

I/O Relay Terminal G70V

I/O Relay Terminals with 16 Points and Push-In Plus terminal blocks to Downsize Control Panels and Save Labor







- I/O Relay Terminals with 16 points to mount G2RV Slim I/O Relays.
- Push-In Plus terminal blocks are used to save wiring work in comparison with traditional screw terminals. (Wiring time is reduced by 60% *1 in comparison with traditional screw terminals.)
- Work is reduced ever further with one-step cable connection to the PLC.
- Diode provided for coil surge absorption.
- Operation indicators for immediate recognition of I/O signal status.
- Accepts G3RV Slim I/O SSRs. *2
- Greatly reduce wiring work and maximize space efficiency with new models that provide internal connections between I/O terminals. (input models: 16 point/common, output models: 4 points/common)
- DIN Track or screw mounting.
- *1. According to OMRON actual measurement data from November 2015.
- *2. Mounting of some models is not possible.



Refer to Safety Precautions on page 22.



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

Model Number Legend

G70V - \square \square \square \square \square 16 \square - \square \square \square (7)

- (1) Mountable Relays
 - S: Relays
 - Z: Sockets
- (2) Input/Output Classification
 - I: For input
 - O: For output
- (3) I/O Specification
 - C: Contacts

(Applicable when (2) is O (for output) (relay output).)

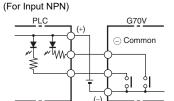
- D: DC (Applicable when (2) is I (for input) (coil for input).)
- M: AC/DC (Applicable when (1) is Z (Sockets).)
- (4) Number of I/O Points
 - 16: 16 points
- (5) Terminal Type
 - P: Push-In Plus terminal blocks
- (6) Common Line on Connector Side
 - Blank: NPN
 - 1: PNP
- (7) Common Line on Terminal Block Side

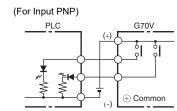
Blank: No internal connections

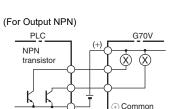
- C4: Every 4 points internally connected at terminal block bottom row
- C4-D: Every 4 points internally connected at terminal

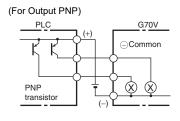
block middle row

C16: 16 points internally connected









Ordering Information

I/O Relay Terminals

Terminals	Classification	Points	Common Line		Rated	Model
Terminais	Terminals Classification F		Terminal Block Side	Connector Side	voltage	Wodel
			No internal connections	NPN (- common)		G70V-SID16P
	Push-In Plus terminal blocks 16		No internal connections	PNP (+ common)	24 VDC	G70V-SID16P-1
		16	16 nainta internally connected	NPN (- common)		G70V-SID16P-C16
Push-In Plus			16 points internally connected	PNP (+ common)		G70V-SID16P-1-C16
terminal blocks		No internal connections		NPN (+ common)		G70V-SOC16P
			PNP (- common)		G70V-SOC16P-1	
Output *2		Every 4 points internally connected	NPN (+ common)		G70V-SOC16P-C4	
			at terminal block bottom row	PNP (- common)		G70V-SOC16P-1-C4

*1. Mountable Relays: G2RV-1-S-AP-G DC21V. *2. Mountable Relays: G2RV-1-S-G DC21V.

I/O Terminal Sockets

Applicable I/O Relay Terminal	Classification	Common L	Model	
Applicable I/O Relay Terminal	Ciassification	Terminal Block Side	Connector Side	wodei
G70V-SID16P		No internal connections	NPN (- common)	G70V-ZID16P
G70V-SID16P-1	Input	No internal connections	PNP (+ common)	G70V-ZID16P-1
G70V-SID16P-C16	Input	16 points internally connected	NPN (- common)	G70V-ZID16P-C16
G70V-SID16P-1-C16		To points internally conflected	PNP (+ common)	G70V-ZID16P-1-C16
G70V-SOC16P		No internal connections	NPN (+ common)	G70V-ZOM16P
G70V-SOC16P-1		No internal connections	PNP (- common)	G70V-ZOM16P-1
G70V-SOC16P-C4	Output	Every 4 points internally connected	NPN (+ common)	G70V-ZOM16P-C4
G70V-SOC16P-1-C4	Output	at terminal block bottom row	PNP (- common)	G70V-ZOM16P-1-C4
*		Every 4 points internally connected	NPN (+ common)	G70V-ZOM16P-C4-D
		at terminal block middle row	PNP (- common)	G70V-ZOM16P-1-C4-D

Note: 1. Relays are not mounted to the G70V-ZID16P(-1)(-C16) I/O Terminal Sockets. Combine the I/O Terminal Sockets with Slim I/O Relays. 2. Relays are not mounted to the G70V-Z0M16P(-1)(-C4) I/O Terminal Sockets. Combine the I/O Terminal Sockets with Slim I/O Relays or Slim I/O SSRs. *The G70V-ZOM16P(-1)-C4-D does not come with SSRs. Use Slim I/O SSRs (for DC: G3RV-D03SL).

Options (Order Separately) Mountable Relays

Applicable I/O Relay Terminal	Classification		Model		
G70V-SID16P(-1)(-C16) G70V-ZID16P(-1)(-C16)	Input	Slim I/O Relays *1	G2RV-1-S-AP-G DC21		
	Output	Slim I/O Relays	No Latching Le	ever * 2	G2RV-1-S-G DC21
G70V-SOC16P(-1)(-C4) G70V-ZOM16P(-1)(-C4)		Silli I/O Relays	Latching Lever	r	G2RV-1-SI-G DC21
		Slim I/O SSRs	For AC	Zero cross function	G3RV-202S DC24
			FOI AC	No zero cross function	G3RV-202SL DC24
			For DC		G3RV-D03SL DC24
G70V-ZOM16P(-1)-C4-D *3	Output	Slim I/O SSRs For DC		G3RV-D03SL DC24	

Note: When using Slim I/O SSRs, either remove the Slim I/O Relays from the output G70V-SOC16P(-1)(-C16) to mount them, or order the output G70V-ZOM16P(-1)(-C16) I/O Terminal Sockets and the Slim I/O SSRs separately and combine them.

*1. G2RV-1-S-AP-G Slim I/O Relays are mounted to G70V-SID16P(-1)(-C16) I/O Relay Terminals as a standard feature. *2. G2RV-1-S-G Slim I/O Relays are mounted to G70V-SOC16P(-1)(-C4) I/O Relay Terminals as a standard feature.

*3. The G70V-ZOM16P(-1)-C4-D does not come with SSRs. Use Slim I/O SSRs (for DC: G3RV-D03SL). When ordering, designate the rated voltage

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 XW2Z-R□C • Fujitsu/Otax connectors

XW2Z-RI□C-□ (1:2): XW2Z-RO□C-□ (1:2): XW2Z-R□C-□-□ (1:3):

· MIL connectors

(1:1):

XW2Z-RO□C XW2Z-RI - D XW2Z-RM - D D XW2Z-RO□-□-D1

XW2Z-RI□C

Refer to Connecting Cables on page 24 for details.

Labels

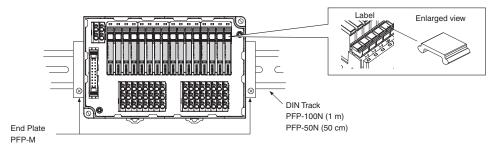
Appearance	Model	Minimum order (sheet) (quantity per sheet)
	XW5Z-P2.5LB2	5 (1 sheet / 72 pieces)

Accessories for DIN Track Mounting

Appearance	Name		Model	Minimum order (quantity)
	1 m		PFP-100N	1
		0.5 m	PFP-50N	
5	End Plate		PFP-M *	10
	Spacer		PFP-S *	

^{*}These products must be ordered in sets of 10.

Option Mounting Example Mounting to DIN Track



Specifications

Coil Ratings (Common to Input/Output per Relay)

Item Rated voltage (V)	Rated current (mA)	Coil resistance (Ω)	Must operate of rated voltage	Must release of rated voltage	Maximum voltage of rated voltage	Power consumption (mW)
24 VDC	13.3	1,575	80% max.	10% min.	110%	Approx. 280

- Note: 1. The rated current and coil resistance are measured at a coil temperature of 23°C with a tolerance of ±15% for coil resistance.
 - 2. The operating characteristics are measured at a coil temperature of 23°C.
 - 3. The value for maximum voltage is the maximum value within the allowable voltage fluctuation range for the relay coil's operating power supply. Continuous operation at this voltage is not within product specifications.
 - 4. The rated current includes the current for the indicators on the I/O Relay Terminal.

Contact Ratings (G2RV-1-S-G I/O Relay)

Classification	For input	Fo	r output			
Item	Resistive load (cos	Resistive load (cosφ=1)	Inductive load (cosφ=0.4 L/R=7 ms)			
Rated load	ted load 50 mA at 30 VAC 50 mA at 36 VDC		2.5 A at 250 VAC 2 A at 30 VDC			
Rated carry current	50 mA	6 A/point, 10 A/common				
Max. switching voltage	30 VAC, 36 VDC	250 VAC, 125 VDC				
Max. switching current	50 mA	6 A/point, 10 A/common				
Maximum switching capacity		1,500 VA 180 W 500 VA 60 W				
Error rate (reference value) * 1 mA at 100 mVDC 10 mA at 5 VDC		10 mA at 5 VDC	'			
Electrical endurance	5,000,000 operations min.	NO contacts: 70,000 operations min. NC contacts: 50,000 operations min.				
Mechanical endurance	5,000,000 operations min.	5,000,000 operations min.				

^{*}The above values are for a switching frequency of 120 operations/min.

Characteristics

	Model	G70V-SID16P(-1)(-C16)	G70V-SOC16P(-1)(-C4)				
Item		(Input, DC coil)	(output, DC coil)				
Contact form	n	SPST-NO × 16	SPDT × 16				
Contact mat	terial	Ag alloy + Au plating	Ag alloy				
Contact res	istance * 1	150 m $Ω$ max.					
Must Opera	te time * 2	20 ms max.					
Release tim	e * 2	40 ms max.					
Max.	Mechanical limit	18,000 operations/h					
switching frequency	At rated load	1,800 operations/h (under rated load)					
Insulation re	Insulation resistance 100 M Ω min.						
Dielectric st	Dielectric strength Between coil and contacts: 2,500 VAC for 1 min						
Vibration re	Vibration resistance 10 to 55 to 10 Hz with 0.5-mm single amplitude (1.0-mm double amplitude)						
Shock resis	Shock resistance 100 m/s², 3 times each in 6 directions along 3 axes						
Noise immu	nity	Noise level: 1.5 kV; pulse width: 100 ns to 1 μs					
Ambient operating temperature -40 to 55°C (with no icing or condensation)							
Ambient operating humidity 35% to 85%							
LED color Power supply Green							
LLD COIOI	1/0	'ellow					
Weight		Approx. 350 g	Approx. 370 g				

Note: The above values are initial values.

***1.** Measurement: 1 A at 5 VDC. ***2.** Ambient temperature: 23°C.

Approved Standards

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

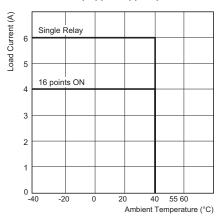
UL standard certification (File No. E95399)

Туре	Model	Ratings	Standard number	Category	Listed/Recognized	Contact ratings
	G70V-SID16P(-1)					24V DC
I/O Relay Terminal	G70V-SID16P(-1)-C16				Listed	24V DC
I/O Relay Terminal	G70V-SOC16P(-1)	Ī			Listed	250V AC / 30V DC
	G70V-SOC16P(-1)-C4	1	24V DC UL: 61010-2-201 NRAQ, NRAQ7	NDAG		Resistive 4A at 40°C
-	G70V-ZID16P(-1)	2/11/11/1		NRAQ, NRAQ7		24V DC
I/O Terminal Sockets	G70V-ZID16P(-1)-C16	Ī	CSA. C22.2 No.01010-2-201	NIXAQ7		
	G70V-ZOM16P(-1)	Ī			Recognized	
	G70V-ZOM16P(-1)-C4	1				250V AC / 30V DC Resistive 4A at 40°C
	G70V-ZOM16P(-1)-C4-D	1				Resistive 4A at 40 C

Note: 1. USL refers to certification in the US, and CNL refers to certification in Canada.

2. cULus certification has been obtained in Canada. (CAN/CSA-C22.2 No. 61010-2-201)

G70V-SOC16P(-1)(-C16)(-C4), G70V-ZOM16P(-1)(-C16)(-C4)(-D): UL certification specifications



TÜV Rheinland certification (Certification No. R50327604)

Туре	Model	Ratings	Standard number	Operating coil	Contact ratings
	G70V-SID16P(-1)				24V DC 0.05A L/R=0ms
	G70V-SID16P(-1)-C16				24V DO 0.03A E/N-0/113
I/O Relay Terminal	G70V-SOC16P(-1)	24V DC	EN 61810-1	24V DC	single load: 250V AC 6A cos(phi)=1 16 loads: 250V AC 3A cos(phi)=1 16 loads: 30V DC 3A L/R=0ms 16 loads: 250V AC 5A cos(phi)=1 (Ta=+25°C) 16 loads: 30V DC 5A L/R=0ms (Ta=+25°C)
	G70V-SOC16P(-1)-C4				250V AC / 30V DC 16 loads: 5A (Ta=+25°C) 16 loads: 3A (Ta=+55°C) 1 load: 6A Resistive load total max. 10A common line
	G70V-ZID16P(-1)		EN 61810-1	24V DC	24V DC 0.054 L/D=0ma
	G70V-ZID16P(-1)-C16				24V DC 0.05A L/R=0ms
I/O Terminal Sockets	G70V-ZOM16P(-1)	24V DC			single load: 250V AC 6A cos(phi)=1 16 loads: 250V AC 3A cos(phi)=1 16 loads: 30V DC 3A L/R=0ms 16 loads: 250V AC 5A cos(phi)=1 (Ta=+25°C) 16 loads: 30V DC 5A L/R=0ms (Ta=+25°C)
	G70V-ZOM16P(-1)-C4				250V AC / 30V DC
	G70V-ZOM16P(-1)-C4-D				16 loads: 5A (Ta=+25°C) 16 loads: 3A (Ta=+55°C) 1 load: 6A Resistive load total max. 10A common line

CE Marking Compliance

Model	EMC Directive	Low Voltage Directive	Machinery Directive
G70V	Not applicable	0	Not applicable

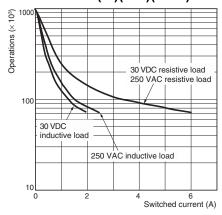
Note: 1. The Safety Category refers to the maximum applicable category selected when constructing control system safety components. The

category does not apply to individual components.

2. Details and other information on conformity levels are issued as part of the "EU Declaration of Conformity." Please contact your OMRON representative for more information.

Engineering Data (Reference Value)

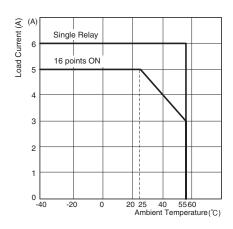
Endurance Curve (NO Contacts) G70V-SOC16P(-1)(-C4)(-C16)



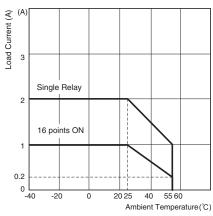
Note: These data are actual measured values that were sampled from the production line and prepared in graph format, and are for reference purposes only. A relay is manufactured by mass production, and as a basic rule must be used with allowance made for a certain amount of deviation

Load Current vs. Ambient Temperature

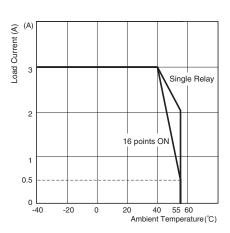
G70V-SOC16P(-1)(-C4)(-C16)



G3RV-202S DC24 (when installed) G3RV-202SL DC24 (when installed)



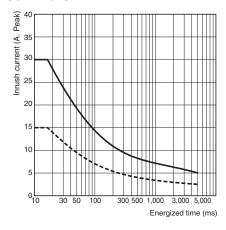
G3RV-D03 DC24 (when installed)



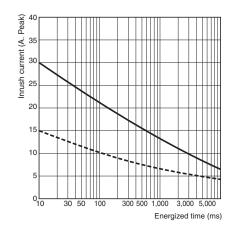
Inrush Current Resistance: Non-repetitive

The following graphs show the maximum inrush currents that can be withstood for non-repetitive operation. For repetitive operation, the figures should be reduced by half.

G3RV-202S DC24 G3RV-202SL DC24



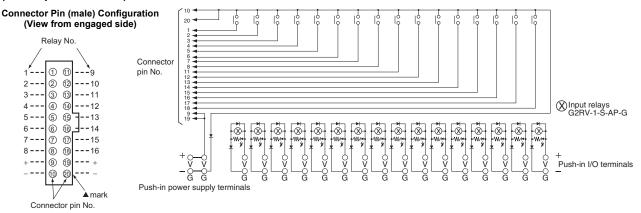
G3RV-D03 DC24



Internal Circuits

G70V-SID16P

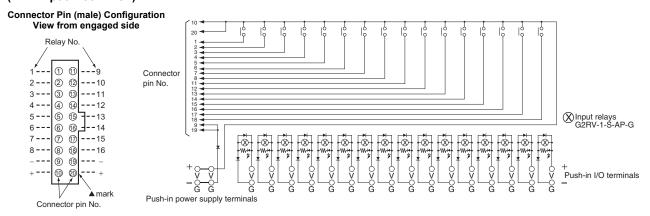
(NPN input/- common)



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

Terminal name	Description
V (push-in power supply terminals)	- Unit power supply terminals (24 VDC)
G (push-in power supply terminals)	of the power supply terminals (24 VDC)
V (push-in I/O terminals)	Relay-drive coil terminals (24 VDC)
G (push-in I/O terminals)	Relay-unive con terminals (24 VDC)

G70V-SID16P-1 (PNP input/+ common)

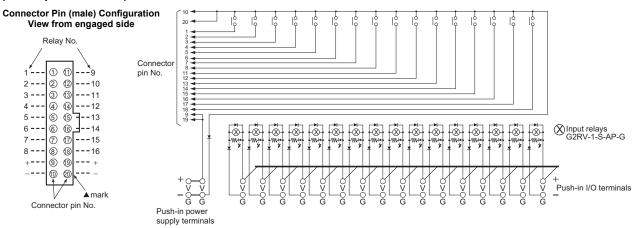


Note: Pin numbers are indicated for convenience. The ▲ mark can be used to determine orientation.

Terminal name	Description
V (push-in power supply terminals)	- Unit power supply terminals (24 VDC)
G (push-in power supply terminals)	
V (push-in I/O terminals)	Relay-drive coil terminals (24 VDC)
G (push-in I/O terminals)	

G70V-SID16P-C16

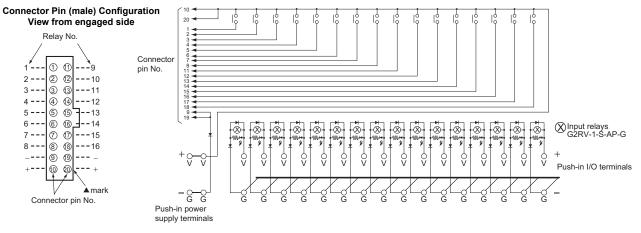
(NPN input/- common)



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

Terminal name	Description
V (push-in power supply terminals)	Unit power supply terminals (24 VDC)
G (push-in power supply terminals)	
V (push-in I/O terminals)	Relay-drive coil terminals (24 VDC)
G (push-in I/O terminals)	

G70V-SID16P-1-C16 (PNP input/+ common)



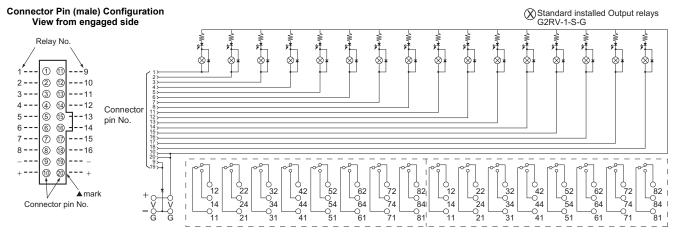
 $\textbf{Note:} \ \ \textbf{Pin numbers are indicated for convenience.} \ \ \textbf{The} \ \ \textbf{\blacktriangle} \ \ \textbf{mark can be used to determine orientation.}$

Terminal name	Description
V (push-in power supply terminals)	Unit power supply terminals (24 VDC)
G (push-in power supply terminals)	
V (push-in I/O terminals)	Relay-drive coil terminals (24 VDC)
G (push-in I/O terminals)	

G70V-SOC16P

(NPN output/+ common)

Note: A controller with an NPN transistor, common output can be connected to the G70V-SOC16P.



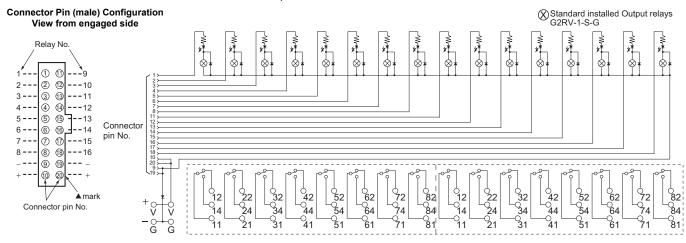
Note: Pin numbers are indicated for convenience. The ▲ mark can be used to determine orientation.

Terminal name	Description
V (push-in power supply terminals)	- Unit power supply terminals (24 VDC)
G (push-in power supply terminals)	
11 to 81 (push-in I/O terminal common terminals)	Relay contact terminals
12 to 82 (push-in I/O terminal NC terminals)	
14 to 84 (push-in I/O terminal NO terminals)	

G70V-SOC16P-1

(PNP output/- common)

Note: A controller with a PNP transistor, + common output can be connected to the G70V-SOC16P-1.



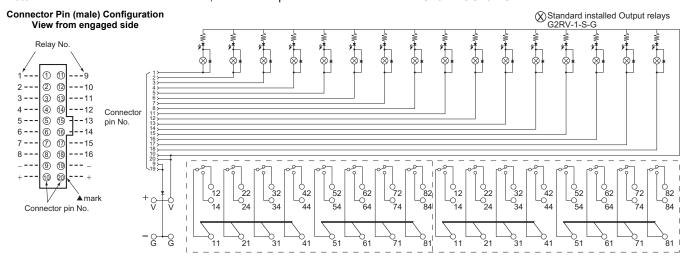
Note: Pin numbers are indicated for convenience. The ▲ mark can be used to determine orientation.

Terminal name	Description
V (push-in power supply terminals)	Unit power supply terminals (24 VDC)
G (push-in power supply terminals)	
11 to 81 (push-in I/O terminal common terminals)	Relay contact terminals
12 to 82 (push-in I/O terminal NC terminals)	
14 to 84 (push-in I/O terminal NO terminals)	

G70V-SOC16P-C4

(NPN output/+ common)

Note: A controller with an NPN transistor, common output can be connected to the G70V-SOC16P-C4.



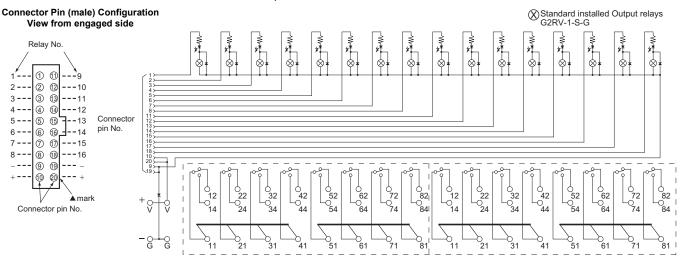
Note: Pin numbers are indicated for convenience. The ▲ mark can be used to determine orientation.

Terminal name	Description
V (push-in power supply terminals)	Unit power supply terminals (24 VDC)
G (push-in power supply terminals)	Onlic power supply terminals (24 VDC)
11 to 81 (push-in I/O terminal common terminals)	Relay contact terminals
12 to 82 (push-in I/O terminal NC terminals)	
14 to 84 (push-in I/O terminal NO terminals)	

G70V-SOC16P-1-C4

(PNP output/- common)

Note: A controller with a PNP transistor, + common output can be connected to the G70V-SOC16P-1-C4.



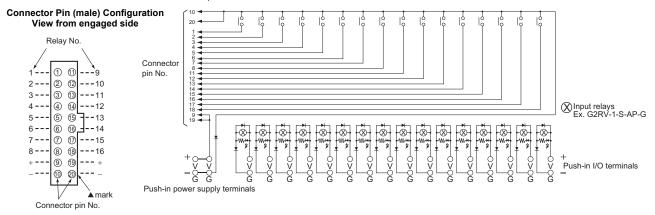
Note: Pin numbers are indicated for convenience. The ▲ mark can be used to determine orientation.

Terminal name	Description
V (push-in power supply terminals)	- Unit power supply terminals (24 VDC)
G (push-in power supply terminals)	
11 to 81 (push-in I/O terminal common terminals)	Relay contact terminals
12 to 82 (push-in I/O terminal NC terminals)	
14 to 84 (push-in I/O terminal NO terminals)	

G70V-ZID16P

(NPN input/- common)

Note: A controller with an NPN common input can be connected to the G70V-ZID16P.



Note: 1. Pin numbers are indicated for convenience. The ▲ mark can be used to determine orientation.

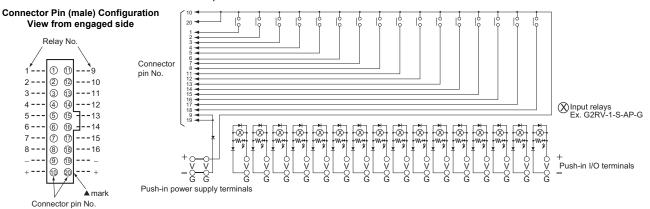
2. Relays are not mounted.

Terminal name	Description
V (push-in power supply terminals)	- Unit power supply terminals (24 VDC)
G (push-in power supply terminals)	
V (push-in I/O terminals)	Relay-drive coil terminals (24 VDC)
G (push-in I/O terminals)	

G70V-ZID16P-1

(PNP input/+ common)

Note: A controller with an NPN + common input can be connected to the G70V-ZID16P-1.



Note: 1. Pin numbers are indicated for convenience. The ▲ mark can be used to determine orientation.

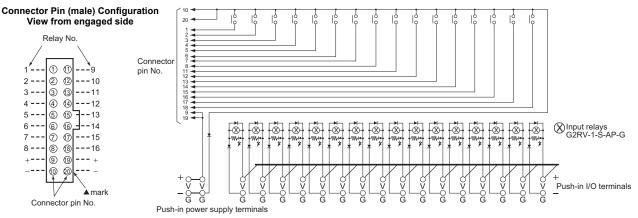
2. Relays are not mounted.

Terminal name	Description
V (push-in power supply terminals)	- Unit power supply terminals (24 VDC)
G (push-in power supply terminals)	
V (push-in I/O terminals)	Relay-drive coil terminals (24 VDC)
G (push-in I/O terminals)	

G70V-ZID16P-C16

(NPN input/- common)

Note: A controller with an PNP common input can be connected to the G70V-ZID16P-C16.



Note: 1. Pin numbers are indicated for convenience. The ▲ mark can be used to determine orientation.

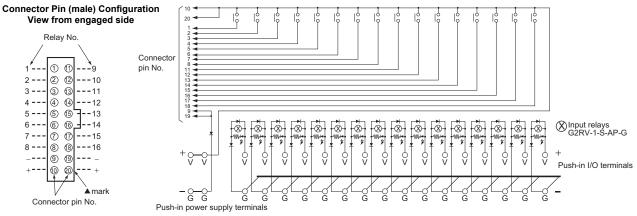
2. Relays are not mounted.

Terminal name	Description
V (push-in power supply terminals)	- Unit power supply terminals (24 VDC)
G (push-in power supply terminals)	
V (push-in I/O terminals)	Relay-drive coil terminals (24 VDC)
G (push-in I/O terminals)	

G70V-ZID16P-1-C16

(PNP input/+ common)

Note: A controller with an NPN + common input can be connected to the G70V-ZID16P-1-C16.



Note: 1. Pin numbers are indicated for convenience. The ▲ mark can be used to determine orientation.

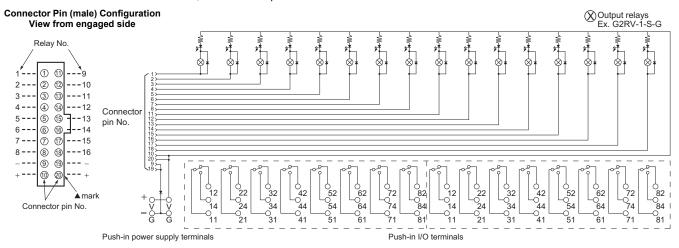
2. Relays are not mounted.

Terminal name	Description
V (push-in power supply terminals)	- Unit power supply terminals (24 VDC)
G (push-in power supply terminals)	
V (push-in I/O terminals)	Relay-drive coil terminals (24 VDC)
G (push-in I/O terminals)	

G70V-ZOM16P

(NPN output/+ common)

Note: A controller with an PNP transistor, + common output can be connected to the G70V-ZOM16P.



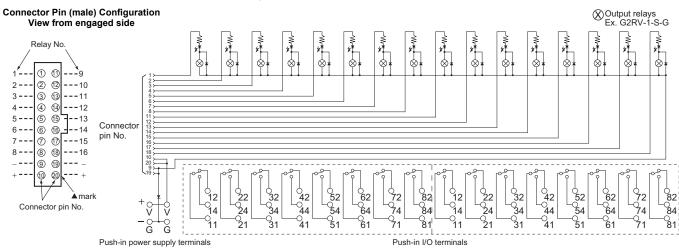
- **Note: 1.** Pin numbers are indicated for convenience. The ▲ mark can be used to determine orientation.
 - 2. A controller with an NPN transistor, common output can be connected to the G70V-ZOM16P.
 - 3. Relays are not mounted.

Terminal name	Description
V (push-in power supply terminals)	- Unit power supply terminals (24 VDC)
G (push-in power supply terminals)	
11 to 81 (push-in I/O terminal common terminals)	Relay contact terminals
12 to 82 (push-in I/O terminal NC terminals)	
14 to 84 (push-in I/O terminal NO terminals)	

G70V-ZOM16P-1

(PNP output/- common)

Note: A controller with an NPN transistor, common output can be connected to the G70V-ZOM16P-1.



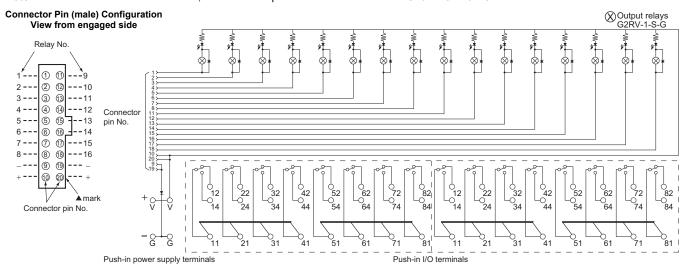
- Note: 1. Pin numbers are indicated for convenience. The \blacktriangle mark can be used to determine orientation.
 - 2. A controller with an PNP transistor, + common output can be connected to the G70V-ZOM16P-1.
 - 3. Relays are not mounted.

Terminal name	Description	
V (push-in power supply terminals)	Unit power supply terminals (24 VDC)	
G (push-in power supply terminals)	offic power supply terminals (24 VDC)	
11 to 81 (push-in I/O terminal common terminals)		
12 to 82 (push-in I/O terminal NC terminals)	Relay contact terminals	
14 to 84 (push-in I/O terminal NO terminals)		

G70V-ZOM16P-C4

(NPN output/+ common)

Note: A controller with an PNP transistor, + common output can be connected to the G70V-ZOM16P-C4.



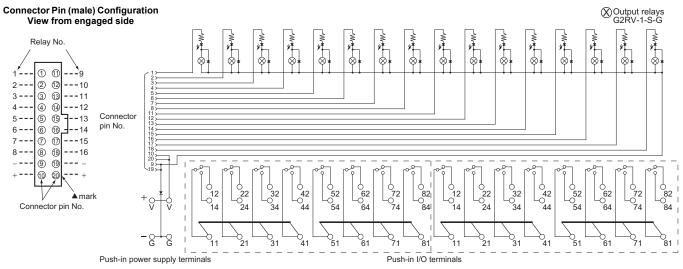
- **Note: 1.** Pin numbers are indicated for convenience. The ▲ mark can be used to determine orientation.
 - 2. A controller with an NPN transistor, common output can be connected to the G70V-ZOM16P-C4.
 - 3. Relays are not mounted.

Terminal name	Description	
V (push-in power supply terminals)	Unit power supply terminals (24 VDC)	
G (push-in power supply terminals)	Offic power supply terminals (24 VDO)	
11 to 81 (push-in I/O terminal common terminals)		
12 to 82 (push-in I/O terminal NC terminals)	Relay contact terminals	
14 to 84 (push-in I/O terminal NO terminals)		

G70V-ZOM16P-1-C4

(PNP output/- common)

Note: A controller with an NPN transistor, common output can be connected to the G70V-ZOM16P-1-C4.



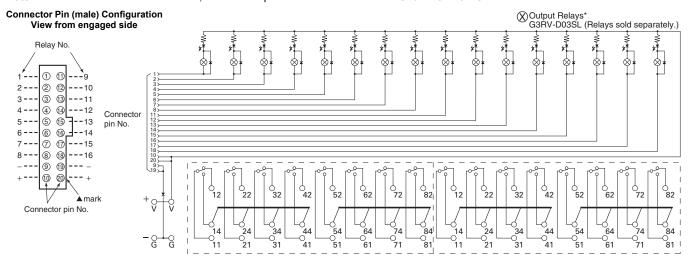
- Note: 1. Pin numbers are indicated for convenience. The ▲ mark can be used to determine orientation.
 - 2. A controller with an PNP transistor, + common output can be connected to the G70V-ZOM16P-1-C4.
 - 3. Relays are not mounted.

Terminal name	Description
V (push-in power supply terminals)	Unit power supply terminals (24 VDC)
G (push-in power supply terminals)	offit power supply terminals (24 VDC)
11 to 81 (push-in I/O terminal common terminals)	
12 to 82 (push-in I/O terminal NC terminals)	Relay contact terminals
14 to 84 (push-in I/O terminal NO terminals)	

G70V-ZOM16P-C4-D

(NPN output/- common)

Note: A controller with an NPN transistor, common output can be connected to the G70V-ZOM16P-C4-D.



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

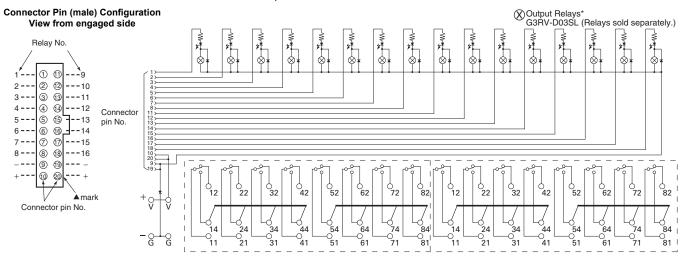
Terminal name	Description		
V (push-in power supply terminals)	Unit power supply terminals (24 VDC)		
G (push-in power supply terminals)			
11 to 81 (push-in I/O terminal SSR output terminal +)			
12 to 82 (push-in I/O terminal Open terminal)	SSR contact terminals		
14 to 84 (push-in I/O terminal SSR output terminal -)			

^{*}The G70V-ZOM16P-C4-D does not come with SSRs. Use Slim I/O SSRs (for DC: G3RV-D03SL).

G70V-ZOM16P-1-C4-D

(PNP output/- common)

Note: A controller with an PNP transistor, common output can be connected to the G70V-ZOM16P-1-C4-D.



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

Terminal name	Description		
V (push-in power supply terminals)	Unit power supply terminals (24 VDC)		
G (push-in power supply terminals)			
11 to 81 (push-in I/O terminal SSR output terminal +)	SSR contact terminals		
12 to 82 (push-in I/O terminal Open terminal)			
14 to 84 (push-in I/O terminal SSR output terminal -)			

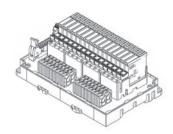
 $[\]label{eq:simple} \mbox{\star The G70V-ZOM16P-1-C4-D does not come with SSRs. Use Slim I/O SSRs (for DC: G3RV-D03SL).}$

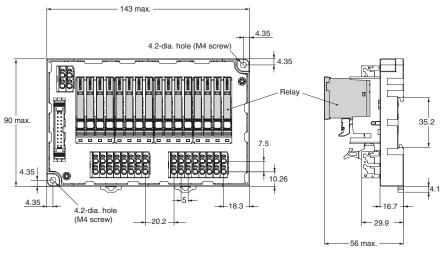
Dimensions (Unit: mm)

Main unit

I/O Relay Terminals and I/O Terminal Sockets

For Inputs
G70V-SID16P
G70V-SID16P-1
G70V-ZID16P
G70V-ZID16P-1
G70V-SID16P-C16
G70V-SID16P-1-C16
G70V-ZID16P-C16
G70V-ZID16P-C16

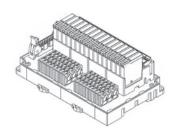


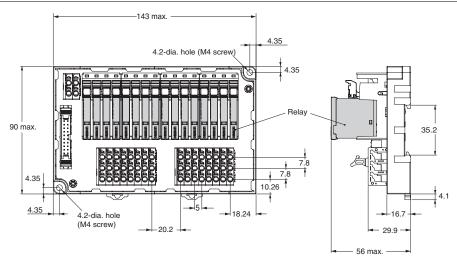


Note: 1. Relays are not mounted to the G70V-ZID16P(-1)(-C16) I/O Terminal Sockets.

2. Specified screw mounting torque: 0.59 to 0.98 N·m.

For Outputs G70V-SOC16P G70V-SOC16P-1 G70V-ZOM16P G70V-ZOM16P-1 G70V-SOC16P-C4 G70V-SOC16P-1-C4 G70V-ZOM16P-C4 G70V-ZOM16P-1-C4 G70V-ZOM16P-C4-D G70V-ZOM16P-1-C4-D





Note: 1. Relays are not mounted to the G70V-ZOM16P(-1)(-C4)(-D) I/O Terminal Sockets.

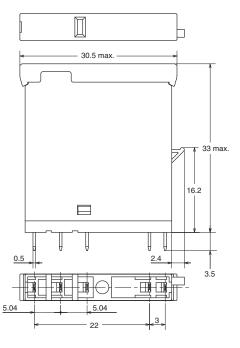
2. Specified screw mounting torque: 0.59 to 0.98 N·m.

Options (Order Separately) Mountable Relays

Slim I/O Relays Models without latching lever G2RV-1-S-G G2RV-1-S-AP-G







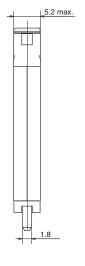
Terminal Arrangement/ Internal Connection Diagram (TOP VIEW)

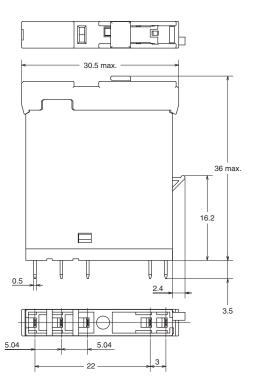
(Input circuit)



Slim I/O Relays Models with latching lever (test switch) G2RV-1-SI-G







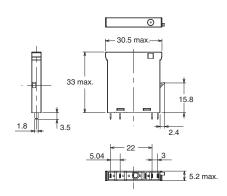
Terminal Arrangement/ Internal Connection Diagram (TOP VIEW)

(Input circuit)



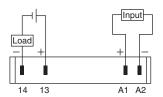
Slim I/O SSRs G3RV-D03SL G3RV-202S G3RV-202SL



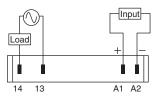


Terminal Arrangement/ Internal Connection Diagram (TOP VIEW)

G3RV-D03SL (input circuit)



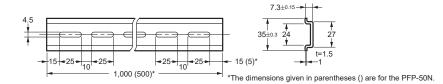
G3RV-202S(L) (input circuit)



Parts for Rail Mounting

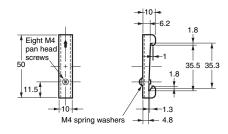
DIN Track PFP-100N PFP-50N





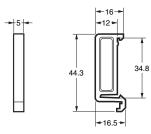
End Plate PFP-M





Spacer PFP-S

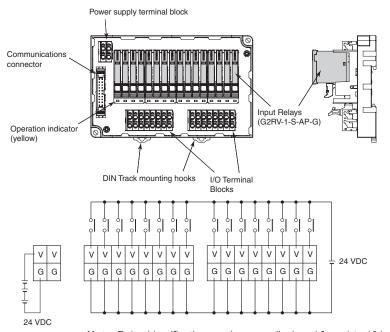




Terminal Arrangement/Internal Connection

For Inputs G70V-SID16P G70V-SID16P-1 G70V-ZID16P

G70V-ZID16P-1



 Supply a power supply that meets the voltage specifications for both the Relays and I/O Relay Terminal to the V and G terminals.

Make sure that the polarity is correct.

The V terminals are positive and the G terminals are negative.

 Supply the rated voltage (24 VDC) of the Controller's input circuit to the power supply input terminals (V and G). Use a power supply with low noise.

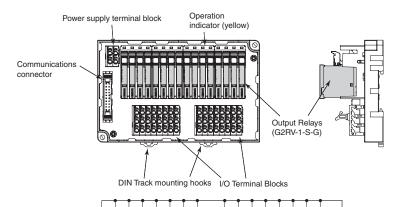
Note: Relay identification numbers are displayed from 1 to 16 in order from the left of the I/O terminal block.

For Outputs

G70V-SOC16P G70V-SOC16P-1 G70V-ZOM16P G70V-ZOM16P-1

G

24 VDC



(L₀)(L₁)(L₂)(L₃)(L₄)(L₅)(L₆)(L₇)

22 32 42 52 62 72 82

24 34 44 54 64 74 84

 Supply a power supply that meets the voltage specifications for both the Relays and I/O Relay Terminal to the V and G terminals.

Make sure that the polarity is correct.

The V terminals are positive and the G terminals are negative.

- The terminals (11 to 81, 12 to 82, and 14 to 84) are contact outputs. Supply a suitable power supply for the loads.
- The power supply input terminals (V and G) supply power to both drive the Relays and to operate the Controller's output transistors.

Align the voltage specifications of the Controller and the I/O Relay Terminal.

When changing to a G3RV-D03SL, pay attention to the electrode polarity.

11 21 31 41 51 61 71 81 11 21 31 41 51 61 71 81

(L8)(L9)(L10)(L12)(L13)(L14)(L15)

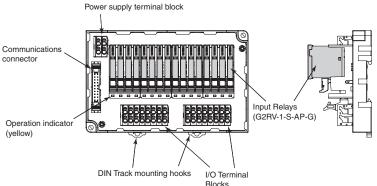
24 34 44 54 64 74 84

Note: Relay identification numbers are displayed from 1 to 16 in order from the left of the I/O terminal block.

AC (DC power supply is also possible.)

For Inputs

G70V-SID16P-C16 G70V-SID16P-1-C16 G70V-ZID16P-C16 G70V-ZID16P-1-C16



 Supply a power supply that meets the voltage specifications for both the Relays and I/O Relay Terminal to the V and G terminals.

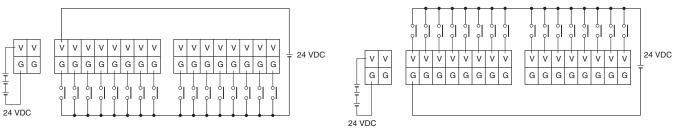
Make sure that the polarity is correct.

The V terminals are positive and the G terminals are negative.

 Supply the rated voltage (24 VDC) of the Controller's input circuit to the power supply input terminals (V and G). Use a power supply with low noise.

G70V-SID16P-C16

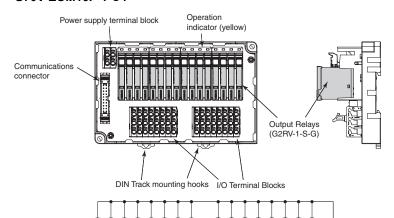
G70V-SID16P-1-C16



Note: Relay identification numbers are displayed from 1 to 16 in order from the left of the I/O terminal block.

For Outputs

G70V-SOC16P-C4 G70V-SOC16P-1-C4 G70V-ZOM16P-C4 G70V-ZOM16P-1-C4



 Supply a power supply that meets the voltage specifications for both the Relays and I/O Relay Terminal to the V and G terminals.

Make sure that the polarity is correct.

The V terminals are positive and the G terminals are negative.

- The terminals (11 to 81, 12 to 82, and 14 to 84) are contact outputs. Supply a suitable power supply for the loads.
- The power supply input terminals (V and G) supply power to both drive the Relays and to operate the Controller's output transistors

Align the voltage specifications of the Controller and the I/O Relay Terminal.

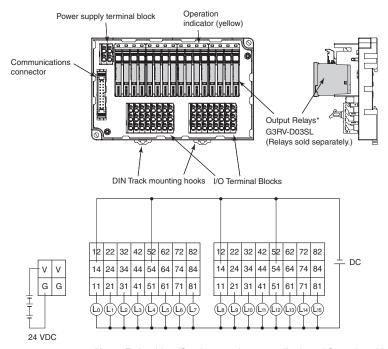
 When changing to a G3RV-D03SL, pay attention to the electrode polarity.



Note: Relay identification numbers are displayed from 1 to 16 in order from the left of the I/O terminal block.

24 VDC

For Outputs G70V-ZOM16P-C4-D G70V-ZOM16P-1-C4-D



 Supply a power supply that meets the voltage specifications for both the Relays and I/O Relay Terminal to the V and G terminals.

Make sure that the polarity is correct.

The V terminals are positive and the G terminals are negative.

- The terminals (11 to 81 and 14 to 84) are contact outputs.
 Supply a suitable power supply for the loads. Make sure that polarity of the output terminal is correct.
- The power supply input terminals (V and G) supply power to both drive the Relays and to operate the Controller's output transistors.

Align the voltage specifications of the Controller and the I/O Relay Terminal.

* The G70V-ZOM16P(-1)-C4-D does not come with SSRs. Use Slim I/O SSRs (for DC: G3RV-D03SL).

Note: Relay identification numbers are displayed from 1 to 16 in order from the left of the I/O terminal block.

Safety Precautions

Be sure to read *The Safety Precautions for All I/O Relay Terminals* in the website at the following URL: http://www.ia.omron.com/product/cautions/46/243/index.html.

Warning Indications

Precautions for Safe Use	Supplementary comments on what to do or avoid doing, to use the product safely.		
Precautions for Correct Use	Supplementary comments on what to do or avoid doing, to prevent failure to operate, malfunction, or undesirable effects on product performance.		

Precautions for Safe Use

Transportation

- Do not transport the I/O Relay Terminal under the following locations. Doing so may occasionally result in damage, malfunction, or deterioration of performance characteristics.
 - · Locations subject to water or oil
 - · Locations subject to high temperature or high humidity
 - Locations subject to condensation due to rapid changes in temperature

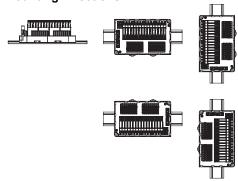
Operating and Storage Environments

- Do not use or store the I/O Relay Terminal in the following locations. Doing so may result in damage, malfunction, or deterioration of performance characteristics.
 - · Locations subject to rainwater or water splashes
 - · Locations subject to exposure to water, oil, or chemicals
 - · Locations subject to high temperature or high humidity
 - Locations subject to ambient storage temperatures outside the range –40 to 65°C
 - Locations subject to ambient operating temperatures outside the range –40 to 55°C
 - Locations subject to relative humidity outside the range 35% to 85% or locations in which condensation may occur due to rapid changes in temperature
 - · Locations subject to corrosive gases or inflammable gases
 - Locations subject to dust, salts, or iron, or locations where there is salt damage
 - · Locations subject to direct sunlight
 - · Locations subject to shock or vibration

Installation and Mounting

 Mount the I/O Relay Terminal in the specified direction. Otherwise excessive heat generated by the I/O Relay Terminal may occasionally cause burning.

Mounting Directions



- Mount the I/O Relay Terminal firmly to a DIN Track. Otherwise, the I/O Relay Terminal may fall off.
- Do not handle the I/O Relay Terminal with oily or dusty (especially iron dust) hands.
- Make sure that there is no excessive ambient temperature rise due to the heat generation of the I/O Relay Terminal. If the I/O Relay Terminal is mounted inside a panel, install a fan so that the interior of the panel is fully ventilated.

Installation and Wiring

- Use wires that are suited to the load current and voltage.
 Otherwise, excessive heat generated by the wires may cause burning or may cause the wire covering to melt, possibly leading to electric shock.
- Do not use wires with a damaged outer covering. Otherwise, it may result in electric shock or ground leakage.
- Do not wire any wiring in the same duct or conduit as power or high-tension lines. Otherwise, inductive noise may damage the I/O Relay Terminal or cause it to malfunction.
- Do not apply a voltage or current that exceeds the rating to any terminal. Doing so may result in failure or burning.

Push-In Plus Terminal Blocks

- · Do not wire anything to the release holes.
- Do not tilt or twist a flat-blade screwdriver while it is inserted into a release hole on the terminal block. The terminal block may be damaged.
- Insert a flat-blade screwdriver into the release holes at an angle.
 The terminal block may be damaged if you insert the screwdriver straight in.
- Do not allow the flat-blade screwdriver to fall out while it is inserted into a release hole.
- Do not bend a wire past its natural bending radius or pull on it with excessive force. Doing so may cause the wire disconnection.
- Do not insert more than one wire into each terminal insertion hole.
- To prevent wire materials from smoking or igniting, confirm wire ratings and use the wiring materials given in the following table.

Recommended wire gauge	Stripping length
0.25 to 1.5 mm²/ AWG24 o AWG16 stranded wire, 0.5 to 1.3 mm solid wire	8 mm

- *The recommended wire gauge and stripping length values are for stranded wire or solid wire. When using ferrules, refer to the table of recommended ferrules in Precautions for Correct Use.
- Refer to the following table for wire sizes for external I/O devices according to the current flow.

AWG24 to AWG20	Maximum current flow: 6 A
AWG18 to AWG16	Maximum current flow: 10 A

Application

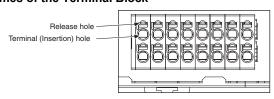
- Select a load within the rated values. Not doing so may result in malfunction, failure, or burning.
- The I/O Relay Terminal may occasionally rupture if short-circuit current flows. As protection against accidents due to shortcircuiting, be sure to install protective devices, such as fuses and no-fuse breakers, on the power supply side.
- Use a power supply within the rated frequencies. Otherwise, malfunction, failure, or burning may occasionally occur.
- Minor electric shock may occasionally occur. Always turn OFF the power supply before performing wiring.

Precautions for Correct Use

- Do not drop the I/O Relay Terminal or subject it to abnormal vibration or shock during transportation or mounting. Doing so may result in deterioration of performance, malfunction, or failure.
- Do not transport an I/O Relay Terminal when it is not packaged.
 Damage or failure may occur.
- Use a power supply with low noise.

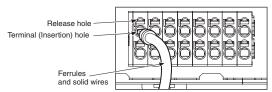
Push-In Plus Terminal Blocks

1. Connecting Wires to the Push-In Plus Terminal Block Part Names of the Terminal Block



Connecting Wires with Ferrules and Solid Wires

Insert the solid wire or ferrule straight into the terminal block until the end strikes the terminal block.

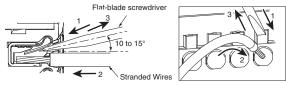


 If a wire is difficult to connect because it is too thin, use a flat-blade screwdriver in the same way as when connecting stranded wire.

Connecting Stranded Wires

Use the following procedure to connect the wires to the terminal block.

- Hold a flat-blade screwdriver at an angle and insert it into the release hole
 - The angle should be between 10° and 15°. If the flat-blade screwdriver is inserted correctly, you will feel the spring in the release hole.
- With the flat-blade screwdriver still inserted into the release hole, insert the wire into the terminal hole until it strikes the terminal block
- 3. Remove the flat-blade screwdriver from the release hole.



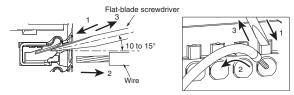
Checking Connections

- After the insertion, pull gently on the wire to make sure that it will not come off and the wire is securely fastened to the terminal block.
- If you use a ferrule with a conductor length of 10 mm, part of the conductor may be visible after the ferrule is inserted into the terminal block, but the product insulation distance will still be satisfied.

2. Removing Wires from the Push-In Plus Terminal Block

Use the following procedure to remove wires from the terminal block. The same method is used to remove stranded wires, solid wires, and ferrules.

- Hold a flat-blade screwdriver at an angle and insert it into the release hole
- With the flat-blade screwdriver still inserted into the release hole, remove the wire from the terminal insertion hole.
- 3. Remove the flat-blade screwdriver from the release hole.

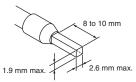


3. Recommended Ferrules and Crimp Tools Recommended ferrules

Appli wi		Ferrule Conductor	Stripping length	Recommended ferrules			
(mm²)	(AWG)	length (mm)	[mm] (Ferrules used)	Phoenix Contact product	Weidmuller product	Wago product	
0.25	24	8	10	AI0,25-8	H0.25/12	216-301	
0.25	24	10	12	AI0,25-10			
0.34	22	8	10	AI0,34-8	H0.34/12	216-302	
0.34	22	10	12	AI0,34-10			
0.5	20	8	10	AI0,5-8	H0.5/14	216-201	
0.5	20	10	12	AI0,5-10	H0.5/16	216-241	
0.75	18	8	10	AI0,75-8	H0.75/14	216-202	
0.75	10	10	12	AI0,75-10	H0.75/16	216-242	
1/1.25	18/17	8	10	AI1-8	H1.0/14	216-203	
1/1.25	10/17	10	12	AI1-10	H1.0/16	216-243	
1.25/1.5	17/16	8	10	AI1,5-8	H1.5/14	216-204	
1.23/1.3	17/10	10	12	AI1,5-10	H1.5/16	216-244	
Recom	Recommended crimp tool			CRIMPFOX6 CRIMPFOX6T-F CRIMPFOX10S	PZ6 roto	Variocrimp4	

Note: 1. Make sure that the outer diameter of the wire coating is smaller than the inner diameter of the insulation sleeve of the recommended ferrule.

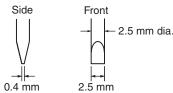
2. Make sure that the ferrule processing dimensions conform to the following figures.



Recommended Flat-blade Screwdriver

Use a flat-blade screwdriver to connect and remove wires. Use the following flat-blade screwdriver.

The following table shows manufacturers and models as of 2015/Dec.



Model	Manufacturer				
ESD 0,40×2,5	Wera				
SZS 0,4×2,5 SZF 0-0,4×2,5 *	Phoenix Contact				
0.4×2.5×75 302	Wiha				
AEF.2,5×75	Facom				
210-719	Wago				
SDI 0.4×2.5×75	Weidmuller				

*OMRON's exclusive purchase model XW4Z-00B is available to order as SZF 0-0,4 × 2,5 (manufactured by Phoenix Contact).

G70V

Connecting Cables

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

Туре	Name	I/O Classification	Appearance	Cable length L (mm)		Models
	Cables with Loose Wires	16 I/O points	A side B side Device end I/O Relay Terminal	1,000		XW2Z-RY100C
				1,500		XW2Z-RY150C
	and Crimp Terminals			2,000		XW2Z-RY200C
	XW2Z-RY□C			3,000		XW2Z-RY300C
Various devices			300 L	5,000		XW2Z-RY500C
	Cables with Loose Wires	16 I/O points		2,000		XW2Z-RA200C
	XW2Z-RA□C	To we pointe	300 L —	5,0	00	XW2Z-RA500C
				1,0	00	XW2Z-R100C
- "· 'O'	Cables with Connectors			1,5	00	XW2Z-R150C
Fujitsu/Otax connectors (24 pins)	(1:1)	16 I/O points		2,0	00	XW2Z-R200C
, ,	XW2Z-R□C			3,0	00	XW2Z-R300C
			_	5,0	00	XW2Z-R500C
				(A) 1,000	(B) 750	XW2Z-RI100C-75
				(A) 1,500	(B) 1,250	XW2Z-RI150C-125
	Cables with Connectors (1:2) XW2Z-RI□C-□ XW2Z-RO□C-□	32 input points	(A)	(A) 2,000	(B) 1,750	XW2Z-RI200C-175
				(A) 3,000	(B) 2,750	XW2Z-RI300C-275
Fujitsu/Otax connectors			(120)	(A) 5,000	(B) 4,750	XW2Z-RI500C-475
(40 pins)		32 output points		(A) 1,000	(B) 750	XW2Z-RO100C-75
				(A) 1,500	(B) 1,250	XW2Z-RO150C-125
			Straight length (without bends)	(A) 2,000	(B) 1,750	XW2Z-RO200C-175
			Straight length (without bends)	(A) 3,000	(B) 2,750	XW2Z-RO300C-275
				(A) 5,000	(B) 4,750	XW2Z-RO500C-475
	Cables with Connectors (1:3) XW2Z-R□C-□-□	48 I/O points	(A) ————————————————————————————————————	(A) (B) 1,500 1,25	(C) 1,000	XW2Z-R150C-125-100
Fujitsu/Otax connectors (56 pins)			(120)	(A) (B) 2,000 1,75	(C) 1,500	XW2Z-R200C-175-150
			C(C) ———————————————————————————————————	(A) (B) 2,75	(C) 2,500	XW2Z-R300C-275-250
MIL connectors (20 pins)	Cables with Connectors	16 I/O points	_	25	0	XW2Z-RI25C
	(1:1) XW2Z-RI□C			50	0	XW2Z-RI50C
				25	0	XW2Z-RO25C
	XW2Z-RO□C			50	0	XW2Z-RO50C

Туре	Name	I/O Classification	Appearance	Cable leng	gth L (mm)	Models
				(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 side B side	(A) 3,000	(B) 2,750	XW2Z-RO300-275-D1
	Cables with Connectors (1:2)		Device end I/O Relay Terminal (A) →	(A) 5,000	(B) 4,750	XW2Z-RO500-475-D1
		32 I/O points	(A)	(A) 500	(B) 250	XW2Z-RI50-25-D1
MIL connectors (40 pins)	XW2Z-RO□-□-D1,	·		(A) 750	(B) 500	XW2Z-RI75-50-D1
WILE GOTIFICATION (10 PINO)	XW2Z-RI□-□-D1, XW2Z-RI□-□-D2,			(A) 1,000	(B) 750	XW2Z-RI100-75-D1
	XW2Z-RM□-□-D1 *1,		(120)	(A) 1,500	(B) 1,250	XW2Z-RI150-125-D1
	XW2Z-RM□-□-D2 *1		(B) —	(A) 2,000	(B) 1,750	XW2Z-RI200-175-D1
			Straight length (without bends)	(A) 5,000	(B) 2,750	XW2Z-RI300-275-D1
				(A) 5,000	(B) 4,750	XW2Z-RI500-475-D1
				(A) 750	(B) 250	XW2Z-RI50-25-D2
		40 i		(A) 750	(B) 500	XW2Z-RI75-50-D2
		16 inputs and 16 outputs		(A) 500	(B) 250	XW2Z-RM50-25-D1
		(32 I/O points)		(A) 750	(B) 500	XW2Z-RM75-50-D1
				(A) 1,000	(B) 750	XW2Z-RI100C-75-MN
		32 input points	(A) →	(A) 1,500	(B) 1,250	XW2Z-RI150C-125-MN
	Mitsubishi Electric PLC Connecting Cables XW2Z-RI□C-□-MN XW2Z-RO□C-□-MN	oz input points		(A) 2,000	(B) 1,750	XW2Z-RI200C-175-MN
Mitsubishi Electric PLCs with				(A) 3,000	(B) 2,750	XW2Z-RI300C-275-MN
32-point connectors (1:2) *2			Straight length (without bends) Straight length (without bends)	(A) 1,000	(B) 750	XW2Z-RO100C-75-MN
				(A) 1,500	(B) 1,250	XW2Z-RO150C-125-MN
		32 output points		(A) 2,000	(B) 1,750	XW2Z-RO200C-175-MN
				(A) 3,000	(B) 2,750	XW2Z-RO300C-275-MN
				50	00	XW2Z-R050C-SCH-A
				1,000		XW2Z-R100C-SCH-A
Schneider Electric PLCs with		32 input points		2,000		XW2Z-R200C-SCH-A
32-point connectors (1:2)				3,000		XW2Z-R300C-SCH-A
Applicable models:				5,000		XW2Z-R500C-SCH-A
For inputs: 140 DDI 353 00				500		XW2Z-R050C-SCH-B
For outputs:				1,000		XW2Z-R100C-SCH-B
140 DDO 353 00		32 output points		2,000		XW2Z-R200C-SCH-B
	Schneider Electric PLC		(minost solido)	3,0	000	XW2Z-R300C-SCH-B
	Connecting Cables			5,000		XW2Z-R500C-SCH-B
	XW2Z-R□C-SCH-□			5	00	XW2Z-R050C-SCH-C
					000	XW2Z-R100C-SCH-C
Schneider Electric PLCs with		16 input points		2,000		XW2Z-R200C-SCH-C
16-point connectors (1:1)					000	XW2Z-R300C-SCH-C
Applicable models:				5,000		XW2Z-R500C-SCH-C
For inputs: BMX DDI 1602 For outputs: BMX DDO 1602	length other than the abov			500		XW2Z-R050C-SCH-D
		16 output points		1,000		XW2Z-R100C-SCH-D
				2,000		XW2Z-R200C-SCH-D
					000	XW2Z-R300C-SCH-D
				5,0	000	XW2Z-R500C-SCH-D

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

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

*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 31.

Туре	Name	I/O Classification	Appearance	Cable length L (mm)	Models	
					500	XW2Z-R050C-SIM-A
		32 input points	A side B side	1,000	XW2Z-R100C-SIM-A	
Siemens PLCs with			Device end I/O Relay Terminal	2,000	XW2Z-R200C-SIM-A	
32-point connectors (1:2)			(A)	3,000	XW2Z-R300C-SIM-A	
Applicable models:				5,000	XW2Z-R500C-SIM-A	
or inputs: SES7 321-1BL00-0AA0				500	XW2Z-R050C-SIM-B	
or outputs:			(120)	1,000	XW2Z-R100C-SIM-B	
SES7 322-1BL00-0AA0		32 output points	(B)	2,000	XW2Z-R200C-SIM-B	
			Straight length (without bends)	-/	XW2Z-R300C-SIM-B	
			5,000		5,000	XW2Z-R500C-SIM-B
Siemens PLCs with	Siemens PLC Connecting Cables XW2Z-R□C-SIM-□				500	XW2Z-R050C-SIM-C
16-point connectors (1:1)		16 input points		1,000	XW2Z-R100C-SIM-C	
Applicable models:				2,000	XW2Z-R200C-SIM-C	
or inputs:				3,000	XW2Z-R300C-SIM-C	
SES7 321-1BH02-0AA0				5,000	XW2Z-R500C-SIM-C	
		7			500	XW2Z-R050C-SIM-D
		32 input points	(A)	1,000	XW2Z-R100C-SIM-D	
Siemens PLCs with				(A) 2,000 3,000	XW2Z-R200C-SIM-D	
32-point connectors (1:2)					XW2Z-R300C-SIM-D	
Applicable models:				5,000	XW2Z-R500C-SIM-D	
For inputs: 6ES7 421-1BL-0AA0 For outputs:		<u> </u>	(120)	500	XW2Z-R050C-SIM-E	
				1,000	XW2Z-R100C-SIM-E	
SES7 422-1BL-0AA0		32 output points	Straight length (without bends)	2,000	XW2Z-R200C-SIM-E	
			Straight length (without belies)	3,000	XW2Z-R300C-SIM-E	
				5,000	XW2Z-R500C-SIM-E	

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

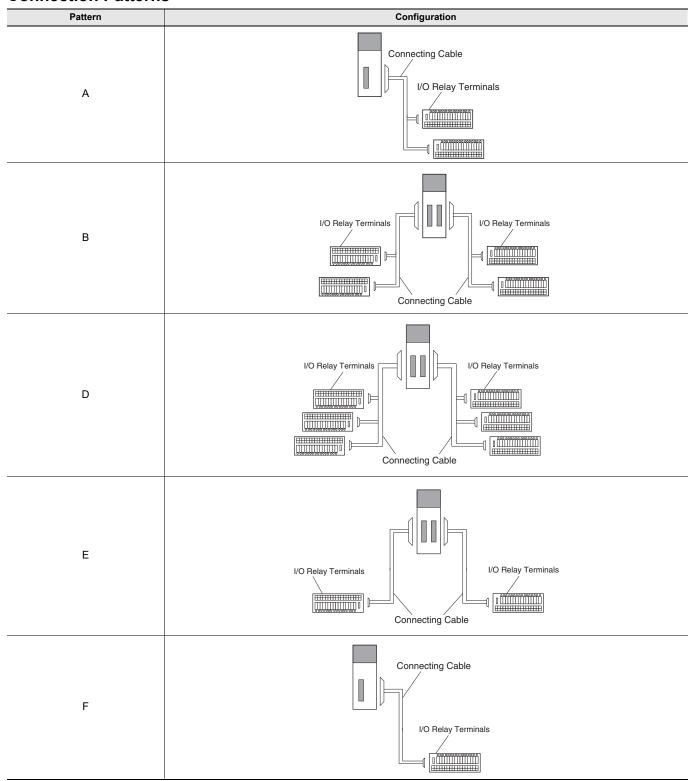
2. For connector pin diagrams and cable colors, refer to the wiring diagrams starting on page 4 of XW2Z-R Cables for I/O Relay Terminals (Cat. No. G126).

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], [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



List of Combinations with the OMRON PLC NX Series

	NX	I/O Units		Conne	2	XW2Z-R Cables		G70V I/O Relay Terminals			
I/O capacity	Model	External connectors	Polarity	ction pattern	Specifications	Model *1	Quantity required	Specifications	Model	Quantity required	
Input Unit	s										
16 inputs	NX-ID5142-5	1 MIL connector	NPN or PNP	F	1:1	XW2Z-RO□C	1		G70V-SID16P(-1)(-C16)	1	
	NX-ID6142-5	1 MIL connector	NPN or PNP			XW2Z-RO□-□-D1	1	Inputs *2	G70V-SID16P(-1)(-C16)	2	
32 inputs	NX-ID6142-6	1 Fujitsu/Otax connector	NPN or PNP	Α	1:2	XW2Z-RI□C-□	1	Inputs *2	G70V-SID16P(-1)(-C16)	2	
Output Un	its										
16	NX-OD5121-5	1 MIL connector	NPN	F	_	1:1	XW2Z-RO□C	1	NPN outputs	G70V-SOC16P(-C4)	1
outputs	NX-OD5256-5	1 MIL connector	PNP		1:1	XW2Z-RO□C	1	PNP outputs	G70V-SOC16P-1(-C4)	1	
	NX-OD6121-5	1 MIL connector	NPN	A	A 1:2	XW2Z-RO□-□-D1	1	NPN outputs	G70V-SOC16P(-C4)	2	
32	NX-OD6256-5	1 MIL connector	PNP					PNP outputs			
outputs	NX-OD6121-6	1 Fujitsu/Otax connector	NPN			XW2Z-RO□C-□	1	NPN outputs	G70V-SOC16P(-C4)	2	
Mixed I/O	Units				<u>'</u>						
		2 Fujitsu/Otax	Outputs:					Inputs *2	G70V-SID16P(-1)(-C16)	1	
	NX-MD6121-6	connectors (1 for 16 inputs and 1 for 16 outputs)	NPN Inputs: NPN or PNP			XW2Z-R□C	2	2 NPN outputs	G70V-SOC16P(-C4)	1	
16 inputs		2 MIL connectors	Outputs:			XW2Z-RO□C	XW2Z-RO□C 1 Inputs:	Inputs *2	G70V-SID16P(-1)(-C16)	1	
and 16 outputs	NX-MD6121-5	(1 for 16 inputs and 1 for 16 outputs)	NPN Inputs: NPN or PNP	E	1:1	XW2Z-RO□C	1	NPN outputs	G70V-SOC16P(-C4)	1	
		2 MIL connectors	Outputs:	1		XW2Z-RO□C	1	Inputs *2	G70V-SID16P(-1)(-C16)	1	
	NX-MD6256-5	(1 for 16 inputs and 1 for 16 outputs)	PNP Inputs: NPN or PNP			XW2Z-RI□C	1	PNP outputs	G70V-SOC16P-1(-C4)	1	

^{*1.} The box □ is replaced by the cable length. ***2.** Either NPN inputs or PNP inputs can be used.

List of Combinations with the OMRON PLC CJ Series

	CJ1V	N I/O Units		Conne		XW2Z-R Cables		G70V I/O Relay Terminals		
I/O capacity	Model	External connectors *1	Polarity	ction pattern	Specifications	Model *2	Quantity required	Specifications	Model	Quantity required
DC Input l	Jnits		•			•				
	CJ1W-ID231	1 Fujitsu/Otax connector	NPN			XW2Z-RI□C-□	1	_		
32 inputs	CJ1W-ID232	1 MIL connector	NPN	Α		XW2Z-RO□-□-D1	1		G70V-SID16P(-1)(-C16)	2
	CJ1W-ID233	1 MIL connector	NPN			XW2Z-RO□-□-D1	1			
64 inputs	CJ1W-ID261	2 Fujitsu/Otax connectors (2, 32-point connectors)	NPN	В	1:2	XW2Z-RI□C-□	2	Inputs *3	G70V-SID16P(-1)(-C16)	4
·	CJ1W-ID262	2 MIL connectors (2, 32-point connectors)	NPN			XW2Z-RO□-□-D1	2			
Transistor	Output Units									
32 outputs	CJ1W-OD231	1 Fujitsu/Otax connector	Sinking (NPN)			XW2Z-RO□C-□	1	NDN outpute	G70V-SOC16P(-C4)	2
	CJ1W-OD233	1 MIL connector	Sinking (NPN)	A		XW2Z-RO□-□-D1	1	NPN outputs	G70V-30C10F(-C4)	2
	CJ1W-OD232	1 MIL connector	Sourcing (PNP)			XW2Z-RO□-□-D1	1 PNP	PNP outputs	G70V-SOC16P-1(-C4)	2
	CJ1W-OD234	1 MIL connector	Sinking (NPN)		1:2	XW2Z-RO□-□-D1	1	NPN outputs	G70V-SOC16P(-C4)	2
	CJ1W-OD261	2 Fujitsu/Otax connectors (2, 32-point connectors)	Sinking (NPN)	В		XW2Z-RO□C-□	2	NPN outputs	G70V-SOC16P(-C4)	4
64 outputs	CJ1W-OD262	2 MIL connectors (2, 32-point connectors)	Sourcing (PNP)			XW2Z-RO□-□-D1	2	PNP outputs	G70V-SOC16P-1(-C4)	4
	CJ1W-OD263	2 MIL connectors (2, 32-point connectors)	Sinking (NPN)			XW2Z-RO□-□-D1	2	NPN outputs	G70V-SOC16P(-C4)	4
DC Input/	Fransistor Outp	ut Units								
		2 Fujitsu/Otax	6: 1:					Inputs *3	G70V-SID16P(-1)(-C16)	1
	CJ1W-MD231	connectors (1 for 16 inputs and 1 for 16 outputs)	Sinking (NPN)			XW2Z-R□C	2	NPN outputs	G70V-SOC16P(-C4)	1
16 inputs and 16		2 MIL connectors	Sinking	Е	1:1	XW2Z-RO□C	1	Inputs *3	G70V-SID16P(-1)(-C16)	1
outputs	CJ1W-MD233	(1 for 16 inputs and 1 for 16 outputs)	(NPN)	_		XW2Z-RO□C	1	NPN outputs	G70V-SOC16P(-C4)	1
		2 MIL connectors	Sourcing			XW2Z-RO□C	1	Inputs *3	G70V-SID16P(-1)(-C16)	1
	CJ1W-MD232	(1 for 16 inputs and 1 for 16 outputs)	(PNP)			XW2Z-RI□C	1	PNP outputs	G70V-SOC16P-1(-C4)	1
		2 Fujitsu/Otax				XW2Z-RI□C-□	1	Inputs *3	G70V-SID16P(-1)(-C16)	2
32 inputs and 32	CJ1W-MD261	connectors (1 for 32 inputs and 1 for 32 outputs)	Sinking (NPN)	В	1:2	XW2Z-RO□C-□	1	NPN outputs	G70V-SOC16P(-C4)	2
outputs	0.000.000	2 MIL connectors	Sinking	ing		XW2Z-RO□-□-D1	1	Inputs *3	G70V-SID16P(-1)(-C16)	2
	CJ1W-MD263	(1 for 32 inputs and 1 for 32 outputs)	(NPN)			XW2Z-RO□-□-D1	1	NPN outputs	G70V-SOC16P(-C4)	2

^{*1.} For details on the types of connectors, refer to pages 24 and 25. ***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)	(W2Z-R Cables		G70V I/O Relay Terminals			
I/O capacity	Model	External connectors *1	Polarity	ction pattern	Specifications	Model *2	Quantity required	Specifications	Model	Quantity required
DC Input l	Units		*	•			+			*
32 inputs	CS1W-ID231	1 Fujitsu/Otax connector	NPN	Α		XW2Z-RI□C-□	1		G70V-SID16P(-1)(-C16)	2
64 inputs	CS1W-ID261	2 Fujitsu/Otax connectors (2, 32-point connectors)	NPN	В	1:2	XW2Z-RI□C-□	2	Inputs * 3	G70V-SID16P(-1)(-C16)	4
96 inputs	CS1W-ID291	2 Fujitsu/Otax connectors (2, 48-point connectors)	NPN	D	1:3	XW2Z-R□C-□-□	2		G70V-SID16P(-1)(-C16)	6
Transisto	r Output Units									
32	CS1W-OD231	1 Fujitsu/Otax connector	Sinking (NPN)	ng A		XW2Z-RO□C-□	1	NPN outputs	G70V-SOC16P(-C4)	2
outputs	CS1W-OD232	1 Fujitsu/Otax connector	Sourcing (PNP)			XW2Z-RO□C-□	1	PNP outputs	G70V-SOC16P-1(-C4)	2
64	CS1W-OD261	2 Fujitsu/Otax connectors (2, 32-point connectors)	Sinking (NPN)	- В	1:2	XW2Z-RO□C-□	2	NPN outputs	G70V-SOC16P(-C4)	4
outputs	CS1W-OD262	2 Fujitsu/Otax connectors (2, 32-point connectors)	Sourcing (PNP)			XW2Z-RO□C-□	2	PNP outputs	G70V-SOC16P-1(-C4)	4
96 outputs	CS1W-OD291	2 Fujitsu/Otax connectors (2, 48-point connectors)	Sinking (NPN)	D	1:3	XW2Z-R□C-□-□	2	NPN outputs	G70V-SOC16P(-C4)	6
DC Input/	Transistor Outp	ut Units								
		2 Fujitsu/Otax				XW2Z-RI□C-□	1	Inputs *3	G70V-SID16P(-1)(-C16)	2
32 inputs	CS1W- MD261	connectors (1 for 32 inputs and 1 for 32 outputs)	Sinking (NPN)	В	1.0		G70V-SOC16P(-C4)	2		
and 32 outputs		2 Fujitsu/Otax	_		B 1:2 XW2Z-RI□C-□ XW2Z-RO□C-□	1	Inputs *3	G70V-SID16P(-1)(-C16)	2	
	CS1W- MD262	connectors (1 for 32 inputs and 1 for 32 outputs)	Sourcing (PNP)			XW2Z-RO□C-□	1	PNP outputs	G70V-SOC16P-1(-C4)	2
		2 Fujitsu/Otax						Inputs *3	G70V-SID16P(-1)(-C16)	3
48 inputs and 48 outputs	CS1W- MD291	connectors (1 for 48 inputs and 1 for 48 outputs)	Sinking (NPN)	_	4.0	XW2Z-R□C-□-□	2	NPN outputs	G70V-SOC16P(-C4)	3
	CS1W- MD292	2 Fujitsu/Otax connectors (1 for 48 inputs and 1 for 48 outputs)	Sourcing (PNP)	- D	1:3	XW2Z-R□C-□-□	1	Inputs *3	G70V-SID16P(-1)(-C16)	3

^{*1.} For details on the types of connectors, refer to pages 24 and 25. ***2.** The box □ is replaced by the cable length. ***3.** 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		XW2Z-R Cables		G70V I/O Relay Terminals				
I/O capacity	Model	External connectors	Polarity	ction pattern	Specifications	Model *1	Quantity required	Specifications	Model	Quantity required		
Input Unit	s											
	LX41C4	1 Fujitsu/Otax				XW2Z-RI						
32 inputs	QX41/QX41-S1/ QX41-S2			А			1	Inputs *2	G70V-SID16P(-1)(-C16)	2		
•	QX71					-□□MN		,				
	RX41C4		NPN or		1:2							
	LX42C4		PNP									
64 inputs	QX42/QX42-S1	2 Fujitsu/Otax		В		XW2Z-RI□□□	2	Inputs *2	G70V-SID16P(-1)(-C16)	4		
04 inputs	QX82/QX82-S1	connectors				-□□MN		inputs 42	0707-312101 (-1)(-010)	1		
	RX42C4											
Output Un	its				L		1					
	LY41NT1P											
32 outputs	QY41P	1 Fujitsu/Otax	NIDNI			XW2Z-RO	1	NPN outputs	G70V-SOC16P(-C4)	2		
	QY71	connector	NPN							2		
	RY41NT2P			Α								
	LY41PT1P				1:2	XW2Z-RO	1	PNP outputs	G70V-SOC16P-1(-C4)	2		
	RY41PT1P	1 Fujitsu/Otax connector	PNP									
	RY41PT2H											
	LY42NT1P	0.5 101				XW2Z-RO MN	2	NPN outputs PNP outputs	G70V-SOC16P(-C4) G70V-SOC16P-1(-C4)			
	RY42NT2P	2 Fujitsu/Otax connectors	NPN PNP							4		
64	QY42P			В								
outputs	LY42PT1P	2 Fujitsu/Otax										
	RY42PT1P	connectors								4		
	QY82P											
Mixed I/O	i		ļ	1	1	1		i -	 	_		
	RH42C4NT2P (Input side)	2 Fujitsu/Otax	NPN or PNP			XW2Z-RI	1	Inputs *2	G70V-SID16P(-1)(-C16)	2		
	RH42C4NT2P (Output side)	connectors	NPN			XW2Z-RO□□□ -□□MN	1	NPN outputs	G70V-SOC16P(-C4)	2		
	QH42P (Input side)	2 Fujitsu/Otax	NPN or PNP			XW2Z-RI□□□ -□□MN	1	Inputs *2	G70V-SID16P(-1)(-C16)	2		
	QH42P (Output side)	connectors	NPN	-		XW2Z-RO□□□ -□□MN	1	NPN outputs	G70V-SOC16P(-C4)	2		
32 inputs	QX41Y41P (Input side)	2 Fujitsu/Otax	NPN or PNP		4.0	XW2Z-RI□□□ -□□MN	1	Inputs *2	G70V-SID16P(-1)(-C16)	2		
and 32 outputs	QX41Y41P (Output side)	connectors	NPN	В	1:2	XW2Z-RO	1	NPN outputs	G70V-SOC16P(-C4)	2		
	LH42C4NT1P (Input side)	2 Fujitsu/Otax	NPN or PNP			XW2Z-RI□□□ -□□MN	1	Inputs *2	G70V-SID16P(-1)(-C16)	2		
	LH42C4NT1P (Output side)	connectors	NPN			XW2Z-RO	1	NPN outputs	G70V-SOC16P(-C4)	2		
	LH42C4PT1P (Input side)	2 Fujitsu/Otax	NPN or PNP			XW2Z-RI	1	Inputs *2	G70V-SID16P(-1)(-C16)	2		
	LH42C4PT1P (Output side)	connectors	PNP			XW2Z-RO	1	PNP outputs	G70V-SOC16P-1(-C4)	2		

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

^{*1.} The box ☐ is replaced by the cable length. For details on the types, refer to page 25. ***2.** Either NPN inputs or PNP inputs can be used.

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