IOLINK
Best Wiring Solution

R16G Series 16points + 16points Master/Slave, OMRON G6B Relay mounted

User's Guide

CE

← JUMP CABLE : Flat cable with 30cm is built into the master board
and a circular cable is being prepared for sale.

← Master Board   ← Slave Board
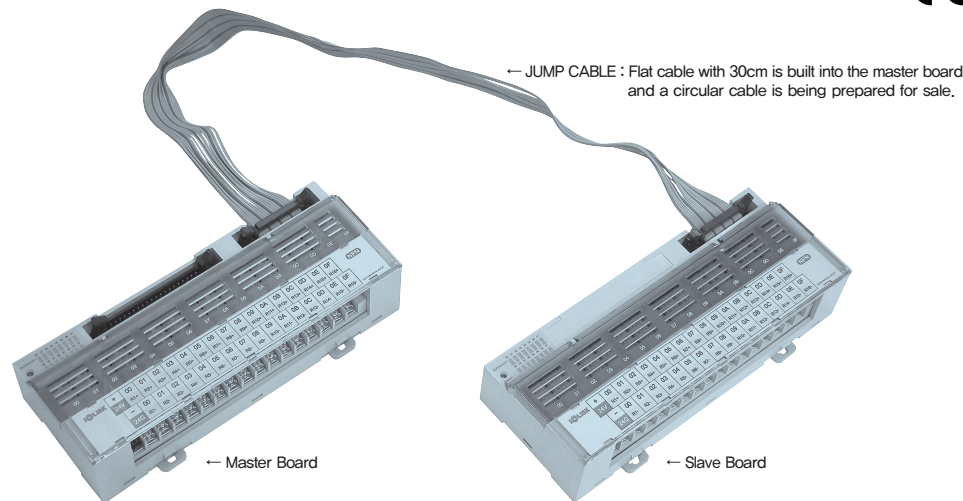
Thank you for purchasing product of SAMWON ACT.
Please check model of product that you purchase first, and read this manual prior to use it.

● Caution for Safety

⚠ **Caution**	Case that results in serious damage in human body or equipment, and fire if user handles this equipment wrongly
⚠ **Warning**	Case that results in slight damage in human body or equipment, and fire if user handles this equipment wrongly

⚠ Caution

1. Do Not use other voltage except appointed voltage. It may be the cause of fire or damage of equipment.
2. Use it within nominal voltage and current which are marked on load.
   It may be the cause of fire or damage of equipment.
3. Check COMMON polarity of using controller (PLC, etc) first, and then select proper product.
   It may be the cause of fire or damage of this equipment and user's.
   1) COMMON Polarity of controller is '+' (NPN TYPE) : R16G−NS5A−M, R16G−NS5A−S
   2) COMMON Polarity of controller is '−' (PNP TYPE) : R16G−PS5A−M, R16G−PS5A−S
4. Make controller and connection cable between relay boards after checking internal wiring of relay board and
   PIN(terminal or socket) array of controller if you want to make it for yourself.
   It may be the cause of fire, and malfunction or damage of this equipment and user's.

※ The connection cable for PLC of various makers is provided by us. Please refer to the
catalogue or contact Head or branch office if you need more detail models and specifications.

⚠ Warning

1. Plug or unplug power line and/or connector for signal after making sure to shut off power so as that
   it is prevented to be damaged or malfunctioned.
2. Read this user's guide which is attached to product, and check product's performance, specification,
   operation pattern, signal, and how to handle prior to use. Keep user's guide please.
3. When wiring the terminal block, please tighten it with the specified torque using the appropriate tool. If it is
   outside of this range torque, it may cause malfunction due to breakage or looseness of tightening surface terminal.
4. When replacing a relay, check how to replace the relay on the back of the manual before using it.

● Model Configuration

Model	Installation Relay	IO Point(s)	Coil Rate voltage	Common		Interface		Dimensions	Protection circuit for contact
				Coil	Contact	Coil	Contact		
R16G−NS5A−M	OMRON G6B−1174P −FD−US DC24V	16Point (1a * 16)	24V DC	NPN ⊕COM	Individual Com. (8P Short bar built)	MIL−C−83503 40Pin/20Pin	Screw Terminal 7.62Pitch 34Pole	174.0 * 70	DIN Rail (Channel)
R16G−PS5A−M				PNP ⊖COM					
R16G−NS5A−S				NPN ⊕COM		MIL−C−83503 20Pin/20Pin			
R16G−PS5A−S				PNP ⊖COM					

● G6B Relay Specification

| Item		G6B−1174P−FD−US DC24V
Contact	Arrangement	SPST−NO (1a)
	Nominal switching capacity (resistive load)	5A 250V AC / 5A 30V DC
	Max. switching current	5A
	Max. switching voltage	380V AC / 125V DC
Coil	Nominal voltage	24V DC
	Pick−up Voltage	70% max of Rated voltage
	Drop−out Voltage	10% min of Rated voltage
	Coil resistance	2,880Ω
	Nominal operating power	Approx 200mW
Surge voltage between contact and coil		6,000V
Initial breakdown voltage between contact and coil		AC 3,000V 50/60Hz 1min

● Material/Specification

Case	Modified PPO
Protective cover	Polycarbonate
P.C.B	Epoxy 1.6t / 2oz
Applicable wire	AWG22～16 (1.5㎟ / MAX)
Terminal Screw	M3.5 X 8L
Screw torque	7～8Kgf • cm (0.68～0.78 N • m)
Ambient temperature	−10℃ ～ +50℃ (No condensation)

● Accessories

• Short bar(2ea)

● Applicable crimp terminal

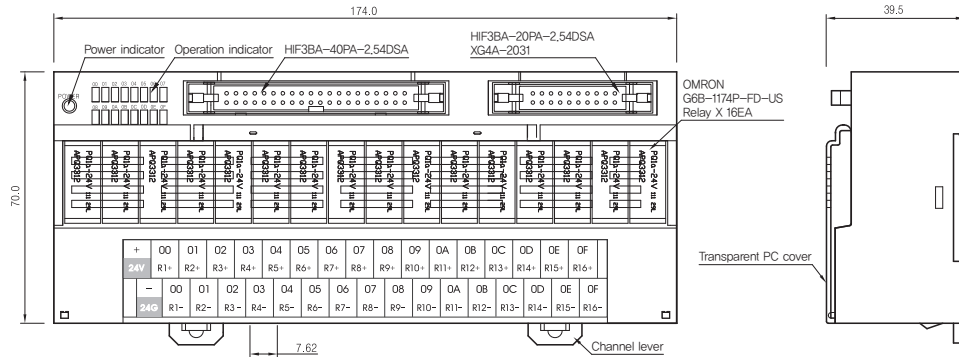MIN3.5 MAX8   MIN4 MAX4.7   MIN3.5 MAX8   MIN4 MAX4
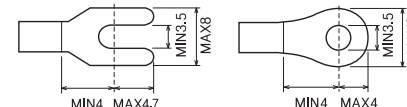
● Separate product

• Master / Slave Connecting cable (Circular cable)
 C20HH−▢SL−"O"

● Dimension

・ R16G−□S5A−M (Master Board)

- Power indicator
- Operation indicator
- HIF3BA−40PA−2.54DSA
- HIF3BA−20PA−2.54DSA XG4A−2031
- OMRON G6B−1174P−FD−US Relay X 16EA
- 174.0
- 39.5
- 70.0
- 7.62
- Channel lever
- Transparent PC cover

● Dimension

・ R16G−□S5A−S (Slave Board)

- Power indicator
- Operation indicator
- HIF3BA−20PA−2.54DSA XG4A−2031
- OMRON G6B−1174P−FD−US Relay X 16EA
- 174.0
- 39.5
- 70.0
- 7.62
- Channel lever
- Transparent PC cover

● Wiring Diagram

・ R16G−NS5A−M (Master Board, NPN) +COM

MASTER Connector side
SLAVE Connector side
Terminal side
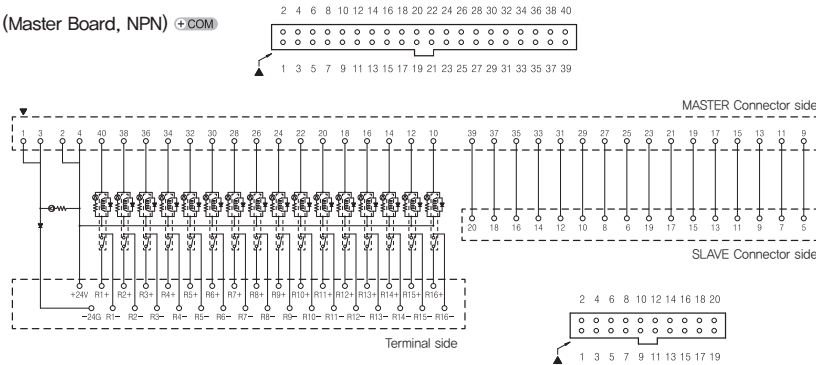
・ R16G−PS5A−M (Master Board, PNP) −COM

MASTER Connector side
SLAVE Connector side
Terminal side
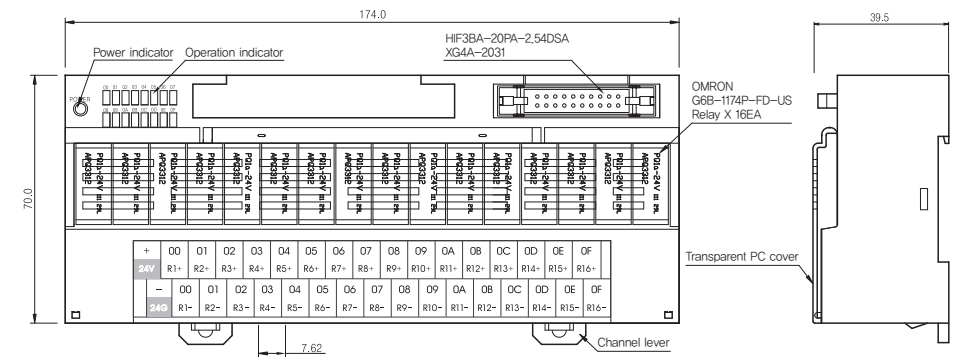
● Wiring Diagram

・ R16G−NS5A−S (Slave Board, NPN) +COM

Connector side
Terminal side
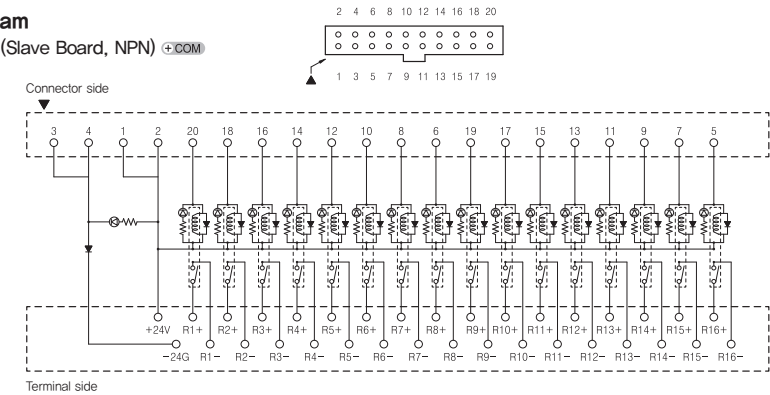
・ R16G−PS5A−S (Slave Board, PNP) −COM

Connector side
Terminal side
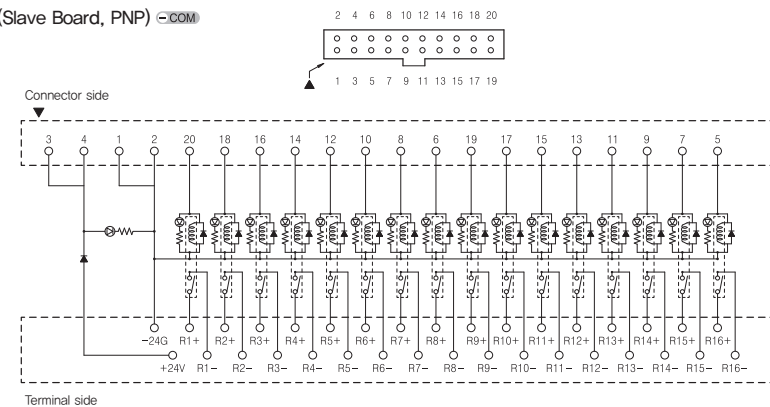
※ The above specifications are subject to change without notice.
※ Please contact HQ or branch office where you purchased product for A/S of this product or technique.