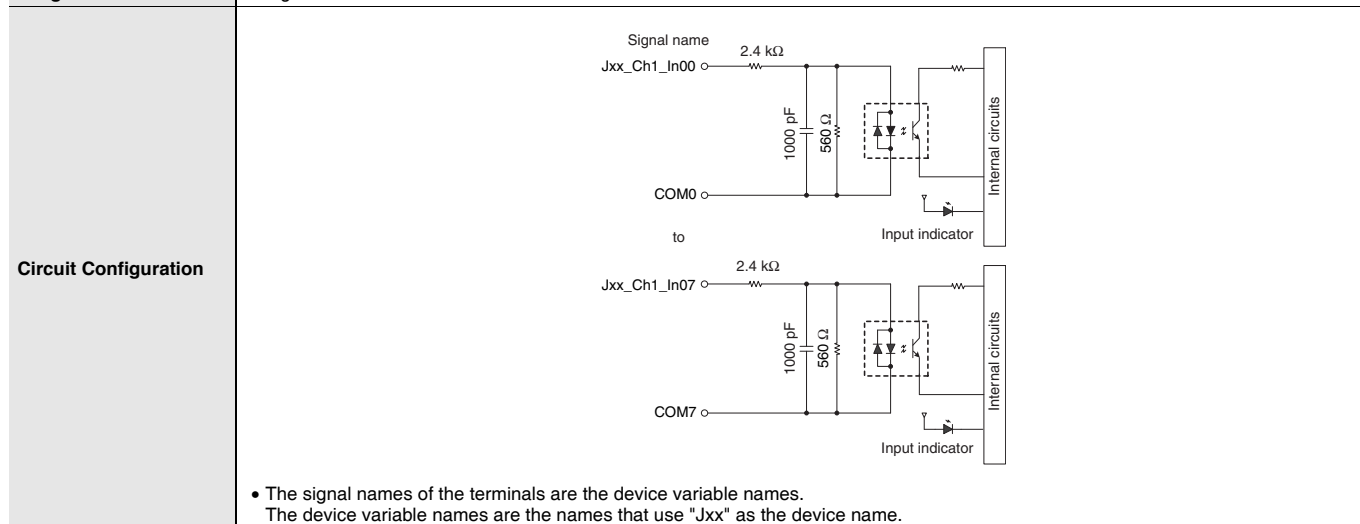
Mountable Racks

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

Specifications

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

| | |
|---|--|
| 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 MΩ min. between external terminals and the GR terminal (100 VDC) |
| Dielectric Strength | 1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max. |
| Internal Current Consumption | 80 mA max. |
| Weight | 110 g max. |



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

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

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

CJ1W-ID211 DC Input Unit (24 VDC, 16 Points)

| | |
|---|--|
| 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 |
| Input Current | 7 mA typical (at 24 VDC) |
| ON Voltage/ON Current | 14.4 VDC min./3 mA min. |
| OFF Voltage/OFF Current | 5 VDC max./1 mA max. |
| ON Response Time | 8.0 ms max. (Can be set to between 0 and 32 ms in the Setup.) *1 |
| OFF Response Time | 8.0 ms max. (Can be set to between 0 and 32 ms in the Setup.) *1 |
| Number of Circuits | 16 (16 points/common, 1 circuit) |
| Number of Simultaneously ON Points | 100% simultaneously ON (at 24 VDC) (Refer to the following illustration.) |
| Insulation Resistance | 20 MΩ min. between external terminals and the GR terminal (100 VDC) |
| Dielectric Strength | 1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max. |
| Internal Current Consumption | 80 mA max. |
| 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

• Polarity of the input power supply can be connected in either direction.
• The signal names of the terminals are the device variable names.
The device variable names are the names that use "Jxx" as the device name.

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

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

CJ1W-ID212 DC Input Unit (24 VDC, 16 Points)

| | |
|---|--|
| Name | 16-point DC Input Unit with Terminal Block |
| Model | CJ1W-ID212 |
| Rated Input Voltage | 24 VDC |
| Rated Input Voltage Range | 20.4 to 26.4 VDC |
| Input Impedance | 3.3 kΩ |
| Input Current | 7 mA typical (at 24 VDC) |
| ON Voltage/ON Current | 14.4 VDC min./3 mA min. |
| OFF Voltage/OFF Current | 5 VDC max./1 mA max. |
| ON Response Time | 8.0 ms max. (Can be set to between 0 and 32 ms in the Setup.) *1 |
| OFF Response Time | 8.0 ms max. (Can be set to between 0 and 32 ms in the Setup.) *1 |
| Number of Circuits | 16 (16 points/common, 1 circuit) |
| Number of Simultaneously ON Points | 100% simultaneously ON (at 24 VDC) (Refer to the following illustration.) |
| Insulation Resistance | 20 MΩ min. between external terminals and the GR terminal (100 VDC) |
| Dielectric Strength | 1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max. |
| Internal Current Consumption | 130 mA max. |
| 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

- Polarity of the input power supply can be connected in either direction.
- The signal names of the terminals are the device variable names. The device variable names are the names that use "Jxx" as the device name.

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

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

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

| | |
|---|--|
| Name | 32-point DC Input Unit with Fujitsu Connector |
| Model | CJ1W-ID231 |
| Rated Input Voltage | 24 VDC |
| Rated Input Voltage Range | 20.4 to 26.4 VDC |
| Input Impedance | 5.6 kΩ |
| Input Current | 4.1 mA typical (at 24 VDC) |
| ON Voltage/ON Current | 19.0 VDC min./3 mA min. |
| OFF Voltage/OFF Current | 5 VDC max./1 mA max. |
| ON Response Time | 8.0 ms max. (Can be set to between 0 and 32 in the Setup.) * |
| OFF Response Time | 8.0 ms max. (Can be set to between 0 and 32 in the Setup.) * |
| Number of Circuits | 32 (16 points/common, 2 circuits) |
| Number of Simultaneously ON Points | 75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.) |
| Insulation Resistance | 20 MΩ min. between external terminals and the GR terminal (100 VDC) |
| Dielectric Strength | 1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max. |
| Internal Current Consumption | 90 mA max. |
| Weight | 70 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.

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

External connection and terminal-device variable diagram

• The input power polarity can be connected in either direction.
 • Be sure to wire both pins A9 and A18 (COM0), and set the same polarity for both pins.
 • Be sure to wire both pins B9 and B18 (COM1), and set the same polarity for both pins.
 • The signal names of the terminals are the device variable names.
 • The device variable names are the names that use "Jxx" as the device name.

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

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

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

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

| | |
|---|--|
| Name | 32-point DC Input Unit with MIL Connector |
| Model | CJ1W-ID232 |
| Rated Input Voltage | 24 VDC |
| Rated Input Voltage Range | 20.4 to 26.4 VDC |
| Input Impedance | 5.6 kΩ |
| Input Current | 4.1 mA typical (at 24 VDC) |
| ON Voltage/ON Current | 19.0 VDC min./3 mA min. |
| OFF Voltage/OFF Current | 5 VDC max./1 mA max. |
| ON Response Time | 8.0 ms max. (Can be set to between 0 and 32 in the Setup.) * |
| OFF Response Time | 8.0 ms max. (Can be set to between 0 and 32 in the Setup.) * |
| Number of Circuits | 32 (16 points/common, 2 circuits) |
| Number of Simultaneously ON Points | 75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.) |
| Insulation Resistance | 20 MΩ min. between external terminals and the GR terminal (100 VDC) |
| Dielectric Strength | 1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max. |
| Internal Current Consumption | 90 mA max. |
| Weight | 70 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

• The input power polarity can be connected in either direction.
• Be sure to wire both pins 23 and 24 (COM0), and set the same polarity for both pins.
• Be sure to wire both pins 3 and 4 (COM1), and set the same polarity for both pins.
• The signal names of the terminals are the device variable names.
The device variable names are the names that use "Jxx" as the device name.

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

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

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

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

| | |
|---|--|
| Name | 32-point DC Input Unit with MIL Connector |
| Model | CJ1W-ID233 |
| Rated Input Voltage | 24 VDC |
| Rated Input Voltage Range | 20.4 to 26.4 VDC |
| Input Impedance | 5.6 kΩ |
| Input Current | 4.1 mA typical (at 24 VDC) |
| ON Voltage/ON Current | 19.0 VDC min./3 mA min. |
| OFF Voltage/OFF Current | 5 VDC max./1 mA max. |
| ON Response Time | 8.0 ms max. (Can be set to between 0 and 32 in the Setup.) * |
| OFF Response Time | 8.0 ms max. (Can be set to between 0 and 32 in the Setup.) * |
| Number of Circuits | 32 (16 points/common, 2 circuits) |
| Number of Simultaneously ON Points | 75% (12 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustration.) |
| Insulation Resistance | 20 MΩ min. between external terminals and the GR terminal (100 VDC) |
| Dielectric Strength | 1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max. |
| Internal Current Consumption | 200 mA max. |
| Weight | 70 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

• The input power polarity can be connected in either direction.
• Be sure to wire both pins 23 and 24 (COM0), and set the same polarity for both pins.
• Be sure to wire both pins 3 and 4 (COM1), and set the same polarity for both pins.
• The signal names of the terminals are the device variable names.
The device variable names are the names that use "Jxx" as the device name.

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

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

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

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

| | |
|---|--|
| Name | 64-point DC Input Unit with Fujitsu Connector |
| Model | CJ1W-ID261 |
| Rated Input Voltage | 24 VDC |
| Rated Input Voltage Range | 20.4 to 26.4 VDC |
| Input Impedance | 5.6 kΩ |
| Input Current | 4.1 mA typical (at 24 VDC) |
| ON Voltage/ON Current | 19.0 VDC min./3 mA min. |
| OFF Voltage/OFF Current | 5 VDC max./1 mA max. |
| ON Response Time | 8.0 ms max. (Can be set to between 0 and 32 in the Setup.) * |
| OFF Response Time | 8.0 ms max. (Can be set to between 0 and 32 in the Setup.) * |
| Number of Circuits | 64 (16 points/common, 4 circuits) |
| Number of Simultaneously ON Points | 50% (16 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustrations.) |
| Insulation Resistance | 20 MΩ min. between external terminals and the GR terminal (100 VDC) |
| Dielectric Strength | 1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max. |
| Internal Current Consumption | 90 mA max. |
| Weight | 110 g max. |
| Accessories | None |

Circuit Configuration

• 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

CN1

CN2

• The input power polarity can be connected in either direction.
 • Be sure to wire both pins A9 and A18 (COM0) of CN1, and set the same polarity for both pins.
 • Be sure to wire both pins B9 and B18 (COM1) of CN1, and set the same polarity for both pins.
 • The signal names of the terminals are the device variable names. The device variable names are the names that use "Jxx" as the device name.

• The input power polarity can be connected in either direction.
 • Be sure to wire both pins A9 and A18 (COM2) of CN2, and set the same polarity for both pins.
 • Be sure to wire both pins B9 and B18 (COM3) of CN2, and set the same polarity for both pins.
 • The signal names of the terminals are the device variable names. The device variable names are the names that use "Jxx" as the device name.

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

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

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

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

| | |
|---|--|
| Name | 64-point DC Input Unit with MIL Connector |
| Model | CJ1W-ID262 |
| Rated Input Voltage | 24 VDC |
| Rated Input Voltage Range | 20.4 to 26.4 VDC |
| Input Impedance | 5.6 kΩ |
| Input Current | 4.1 mA typical (at 24 VDC) |
| ON Voltage/ON Current | 19.0 VDC min./3 mA min. |
| OFF Voltage/OFF Current | 5 VDC max./1 mA max. |
| ON Response Time | 8.0 ms max. (Can be set to between 0 and 32 in the Setup.) * |
| OFF Response Time | 8.0 ms max. (Can be set to between 0 and 32 in the Setup.) * |
| Number of Circuits | 64 (16 points/common, 4 circuits) |
| Number of Simultaneously ON Points | 50% (8 points/common) simultaneously ON (at 24 VDC) (Refer to the following illustrations.) |
| Insulation Resistance | 20 MΩ min. between external terminals and the GR terminal (100 VDC) |
| Dielectric Strength | 1,000 VAC between the external terminals and the GR terminal for 1 minute at a leakage current of 10 mA max. |
| Internal Current Consumption | 90 mA max. |
| Weight | 110 g max. |
| Accessories | None |

Circuit Configuration

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

Number of Simultaneously ON Points vs. Ambient Temperature Characteristic

External connection and terminal-device variable diagram

CN1

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

• The input power polarity can be connected in either direction.
• Be sure to wire both pins 23 and 24 (COM0) of CN1, and set the same polarity for both pins.
• Be sure to wire both pins 3 and 4 (COM1) of CN1, and set the same polarity for both pins.
• The signal names of the terminals are the device variable names.
The device variable names are the names that use "Jxx" as the device name.

CN2

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

• The input power polarity can be connected in either direction.
• Be sure to wire both pins 23 and 24 (COM2) of CN2, and set the same polarity for both pins.
• Be sure to wire both pins 3 and 4 (COM3) of CN2, and set the same polarity for both pins.
• The signal names of the terminals are the device variable names.
The device variable names are the names that use "Jxx" as the device name.

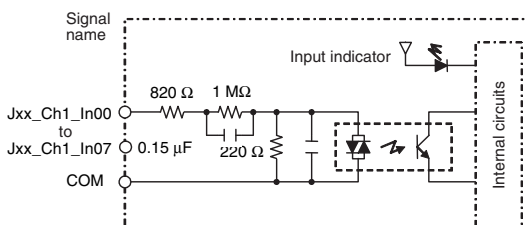
* The ON response time will be 120 μs maximum and OFF response time will be 400 μs maximum even if the response times are set to 0 ms due to internal element delays.

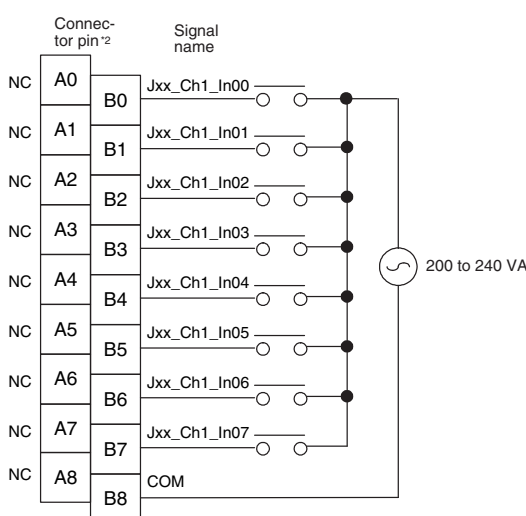
Note: Observe the following restrictions when connecting to a 2-wire sensor.

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

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

| | |
|---|--|
| 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 k Ω (50 Hz), 18 k Ω (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 Ω 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 |  <ul style="list-style-type: 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. |
|------------------------------|---|

| | |
|---|--|
| External connection and terminal-device variable diagram |  <ul style="list-style-type: 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. |
|---|--|

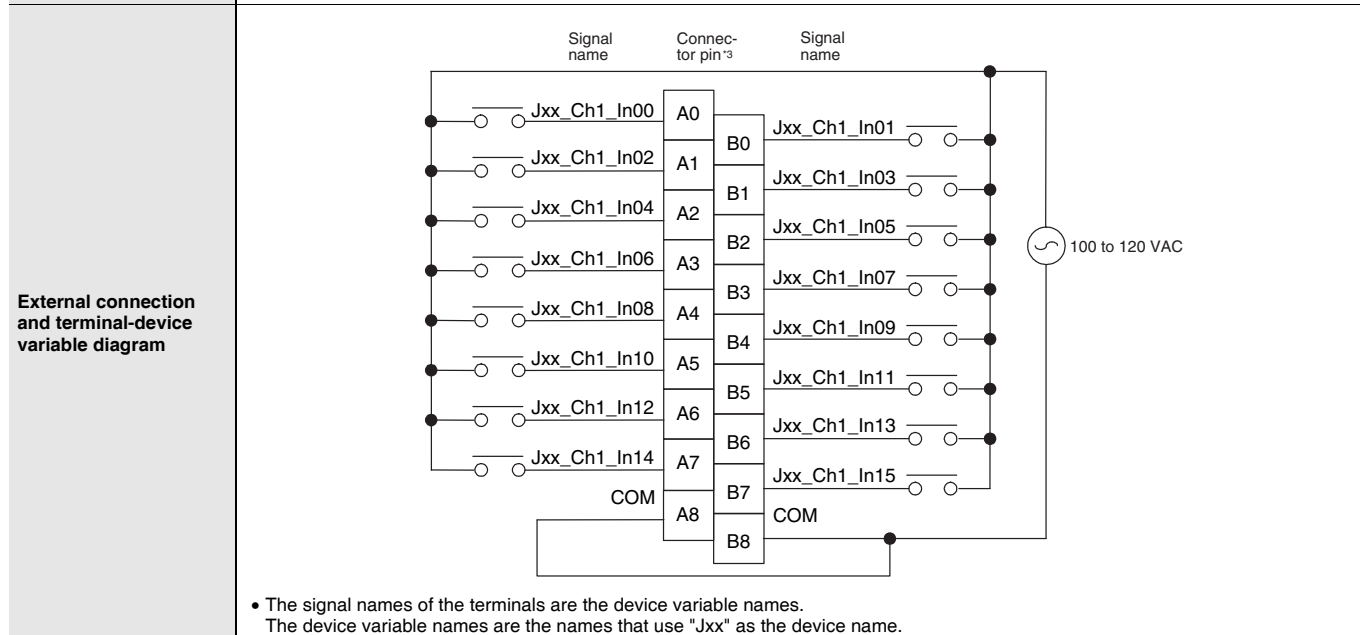
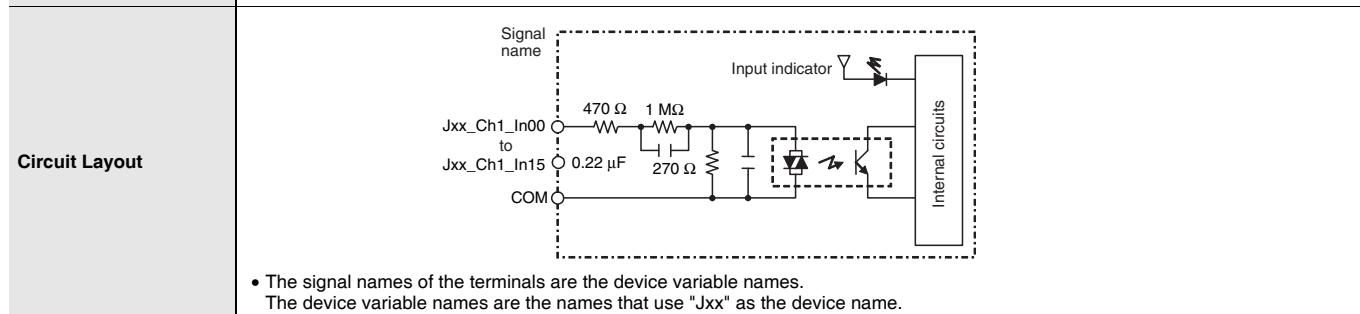
*1. Can be set to 0 ms, 0.5 ms, 1 ms, 2 ms, 4 ms, 8 ms, 16 ms, or 32ms in the settings. When the response times have been set to 0 ms, the ON response time will be 10 ms maximum and the OFF response time will be 55 ms maximum due to internal element delays.

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

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

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

| | |
|---|--|
| Name | 16-point AC Input Unit with Terminal Block |
| Model | CJ1W-IA111 |
| Rated input voltage | 100 to 120 VAC 50/60 Hz *2 |
| Rated Input Voltage Range | 85 to 132 VAC |
| Input Impedance | 14.5 kΩ (50 Hz), 12 kΩ (60 Hz) |
| Input Current | 7 mA typical (at 100 VAC, 50 Hz), 8 mA typical (at 100 VAC, 60 Hz) |
| ON Voltage/ON Current | 70 VAC min./4 mA min |
| OFF Voltage/OFF Current | 20 VAC max./2 mA max |
| ON Response Time | 18 ms max. (default setting: 8 ms) *1 |
| OFF Response Time | 48 ms max. (default setting: 8 ms) *1 |
| Number of Circuits | 16 (16 points/common, 1 circuit) |
| Number of Inputs ON Simultaneously | 100% simultaneously ON (16 points/common) |
| Insulation Resistance | 20 MΩ 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 |



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

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

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

Bit Allocations for Input Unit

8-point Input Unit

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

32-point Input Unit

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

16-point Input Unit

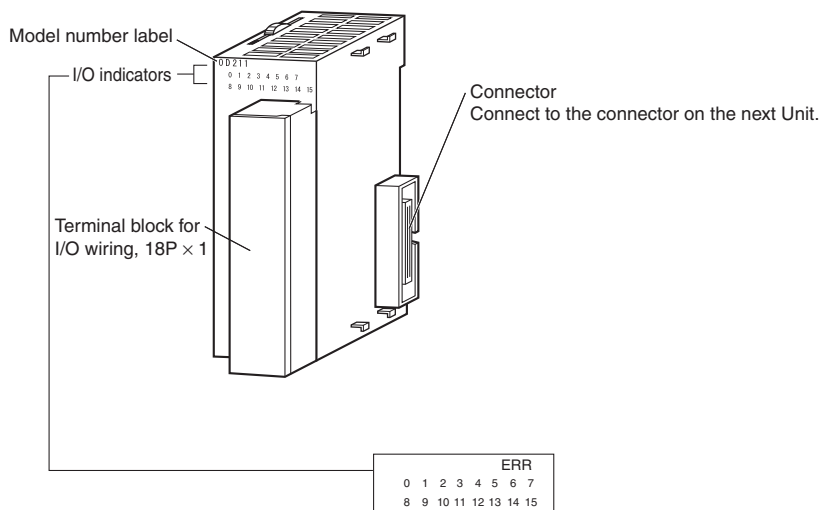
| Allocated CIO word | | Signal name (CJ/NJ) |
|--------------------|-----|---------------------|
| CIO | Bit | |
| Wd m (Input) | 00 | IN0/Jxx_Ch1_In00 |
| | 01 | IN1/Jxx_Ch1_In01 |
| | : | : |
| | 14 | IN14/Jxx_Ch1_In14 |
| | 15 | IN15/Jxx_Ch1_In15 |

64-point Input Unit

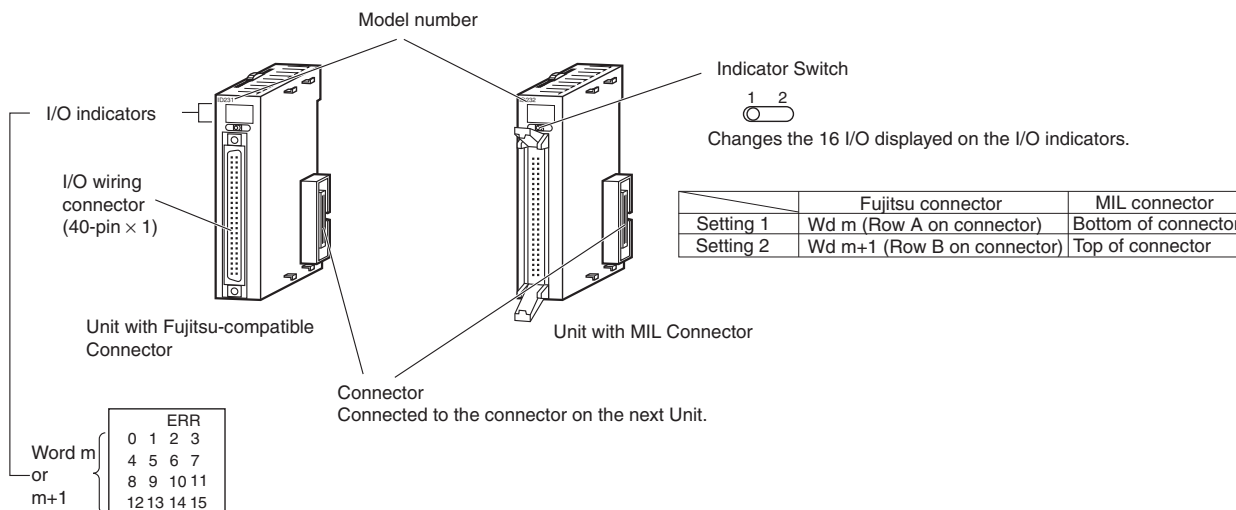
| Allocated CIO word | | Signal name (CJ/NJ) |
|--------------------|-----|---------------------|
| CIO | Bit | |
| Wd m (Input) | 00 | IN0/Jxx_Ch1_In00 |
| | 01 | IN1/Jxx_Ch1_In01 |
| | : | : |
| | 14 | IN14/Jxx_Ch1_In14 |
| | 15 | IN15/Jxx_Ch1_In15 |
| Wd m+1 (Input) | 00 | IN0/Jxx_Ch2_In00 |
| | 01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

External Interface

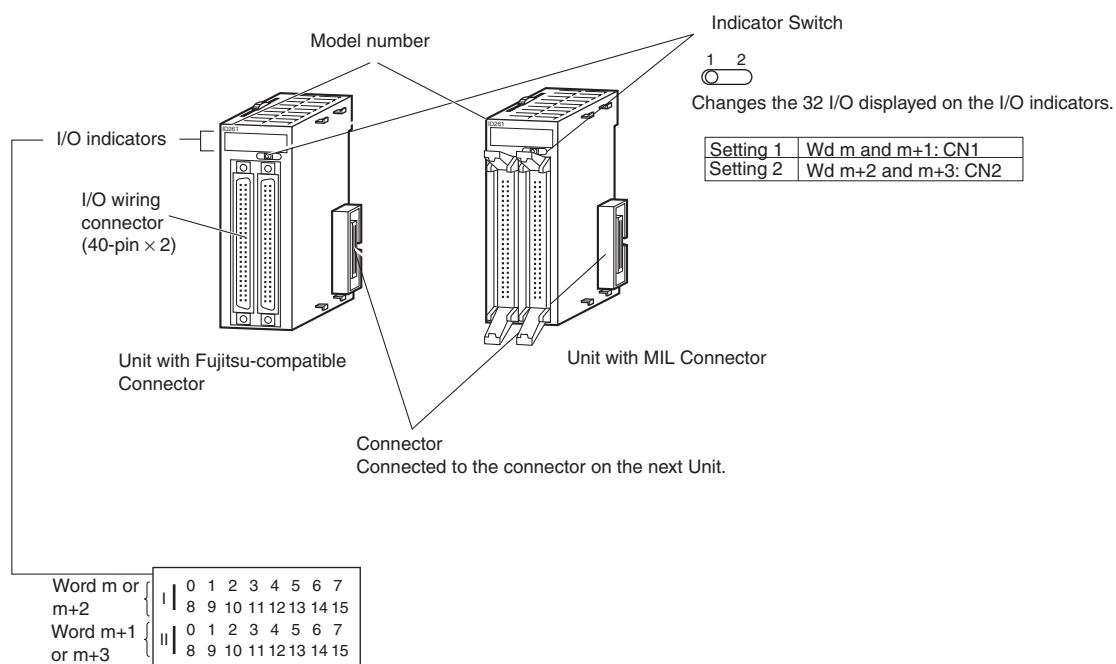
8-point/16-point Units (18-point Terminal Blocks)



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



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



Wiring Basic I/O Units with Terminal Blocks

Electric Wires

The following wire gauges are recommended.

| Terminal Block Connector | Wire Size |
|--------------------------|--|
| 18-terminal | AWG 22 to 18 (0.32 to 0.82 mm ²) |

Crimp terminals

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

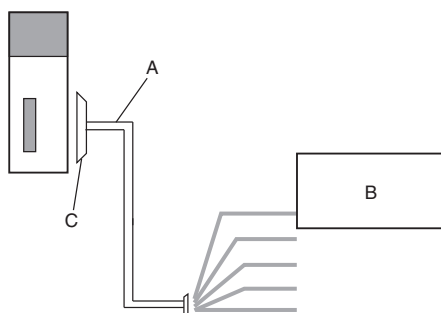


I/O Unit Wiring Methods

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.

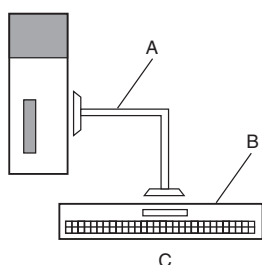


| | |
|----------|---------------------|
| A | User-provided cable |
| B | External device |
| C | Connector |

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.

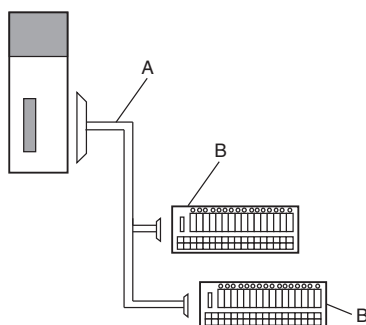


| | |
|----------|--|
| A | Connecting Cable for Connector-Terminal Block Conversion Unit XW2Z |
| B | Connector-Terminal Block Conversion Unit XW2R |
| C | Conversion to a screw terminal block |

3. I/O Relay Terminal

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

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



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

1. Using User-made Cables with Connector

Available Connectors

Use the following connectors when assembling a connector and cable.

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

Applicable Units

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

Applicable Cable-side Connectors

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

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

Applicable Units

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

Applicable Cable-side Connectors

| Connection | Pins | OMRON set | DDK parts |
|-----------------|------|--|----------------|
| Pressure-welded | 40 | XG4M-4030-T *1 | FRC5-A040-3T0S |
| | 40 | XG5N-401 *2 | HU-40OS2-001 |
| Crimped | — | Crimp Contacts for XG5N *3 XG5W-0232 (loose contacts: 100 pieces) XG5W-0232-R (reel contacts: 10,000 pieces) | HU-111S |

*1. Socket and Stain Relief set.

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

*3. Applicable wire size is AWG 28 to 24. For applicable conductor construction and more information, visit the OMRON website at www.ia.omron.com.

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)

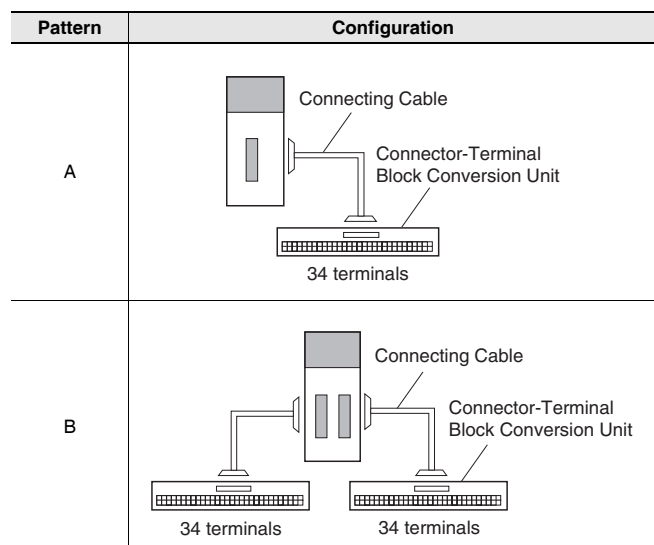
| Product Name | Model |
|-----------------------|-----------|
| Pressure-welding Tool | XY2B-0002 |
| Attachment | XY2B-1007 |

Tools for Crimped Connectors (OMRON)

| Product Name | Model |
|----------------------|-----------|
| Manual Crimping Tool | XY2B-7007 |

2. Connecting Connector-Terminal Block Conversion Units

Connection Patterns for Connector-Terminal Block Conversion Units



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

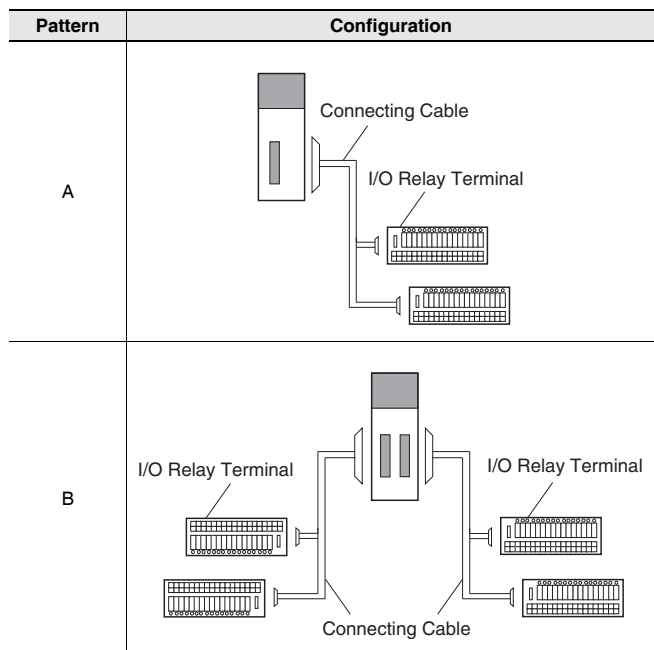
| Unit | I/O capacity | Number of connectors | Polarity | Connection pattern | Connecting Cable * | Connector-Terminal Block Conversion Unit | Wiring method | Common terminals |
|------------|--------------|----------------------|----------|--------------------|--------------------|--|-------------------------|------------------|
| CJ1W-ID231 | 32 inputs | 1 Fujitsu connector | NPN/PNP | A | XW2Z-□□□PF | XW2R-J34GD-C1 | Phillips screw | No |
| | | | | | | XW2R-E34GD-C1 | Slotted screw (rise up) | |
| | | | | | | XW2R-P34GD-C1 | Push-in spring | |
| CJ1W-ID232 | 32 inputs | 1 MIL connector | NPN/PNP | A | XW2Z-□□□PM | XW2R-J34GD-C2 | Phillips screw | No |
| | | | | | | XW2R-E34GD-C2 | Slotted screw (rise up) | |
| | | | | | | XW2R-P34GD-C2 | Push-in spring | |
| CJ1W-ID233 | 32 inputs | 1 MIL connector | NPN/PNP | A | XW2Z-□□□PM | XW2R-J34GD-C2 | Phillips screw | No |
| | | | | | | XW2R-E34GD-C2 | Slotted screw (rise up) | |
| | | | | | | XW2R-P34GD-C2 | Push-in spring | |
| CJ1W-ID261 | 64 inputs | 2 Fujitsu connectors | NPN/PNP | B | XW2Z-□□□PF (2 pcs) | XW2R-J34GD-C1 (2 Units) | Phillips screw | No |
| | | | | | | XW2R-E34GD-C1 (2 Units) | Slotted screw (rise up) | |
| | | | | | | XW2R-P34GD-C1 (2 Units) | Push-in spring | |
| CJ1W-ID262 | 64 inputs | 2 MIL connectors | NPN/PNP | B | XW2Z-□□□PM (2 pcs) | XW2R-J34GD-C2 (2 Units) | Phillips screw | No |
| | | | | | | XW2R-E34GD-C2 (2 Units) | Slotted screw (rise up) | |
| | | | | | | XW2R-P34GD-C2 (2 Units) | Push-in spring | |

* The box □ is replaced by the cable length.

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

3. Connecting I/O Relay Terminals

Connection Patterns for I/O Relay Terminals



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

| I/O Units | | | | Connection pattern | Connecting Cables | | I/O Relay Terminals | | | |
|------------|--------------|-----------------------------|----------------------------|--------------------|-------------------|-------------------|--------------------------|------------|-------------------|----------------|
| Model | I/O capacity | External connectors | Polarity | | Model *1 | Quantity required | Model | I/O points | Quantity required | Wiring method |
| CJ1W-ID231 | 32 inputs | 1 Fujitsu connector (40 p) | Sinking/Sourcing (NPN/PNP) | A | XW2Z-RI□C-□ | 1 | G70V-SID16P(-1)-(C16) *2 | 16 | 2 | Push-in spring |
| | | | | | | | G7TC-ID/IA16 | 16 | | Screw terminal |
| | | | | | | | G70A-ZIM16-5 *3 | 16 | | |
| CJ1W-ID232 | 32 inputs | 1 MIL connector (40 p) | Sinking/Sourcing (NPN/PNP) | A | XW2Z-RO□-□-D1 | 1 | G70V-SID16P(-1)-(C16) *2 | 16 | 2 | Push-in spring |
| | | | | | | | G7TC-ID/IA16 | 16 | | Screw terminal |
| | | | | | | | G70A-ZIM16-5 | 16 | | |
| CJ1W-ID233 | 32 inputs | 1 MIL connector (40 p) | Sinking/Sourcing (NPN/PNP) | A | XW2Z-RO□-□-D1 | 1 | G70V-SID16P(-1)-(C16) *2 | 16 | 2 | Push-in spring |
| | | | | | | | G7TC-ID/IA16 | 16 | | Screw terminal |
| | | | | | | | G70A-ZIM16-5*3 | 16 | | |
| CJ1W-ID261 | 64 inputs | 2 Fujitsu connectors (40 p) | Sinking/Sourcing (NPN/PNP) | B | XW2Z-RI□C-□ | 2 | G70V-SID16P(-1)-(C16) *2 | 16 | 4 | Push-in spring |
| | | | | | | | G7TC-ID/IA16 | 16 | | Screw terminal |
| | | | | | | | G70A-ZIM16-5 *3 | 16 | | |
| CJ1W-ID262 | 64 inputs | 2 MIL connectors (40 p) | Sinking/Sourcing (NPN/PNP) | B | XW2Z-RO□-□-D1 | 2 | G70V-SID16P(-1)-(C16) *2 | 16 | 4 | Push-in spring |
| | | | | | | | G7TC-ID/IA16 | 16 | | Screw terminal |
| | | | | | | | G70A-ZIM16-5 *3 | 16 | | |

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

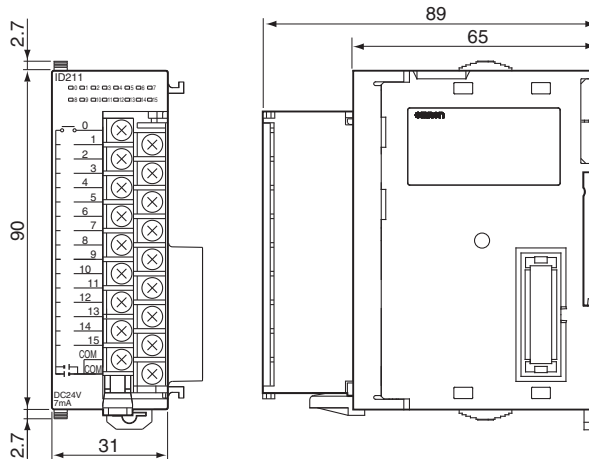
*2. Either NPN inputs or PNP inputs can be used.

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

Dimensions

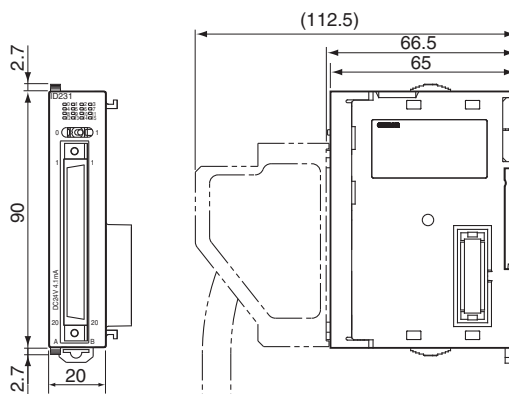
8-point/16-point Units (18-point Terminal Blocks)

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



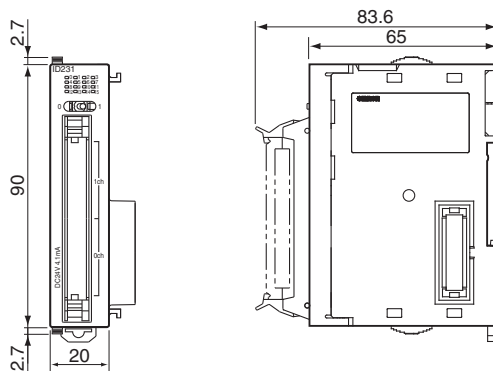
32-point Units (Input Units)

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



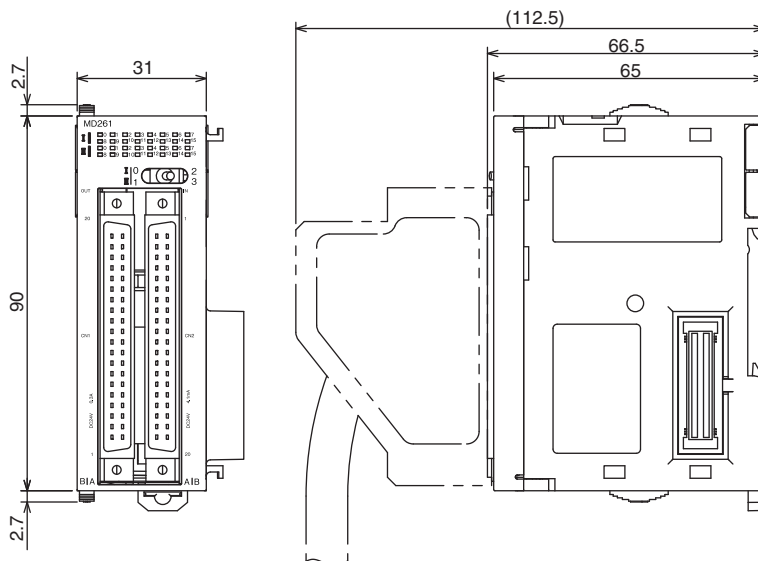
With MIL Connector (40-pin × 1)

- CJ1W-ID232
- CJ1W-ID233

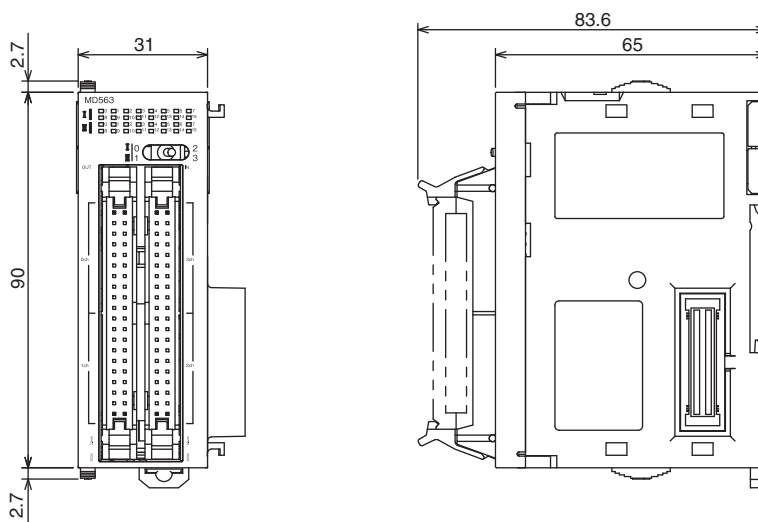


64-point Units (Input Units)

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



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



Related Manuals

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

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