

# I/O Terminal Socket G70A

**16-point I/O Terminal Socket accepts Various Devices such as G2R Relays, Solid State Relays, and Timers for More System Flexibility.**

- Connects to a PLC with a simple snap-in connector.
- The G70A-ZOC16-3 can be combined with a DRT1-OD32ML I/O Terminal for DeviceNet connectivity or an SRT2-VOD16ML Connector Terminal for CompoBus/S connectivity.
- SPDT relays can be mounted.
- Conforms to VDE (VDE0106) and CE standards.
- Electric-shock preventive (finger-touch protection) terminal socket.
- DIN rail mountable.
- High-capacity (10 A) terminal socket.
- Excellent noise resistance characteristics.
- Built-in diodes for coil surge suppression.



For the most recent information on models that have been certified for safety standards, refer to your OMRON website.

## Ordering Information

### I/O Terminal Socket

| Classification | Internal I/O common | Rated voltage                | Model               |
|----------------|---------------------|------------------------------|---------------------|
| Output         | NPN (+ common)      | 24 VDC                       | <b>G70A-ZOC16-3</b> |
|                | PNP (– common)      | 24 VDC                       | <b>G70A-ZOC16-4</b> |
| Input          | NPN/PNP             | 110 VDC max., 240 VAC max. * | <b>G70A-ZIM16-5</b> |

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

### Suitable Relay/Solid State Relay/Solid-State Timer

| Classification | I/O Terminal Socket                    | Relay                                                                            | Solid State Relay (SSR)                                                       | Solid-State Timer |
|----------------|----------------------------------------|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------|
| Output         | NPN: G70A-ZOC16-3<br>PNP: G70A-ZOC16-4 | G2R-1-S<br>G2R-1-SN<br>G2R-1-S (S)<br>G2R-1-SN (S)                               | G3R-OA202SZN<br>G3R-OA202SLN<br>G3R-ODX02SN<br>G3R-OD201SN<br><br>G3RZ-201SLN | H3RN-1<br>H3RN-11 |
| Input          | G70A-ZIM16-5                           | G2R-1A3-SN *1, *2<br>G2R-13-SN *1, *2<br>G2R-1A3-SND *1, *2<br>G2R-13-SND *1, *2 | G3R-IAZR1SN<br>G3R-IDZR1SN<br>G3R-IDZR1SN-1                                   | ---               |

\*1. G2R-13-SN has twin cross-bar contacts.

\*2. Manufacturing of the G2R-1A3-S□ and G2R-13-S□ was discontinued at the end of March 2014.

## Accessories (Order Separately)

### Short Bar

| Applicable model | Model    |
|------------------|----------|
| G70A-ZOC16-3     | G78-16-E |
| G70A-ZOC16-4     |          |
| G70A-ZIM16-5     |          |

### Connecting Sockets for I/O Terminal Expansion

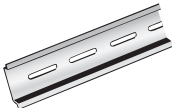
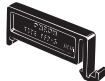
| Number of poles              | Model     |
|------------------------------|-----------|
| 1 pole (G2R: 1 pole usage)   | P2RF-05-E |
| 2 poles (G2R: 2 poles usage) | P2RF-08-E |

### Cables for I/O Relay Terminals XW2Z-R

- Cable with Loose Wire and Crimp Terminals: XW2Z-RY□C
- Cable with Loose Wires: XW2Z-RA□C
- Cable with connectors
  - Fujitsu connectors (1:1): XW2Z-R□C
  - (1:2): XW2Z-RI□C-□
  - (1:3): XW2Z-RO□C-□
  - (1:1): XW2Z-R□C-□-□
  - (1:2): XW2Z-RI□C
  - (1:3): XW2Z-RO□C
  - (1:1): XW2Z-RI□-□-□-D□
  - (1:2): XW2Z-RM□-□-□-D□
  - (1:3): XW2Z-RO□-□-□-D1
- MIL connectors (1:1):
- (1:2):

Refer to "Connecting Cables" on page 13 for details.

### Accessories for DIN Track Mounting

| Appearance                                                                         | Name       |       | Model    |
|------------------------------------------------------------------------------------|------------|-------|----------|
|   | DIN Tracks | 1 m   | PFP-100N |
|                                                                                    |            | 0.5 m | PFP-50N  |
|   | End Plate  |       | PFP-M    |
|  | Spacer     |       | PFP-S    |

## Specifications

### Ratings/Characteristics

| Item                                    | G70A-ZOC16-3                                                                                                                                                                     | G70A-ZOC16-4 | G70A-ZIM16-5                                                                                                                                                                  |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contact resistance                      | 10 mΩ (excluding the resistance of the relay to be used)                                                                                                                         |              |                                                                                                                                                                               |
| Permissible current                     | 10 A                                                                                                                                                                             |              | 100 mA                                                                                                                                                                        |
| Max. operating voltage                  | 380 VAC, 125 VDC                                                                                                                                                                 |              | 30 VDC                                                                                                                                                                        |
| Dielectric strength                     | 4,000 VAC, 50/60 Hz for 1 min between connector and output terminals<br>2,000 VAC, 50/60 Hz for 1 min between output terminals<br>250 VAC, 50/60 Hz for 1 min between connectors |              | 4,000 VAC, 50/60 Hz for 1 min between connector and input terminals<br>2,000 VAC, 50/60 Hz for 1 min between coil terminals<br>250 VAC, 50/60 Hz for 1 min between connectors |
| Insulation resistance                   | Between connector and I/O terminals: 1,000 MΩ (at 500 V)<br>Other: 100 MΩ (at 500 V)                                                                                             |              |                                                                                                                                                                               |
| Vibration resistance                    | Malfunction: 10 to 61.2 to 10 Hz, 0.1-mm single amplitude (0.2-mm double amplitude); 61.2 to 150 to 61.2 Hz, 14.7 m/s <sup>2</sup>                                               |              |                                                                                                                                                                               |
| Shock resistance                        | Malfunction: 200 m/s <sup>2</sup>                                                                                                                                                |              |                                                                                                                                                                               |
| Noise immunity                          | Noise level: 2.0 kV; pulse width: 100 ns to 1 μs                                                                                                                                 |              |                                                                                                                                                                               |
| Ambient temperature                     | Operating: 0 to 55°C (with no condensation or icing)                                                                                                                             |              |                                                                                                                                                                               |
| Ambient humidity                        | Operating: 35% to 85%                                                                                                                                                            |              |                                                                                                                                                                               |
| Coil surge absorption element           | Diode: 1 A, 400 V                                                                                                                                                                |              | Varistor *                                                                                                                                                                    |
| Protection diode for inverse connection | Diode (2 A, withstand inverse voltage: 40 V)                                                                                                                                     |              |                                                                                                                                                                               |
| Tensile strength                        | No damage when a tensile force of 49 N is applied for 1 second in any direction                                                                                                  |              |                                                                                                                                                                               |
| I/O terminal tightening torque          | Tightening strength: 0.59 N·m;<br>Tensile strength 49 N for 1 min.                                                                                                               |              |                                                                                                                                                                               |
| Weight                                  | Approx. 400 g                                                                                                                                                                    |              |                                                                                                                                                                               |

\* Use a DC relay with a built-in diode because a DC relay without a built-in diode does not absorb any coil surge.

### Approved Standards

The rated values for safety standard certification are not the same as individually defined performance values. Always check the specifications before use.

#### UL standard certification (File No. E95399)

| Model                        | Ratings | Standard number | Category | Listed/Recognized | Contact ratings |
|------------------------------|---------|-----------------|----------|-------------------|-----------------|
| G70A-ZOC16-3<br>G70A-ZOC16-4 | ---     | UL508           | NRAQ2    | Recognized        | 10 A 250 VAC    |

#### CSA certified (File No. LR35535)

| Model                        | Ratings | Standard number    | Class number | Contact ratings |
|------------------------------|---------|--------------------|--------------|-----------------|
| G70A-ZOC16-3<br>G70A-ZOC16-4 | ---     | CSA C22.2<br>No.14 | 3211 04      | 10 A 250 VAC    |
|                              |         |                    |              | 10 A 30 VDC     |

#### VDE Standards

| Model                        | Standard number | Certification No. |
|------------------------------|-----------------|-------------------|
| G70A-ZOC16-3<br>G70A-ZOC16-4 | VDE0160         | 124796            |

## ●Relay (G2R-1-S, G2R-1-SN, G2R-1-S (S), G2R-1-SN (S))

### Coil Ratings

|                      |              |                           |
|----------------------|--------------|---------------------------|
| Rated voltage        |              | 24 VDC                    |
| Rated current        |              | 21.8 mA                   |
| Coil resistance      |              | 1,100 $\Omega$            |
| Coil inductance      | Armature OFF | 4.27                      |
| (H) (ref. value)     | Armature ON  | 8.55                      |
| Must operate voltage |              | 70% min. of rated voltage |
| Must release voltage |              | 15% min. of rated voltage |
| Max. voltage         |              | 110% of rated voltage     |
| Power consumption    |              | Approx. 0.53 W            |

### Contact Ratings

|                         |  |                                                                                        |
|-------------------------|--|----------------------------------------------------------------------------------------|
| Number of poles         |  | 1 pole                                                                                 |
| Load                    |  | Resistive load ( $\cos\phi = 1$ )      Inductive load ( $\cos\phi = 0.4$ ; L/R = 7 ms) |
| Rated load              |  | 10 A at 250 VAC; 10 A at 30 VDC      7.5 A at 250 VAC; 5 A at 30 VDC                   |
| Rated carry current     |  | 10 A                                                                                   |
| Max. operating voltage  |  | 380 VAC, 125 VDC                                                                       |
| Max. operating current  |  | 10 A                                                                                   |
| Max. switching capacity |  | 2,500 VA, 300 W      1,875 VA, 150 W                                                   |
| Min. permissible load   |  | 100 mA at 5 VDC                                                                        |

## ●Relay (G2R-1A3-SN (SND), G2R-13-SN (SND))

### Coil Ratings

|                      |       |                           |                           |         |
|----------------------|-------|---------------------------|---------------------------|---------|
| Rated voltage        |       | 230 VAC                   | 12 VDC                    | 24 VDC  |
| Rated current        | 50 Hz | 3.7 mA                    | 43.6 mA                   | 21.8 mA |
|                      | 60 Hz | 3.1 mA                    |                           |         |
| Coil resistance      |       | 30,000 Ω                  | 275 Ω                     | 1,100 Ω |
| Must operate voltage |       | 80% max. of rated voltage | 70% max. of rated voltage |         |
| Must release voltage |       | 30% min. of rated voltage | 15% min. of rated voltage |         |
| Max. voltage         |       | 110% of rated voltage     |                           |         |
| Power consumption    |       | Approx. 0.7 W (60 Hz)     | Approx. 0.53 W            |         |

**Note: 1.** The rated current and coil resistance are measured at a coil temperature of 23°C with a tolerance of  $+15\%/-20\%$  (AC rated current) or  $\pm 10\%$  (DC coil resistance).

**2.** LEDs are used for the built-in operation indicator. For models equipped with these indications, the VAC rated current must be increased by approximately 1 mA; the VDC rated current, by approximately 4 mA.

**3.** Operating characteristics are measured at a coil temperature of 23°C.

### Contact Ratings

Refer to Ratings/Characteristics of G70A-ZIM16-5.

## ●Solid State Relay (G3R-I/O)

### Ratings

#### Input Module

##### Input

| Model         | Rated voltage  | Operating voltage | Input current | Must operate voltage | Must release voltage |
|---------------|----------------|-------------------|---------------|----------------------|----------------------|
| G3R-IAZR1SN   | 100 to 240 VAC | 60 to 264 VAC     | 15 mA max.    | 60 VAC max.          | 20 VAC min.          |
| G3R-IDZR1SN   | 5 VDC          | 4 to 6 VDC        | 8 mA max.     | 4 VDC max.           | 1 VDC min.           |
|               | 12 to 24 VDC   | 6.6 to 32 VDC     |               | 6.6 VDC max.         | 3.6 VDC min.         |
| G3R-IDZR1SN-1 | 5 VDC          | 4 to 6 VDC        |               | 4 VDC max.           | 1 VDC min.           |
|               | 12 to 24 VDC   | 6.6 to 32 VDC     |               | 6.6 VDC max.         | 3.6 VDC min.         |

##### Output

| Model         | Load voltage | Load current  |
|---------------|--------------|---------------|
| G3R-IAZR1SN   | 4 to 32 VDC  | 0.1 to 100 mA |
| G3R-IDZR1SN   |              |               |
| G3R-IDZR1SN-1 |              |               |

#### Output Module

##### Input

| Model        | Rated voltage | Operating voltage | Input current           | Must operate voltage | Must release voltage |
|--------------|---------------|-------------------|-------------------------|----------------------|----------------------|
| G3R-OA202SZN | 5 to 24 VDC   | 4 to 32 VDC       | 15 mA max.<br>(at 25°C) | 4 VDC max.           | 1 VDC min.           |
| G3R-OA202SLN |               |                   | 8 mA max.               |                      |                      |
| G3R-ODX02SN  |               |                   |                         |                      |                      |
| G3R-OD201SN  |               |                   |                         |                      |                      |

##### Output

| Model        | Load voltage  | Load current *1, *2 | Inrush current        |
|--------------|---------------|---------------------|-----------------------|
| G3R-OA202SZN | 75 to 264 VAC | 0.05 to 2 A         | 30 A (60 Hz, 1 cycle) |
| G3R-OA202SLN |               |                     |                       |
| G3R-ODX02SN  | 4 to 60 VDC   | 0.01 to 2 A         | 8 A (10 ms)           |
| G3R-OD201SN  | 40 to 200 VDC | 0.01 to 1.5 A       | 8 A (10 ms)           |

\*1. Depends on the ambient temperature. Refer to the Engineering Data (Reference Value) *Load Current vs. Ambient Temperature Rating* on page 7 for details.

\*2. The minimum current value is measured at 10°C min.

### Characteristics

#### Input Module

| Item                   | G3R-IAZR1SN                                                                     | G3R-IDZR1SN | G3R-IDZR1SN-1 |
|------------------------|---------------------------------------------------------------------------------|-------------|---------------|
| Operate time           | 20 ms max.                                                                      | 0.1 ms max. | 15 ms max.    |
| Release time           | 20 ms max.                                                                      | 0.1 ms max. | 15 ms max.    |
| Response frequency     | 10 Hz                                                                           | 1 kHz       | 10 Hz         |
| Output ON voltage drop | 1.6 V max.                                                                      |             |               |
| Leakage current        | 5 $\mu$ A max.                                                                  |             |               |
| Insulation resistance  | 100 M $\Omega$ min. between input and output                                    |             |               |
| Dielectric strength    | 4,000 VAC, 50/60 Hz for 1 min between input and output                          |             |               |
| Vibration resistance   | 10 to 55 to 10 Hz, 0.75-mm single amplitude (1.5-mm double amplitude)           |             |               |
| Shock resistance       | 1,000 m/s <sup>2</sup>                                                          |             |               |
| Ambient temperature    | Operating: -30 to 80°C (with no icing)<br>Storage: -30 to 100°C (with no icing) |             |               |
| Ambient humidity       | Operating: 45% to 85%                                                           |             |               |
| Weight                 | Approx. 18 g                                                                    |             |               |

## Output Module

| Item                   | G3R-OA202SZN                                                                    | G3R-OA202SLN | G3R-ODX02SN | G3R-OD201SN |
|------------------------|---------------------------------------------------------------------------------|--------------|-------------|-------------|
| Operate time           | 1/2 of load power source cycle + 1 ms max.                                      | 1 ms max.    |             |             |
| Release time           | 1/2 of load power source cycle + 1 ms max.                                      |              | 2 ms max.   |             |
| Response frequency     | 20 Hz                                                                           |              | 100 Hz      |             |
| Output ON voltage drop | 1.6 V max.                                                                      |              |             | 2.5 V max.  |
| Leakage current        | 1.5 mA max.                                                                     |              | 1 mA max.   |             |
| Insulation resistance  | 100 MΩ min. between input and output                                            |              |             |             |
| Dielectric strength    | 4,000 VAC, 50/60 Hz for 1 min between input and output                          |              |             |             |
| Vibration resistance   | 10 to 55 to 10 Hz, 0.75-mm single amplitude (1.5-mm double amplitude)           |              |             |             |
| Shock resistance       | 1,000 m/s <sup>2</sup>                                                          |              |             |             |
| Ambient temperature    | Operating: −30 to 80°C (with no icing)<br>Storage: −30 to 100°C (with no icing) |              |             |             |
| Ambient humidity       | Operating: 45% to 85%                                                           |              |             |             |
| Weight                 | Approx. 18 g                                                                    |              |             |             |

## ●Solid State Relay (G3RZ)

## Ratings

| Item<br>Model | Input         |                   |             |               |            | Output                       |                              |                 |                         |
|---------------|---------------|-------------------|-------------|---------------|------------|------------------------------|------------------------------|-----------------|-------------------------|
|               | Rated voltage | Operating voltage | Impedance   | Voltage level |            | Rated load voltage           | Load voltage range           | Load current *  | Surge withstand current |
| G3RZ-201SLN   | 5 VDC         | 4 to 6 VDC        | 400 Ω ±20%  | 4 VDC max.    | 1 VDC min. | 5 to 240 VAC<br>5 to 100 VDC | 3 to 264 VAC<br>3 to 125 VDC | 100 μA to 1.0 A | 10 A (10 ms)            |
|               | 12 VDC        | 9.6 to 14.4 VDC   | 1.1 kΩ ±20% | 9.6 VDC max.  |            |                              |                              |                 |                         |
|               | 24 VDC        | 19.2 to 28.8 VDC  | 2.2 kΩ ±20% | 19.2 VDC max. |            |                              |                              |                 |                         |

\* Depends on the ambient temperature. Refer to the reference data *Load Current vs. Ambient Temperature Rating* on page 7 for details.

## Characteristics

|                               |                                                                       |
|-------------------------------|-----------------------------------------------------------------------|
| Operation time                | 6 ms max.                                                             |
| Release time                  | 10 ms max.                                                            |
| Output ON resistance          | 2.4 Ω max.                                                            |
| OFF leakage current           | 10 μA max. (at 125 VDC)<br>100 μA max. (at 200 VAC)                   |
| Insulation resistance         | 100 MΩ min. (at 500 VDC)                                              |
| Dielectric strength           | 2,500 VAC at 50/60 Hz for 1 min. between inputs and outputs           |
| Vibration resistance          | 10 to 55 to 10 Hz, 0.75-mm single amplitude (1.5-mm double amplitude) |
| Shock resistance              | 1,000 m/s <sup>2</sup>                                                |
| Storage temperature           | -30 to 100°C (with no icing or condensation)                          |
| Ambient operating temperature | -30 to 85°C (with no icing or condensation)                           |
| Ambient operating humidity    | 45% to 85%                                                            |
| Weight                        | Approx. 20 g                                                          |

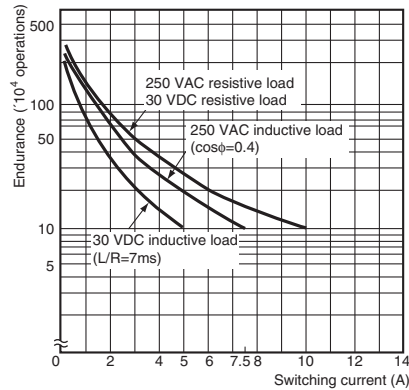
## ●Solid-State Timer (H3RN)

For H3RN specifications, refer to the H3RN Datasheet.

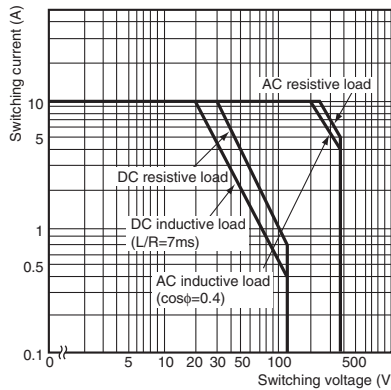
# Engineering Data (Reference Value)

## When Mounted to a G2R

### Endurance



### Maximum Switching Power G2R-1-S (24 VDC)

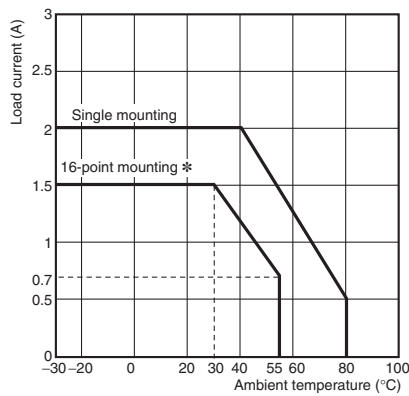


**Note:** The characteristics shown here are for 16-point mounting. This data was produced from actual values sampled on production lines, and should be used for reference purposes only. Since relays are mass-produced, a certain amount of tolerance is generally allowed in their application.

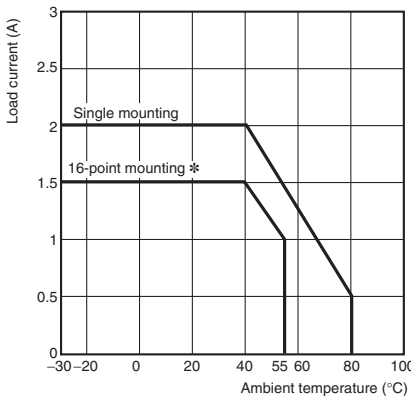
## When Mounted to a G3R-I/O

### Load Current vs. Ambient Temperature Rating

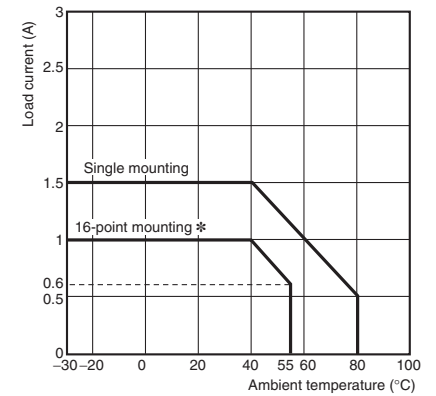
G3R-OA202SZN  
G3R-OA202SLN



G3R-ODX02SN



G3R-OD201SN

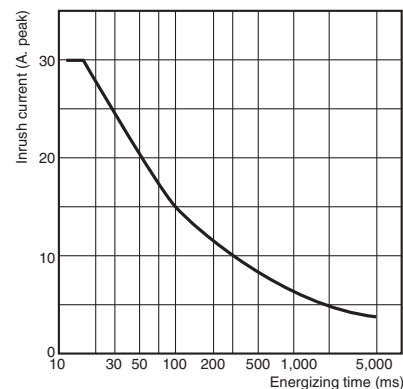


\* On G70A-ZOC16, fully mounted.

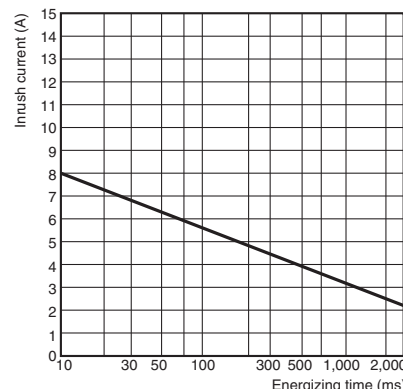
### Inrush Current Resistivity

Non-repetitive (Keep the inrush current to half the rated value if it occurs repetitively.)

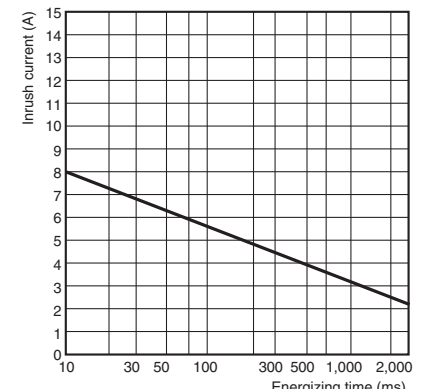
G3R-OA202SZN  
G3R-OA202SLN



G3R-ODX02SN



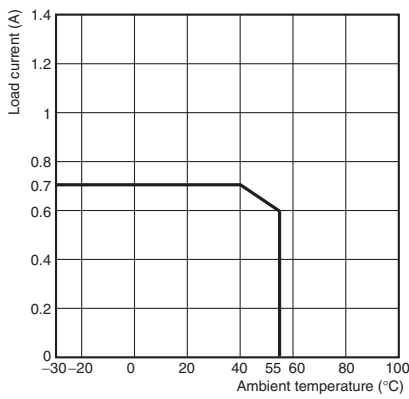
G3R-OD201SN



When Mounted to a G3RZ

Load Current vs. Ambient Temperature Rating

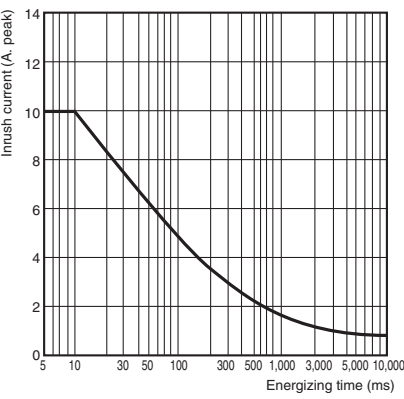
G3RZ-201SLN



Inrush Current Resistivity

Non-repetitive (Keep the inrush current to half the rated value if it occurs repetitively.)

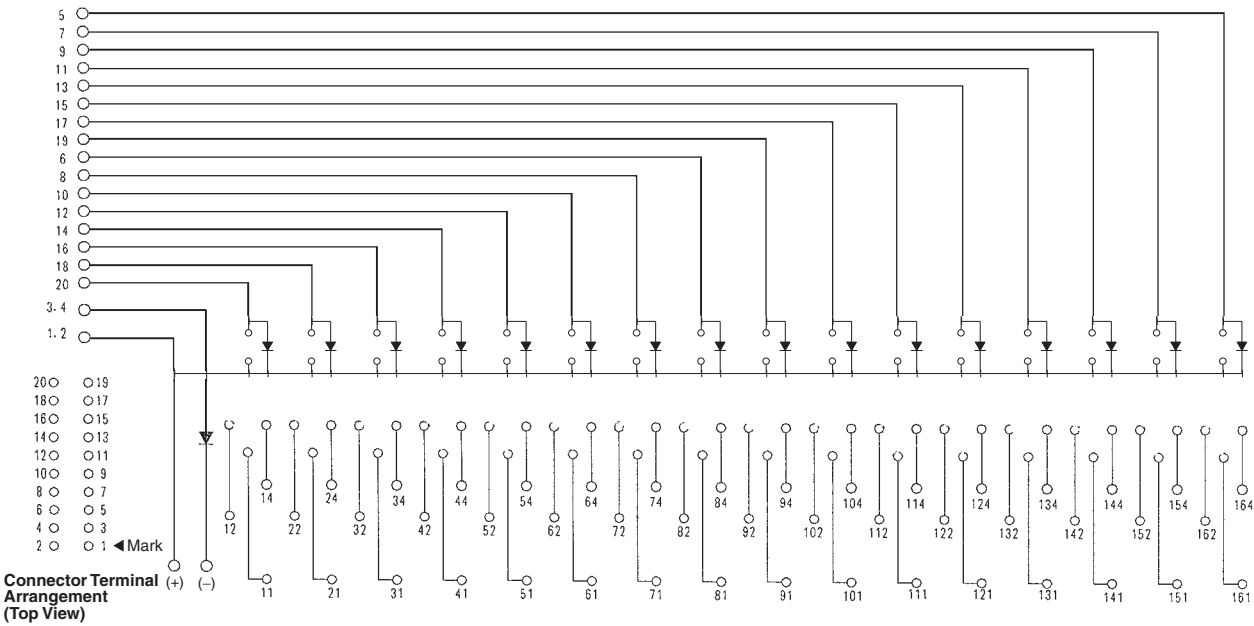
G3RZ-201SLN



# Internal Circuits

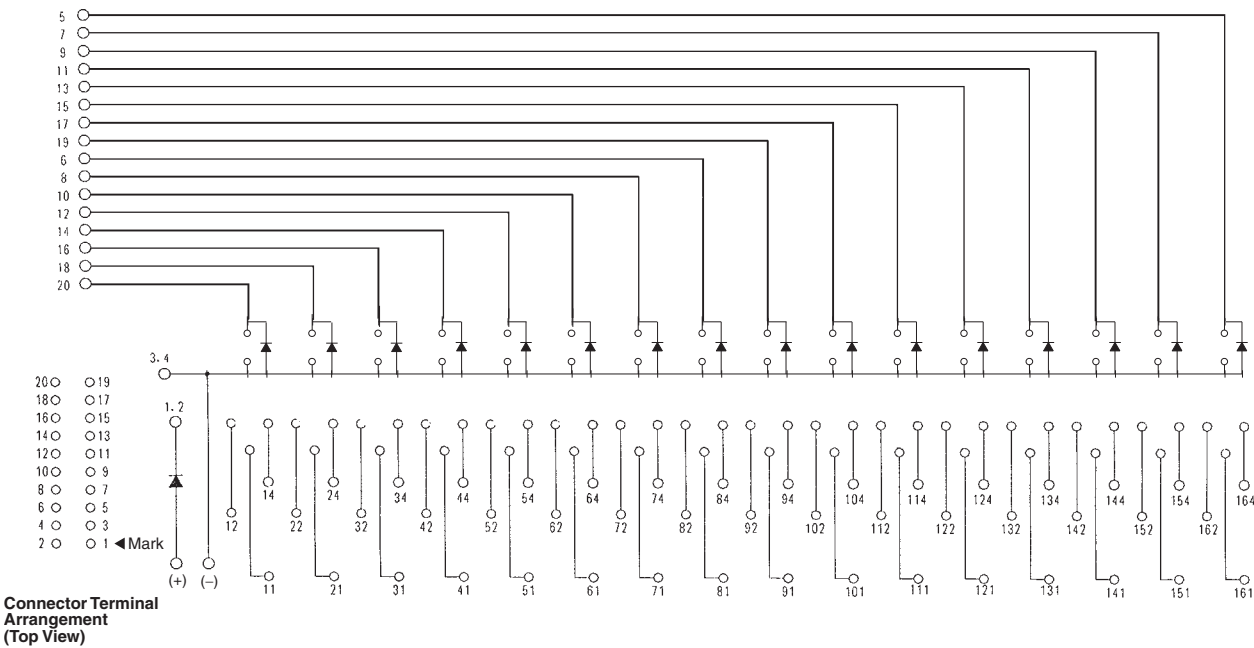
• G70A-ZOC16-3 (NPN)

NPN (positive common): The output at the connected controller will have a negative common from an NPN transistor.



G70A-ZOC16-4 (PNP)

PNP (negative common): The output at the connected controller will have a positive common from a PNP transistor.



**Note:** Pin numbers are indicated for convenience. The ▲ mark can be used to determine orientation.

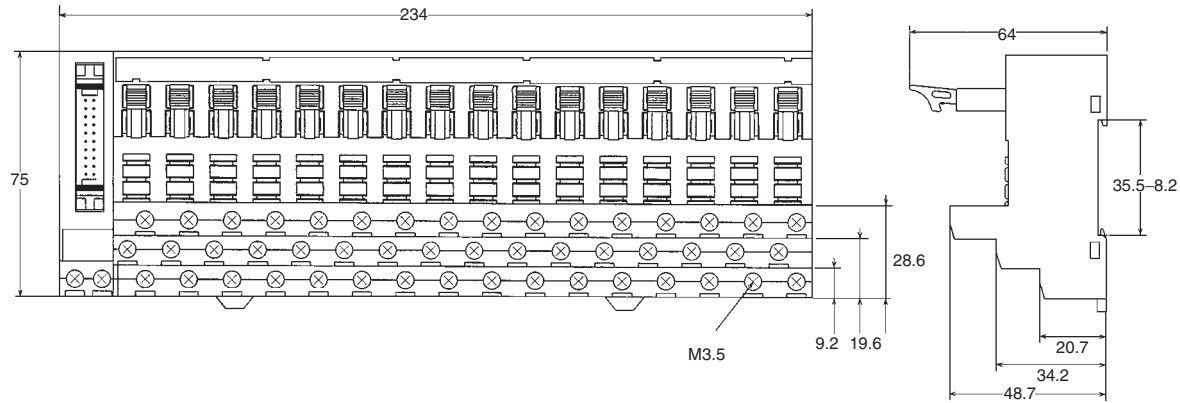


**Note:** Pin numbers are indicated for convenience. The ▲ mark can be used to determine orientation.

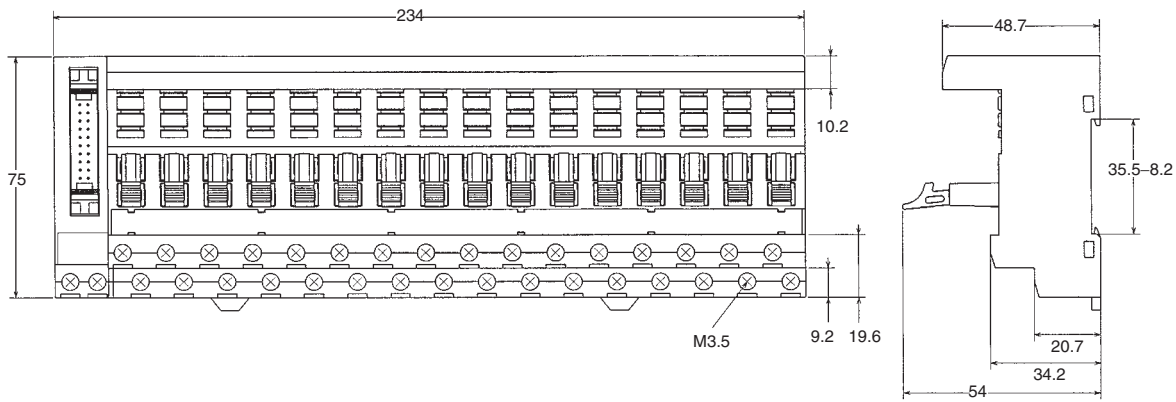
**Dimensions**

(Unit: mm)

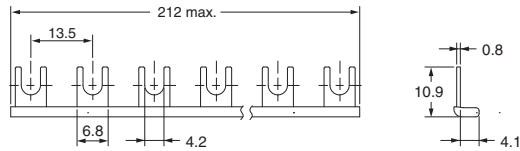
**G70A-ZOC16 (Output)**



**G70A-ZIM16 (Input)**



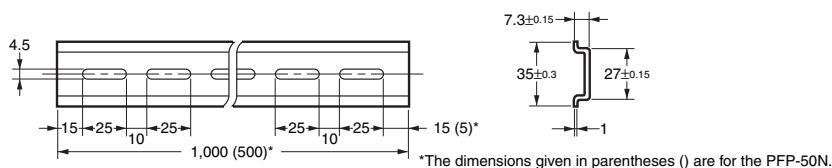
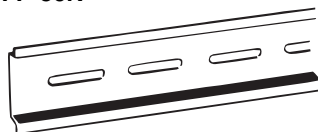
**Short Bar  
G78-16-E**



## G70A

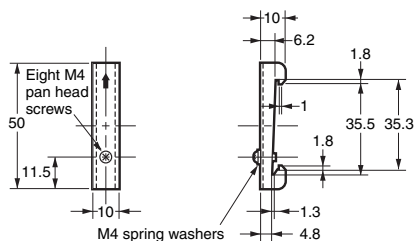
## Parts for Rail Mounting

**DIN Track**  
**PFP-100N**  
**PFP-50N**

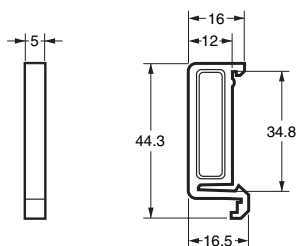
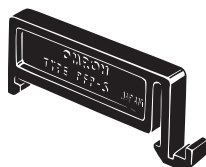


\*The dimensions given in parentheses ( ) are for the PFP-50N.

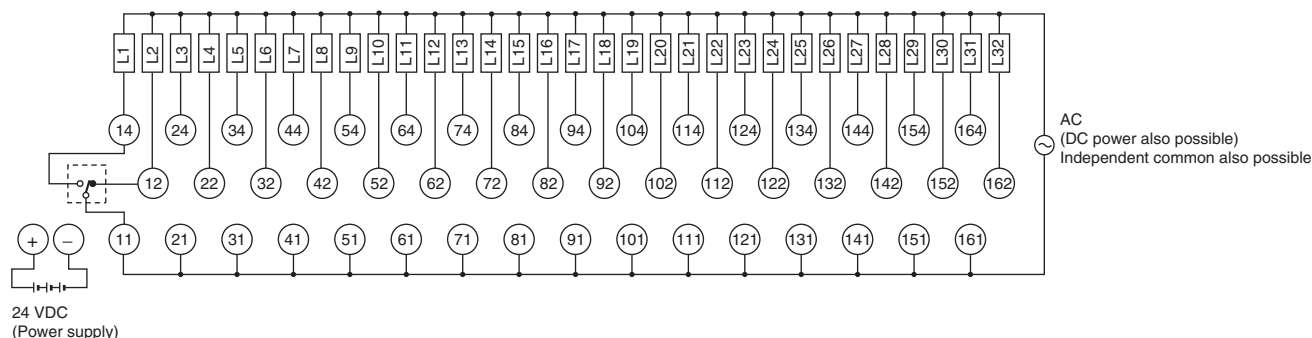
**End Plate  
PFP-M**



**Spacer  
PFP-S**



## Terminal Arrangement/Internal Connection



**Note:** The above diagram shows the Unit mounted to a G2R-1-S.

When mounting to a G3R-OA□ or G3RZ-201SLN, pins 11 to 14 are output terminals.

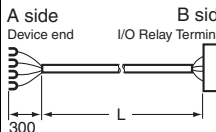
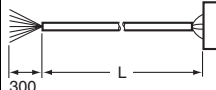
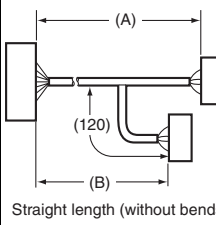
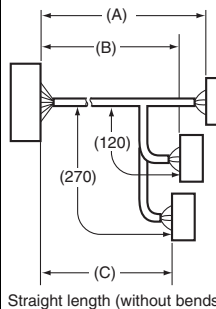
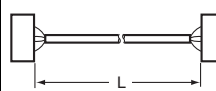
When mounting to a G3R-OD□, pin 14 is a plus terminal and pin 11 is a minus terminal. When mounting to G3RZ-201SLN, there is no polarity.

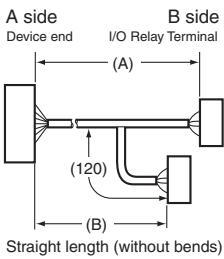
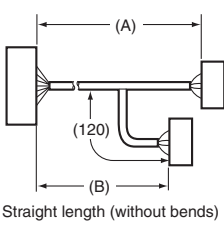
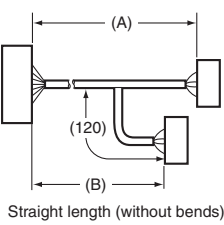
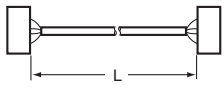
## Safety Precautions

**Be sure to read *the Safety Precautions for All I/O Relay Terminals* in the website: <http://www.ia.omron.com/>.**

## Connecting Cables

Refer to the datasheet for the **XW2Z-R** Cables for I/O Relay Terminals (Cat. No. G126).

| Type                         | Name                                                           | I/O Classification | Appearance                                                                          | Cable length L (mm) |             | Models          |                    |
|------------------------------|----------------------------------------------------------------|--------------------|-------------------------------------------------------------------------------------|---------------------|-------------|-----------------|--------------------|
| Various devices              | Cables with Loose Wires and Crimp Terminals<br><br>XW2Z-RY□C   | 16 I/O points      |    | 1,000               |             | XW2Z-RY100C     |                    |
|                              |                                                                |                    |                                                                                     | 1,500               |             | XW2Z-RY150C     |                    |
|                              |                                                                |                    |                                                                                     | 2,000               |             | XW2Z-RY200C     |                    |
|                              |                                                                |                    |                                                                                     | 3,000               |             | XW2Z-RY300C     |                    |
|                              |                                                                |                    |                                                                                     | 5,000               |             | XW2Z-RY500C     |                    |
|                              | Cables with Loose Wires<br>XW2Z-RA□C                           | 16 I/O points      |    | 2,000               |             | XW2Z-RA200C     |                    |
|                              |                                                                |                    | 5,000                                                                               |                     | XW2Z-RA500C |                 |                    |
| Fujitsu connectors (24 pins) | Cables with Connectors (1:1)<br><br>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)<br><br>XW2Z-RI□C-□<br>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 |                    |
| Fujitsu connectors (56 pins) | Cables with Connectors (1:3)<br><br>XW2Z-R□C-□-□               | 48 I/O points      |  | (A) 1,500           | (B) 1,250   | (C) 1,000       | XW2Z-R150C-125-100 |
|                              |                                                                |                    |                                                                                     | (A) 2,000           | (B) 1,750   | (C) 1,500       | XW2Z-R200C-175-150 |
|                              |                                                                |                    |                                                                                     | (A) 3,000           | (B) 2,750   | (C) 2,500       | XW2Z-R300C-275-250 |
|                              |                                                                |                    |                                                                                     |                     |             |                 |                    |
|                              |                                                                |                    |                                                                                     |                     |             |                 |                    |
|                              |                                                                |                    |                                                                                     |                     |             |                 |                    |
| MIL connectors (20 pins)     | Cables with Connectors (1:1)<br><br>XW2Z-RI□C<br>XW2Z-RO□C     | 16 I/O points      |  | 250                 |             | XW2Z-RI25C      |                    |
|                              |                                                                |                    |                                                                                     | 500                 |             | XW2Z-RI50C      |                    |
|                              |                                                                |                    |                                                                                     | 250                 |             | XW2Z-RO25C      |                    |
|                              |                                                                |                    |                                                                                     | 500                 |             | XW2Z-RO50C      |                    |

| Type                                                                                                                                                | Name                                                                                                                            | I/O Classification                       | Appearance                                                                           | Cable length L (mm) |                  | Models             |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|--------------------------------------------------------------------------------------|---------------------|------------------|--------------------|--|
| MIL connectors (40 pins)                                                                                                                            | Cables with Connectors (1:2)<br><br>XW2Z-RO□-□-D1,<br>XW2Z-RI□-□-D1,<br>XW2Z-RI□-□-D2,<br>XW2Z-RM□-□-D1 *1,<br>XW2Z-RM□-□-D2 *1 | 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  |  |
|                                                                                                                                                     |                                                                                                                                 | 16 inputs and 16 outputs (32 I/O points) | Straight length (without bends)                                                      | (A) 500             | (B) 250          | XW2Z-RI50-25-D2    |  |
|                                                                                                                                                     |                                                                                                                                 |                                          |                                                                                      | (A) 750             | (B) 500          | XW2Z-RI75-50-D2    |  |
|                                                                                                                                                     |                                                                                                                                 |                                          |                                                                                      | (A) 500             | (B) 250          | XW2Z-RM50-25-D1    |  |
|                                                                                                                                                     |                                                                                                                                 |                                          |                                                                                      | (A) 750             | (B) 500          | XW2Z-RM75-50-D1    |  |
|                                                                                                                                                     |                                                                                                                                 |                                          |                                                                                      | (A) 500             | (B) 250          | XW2Z-RM50-25-D2    |  |
|                                                                                                                                                     |                                                                                                                                 |                                          |                                                                                      | (A) 750             | (B) 500          | XW2Z-RM75-50-D2    |  |
| Mitsubishi Electric PLCs with 32-point connectors (1:2) *2                                                                                          | Mitsubishi Electric PLC Connecting Cables<br><br>XW2Z-RI□C-□-MN<br>XW2Z-RO□C-□-MN                                               | 32 input points                          |   | (A) 1,000           | (B) 750          | XW2Z-RI100C-75-MN  |  |
|                                                                                                                                                     |                                                                                                                                 |                                          |                                                                                      | (A) 1,500           | (B) 1,250        | XW2Z-RI150C-125-MN |  |
|                                                                                                                                                     |                                                                                                                                 |                                          |                                                                                      | (A) 2,000           | (B) 1,750        | XW2Z-RI200C-175-MN |  |
|                                                                                                                                                     |                                                                                                                                 |                                          |                                                                                      | (A) 3,000           | (B) 2,750        | XW2Z-RI300C-275-MN |  |
|                                                                                                                                                     |                                                                                                                                 | 32 output points                         |                                                                                      | (A) 1,000           | (B) 750          | XW2Z-RO100C-75-MN  |  |
|                                                                                                                                                     |                                                                                                                                 |                                          |                                                                                      | (A) 1,500           | (B) 1,250        | XW2Z-RO150C-125-MN |  |
|                                                                                                                                                     |                                                                                                                                 |                                          |                                                                                      | (A) 2,000           | (B) 1,750        | XW2Z-RO200C-175-MN |  |
|                                                                                                                                                     |                                                                                                                                 |                                          |                                                                                      | (A) 3,000           | (B) 2,750        | XW2Z-RO300C-275-MN |  |
| Schneider Electric PLCs with 32-point connectors (1:2)<br><br>Applicable models:<br>For inputs:<br>140 DDI 353 00<br>For outputs:<br>140 DDO 353 00 | Schneider Electric PLC Connecting Cables                                                                                        | 32 input points                          |  | 500                 |                  | XW2Z-R050C-SCH-A   |  |
|                                                                                                                                                     |                                                                                                                                 |                                          |                                                                                      | 1,000               |                  | XW2Z-R100C-SCH-A   |  |
|                                                                                                                                                     |                                                                                                                                 |                                          |                                                                                      | 2,000               |                  | XW2Z-R200C-SCH-A   |  |
|                                                                                                                                                     |                                                                                                                                 |                                          |                                                                                      | 3,000               |                  | XW2Z-R300C-SCH-A   |  |
|                                                                                                                                                     |                                                                                                                                 | 32 output points                         |                                                                                      | 5,000               | XW2Z-R500C-SCH-A |                    |  |
|                                                                                                                                                     |                                                                                                                                 |                                          |                                                                                      | 500                 |                  | XW2Z-R050C-SCH-B   |  |
|                                                                                                                                                     |                                                                                                                                 |                                          |                                                                                      | 1,000               |                  | XW2Z-R100C-SCH-B   |  |
|                                                                                                                                                     |                                                                                                                                 |                                          |                                                                                      | 2,000               |                  | XW2Z-R200C-SCH-B   |  |
|                                                                                                                                                     |                                                                                                                                 |                                          |                                                                                      | 3,000               |                  | XW2Z-R300C-SCH-B   |  |
|                                                                                                                                                     |                                                                                                                                 |                                          |                                                                                      | 5,000               |                  | XW2Z-R500C-SCH-B   |  |
| Schneider Electric PLCs with 16-point connectors (1:1)<br><br>Applicable models:<br>For inputs:<br>BMX DDI 1602<br>For outputs:<br>BMX DDO 1602     | XW2Z-R□C-SCH-□                                                                                                                  | 16 input points                          |  | 500                 |                  | XW2Z-R050C-SCH-C   |  |
|                                                                                                                                                     |                                                                                                                                 |                                          |                                                                                      | 1,000               |                  | XW2Z-R100C-SCH-C   |  |
|                                                                                                                                                     |                                                                                                                                 |                                          |                                                                                      | 2,000               |                  | XW2Z-R200C-SCH-C   |  |
|                                                                                                                                                     |                                                                                                                                 |                                          |                                                                                      | 3,000               |                  | XW2Z-R300C-SCH-C   |  |
|                                                                                                                                                     |                                                                                                                                 | 16 output points                         |                                                                                      | 5,000               | XW2Z-R500C-SCH-C |                    |  |
|                                                                                                                                                     |                                                                                                                                 |                                          |                                                                                      | 500                 |                  | XW2Z-R050C-SCH-D   |  |
|                                                                                                                                                     |                                                                                                                                 |                                          |                                                                                      | 1,000               |                  | XW2Z-R100C-SCH-D   |  |
|                                                                                                                                                     |                                                                                                                                 |                                          |                                                                                      | 2,000               |                  | XW2Z-R200C-SCH-D   |  |
|                                                                                                                                                     |                                                                                                                                 |                                          |                                                                                      | 3,000               |                  | XW2Z-R300C-SCH-D   |  |
|                                                                                                                                                     |                                                                                                                                 |                                          |                                                                                      | 5,000               |                  | XW2Z-R500C-SCH-D   |  |

**Note:** Contact for a cable length other than the above.

\*1. These cables are used to connect to slave products for DeviceNet and other networks.

\*2. For details on models that can be used, refer to *List of Combinations with the Mitsubishi PLC MELSEC-L Series, MELSEC-Q Series, and MELSEC iQ-R Series* on page 20.

| Type                                                                                                                                               | Name                                                | I/O Classification                                                                                                                             | Appearance       | Cable length L (mm) | Models           |  |       |                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------------|------------------|--|-------|------------------|
| Siemens PLCs with 32-point connectors (1:2)<br><br>Applicable models:<br>For inputs:<br>6ES7 321-1BL00-0AA0<br>For outputs:<br>6ES7 322-1BL00-0AA0 |                                                     | 32 input points                                                                                                                                |                  | 500                 | XW2Z-R050C-SIM-A |  |       |                  |
|                                                                                                                                                    |                                                     |                                                                                                                                                |                  | 1,000               | XW2Z-R100C-SIM-A |  |       |                  |
|                                                                                                                                                    |                                                     |                                                                                                                                                |                  | 2,000               | XW2Z-R200C-SIM-A |  |       |                  |
|                                                                                                                                                    |                                                     |                                                                                                                                                |                  | 3,000               | XW2Z-R300C-SIM-A |  |       |                  |
|                                                                                                                                                    |                                                     |                                                                                                                                                |                  | 5,000               | XW2Z-R500C-SIM-A |  |       |                  |
|                                                                                                                                                    |                                                     | 32 output points                                                                                                                               |                  | 500                 | XW2Z-R050C-SIM-B |  |       |                  |
|                                                                                                                                                    |                                                     |                                                                                                                                                |                  | 1,000               | XW2Z-R100C-SIM-B |  |       |                  |
|                                                                                                                                                    |                                                     |                                                                                                                                                |                  | 2,000               | XW2Z-R200C-SIM-B |  |       |                  |
|                                                                                                                                                    |                                                     |                                                                                                                                                |                  | 3,000               | XW2Z-R300C-SIM-B |  |       |                  |
|                                                                                                                                                    |                                                     |                                                                                                                                                |                  | 5,000               | XW2Z-R500C-SIM-B |  |       |                  |
| Siemens PLCs with 16-point connectors (1:1)<br><br>Applicable models:<br>For inputs:<br>6ES7 321-1BH02-0AA0                                        | Siemens PLC Connecting Cables<br><br>XW2Z-R□C-SIM-□ | 16 input points                                                                                                                                |                  | 500                 | XW2Z-R050C-SIM-C |  |       |                  |
|                                                                                                                                                    |                                                     |                                                                                                                                                |                  | 1,000               | XW2Z-R100C-SIM-C |  |       |                  |
|                                                                                                                                                    |                                                     |                                                                                                                                                |                  | 2,000               | XW2Z-R200C-SIM-C |  |       |                  |
|                                                                                                                                                    |                                                     |                                                                                                                                                |                  | 3,000               | XW2Z-R300C-SIM-C |  |       |                  |
|                                                                                                                                                    |                                                     |                                                                                                                                                |                  | 5,000               | XW2Z-R500C-SIM-C |  |       |                  |
|                                                                                                                                                    |                                                     | Siemens PLCs with 32-point connectors (1:2)<br><br>Applicable models:<br>For inputs:<br>6ES7 421-1BL-0AA0<br>For outputs:<br>6ES7 422-1BL-0AA0 |                  |                     | 32 input points  |  | 500   | XW2Z-R050C-SIM-D |
|                                                                                                                                                    |                                                     |                                                                                                                                                |                  |                     |                  |  | 1,000 | XW2Z-R100C-SIM-D |
|                                                                                                                                                    |                                                     |                                                                                                                                                |                  |                     |                  |  | 2,000 | XW2Z-R200C-SIM-D |
|                                                                                                                                                    |                                                     |                                                                                                                                                |                  |                     |                  |  | 3,000 | XW2Z-R300C-SIM-D |
|                                                                                                                                                    |                                                     |                                                                                                                                                |                  |                     |                  |  | 5,000 | XW2Z-R500C-SIM-D |
| 32 output points                                                                                                                                   | 500                                                 |                                                                                                                                                | XW2Z-R050C-SIM-E |                     |                  |  |       |                  |
|                                                                                                                                                    | 1,000                                               |                                                                                                                                                | XW2Z-R100C-SIM-E |                     |                  |  |       |                  |
|                                                                                                                                                    | 2,000                                               |                                                                                                                                                | XW2Z-R200C-SIM-E |                     |                  |  |       |                  |
|                                                                                                                                                    | 3,000                                               |                                                                                                                                                | XW2Z-R300C-SIM-E |                     |                  |  |       |                  |
|                                                                                                                                                    | 5,000                                               |                                                                                                                                                | XW2Z-R500C-SIM-E |                     |                  |  |       |                  |

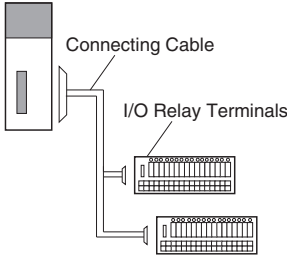
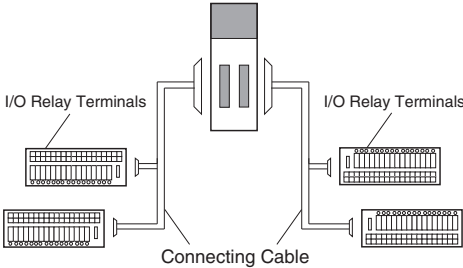
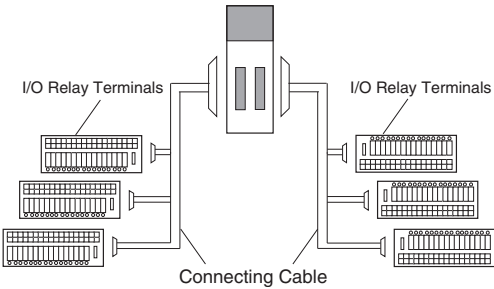
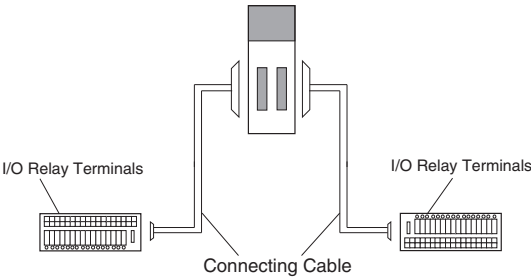
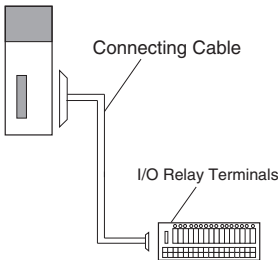
**Note: 1.** Refer to Combinations of Connections starting on the next page.

**2.** For connector pin diagrams and cable colors, refer to the wiring diagrams starting on page 4 of *XW2Z-R Cables for I/O Relay Terminals* (Cat. No. G126).

Combinations of Connections

Refer to the next page for details on the combinations of cables and connection devices [OMRON PLC I/O Units NX Series, CJ Series, CS Series], [Mitsubishi PLC I/O Units MELSEC-L Series, MELSEC-Q Series, MELSEC iQ-R Series].  
For combinations with other products, refer to *I/O Relay Terminals and Connected Devices* (Cat. No. J217) or to the datasheets for related products.

Connection Patterns

| Pattern | Configuration                                                                                                                                                                                                                                                                                                                           |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A       |  <p>Diagram A shows a single I/O Relay Terminal connected to a Connecting Cable. The cable is shown as a vertical line with a horizontal branch connecting to the terminal. Labels include "Connecting Cable" and "I/O Relay Terminals".</p>          |
| B       |  <p>Diagram B shows two I/O Relay Terminals connected to a Connecting Cable. The cable is shown as a vertical line with two horizontal branches, each connecting to a terminal. Labels include "I/O Relay Terminals" and "Connecting Cable".</p>      |
| D       |  <p>Diagram D shows three I/O Relay Terminals connected to a Connecting Cable. The cable is shown as a vertical line with three horizontal branches, each connecting to a terminal. Labels include "I/O Relay Terminals" and "Connecting Cable".</p> |
| E       |  <p>Diagram E shows two I/O Relay Terminals connected to a Connecting Cable. The cable is shown as a vertical line with two horizontal branches, each connecting to a terminal. Labels include "I/O Relay Terminals" and "Connecting Cable".</p>    |
| F       |  <p>Diagram F shows a single I/O Relay Terminal connected to a Connecting Cable. The cable is shown as a vertical line with a horizontal branch connecting to the terminal. Labels include "Connecting Cable" and "I/O Relay Terminals".</p>        |

## List of Combinations with the OMRON PLC NX Series

| NX I/O Units                   |                                                               |                                                                   |                                          | Conne<br>ction<br>pattern | XW2Z-R Cables  |               |                      | G70A-ZOC16<br>Relay Terminal Socket |              |                      |  |  |
|--------------------------------|---------------------------------------------------------------|-------------------------------------------------------------------|------------------------------------------|---------------------------|----------------|---------------|----------------------|-------------------------------------|--------------|----------------------|--|--|
| I/O<br>capacity                | Model                                                         | External<br>connectors *2                                         | Polarity                                 |                           | Specifications | Model *2      | Quantity<br>required | Specifications                      | Model        | Quantity<br>required |  |  |
| Input Units                    |                                                               |                                                                   |                                          |                           |                |               |                      |                                     |              |                      |  |  |
| 16 inputs                      | NX-ID5142-5                                                   | 1 MIL connector                                                   | NPN or PNP                               | F                         | 1:1            | XW2Z-RO□C     | 1                    | Inputs *3                           | ---          |                      |  |  |
| 32 inputs                      | NX-ID6142-5                                                   | 1 MIL connector                                                   | NPN or PNP                               | A                         | 1:2            | XW2Z-RO□-□-D1 | 1                    |                                     | ---          |                      |  |  |
|                                | NX-ID6142-6                                                   | 1 Fujitsu connector                                               | NPN or PNP                               |                           |                | XW2Z-RI□C-□   | 1                    |                                     | ---          |                      |  |  |
| Output Units                   |                                                               |                                                                   |                                          |                           |                |               |                      |                                     |              |                      |  |  |
| 16 outputs                     | NX-OD5121-5                                                   | 1 MIL connector                                                   | NPN                                      | F                         | 1:1            | XW2Z-RO□C     | 1                    | NPN outputs                         | G70A-ZOC16-3 | 1                    |  |  |
|                                | NX-OD5256-5                                                   | 1 MIL connector                                                   | PNP                                      |                           |                | XW2Z-RO□C     | 1                    | PNP outputs                         | G70A-ZOC16-4 | 1                    |  |  |
| 32 outputs                     | NX-OD6121-5                                                   | 1 MIL connector                                                   | NPN                                      | A                         | 1:2            | XW2Z-RO□-□-D1 | 1                    | NPN outputs                         | G70A-ZOC16-3 | 2                    |  |  |
|                                | NX-OD6256-5                                                   | 1 MIL connector                                                   | PNP                                      |                           |                | XW2Z-RO□-□-D1 | 1                    | PNP outputs                         | G70A-ZOC16-4 | 2                    |  |  |
| 32 outputs                     | NX-OD6121-6                                                   | 1 Fujitsu connector                                               | NPN                                      |                           |                | XW2Z-RO□C-□   | 1                    | NPN outputs                         | G70A-ZOC16-3 | 2                    |  |  |
| Mixed I/O Units                |                                                               |                                                                   |                                          |                           |                |               |                      |                                     |              |                      |  |  |
| 16 inputs<br>and 16<br>outputs | NX-MD6121-6                                                   | 2 Fujitsu connectors<br>(1 for 16 inputs and<br>1 for 16 outputs) | Outputs:<br>NPN<br>Inputs:<br>NPN or PNP | E                         | 1:1            | XW2Z-R□C      | 2                    | Inputs *3                           | ---          |                      |  |  |
|                                |                                                               |                                                                   |                                          |                           |                | XW2Z-RO□C     |                      | NPN outputs                         | G70A-ZOC16-3 | 1                    |  |  |
|                                | NX-MD6121-5                                                   | 2 MIL connectors<br>(1 for 16 inputs and<br>1 for 16 outputs)     | Outputs:<br>NPN<br>Inputs:<br>NPN or PNP |                           |                | XW2Z-RO□C     | 1                    | Inputs *3                           | ---          |                      |  |  |
|                                |                                                               |                                                                   |                                          |                           |                | XW2Z-RO□C     | 1                    | NPN outputs                         | G70A-ZOC16-3 | 1                    |  |  |
|                                |                                                               |                                                                   |                                          |                           |                | XW2Z-RO□C     | 1                    | Inputs *3                           | ---          |                      |  |  |
| NX-MD6256-5                    | 2 MIL connectors<br>(1 for 16 inputs and<br>1 for 16 outputs) | Outputs:<br>PNP<br>Inputs:<br>NPN or PNP                          | XW2Z-RI□C                                | 1                         | PNP outputs    | G70A-ZOC16-4  | 1                    |                                     |              |                      |  |  |

\*1. For details on the types of connectors, refer to pages 13 and 14.

\*2. The box □ is replaced by the cable length.

\*3. Either NPN inputs or PNP inputs can be used.

## List of Combinations with the OMRON PLC CJ Series

| CJ1W I/O Units                   |            |                                                                   |                   | Conne<br>ction<br>pattern | XW2Z-R Cables  |               |                                                               | G70A-ZOC16<br>Relay Terminal Socket |              |                      |
|----------------------------------|------------|-------------------------------------------------------------------|-------------------|---------------------------|----------------|---------------|---------------------------------------------------------------|-------------------------------------|--------------|----------------------|
| I/O<br>capacity                  | Model      | External connectors<br>*1                                         | Polarity          |                           | Specifications | Model *2      | Quantity<br>required                                          | Specifications                      | Model        | Quantity<br>required |
| DC Input Units                   |            |                                                                   |                   |                           |                |               |                                                               |                                     |              |                      |
| 32 inputs                        | CJ1W-ID231 | 1 Fujitsu connector                                               | NPN               | A                         | 1:2            | XW2Z-RI□C-□   | 1                                                             | Inputs *3                           | ---          |                      |
|                                  | CJ1W-ID232 | 1 MIL connector                                                   | NPN               |                           |                | XW2Z-RO□-□-D1 | 1                                                             |                                     | ---          |                      |
|                                  | CJ1W-ID233 | 1 MIL connector                                                   | NPN               |                           |                | XW2Z-RO□-□-D1 | 1                                                             |                                     | ---          |                      |
| 64 inputs                        | CJ1W-ID261 | 2 Fujitsu connectors<br>(2, 32-point connectors)                  | NPN               | B                         |                | XW2Z-RI□C-□   | 2                                                             |                                     | ---          |                      |
|                                  | CJ1W-ID262 | 2 MIL connectors<br>(2, 32-point connectors)                      | NPN               |                           |                | XW2Z-RO□-□-D1 | 2                                                             |                                     | ---          |                      |
| Transistor Output Units          |            |                                                                   |                   |                           |                |               |                                                               |                                     |              |                      |
| 32<br>outputs                    | CJ1W-OD231 | 1 Fujitsu connector                                               | Sinking<br>(NPN)  | A                         | 1:2            | XW2Z-RO□C-□   | 1                                                             | NPN outputs                         | G70A-ZOC16-3 | 2                    |
|                                  | CJ1W-OD233 | 1 MIL connector                                                   | Sinking<br>(NPN)  |                           |                | XW2Z-RO□-□-D1 | 1                                                             |                                     | G70A-ZOC16-3 |                      |
|                                  | CJ1W-OD232 | 1 MIL connector                                                   | Sourcing<br>(PNP) |                           |                | XW2Z-RO□-□-D1 | 1                                                             | PNP outputs                         | G70A-ZOC16-4 | 2                    |
|                                  | CJ1W-OD234 | 1 MIL connector                                                   | Sinking<br>(NPN)  |                           |                | XW2Z-RO□-□-D1 | 1                                                             | NPN outputs                         | G70A-ZOC16-3 | 2                    |
| 64<br>outputs                    | CJ1W-OD261 | 2 Fujitsu connectors<br>(2, 32-point connectors)                  | Sinking<br>(NPN)  | B                         |                | XW2Z-RO□C-□   | 2                                                             | NPN outputs                         | G70A-ZOC16-3 | 2                    |
|                                  | CJ1W-OD262 | 2 MIL connectors<br>(2, 32-point connectors)                      | Sourcing<br>(PNP) |                           |                | XW2Z-RO□-□-D1 | 2                                                             | PNP outputs                         | G70A-ZOC16-4 | 2                    |
|                                  | CJ1W-OD263 | 2 MIL connectors<br>(2, 32-point connectors)                      | Sinking<br>(NPN)  |                           |                | XW2Z-RO□-□-D1 | 2                                                             | NPN outputs                         | G70A-ZOC16-3 | 2                    |
| DC Input/Transistor Output Units |            |                                                                   |                   |                           |                |               |                                                               |                                     |              |                      |
| 16 inputs<br>and 16<br>outputs   | CJ1W-MD231 | 2 Fujitsu connectors<br>(1 for 16 inputs and<br>1 for 16 outputs) | Sinking<br>(NPN)  | E                         | 1:1            | XW2Z-R□C      | 2                                                             | Inputs *3                           | ---          |                      |
|                                  |            |                                                                   |                   |                           |                | NPN outputs   |                                                               | G70A-ZOC16-3                        | 1            |                      |
|                                  | CJ1W-MD233 | 2 MIL connectors<br>(1 for 16 inputs and<br>1 for 16 outputs)     | Sinking<br>(NPN)  |                           |                | XW2Z-RO□C     | 1                                                             | Inputs *3                           | ---          |                      |
|                                  |            |                                                                   |                   |                           |                | XW2Z-RO□C     | 1                                                             | NPN outputs                         | G70A-ZOC16-3 | 1                    |
|                                  |            |                                                                   |                   |                           |                | CJ1W-MD232    | 2 MIL connectors<br>(1 for 16 inputs and<br>1 for 16 outputs) | Sourcing<br>(PNP)                   | XW2Z-RO□C    | 1                    |
| XW2Z-RI□C                        | 1          | PNP outputs                                                       | G70A-ZOC16-4      | 1                         |                |               |                                                               |                                     |              |                      |
| 32 inputs<br>and 32<br>outputs   | CJ1W-MD261 | 2 Fujitsu connectors<br>(1 for 32 inputs and<br>1 for 32 outputs) | Sinking<br>(NPN)  | B                         | 1:2            | XW2Z-RI□C-□   | 1                                                             | Inputs *3                           | ---          |                      |
|                                  |            |                                                                   |                   |                           |                | XW2Z-RO□C-□   | 1                                                             | NPN outputs                         | G70A-ZOC16-3 | 1                    |
|                                  | CJ1W-MD263 | 2 MIL connectors<br>(1 for 32 inputs and<br>1 for 32 outputs)     | Sinking<br>(NPN)  |                           |                | XW2Z-RO□-□-D1 | 1                                                             | Inputs *3                           | ---          |                      |
|                                  |            |                                                                   |                   |                           |                | XW2Z-RO□-□-D1 | 1                                                             | NPN outputs                         | G70A-ZOC16-4 | 2                    |

\*1. For details on the types of connectors, refer to pages 13 and 14.

\*2. The box □ is replaced by the cable length.

\*3. Either NPN inputs or PNP inputs can be used.

## List of Combinations with the OMRON PLC CS Series

| CJ1W I/O Units                   |                |                                                                   |                   | Conne<br>ction<br>pattern | XW2Z-R Cables  |                   |                      | G70A-ZOC16<br>Relay Terminal Socket |              |                      |   |
|----------------------------------|----------------|-------------------------------------------------------------------|-------------------|---------------------------|----------------|-------------------|----------------------|-------------------------------------|--------------|----------------------|---|
| I/O<br>capacity                  | Model          | External connectors                                               | Polarity          |                           | Specifications | Model *1          | Quantity<br>required | Specifications                      | Model        | Quantity<br>required |   |
| DC Input Units                   |                |                                                                   |                   |                           |                |                   |                      |                                     |              |                      |   |
| 32 inputs                        | CS1W-ID231     | 1 Fujitsu connector                                               | NPN               | A                         | 1:2            | XW2Z-RI□C-□       | 1                    | Inputs #2                           | ---          |                      |   |
| 64 inputs                        | CS1W-ID261     | 2 Fujitsu connectors<br>(2, 32-point connectors)                  | NPN               | B                         |                | XW2Z-RI□C-□       | 2                    |                                     | ---          |                      |   |
| 96 inputs                        | CS1W-ID291     | 2 Fujitsu connectors<br>(2, 48-point connectors)                  | NPN               | D                         | 1:3            | XW2Z-R□C-□-□      | 2                    |                                     | ---          |                      |   |
| Transistor Output Units          |                |                                                                   |                   |                           |                |                   |                      |                                     |              |                      |   |
| 32<br>outputs                    | CS1W-OD231     | 1 Fujitsu connector                                               | Sinking<br>(NPN)  | A                         | 1:2            | XW2Z-RO□C-□       | 1                    | NPN outputs                         | G70A-ZOC16-3 | 2                    |   |
|                                  | CS1W-OD232     | 1 Fujitsu connector                                               | Sourcing<br>(PNP) |                           |                | XW2Z-RO□C-□       | 1                    | PNP outputs                         | G70A-ZOC16-4 | 2                    |   |
| 64<br>outputs                    | CS1W-OD261     | 2 Fujitsu connectors<br>(2, 32-point connectors)                  | Sinking<br>(NPN)  | B                         |                | XW2Z-RO□C-□       | 2                    | NPN outputs                         | G70A-ZOC16-3 | 4                    |   |
|                                  | CS1W-OD262     | 2 Fujitsu connectors<br>(2, 32-point connectors)                  | Sourcing<br>(PNP) |                           |                | XW2Z-RO□C-□       | 2                    | PNP outputs                         | G70A-ZOC16-4 | 4                    |   |
| 96<br>outputs                    | CS1W-OD291     | 2 Fujitsu connectors<br>(2, 48-point connectors)                  | Sinking<br>(NPN)  | D                         | 1:3            | XW2Z-R□C-□-□      | 2                    | NPN outputs                         | G70A-ZOC16-3 | 6                    |   |
| DC Input/Transistor Output Units |                |                                                                   |                   |                           |                |                   |                      |                                     |              |                      |   |
| 32 inputs<br>and 32<br>outputs   | CS1W-<br>MD261 | 2 Fujitsu connectors<br>(1 for 32 inputs and<br>1 for 32 outputs) | Sinking<br>(NPN)  | B                         | 1:2            | XW2Z-RI□C-□       | 1                    | Inputs #2                           | ---          |                      |   |
|                                  |                |                                                                   | Sourcing<br>(PNP) |                           |                | XW2Z-RO□C-□       | 1                    | NPN outputs                         | G70A-ZOC16-3 | 1                    |   |
|                                  | CS1W-<br>MD262 | 2 Fujitsu connectors<br>(1 for 32 inputs and<br>1 for 32 outputs) |                   |                           |                | Sourcing<br>(PNP) | XW2Z-RI□C-□          | 1                                   | Inputs #2    | ---                  |   |
|                                  |                |                                                                   |                   |                           |                |                   | XW2Z-RO□C-□          | 1                                   | PNP outputs  | G70A-ZOC16-4         | 2 |
| 48 inputs<br>and 48<br>outputs   | CS1W-<br>MD291 | 2 Fujitsu connectors<br>(1 for 48 inputs and<br>1 for 48 outputs) | Sinking<br>(NPN)  | D                         | 1:3            | XW2Z-R□C-□-□      | 2                    | Inputs #2                           | ---          |                      |   |
|                                  |                |                                                                   | NPN outputs       |                           |                |                   |                      | G70A-ZOC16-3                        | 3            |                      |   |
|                                  | CS1W-<br>MD292 | 2 Fujitsu connectors<br>(1 for 48 inputs and<br>1 for 48 outputs) | Sourcing<br>(PNP) |                           |                | XW2Z-R□C-□-□      | 1                    | Inputs #2                           | ---          |                      |   |
|                                  |                |                                                                   |                   |                           |                |                   |                      |                                     |              |                      |   |

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

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

Refer to the manuals for the connected PLC for the connections to I/O Units for OMRON PLCs.

| Series | Model                                                                  | Man. No. | Manual Name                                         |
|--------|------------------------------------------------------------------------|----------|-----------------------------------------------------|
| CS1    | CS1G-CPU□□□H, CS1H-CPU□□□H                                             | W339     | Programmable Controllers Operation Manual           |
| CJ1    | CJ1H-CPU□□□H-R, CJ1G/H-CPU□□□H, CJ1G-CPU□□□P, CJ1M-CPU□□□, CJ1G-CPU□□□ | W393     | CJ Series Programmable Controllers Operation Manual |
| CJ2    | CJ2H-CPU6□-EIP, CJ2H-CPU6□, CJ2M-CPU□□□                                | W472     | CJ-series CJ2 CPU Unit Hardware User's Manual       |
| NJ     | NJ501-□□□□□                                                            | W500     | NJ-series CPU Unit Hardware User's Manual           |
| NX     | NX-ID□□□□□, NX-IA□□□□□, NX-OD□□□□□, NX-OC□□□□□, NX-MD□□□□□             | W521     | NX-series Digital I/O Units User's Manual           |

## List of Combinations with the Mitsubishi PLC MELSEC-L Series, MELSEC-Q Series, and MELSEC iQ-R Series

| PLC I/O Unit                   |                             |                         |               | Conne<br>ction<br>pattern | XW2Z-R Cables  |                 |                      | G70A-ZOC16<br>Relay Terminal Socket |              |                      |
|--------------------------------|-----------------------------|-------------------------|---------------|---------------------------|----------------|-----------------|----------------------|-------------------------------------|--------------|----------------------|
| I/O<br>capacity                | Model                       | External<br>connectors  | Polarity      |                           | Specifications | Model *         | Quantity<br>required | Specifications                      | Model        | Quantity<br>required |
| Input Units                    |                             |                         |               |                           |                |                 |                      |                                     |              |                      |
| 32 inputs                      | LX41C4                      | 1 Fujitsu<br>connector  | NPN or<br>PNP | A                         | 1:2            | XW2Z-RI□□□-□□MN | 1                    | ---                                 |              |                      |
|                                | QX41/QX41-S1/<br>QX41-S2    |                         |               |                           |                |                 |                      |                                     |              |                      |
|                                | QX71                        |                         |               |                           |                |                 |                      |                                     |              |                      |
|                                | RX41C4                      |                         |               |                           |                |                 |                      |                                     |              |                      |
| 64 inputs                      | LX42C4                      | 2 Fujitsu<br>connectors |               | B                         |                | XW2Z-RI□□□-□□MN | 2                    | ---                                 |              |                      |
|                                | QX42/QX42-S1                |                         |               |                           |                |                 |                      |                                     |              |                      |
|                                | QX82/QX82-S1                |                         |               |                           |                |                 |                      |                                     |              |                      |
|                                | RX42C4                      |                         |               |                           |                |                 |                      |                                     |              |                      |
| Output Units                   |                             |                         |               |                           |                |                 |                      |                                     |              |                      |
| 32<br>outputs                  | LY41NT1P                    | 1 Fujitsu<br>connector  | NPN           | A                         | 1:2            | XW2Z-RO□□□-□□MN | 1                    | NPN outputs                         | G70A-ZOC16-3 | 2                    |
|                                | QY41P                       |                         |               |                           |                |                 |                      |                                     |              |                      |
|                                | QY71                        |                         |               |                           |                |                 |                      |                                     |              |                      |
|                                | RY41NT2P                    | 1 Fujitsu<br>connector  | PNP           |                           |                | XW2Z-RO□□□-□□MN | 1                    | PNP outputs                         | G70A-ZOC16-4 | 2                    |
|                                | LY41PT1P                    |                         |               |                           |                |                 |                      |                                     |              |                      |
|                                | RY41PT1P                    |                         |               |                           |                |                 |                      |                                     |              |                      |
| 64<br>outputs                  | RY41PT2H                    | 2 Fujitsu<br>connectors | NPN           | B                         |                | XW2Z-RO□□□-□□MN | 2                    | NPN outputs                         | G70A-ZOC16-3 | 4                    |
|                                | LY42NT1P                    |                         |               |                           |                |                 |                      |                                     |              |                      |
|                                | RY42NT2P                    |                         |               |                           |                |                 |                      |                                     |              |                      |
|                                | QY42P                       | 2 Fujitsu<br>connectors | PNP           |                           |                | XW2Z-RO□□□-□□MN | 2                    | PNP outputs                         | G70A-ZOC16-4 | 4                    |
|                                | LY42PT1P                    |                         |               |                           |                |                 |                      |                                     |              |                      |
|                                | RY42PT1P                    |                         |               |                           |                |                 |                      |                                     |              |                      |
| QY82P                          |                             |                         |               |                           |                |                 |                      |                                     |              |                      |
| Mixed I/O Units                |                             |                         |               |                           |                |                 |                      |                                     |              |                      |
| 32 inputs<br>and 32<br>outputs | RH42C4NT2P<br>(Input side)  | 2 Fujitsu<br>connectors | NPN or<br>PNP | B                         | 1:2            | XW2Z-RI□□□-□□MN | 1                    | ---                                 |              |                      |
|                                | RH42C4NT2P<br>(Output side) |                         | NPN           |                           |                | XW2Z-RO□□□-□□MN | 1                    | NPN outputs                         | G70A-ZOC16-3 | 2                    |
|                                | QH42P<br>(Input side)       | 2 Fujitsu<br>connectors | NPN or<br>PNP |                           |                | XW2Z-RI□□□-□□MN | 1                    | ---                                 |              |                      |
|                                | QH42P<br>(Output side)      |                         | NPN           |                           |                | XW2Z-RO□□□-□□MN | 1                    | NPN outputs                         | G70A-ZOC16-3 | 2                    |
|                                | QX41Y41P<br>(Input side)    | 2 Fujitsu<br>connectors | NPN or<br>PNP |                           |                | XW2Z-RI□□□-□□MN | 1                    | ---                                 |              |                      |
|                                | QX41Y41P<br>(Output side)   |                         | NPN           |                           |                | XW2Z-RO□□□-□□MN | 1                    | NPN outputs                         | G70A-ZOC16-3 | 2                    |
|                                | LH42C4NT1P<br>(Input side)  | 2 Fujitsu<br>connectors | NPN or<br>PNP |                           |                | XW2Z-RI□□□-□□MN | 1                    | ---                                 |              |                      |
|                                | LH42C4NT1P<br>(Output side) |                         | NPN           |                           |                | XW2Z-RO□□□-□□MN | 1                    | NPN outputs                         | G70A-ZOC16-3 | 2                    |
|                                | LH42C4PT1P<br>(Input side)  | 2 Fujitsu<br>connectors | NPN or<br>PNP |                           |                | XW2Z-RI□□□-□□MN | 1                    | ---                                 |              |                      |
|                                | LH42C4PT1P<br>(Output side) |                         | PNP           |                           |                | XW2Z-RO□□□-□□MN | 1                    | PNP outputs                         | G70A-ZOC16-4 | 2                    |

**Note:** Cables that can be connected to the QX81, QX81-S2, and QY81P have not been prepared.

\* The box □ is replaced by the cable length. For details on the types, refer to page 14.

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