

# I/O Cables



## CH Series PRODUCT MANUAL

For your safety, read and follow the considerations written in the instruction manual, other manuals and Autonics website.

The specifications, dimensions, etc. are subject to change without notice for product improvement. Some models may be discontinued without notice.

### Features

- Diverse cables available for connection to various PLCs and controller
- Customizable cable arrangement
- Diverse cable lengths for various user requirements
- Customizable branching cable types

### Ordering Information

This is only for reference.

For selecting the specified model, follow the Autonics website.

Check PLC / SERVO Connector, cable appearance, cable selection and connection to order a product. Optional specifications, needed to contact Autonics

If there is no items you are looking for, please contact Autonics.

CH ① - ② ③ - ④ ⑤ ⑥ ⑦ ⑧ - ⑨

① <b>No. of connector pins</b> Number: Number of connector pins	⑨ <b>Cable length</b> 005: 0.5 m 010: 1 m 015: 1.5 m 020: 2 m 025: 2.5 m 030: 3 m 040: 4 m 050: 5 m
② <b>PLC / SERVO connector</b> HP: Hirose plug FP: Fujitsu plug DP: D-sub plug DS: D-sub socket MP: 3M plug (latch) MQ: 3M plug (bolt)	
④ <b>Position of PLC (SERVO) power connection pin</b>	
⑤ <b>Signal arrangement</b>	
⑥ <b>PLC (SERVO) power connection pin</b>	
⑦ <b>Connection type of PLC (SERVO)</b>	
⑧ <b>PLC (SERVO) connector direction</b>	
⑨ <b>Cable branching</b>	

### Specifications

Series	CH Series
<b>Cable connector</b>	PLC / SERVO side - Terminal block side
PLC / SERVO side	Hirose 20-pin / 40-pin socket Fujitsu 40-pin socket D-Sub 37-pin socket / plug MDR (latch) 20-pin / 26-pin / 50-pin socket MDR (bolt) 26-pin / 50-pin socket
Terminal block side	Hirose 20-pin / 26-pin / 40-pin / 50-pin socket
<b>Wire</b> <sup>01)</sup>	UL 20276 TWIST 20C / 40C / 26C / 50C
<b>Conductor characteristics</b>	7 / 0.127 mm (AWG 28) × 20P, 7 / 0.127 mm (AWG 28) × 13P, 7 / 0.127 mm (AWG 28) × 10P, 7 / 0.127 mm (AWG 28) × 25P
<b>Insulation diameter</b>	0.12 mm <sup>2</sup>
<b>Cable diameter</b>	∅ 6.3 mm (26C) / ∅ 7.2 mm (40C) / ∅ 8.9 mm (50C)
<b>Rated current</b>	≤ 1 A
<b>Conductor resistance</b> <sup>02)</sup>	≤ 0.223 Ω/m
<b>Insulation voltage</b>	500 VAC ~ 50/60Hz for 1 min
<b>Insulation resistance</b>	≥ 15 MΩ/km
<b>Ambient temperature</b>	-15 to 55°C, storage: -25 to 65°C (no freezing or condensation)
<b>Ambient humidity</b>	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)

01) Color is black.

02) Conductor resistance value is rated at 20 °C.

## ■ Unit weight : PLC cable

- It excludes the package weight (+ 5 g). Unit weight is different depending on the cable length.

Type	No. of pin	Branching	Model	Weight
Hirose plug	20-pin	Non-branching	CH20-HP□-□	≈ 37 to 298 g
	40-pin	Non-branching	CH40-HP□-□	≈ 58 to 391 g
		2-branching	CH40-HP□-□-2S	≈ 55 to 388 g
		2-branching	CH40-HP□-□-2L	≈ 55 to 388 g
		2-branching	CH40-HP□-□-YS	≈ 58 to 391 g
		2-branching	CH40-HP□-□-FS	≈ 58 to 391 g
Fujitsu plug	40-pin	Non-branching	CH40-FP□-□	≈ 85 to 418 g
	2-branching	CH40-FP□-□-2S	≈ 88 to 421 g	
	2-branching	CH40-FP□-□-2L	≈ 88 to 421 g	
D-Sub plug	37-pin	Non-branching	CH37-DP□-□	≈ 90 to 423 g
	2-branching	CH37-DP□-□-2S	≈ 84 to 417 g	
	2-branching	CH37-DP□-□-2L	≈ 84 to 417 g	
D-Sub Socket	37-pin	Non-branching	CH37-DS□-□	≈ 90 to 423 g
	2-branching	CH37-DS□-□-2S	≈ 84 to 417 g	
	2-branching	CH37-DS□-□-2L	≈ 84 to 417 g	

## ■ Unit weight : SERVO cable

- It excludes the package weight (+ 5 g). Unit weight is different depending on the cable length.













Type	No. of pin	Model	Weight
3M plug (latch)	20-pin	CH20-MP□-□	≈ 46 to 301 g
	26-pin	CH26-MP□-□	≈ 72 to 267 g
	50-pin	CH50-MP□-□	≈ 95 to 587 g
3M plug (bolt)	26-pin	CH26-MQ□-□	≈ 74 to 269 g
	50-pin	CH50-MQ□-□	≈ 98 to 590 g

## Connectible Connectors









- These are shape and direction of connectors in PLC / SERVO to which CH series cable can be connected.
- These images stand for the direction of cable running down.

### ■ PLC connector

#### • Non-branching


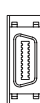

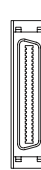
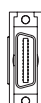

Direction	Right (R) 					Left (L) 				
	Hirose plug	Fujitsu plug	D-Sub plug	D-Sub socket	Hirose plug	Fujitsu plug	D-Sub plug	D-Sub socket		
Type	20-pin	40-pin	40-pin	37-pin	37-pin	20-pin	40-pin	40-pin	37-pin	37-pin
Shape										

#### • 2-branching


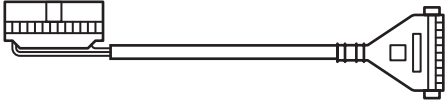
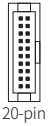


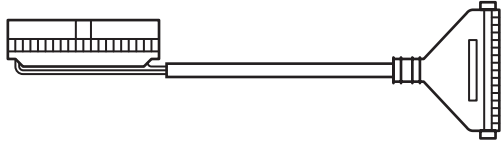
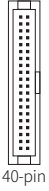


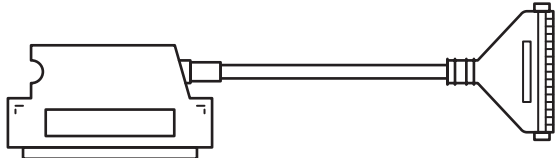
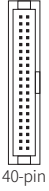


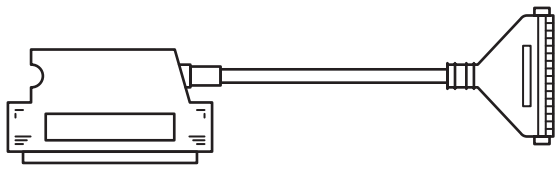
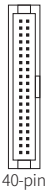


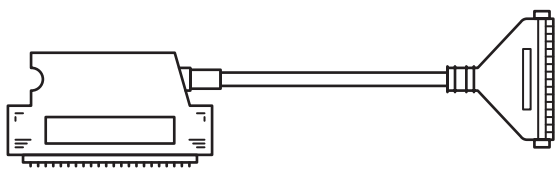
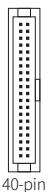

Direction	Right (R) 	Left (L) 	Right + Left (W, X) <sup>01</sup> 	Left + Right (Y, Z) <sup>01</sup> 
	Hirose plug	Hirose plug	Hirose plug	Hirose plug
Type	40-pin	40-pin	40-pin	40-pin
Shape				

01) It is decided according to the pin arrangement. For detailed information, contact Autonics.

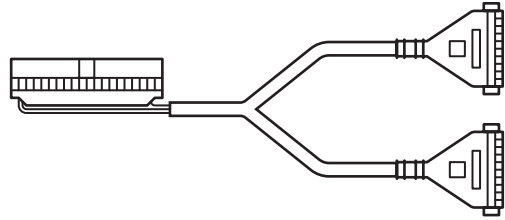
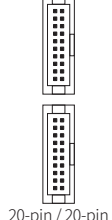
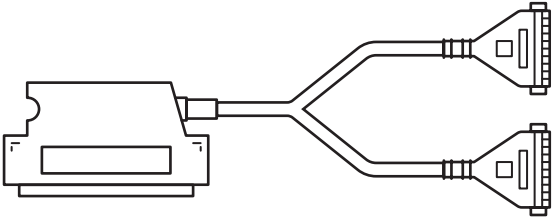
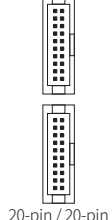
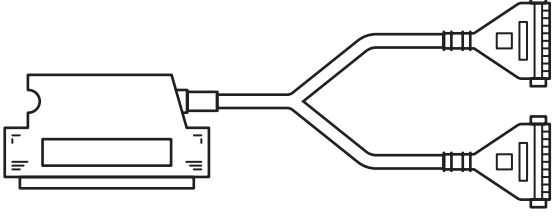
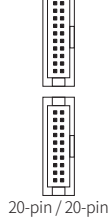
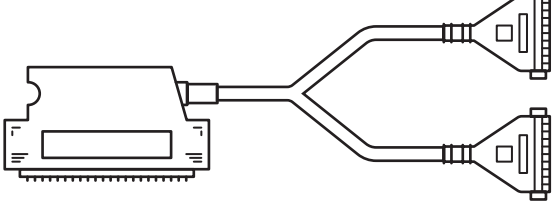
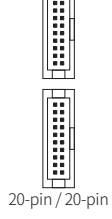
### ■ SERVO connector

Direction	Right (R) 				
Type	3M plug (latch)			3M plug (bolt)	
No. of pin	20-pin	26-pin	50-pin	26-pin	50-pin
Shape					


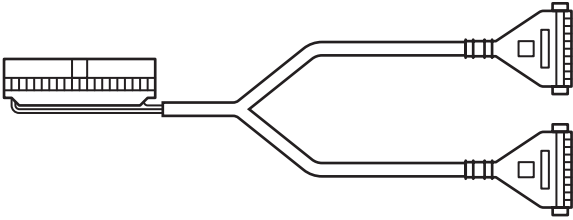
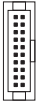
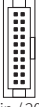


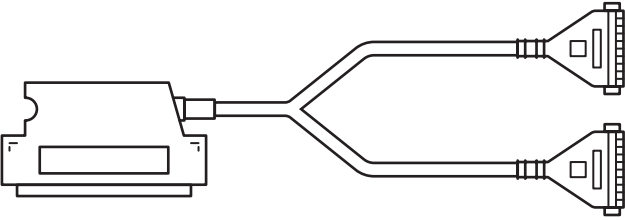
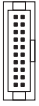
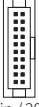


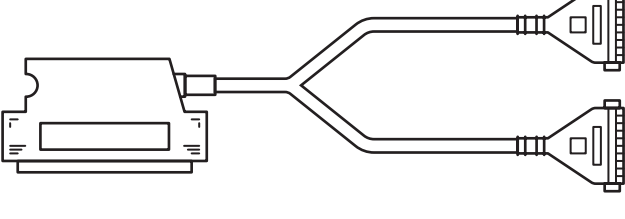
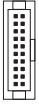
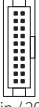


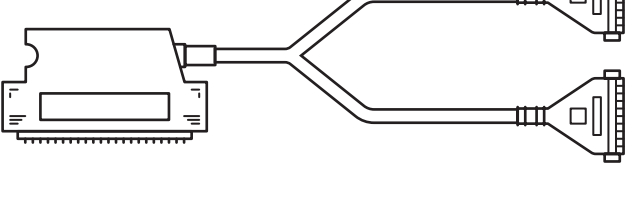

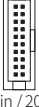

## Cable Appearance: Non-branching

PLC connector		Cable model	Cable appearance	Terminal block connector
Type	Direction			
Hirose 20-pin plug	 R direction	CH20-HP□-□ R		 20-pin
	 L direction	CH20-HP□-□ L		
Hirose 40-pin plug	 R direction	CH40-HP□-□ R		 40-pin
	 L direction	CH40-HP□-□ L		
Fujitsu 40-pin plug	 R direction	CH40-FP□-□ R		 40-pin
	 L direction	CH40-FP□-□ L		
D-sub 37-pin plug	 R direction	CH37-DP□-□ R		 40-pin
	 L direction	CH37-DP□-□ L		
D-sub 37-pin socket	 R direction	CH37-DS□-□ R		 40-pin
	 L direction	CH37-DS□-□ L		

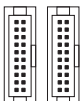
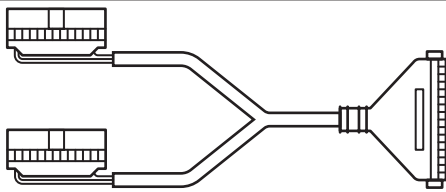

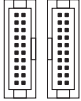
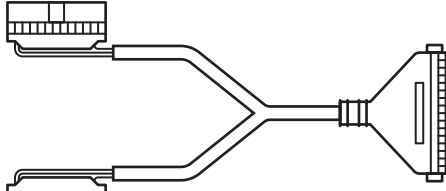

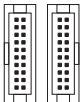
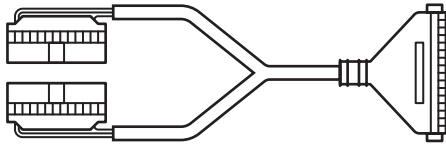

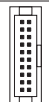
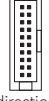
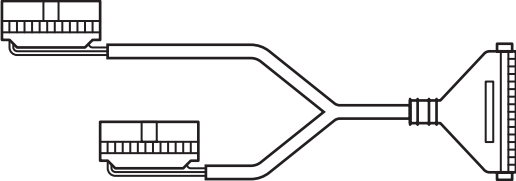

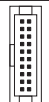
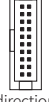
## Cable Appearance: Terminal block side 2-branching short type

PLC connector		Cable model	Cable appearance	Terminal block connector
Type	Direction			
Hirose 40-pin plug	R direction	CH40-HP□-□R-2S		 20-pin / 20-pin
	L direction	CH40-HP□-□L-2S		
Fujitsu 40-pin plug	R direction	CH40-FP□-□R-2S		 20-pin / 20-pin
	L direction	CH40-FP□-□L-2S		
D-sub 37-pin plug	R direction	CH37-DP□-□R-2S		 20-pin / 20-pin
	L direction	CH37-DP□-□L-2S		
D-sub 37-pin socket	R direction	CH37-DS□-□R-2S		 20-pin / 20-pin
	L direction	CH37-DS□-□L-2S		


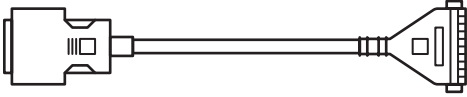


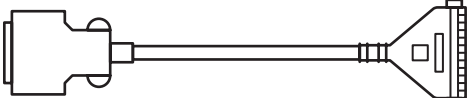


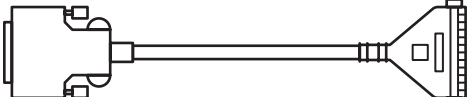







## Cable Appearance: Terminal block side 2-branching long type

PLC connector		Cable model	Cable appearance	Terminal block connector
Type	Direction			
Hirose 40-pin plug	 R direction	CH40-HP□-□ R-2L		  20-pin / 20-pin
	 L direction	CH40-HP□-□ L-2L		
Fujitsu 40-pin plug	 R direction	CH40-FP□-□ R-2L		  20-pin / 20-pin
	 L direction	CH40-FP□-□ L-2L		
D-sub 37-pin plug	 R direction	CH37-DP□-□ R-2L		  20-pin / 20-pin
	 L direction	CH37-DP□-□ L-2L		
D-sub 37-pin socket	 R direction	CH37-DS□-□ R-2L		  20-pin / 20-pin
	 L direction	CH37-DS□-□ L-2L		

## Cable Appearance: PLC side 2-branching short type

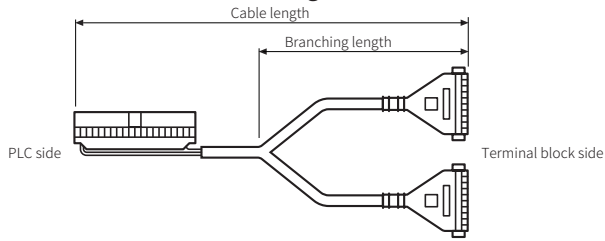
PLC connector		Cable model	Cable appearance	Terminal block connector
Type	Direction			
Hirose 20-pin plug	 R direction + R direction	CH40-HP□-□R-YS		 40-pin
	 R direction + L direction	CH40-HP□-□W-YS CH40-HP□-□X-YS		 40-pin
	 L direction + R direction	CH40-HP□-□Y-YS CH40-HP□-□Z-YS		 40-pin
	  R direction + R direction	CH40-HP□-□R-FS		 40-pin
	  L direction + L direction	CH40-HP□-□L-FS		

## Cable Appearance: SERVO

SERVO connector		Cable model	Cable appearance	Terminal block connector
Type	Direction			
3M 20-pin plug (latch)	 R direction	CH20-MP□-□ R		 20-pin
3M 26-pin plug (latch)	 R direction	CH26-MP□-□ R		 26-pin
3M 26-pin plug (bolt)	 R direction	CH26-MQ□-□ R		 26-pin
3M 50-pin plug (latch)	 R direction	CH50-MP□-□ R		 50-pin
3M 50-pin plug (bolt)	 R direction	CH50-MQ□-□ R		 50-pin

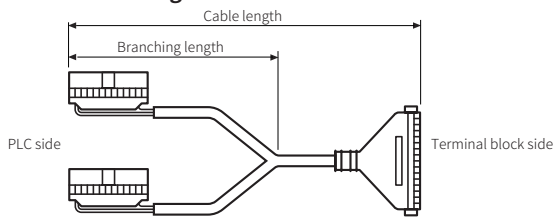
## Cable Length of Branching Type Cable

### Terminal block side branching cable

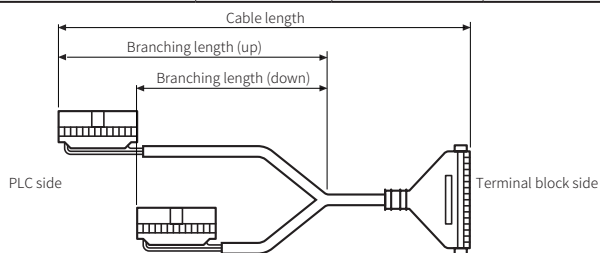


Cable model	Branching	Cable length	Branching length
CH□-□005-□-2S	2-branching short type	0.5 m	0.15 m
CH□-□010-□-2S		1 m	0.15 m
CH□-□015-□-2S		1.5 m	0.15 m
CH□-□020-□-2S		2 m	0.15 m
CH□-□025-□-2S		2.5 m	0.15 m
CH□-□030-□-2S		3 m	0.15 m
CH□-□040-□-2S		4 m	0.15 m
CH□-□050-□-2S	5 m	0.15 m	
CH□-□005-□-2L	2-branching long type	0.5 m	0.3 m
CH□-□010-□-2L		1 m	0.8 m
CH□-□015-□-2L		1.5 m	1.3 m
CH□-□020-□-2L		2 m	1.8 m
CH□-□025-□-2L		2.5 m	2.3 m
CH□-□030-□-2L		3 m	2.8 m
CH□-□040-□-2L		4 m	3.8 m
CH□-□050-□-2L	5 m	4.8 m	

### PLC side branching cable



Cable model	Branching	Cable length	Branching length
CH40-HP005-□-YS	2-branching right/left type	0.5 m	0.15 m
CH40-HP010-□-YS		1 m	0.15 m
CH40-HP015-□-YS		1.5 m	0.15 m
CH40-HP020-□-YS		2 m	0.15 m
CH40-HP025-□-YS		2.5 m	0.15 m
CH40-HP030-□-YS		3 m	0.15 m
CH40-HP040-□-YS		4 m	0.15 m
CH40-HP050-□-YS	5 m	0.15 m	



Cable model	Branching	Cable length	Branching length
CH40-HP005-□-FS	2-branching up/down type	0.5 m	Up: 0.15 m Down: 0.09 m
CH40-HP010-□-FS		1 m	
CH40-HP015-□-FS		1.5 m	
CH40-HP020-□-FS		2 m	
CH40-HP025-□-FS		2.5 m	
CH40-HP030-□-FS		3 m	
CH40-HP040-□-FS		4 m	
CH40-HP050-□-FS	5 m		



## Cable Selection and Connection Diagram

Check the cable selection table and connection diagram to select the proper cable model. Only some of representative PLC are selected. If there is no PLC model you are looking for or you need branching type of cable, please contact Autonics.

### 1 ■ LS) XGT Series - Interface/Relay terminal block

• Cable selection guide

Controller				Terminal block to connect	Proper cable	
Module name	I/O	No. of I/O	Logic		Model name	Quantity
XGI-D24A	Input	32	-	Interface Terminal block	CH40-FP□-1R	1
XGI-D24B	Input	32	-	Interface Terminal block	CH40-FP□-1R	1
XGI-D28A	Input	64	-	Interface Terminal block	CH40-FP□-1R	2
XGI-D28B	Input	64	-	Interface Terminal block	CH40-FP□-1R	2
XGQ-TR4A	Output	32	NPN	Interface Terminal block	CH40-FP□-1R	1
	Output	32	NPN	Relay Terminal block	CH40-FP□-E1T1R	1
XGQ-TR4B	Output	32	PNP	Interface Terminal block	CH40-FP□-1R	1
	Output	32	PNP	Relay Terminal block	CH40-FP□-E1T4R	1
XGQ-TR8A	Output	64	NPN	Interface Terminal block	CH40-FP□-1R	2
	Output	64	NPN	Relay Terminal block	CH40-FP□-E1T1R	2
XGQ-TR8B	Output	64	PNP	Interface Terminal block	CH40-FP□-1R	2
	Output	64	PNP	Relay Terminal block	CH40-FP□-E1T4R	2

□ in proper cable model name stands for the cable length. Please refer to the cable length in 'Ordering Information'.

3 • Cable connection diagram

### 4 - Interface Terminal block input

COM	COM	NC	NC	OF	OE	OD	OC	OB	OA	O9	O8	O7	O6	O5	O4	O3	O2	O1	O0	PLC I/O signal Pin no. of PLC connector
B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15	B16	B17	B18	B19	B20	
																				Terminal block signal
B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15	B16	B17	B18	B19	B20	
A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19	A20	Terminal block signal
COM	COM	NC	NC	1F	1E	1D	1C	1B	1A	19	18	17	16	15	14	13	12	11	10	
A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19	A20	PLC I/O signal Pin no. of PLC connector

5

No.	Description
1	Search for the manufacturer and series name of PLC you have, and terminal block type to connect.
2	Search for detailed information of the PLC, and terminal block type to connect.
3	Check the model name and required quantity. If there is no item you want, please contact Autonics.
4	Search for the terminal block to connect.
5	Connect the PLC and terminal block using the purchased cable, and wire referring to the above terminal block image.

## Cable Selection and Connection Diagram

Check the cable selection table and connection diagram to select the proper cable model.  
Only some of representative PLC are selected. If there is no PLC model you are looking for or you need branching type of cable, please contact Autonics.

### ■ LS) XGT Series - Interface/Relay/SSR terminal block

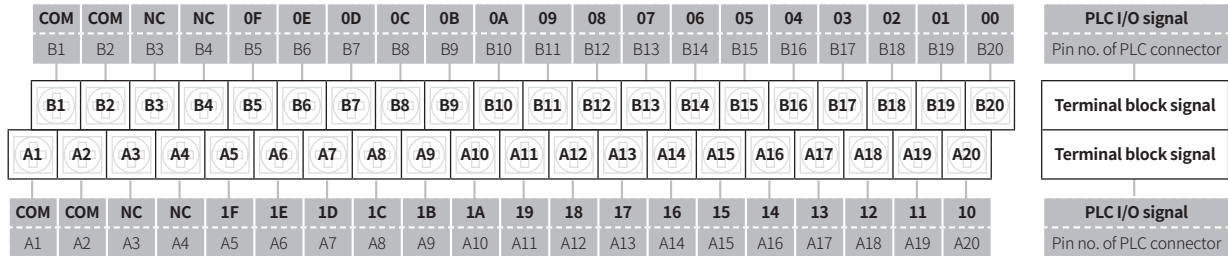
- Cable selection guide

Controller				Terminal block to connect	Proper cable	
Module name	I/O	No. of I/O	Logic		Model name	Quantity
XGI-D24A	Input	32	-	Interface Terminal block	CH40-FP□-1R	1
XGI-D24B	Input	32	-	Interface Terminal block	CH40-FP□-1R	1
XGI-D28A	Input	64	-	Interface Terminal block	CH40-FP□-1R	2
XGI-D28B	Input	64	-	Interface Terminal block	CH40-FP□-1R	2
XGQ-TR4A	Output	32	NPN	Interface Terminal block	CH40-FP□-1R	1
	Output	32	NPN	Relay/SSR terminal block	CH40-FP□-E1T1R	1
XGQ-TR4B	Output	32	PNP	Interface Terminal block	CH40-FP□-1R	1
	Output	32	PNP	Relay/SSR terminal block	CH40-FP□-E1T4R	1
XGQ-TR8A	Output	64	NPN	Interface Terminal block	CH40-FP□-1R	2
	Output	64	NPN	Relay/SSR terminal block	CH40-FP□-E1T1R	2
XGQ-TR8B	Output	64	PNP	Interface Terminal block	CH40-FP□-1R	2
	Output	64	PNP	Relay/SSR terminal block	CH40-FP□-E1T4R	2

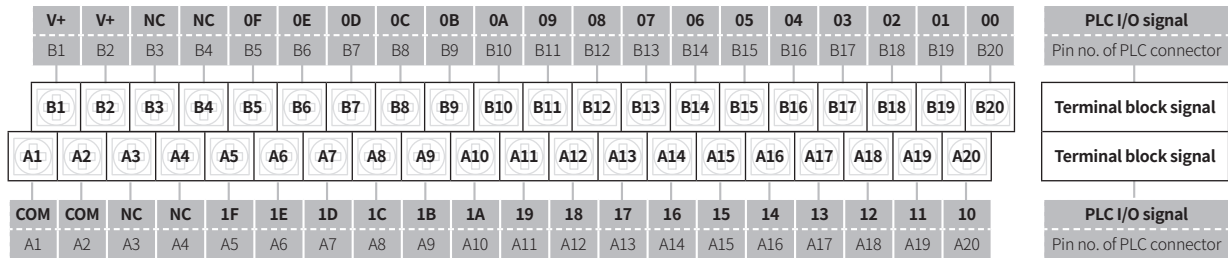
□ in proper cable model name stands for the cable length. Please refer to the cable length in 'Ordering Information'.

- Cable connection diagram

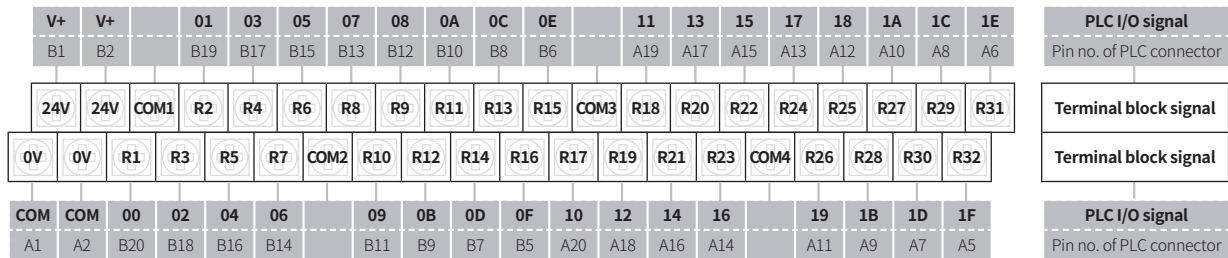
#### - Interface Terminal block input



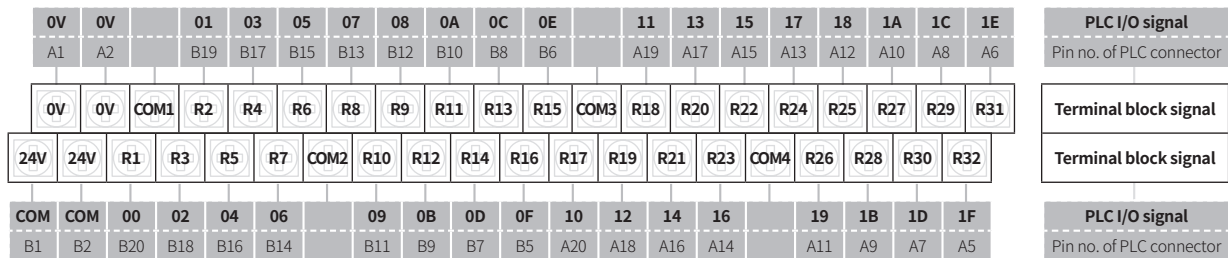
#### - Interface Terminal block output



#### - Relay/SSR terminal block output (NPN)



#### - Relay/SSR terminal block output (PNP)



## ■ LS) XGT Series - Sensor connector terminal block

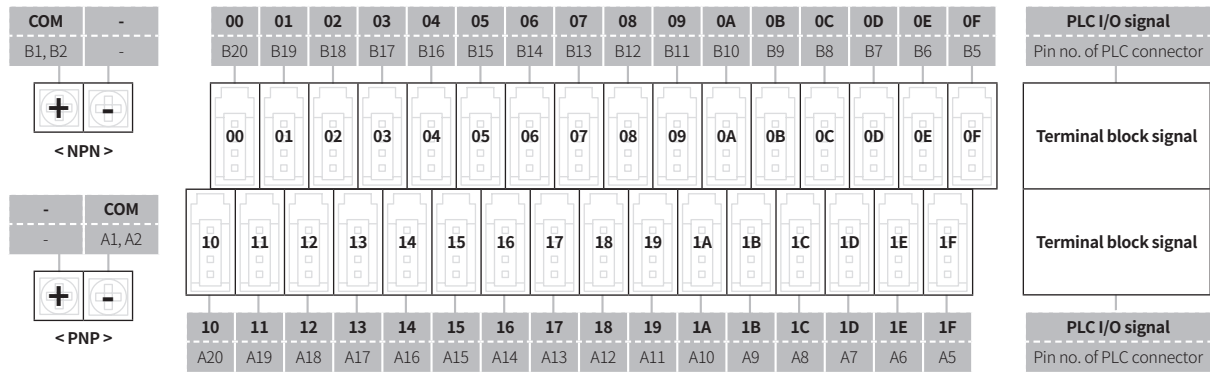
### • Cable selection guide

Controller				Terminal block to connect		Proper cable	
Module name	I/O	No. of I/O	Logic	Type	Logic	Model name	Quantity
XGI-D24A	Input	32	NPN	Sensor connector Terminal block	NPN	CH40-FP□-E1T3R	1
	Input	32	PNP	Sensor connector Terminal block	PNP	CH40-FP□-E1T2R	1
XGI-D24B	Input	32	NPN	Sensor connector Terminal block	NPN	CH40-FP□-E1T3R	1
	Input	32	PNP	Sensor connector Terminal block	PNP	CH40-FP□-E1T2R	1
XGI-D28A	Input	64	NPN	Sensor connector Terminal block	NPN	CH40-FP□-E1T3R	2
	Input	64	PNP	Sensor connector Terminal block	PNP	CH40-FP□-E1T2R	2
XGI-D28B	Input	64	NPN	Sensor connector Terminal block	NPN	CH40-FP□-E1T3R	2
	Input	64	PNP	Sensor connector Terminal block	PNP	CH40-FP□-E1T2R	2
XGQ-TR4A	Output	32	NPN	Sensor connector Terminal block	NPN	CH40-FP□-E1T1R	1
XGQ-TR4B	Output	32	PNP	Sensor connector Terminal block	PNP	CH40-FP□-E1T1R	1
XGQ-TR8A	Output	64	NPN	Sensor connector Terminal block	NPN	CH40-FP□-E1T1R	2
XGQ-TR8B	Output	64	PNP	Sensor connector Terminal block	PNP	CH40-FP□-E1T1R	2

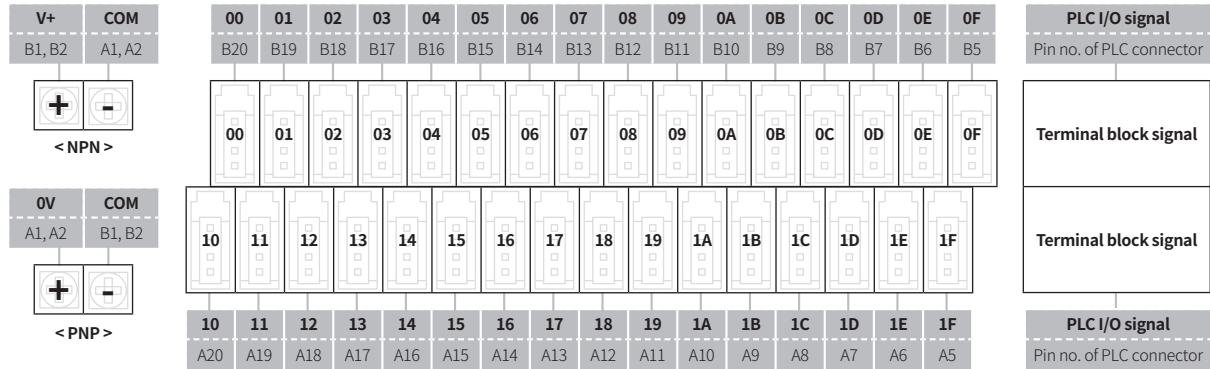
□ in proper cable model name stands for the cable length. Please refer to the cable length in 'Ordering Information'.

### • Cable connection diagram

#### - Sensor connector Terminal block input



#### - Sensor connector Terminal block output



## ■ LS) XGB Series - Interface/Relay/SSR terminal block

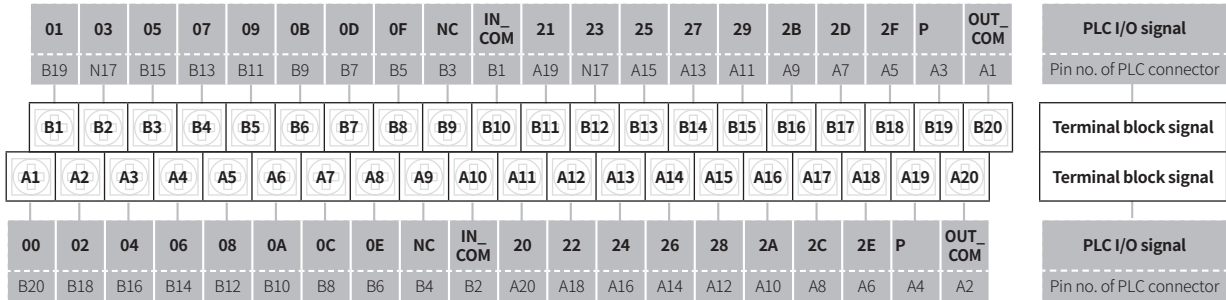
### • Cable selection guide

Controller				Terminal block to connect	Proper cable	
Module name	I/O	No. of I/O	Logic		Model name	Quantity
XBM-DN32H	Input/output	32	-	Interface Terminal block	CH40-HP□-8L	1
XBE-DN32A	Input/output	32	-	Interface Terminal block	CH40-HP□-8L	1

□ in proper cable model name stands for the cable length. Please refer to the cable length in 'Ordering Information'.

### • Cable connection diagram

#### - Interface Terminal block input/output



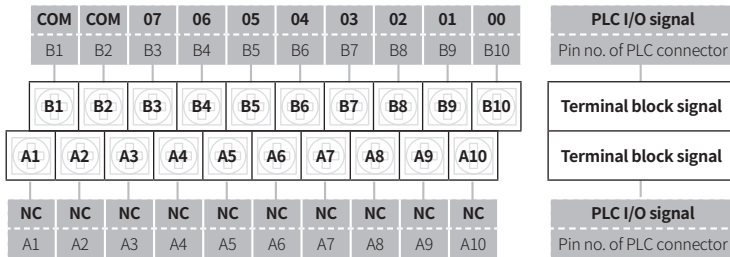
### • Cable selection guide

Controller				Terminal block to connect	Proper cable	
Module name	I/O	No. of I/O	Logic		Model name	Quantity
XBM-DN16S	Input	8	-	Interface Terminal block	CH20-HP□-1R	1
	Output	8	NPN	Interface Terminal block	CH20-HP□-1L	1
	Output	8	NPN	Relay/SSR terminal block	CH20-HP□-D1T1L	1

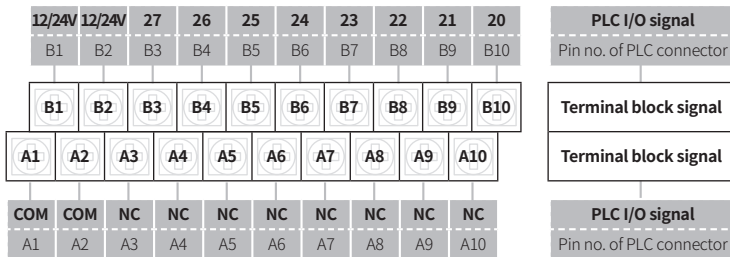
□ in proper cable model name stands for the cable length. Please refer to the cable length in 'Ordering Information'.

### • Cable connection diagram

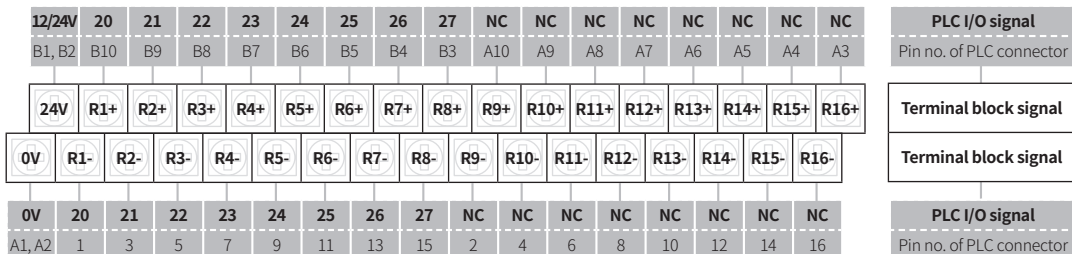
#### - Interface terminal block input



#### - Interface terminal block output



#### - Relay/SSR terminal block output (NPN)



## ■ LS) XGB Series - Interface/Relay/SSR terminal block

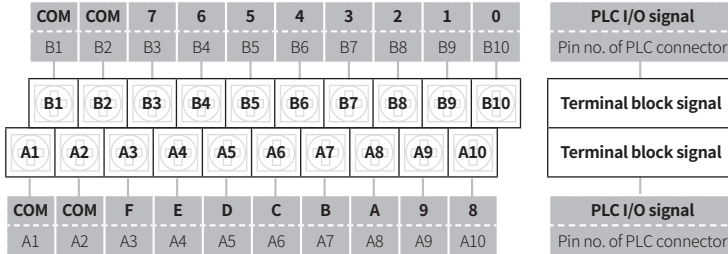
• Cable selection guide

Controller				Terminal block to connect	Proper cable	
Module name	I/O	No. of I/O	Logic		Model name	Quantity
XBM-DN32S	Input	16	-	Interface terminal block	CH20-HP□-1R	1
	Output	16	NPN	Interface terminal block	CH20-HP□-1L	1
	Output	16	NPN	Relay/SSR terminal block	CH20-HP□-D1T1L	1

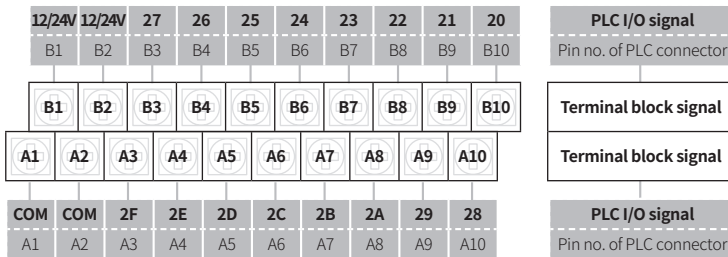
□ in proper cable model name stands for the cable length. Please refer to the cable length in 'Ordering Information'.

• Cable connection diagram

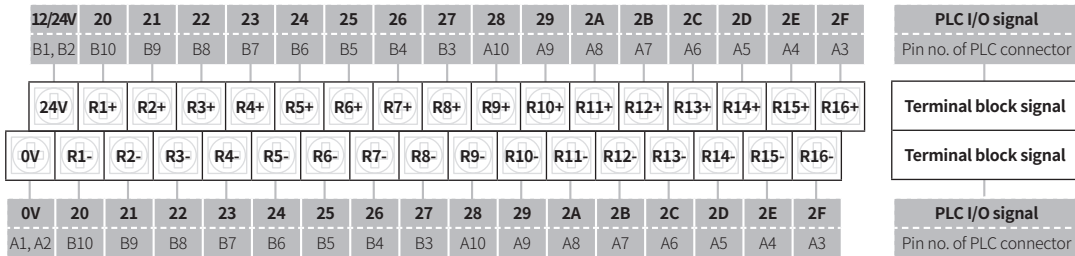
- Interface terminal block input



- Interface terminal block output



- Relay/SSR terminal block output (NPN)



## ■ LS) XGB Series - Interface/Relay/SSR terminal block

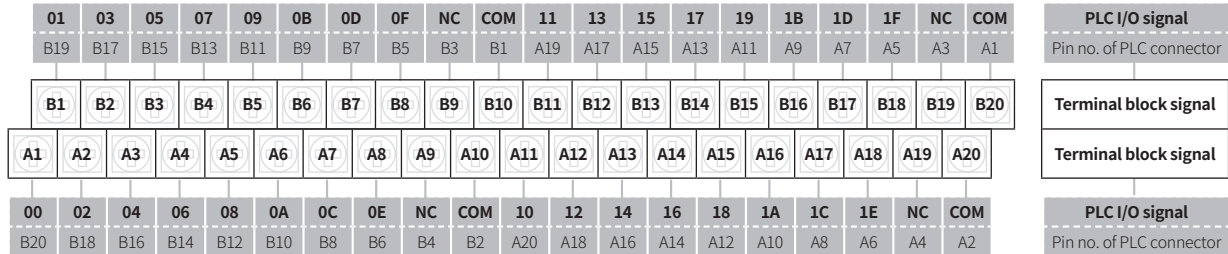
### • Cable selection guide

Controller				Terminal block to connect	Proper cable	
Module name	I/O	No. of I/O	Logic		Model name	Quantity
XBE-DC32A	Input	32	-	Interface terminal block	CH40-HP□-8L	1
XBE-TN32A	Output	32	NPN	Interface terminal block	CH40-HP□-8L	1
	Output	32	NPN	Relay/SSR terminal block	CH40-HP□-E1T1L	1
XBE-TP32A	Output	32	PNP	Interface terminal block	CH40-HP□-8L	1
	Output	32	PNP	Relay/SSR terminal block	CH40-HP□-E1T4L	1

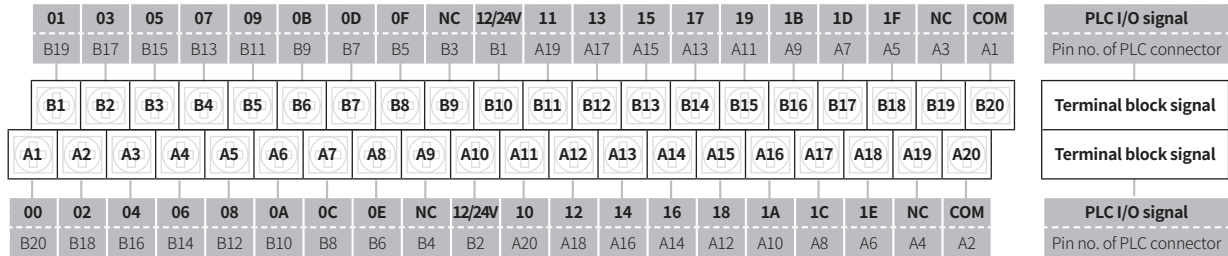
□ in proper cable model name stands for the cable length. Please refer to the cable length in 'Ordering Information'.

### • Cable connection diagram

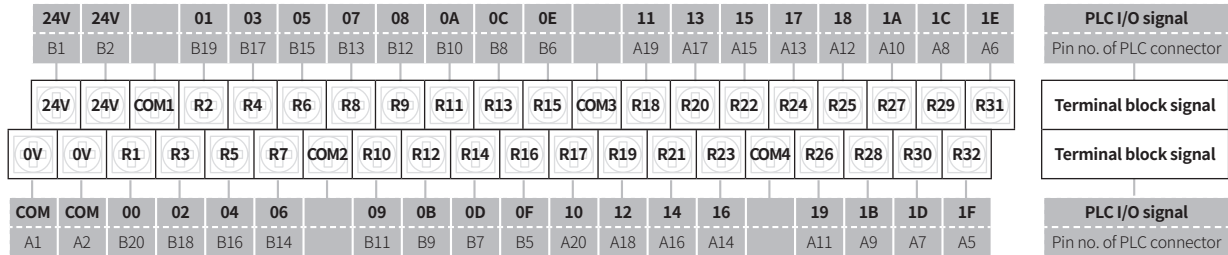
#### - Interface terminal block input



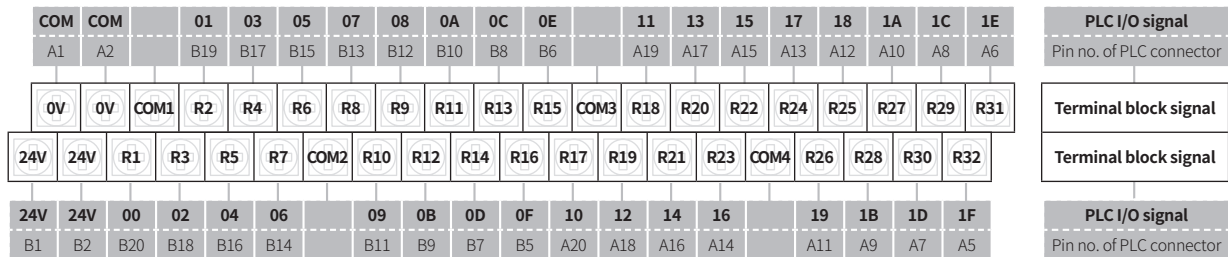
#### - Interface terminal block output



#### - Relay/SSR terminal block output (NPN)



#### - Relay/SSR terminal block output (PNP)



## ■ LS) XGB Series - Sensor connector terminal block

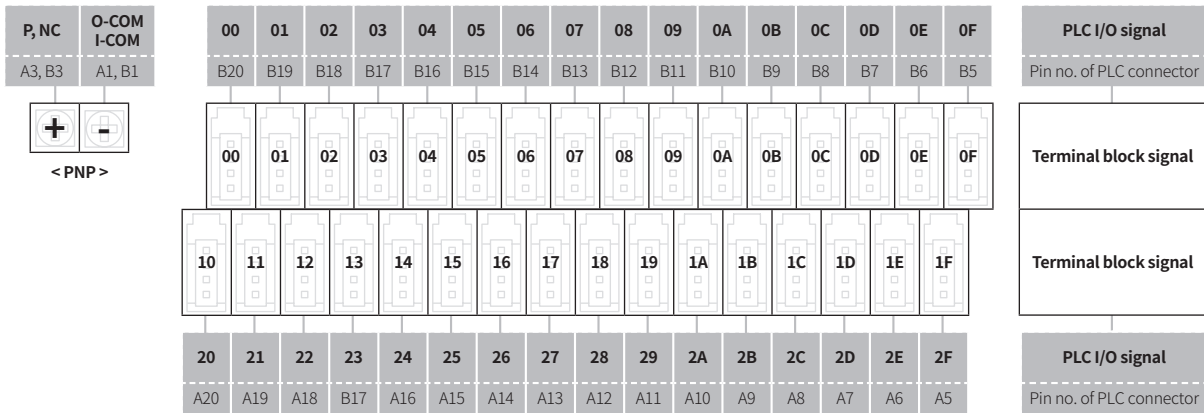
### • Cable selection guide

Controller				Terminal block to connect			Proper cable	
Module name	I/O	No. of I/O	Logic	Type	Logic	Model name	Quantity	
XBM-DN32H	Input/Output	32	PNP	Sensor connector terminal block	PNP	CH40-HP□-D1T1L	1	
XBE-DN32A	Input/Output	32	PNP	Sensor connector terminal block	PNP	CH40-HP□-D1T1L	1	

□ in proper cable model name stands for the cable length. Please refer to the cable length in 'Ordering Information'.

### • Cable connection diagram

#### - Sensor connector terminal block input/output



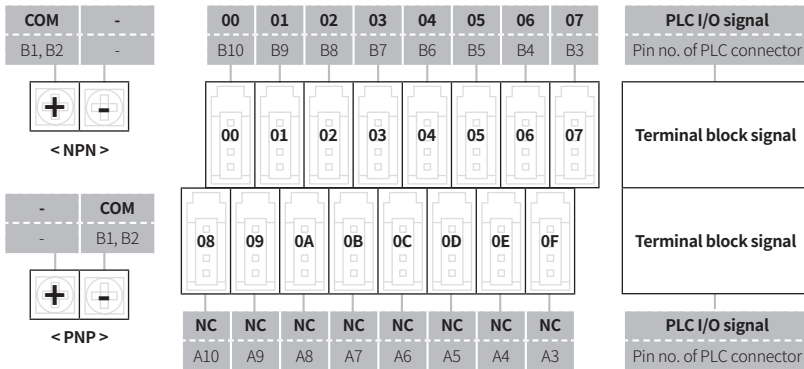
### • Cable selection guide

Controller				Terminal block to connect			Proper cable	
Module name	I/O	No. of I/O	Logic	Type	Logic	Model name	Quantity	
XBM-DN16S	Input	8	NPN	Sensor connector terminal block	NPN	CH20-HP□-D1T3R	1	
	Input	8	PNP	Sensor connector terminal block	PNP	CH20-HP□-D1T6R	1	
	Output	8	NPN	Sensor connector terminal block	NPN	CH20-HP□-D1T1L	1	

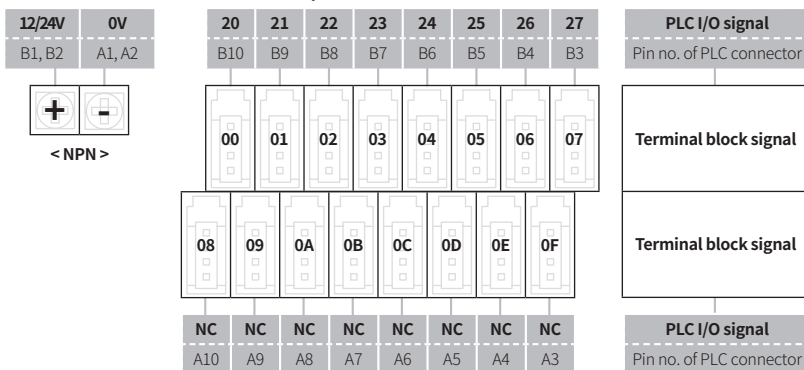
□ in proper cable model name stands for the cable length. Please refer to the cable length in 'Ordering Information'.

### • Cable connection diagram

#### - Sensor connector terminal block input



#### - Sensor connector terminal block output



## ■ LS) XGB Series - Sensor connector terminal block

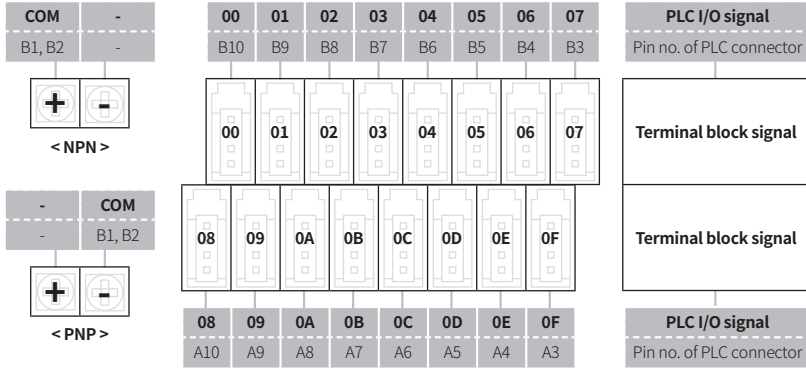
### • Cable selection guide

Controller				Terminal block to connect		Proper cable	
Module name	I/O	No. of I/O	Logic	Type	Logic	Model name	Quantity
XBM-DN32S	Input	16	NPN	Sensor connector terminal block	NPN	CH20-HP□-D1T3R	1
	Input	16	PNP	Sensor connector terminal block	PNP	CH20-HP□-D1T6R	1
	Output	16	NPN	Sensor connector terminal block	NPN	CH20-HP□-D1T1L	1

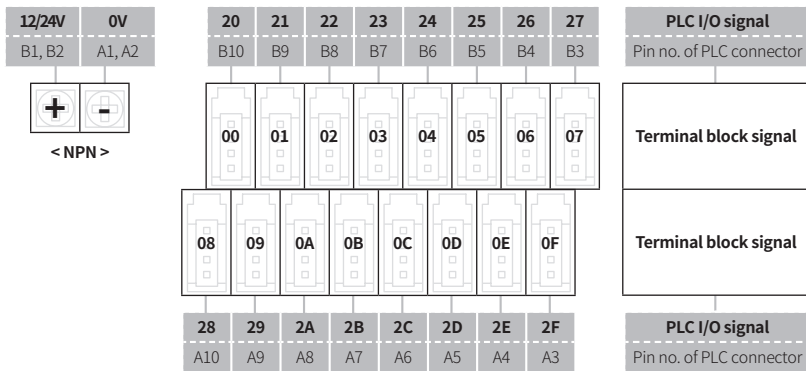
□ in proper cable model name stands for the cable length. Please refer to the cable length in 'Ordering Information'.

### • Cable connection diagram

#### - Sensor connector terminal block input



#### - Sensor connector terminal block output





## ■ LS) XGB Series - Sensor connector terminal block

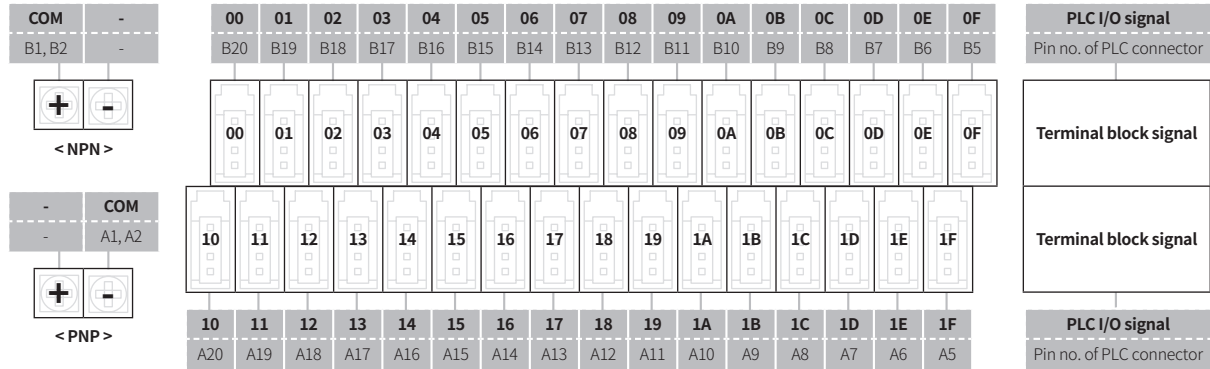
- Cable selection guide

Controller				Terminal block to connect			Proper cable	
Module name	I/O	No. of I/O	Logic	Type	Logic	Model name	Quantity	
XBE-DC32A	Input	32	NPN	Sensor connector terminal block	NPN	CH40-HP□-E1T3L	1	
	Input	32	PNP	Sensor connector terminal block	PNP	CH40-HP□-E1T2L	1	
XBE-TN32A	Output	32	NPN	Sensor connector terminal block	NPN	CH40-HP□-E1T1L	1	
XBE-TP32A	Output	32	PNP	Sensor connector terminal block	PNP	CH40-HP□-E1T1L	1	

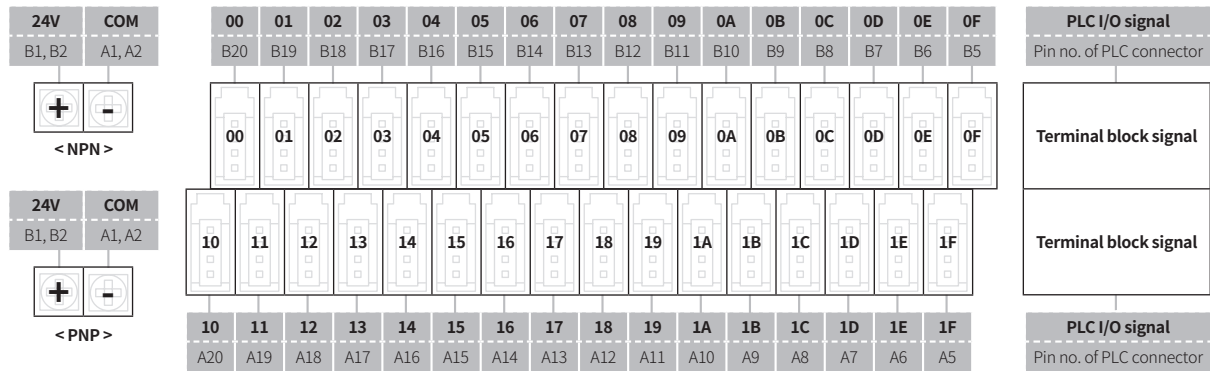
□ in proper cable model name stands for the cable length. Please refer to the cable length in 'Ordering Information'.

- Cable connection diagram

### - Sensor connector terminal block input



### - Sensor connector terminal block output



## ■ MITSUBISHI) iQ-F Series - Interface terminal block

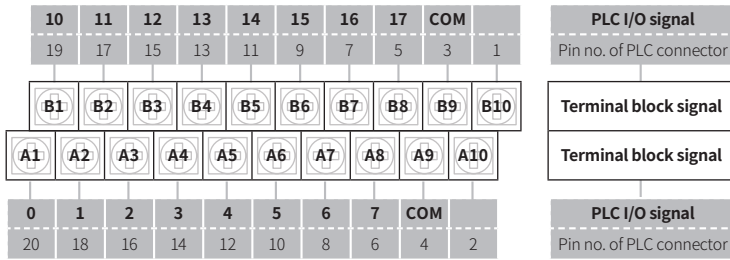
### • Cable selection guide

Controller				Terminal block to connect	Proper cable	
Module name	I/O	No. of I/O	Logic		Model name	Quantity
FX5-C16EX/D	Input	16	NPN	Interface terminal block	CH20-HP□-4R	1
FX5-C16EX/DS	Input	16	-	Interface terminal block	CH20-HP□-4R	1
FX5-C32EX/D	Input	32	NPN	Interface terminal block	CH40-HP□-8R-FS	1
FX5-C32EX/DS	Input	32	-	Interface terminal block	CH40-HP□-8R-FS	1
FX5-C16EYT/D	Output	16	NPN	Interface terminal block	CH20-HP□-4R	1
FX5-C16EYT/DSS	Output	16	PNP	Interface terminal block	CH20-HP□-4R	1
FX5-C32EYT/D	Output	32	NPN	Interface terminal block	CH40-HP□-8R-FS	1
FX5-C32EYT/DSS	Output	32	PNP	Interface terminal block	CH40-HP□-8R-FS	1

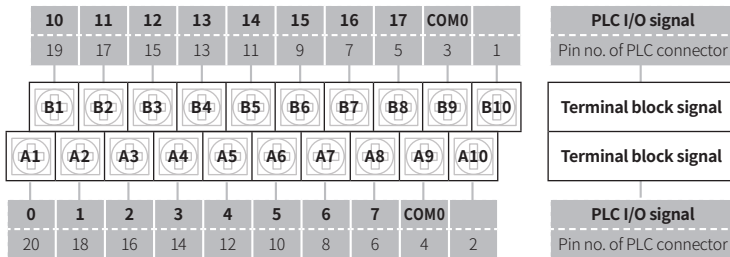
□ in proper cable model name stands for the cable length. Please refer to the cable length in 'Ordering Information'.

### • Cable connection diagram

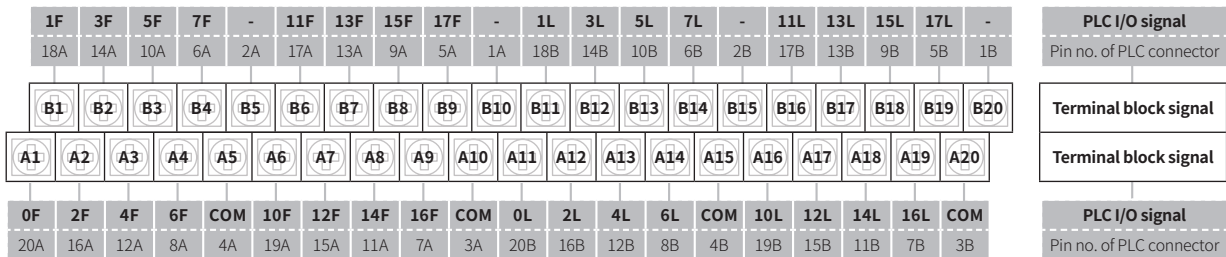
#### - Interface terminal block input



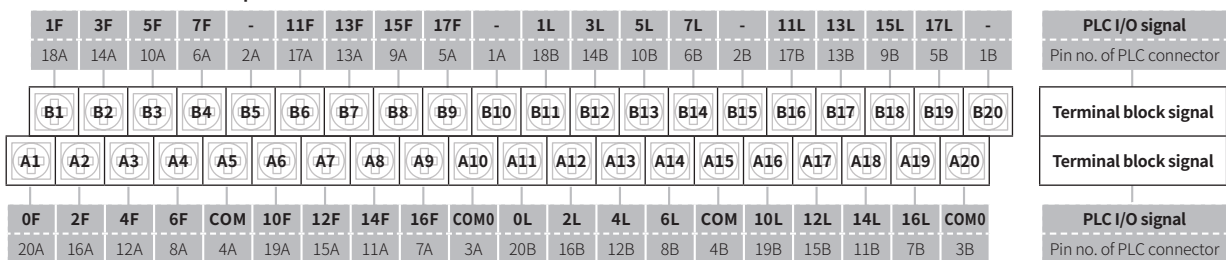
#### - Interface terminal block output



#### - Interface terminal block input



#### - Interface terminal block output



## ■ MITSUBISHI iQ-R Series - Interface/Relay/SSR terminal block

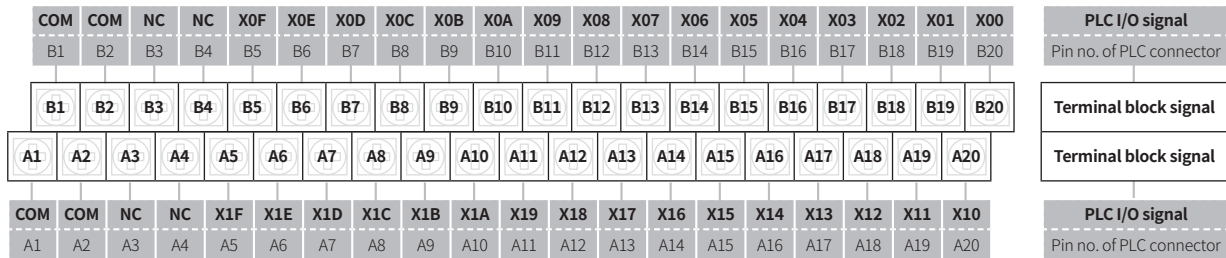
### • Cable selection guide

Controller				Terminal block to connect	Proper cable	
Module name	I/O	No. of I/O	Logic		Model name	Quantity
RX41C4, RX41C6HS	Input	32	-	Interface terminal block	CH40-FP□-1R	1
RY41NT2P, RY41NT2H	Output	32	NPN	Interface terminal block	CH40-FP□-1R	1
	Output	32	NPN	Relay/SSR terminal block	CH40-FP□-E1T1R	1
RY41PT1P, RY41PT2H	Output	32	PNP	Interface terminal block	CH40-FP□-1R	1
	Output	32	PNP	Relay/SSR terminal block	CH40-FP□-E1T4R	1
RX42C4	Input	64	-	Interface terminal block	CH40-FP□-1R	2
RY42NT2P	Output	64	NPN	Interface terminal block	CH40-FP□-1R	2
	Output	64	NPN	Relay/SSR terminal block	CH40-FP□-E1T1R	2
RY42PT1P	Output	64	PNP	Interface terminal block	CH40-FP□-1R	2
	Output	64	PNP	Relay/SSR terminal block	CH40-FP□-E1T4R	2
RH42C4NT2P	Input	32	-	Interface terminal block	CH40-FP□-1R	1
	Output	32	NPN	Interface terminal block	CH40-FP□-1R	1
	Output	32	NPN	Relay/SSR terminal block	CH40-FP□-E1T1R	1

□ in proper cable model name stands for the cable length. Please refer to the cable length in 'Ordering Information'.

### • Cable connection diagram

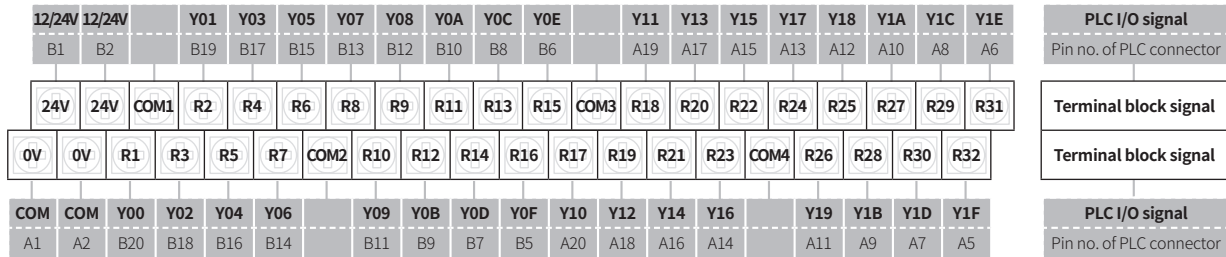
#### - Interface terminal block input



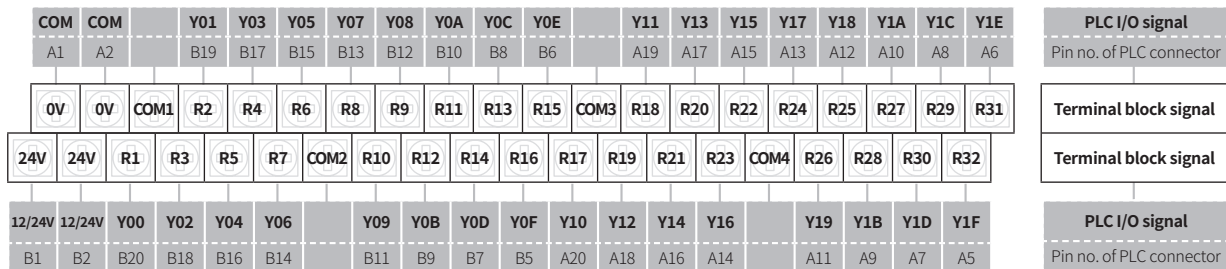
#### - Interface terminal block output



#### - Relay/SSR terminal block output (NPN)



#### - Relay/SSR terminal block output (PNP)



## ■ MITSUBISHI) iQ-R Series - Sensor connector terminal block

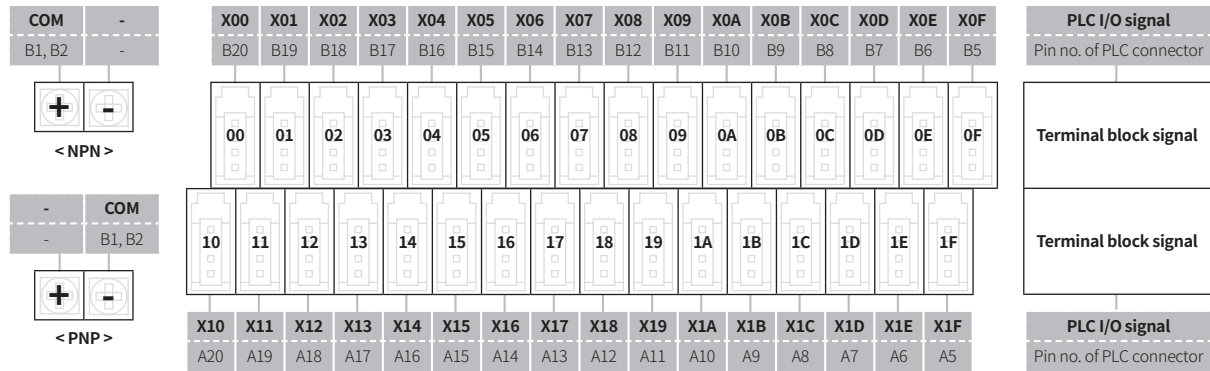
### • Cable selection guide

Controller				Terminal block to connect			Proper cable	
Module name	I/O	No. of I/O	Logic	Type	Logic	Model name	Quantity	
RX41C4, RX41C6HS	Input	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T3R	1	
			PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T6R	1	
RY41NT2P, RY41NT2H	Output	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T1R	1	
RY41PT1P, RY41PT2H	Output	32	PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T1R	1	
RX42C4	Input	64	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T3R	2	
			PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T6R	2	
RY42NT2P	Output	64	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T1R	2	
RY42PT1P	Output	64	PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T1R	2	
RH42C4NT2P	Input	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T3R	1	
			PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T6R	1	
	Output	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T1R	1	

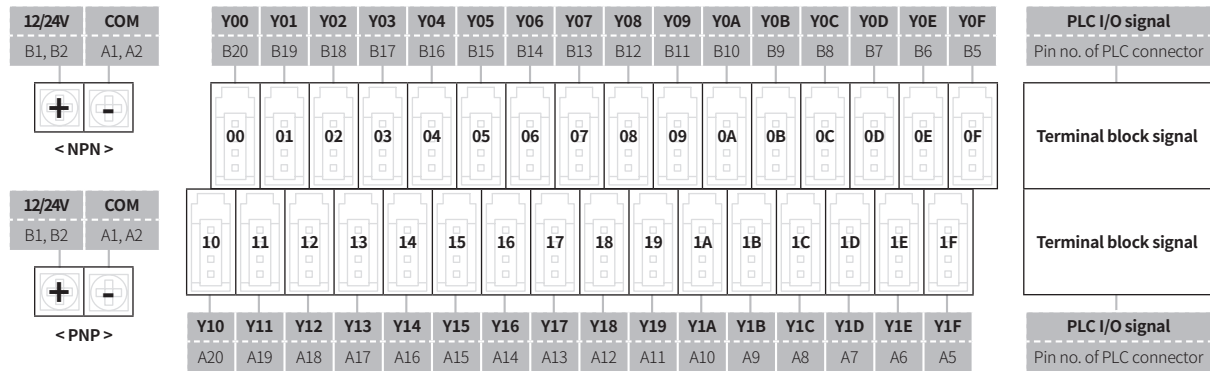
□ in proper cable model name stands for the cable length. Please refer to the cable length in 'Ordering Information'.

### • Cable connection diagram

#### - Sensor connector terminal block input



#### - Sensor connector terminal block output



## ■ MITSUBISHI) QnU Series - Interface/Relay/SSR terminal block

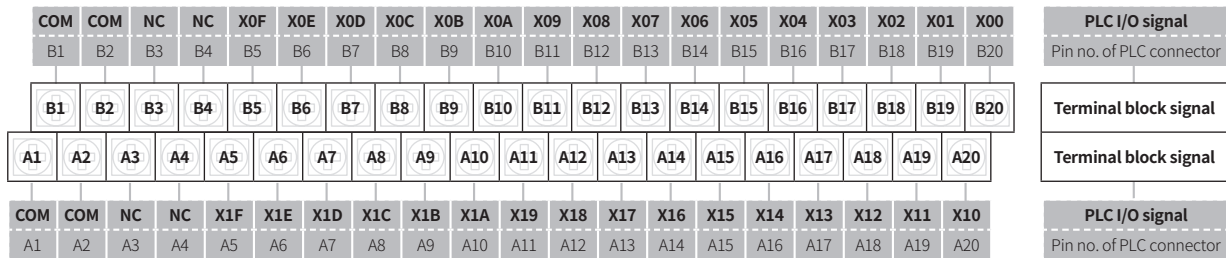
### • Cable selection guide

Controller				Terminal block to connect	Proper cable	
Module name	I/O	No. of I/O	Logic		Model name	Quantity
QX41, QX42-S1/S2	Input	32	-	Interface terminal block	CH40-FP□-1R	1
	Input	32	-	Interface terminal block	CH40-FP□-1R	1
QH42P, QX41Y41P	Output	32	NPN	Interface terminal block	CH40-FP□-1R	1
	Output	32	NPN	Relay/SSR terminal block	CH40-FP□-E1T1R	1
QX42, QX42-S1	Input	64	-	Interface terminal block	CH40-FP□-1R	2
QX82	Input	64	-	Interface terminal block	CH40-FP□-1R	2
QY41P	Output	32	NPN	Interface terminal block	CH40-FP□-1R	1
	Output	32	NPN	Relay/SSR terminal block	CH40-FP□-E1T1R	1
QY42P	Output	64	NPN	Interface terminal block	CH40-FP□-1R	2
	Output	64	NPN	Relay/SSR terminal block	CH40-FP□-E1T1R	2
QY82P	Output	64	PNP	Interface terminal block	CH40-FP□-1R	2
	Output	64	PNP	Relay/SSR terminal block	CH40-FP□-E1T4R	2

□ in proper cable model name stands for the cable length. Please refer to the cable length in 'Ordering Information'.

### • Cable connection diagram

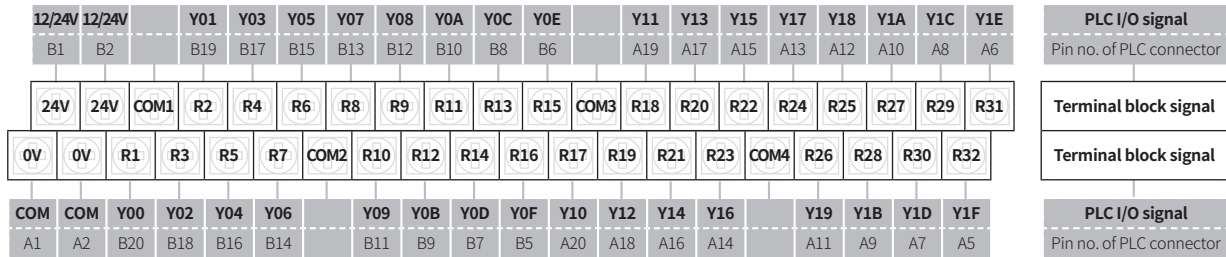
#### - Interface terminal block input



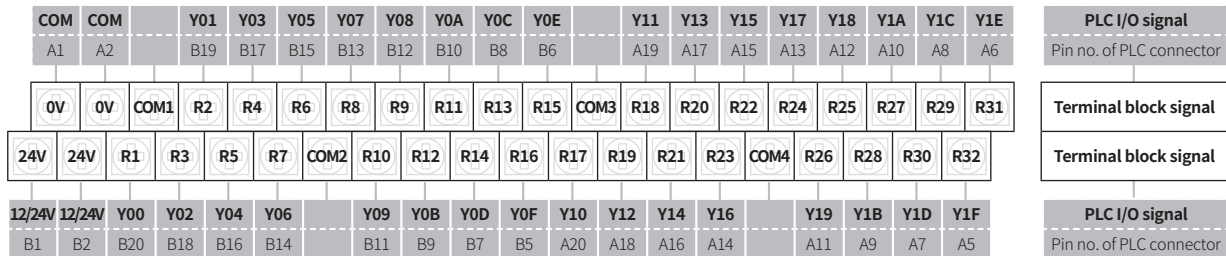
#### - Interface terminal block output



#### - Relay/SSR terminal block output (NPN)



#### - Relay/SSR terminal block output (PNP)



## ■ MITSUBISHI) QnU Series - Interface/Relay/SSR terminal block

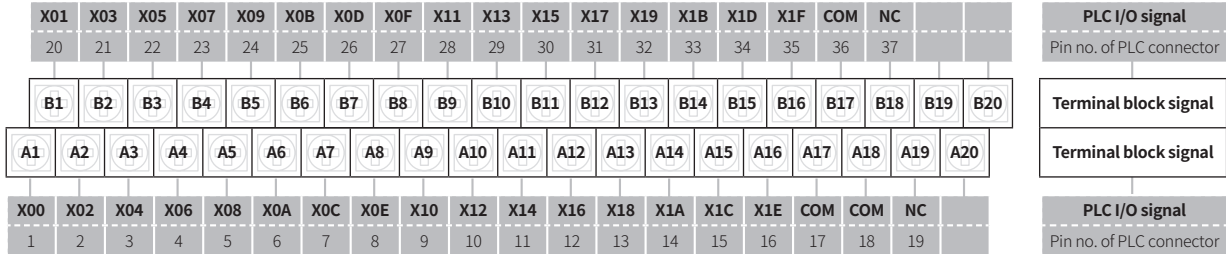
### • Cable selection guide

Controller				Terminal block to connect	Proper cable	
Module name	I/O	No. of I/O	Logic		Model name	Quantity
QX81, QX81-S2	Input	32	-	Interface terminal block	CH37-DP□-3R	1
QY81P	Output	32	PNP	Interface terminal block	CH37-DP□-3R	1
	Output	32	PNP	Relay/SSR terminal block	CH37-DP□-B6T1R	1

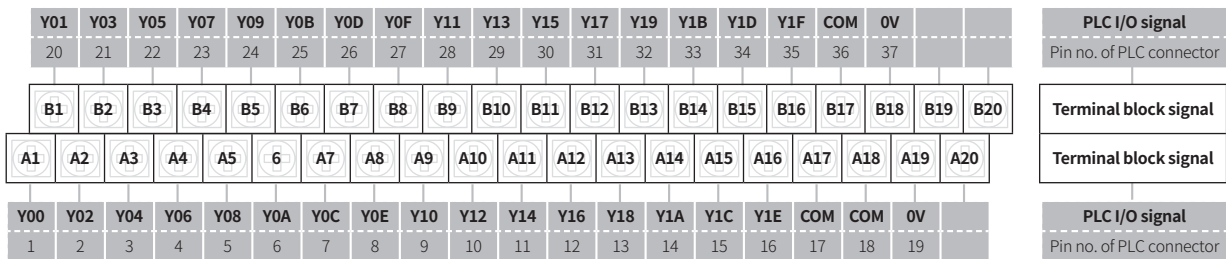
□ in proper cable model name stands for the cable length. Please refer to the cable length in 'Ordering Information'.

### • Cable connection diagram

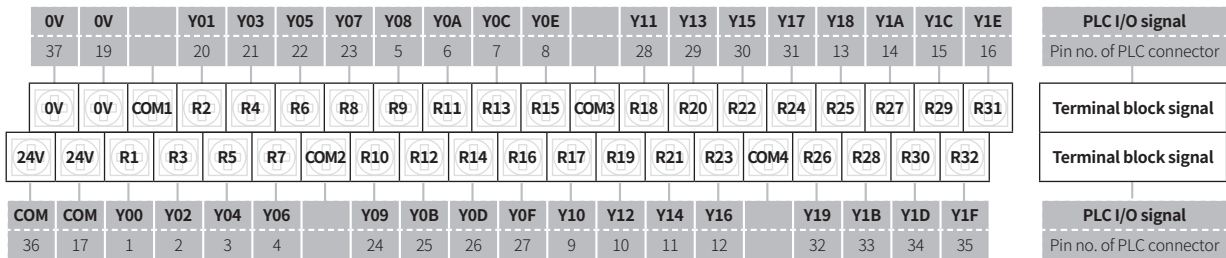
#### - Interface terminal block Input



#### - Interface terminal block output



#### - Relay/SSR terminal block output



## ■ MITSUBISHI) QnU Series - Sensor connector terminal block

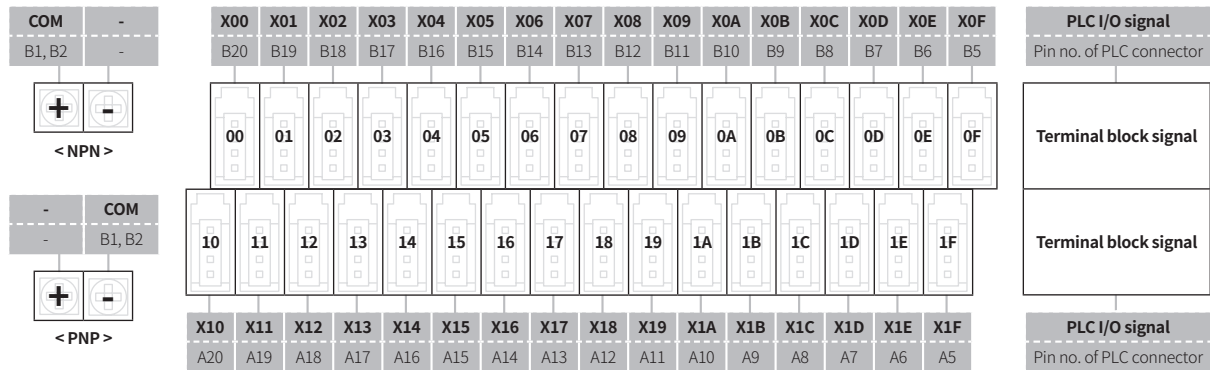
### • Cable selection guide

Controller				Terminal block to connect			Proper cable	
Module name	I/O	No. of I/O	Logic	Type	Logic	Model name	Quantity	
QX41, QX42-S1/S2	Input	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T3R	1	
			PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T6R	1	
QH42P, QX41Y41P	Input	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T3R	1	
			PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T6R	1	
QX42, QX42-S1	Input	64	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T3R	2	
			PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T6R	2	
QX82	Input	64	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T3R	2	
			PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T6R	2	
QY41P	Output	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T1R	1	
QY42P	Output	64	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T1R	2	
QY82P	Output	64	PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T1R	2	

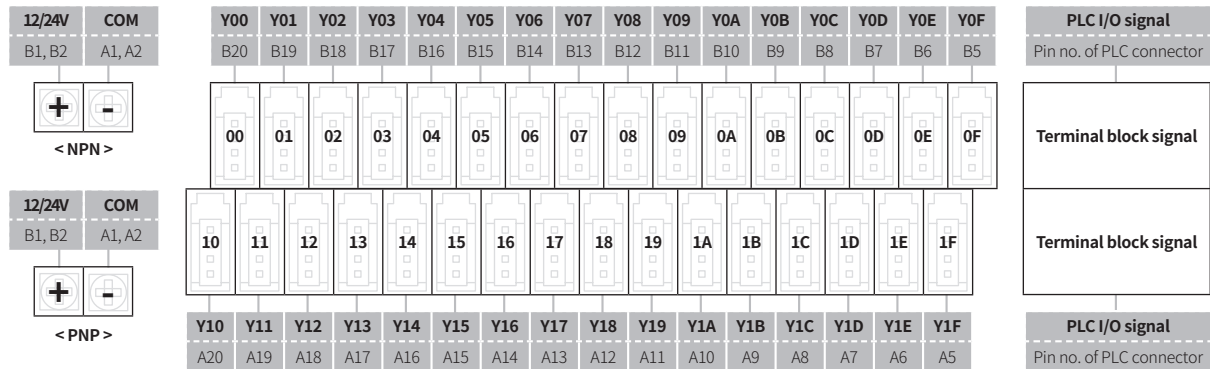
□ in proper cable model name stands for the cable length. Please refer to the cable length in 'Ordering Information'.

### • Cable connection diagram

#### - Sensor connector terminal block input



#### - Sensor connector terminal block output



## ■ MITSUBISHI) QnU Series - Sensor connector terminal block

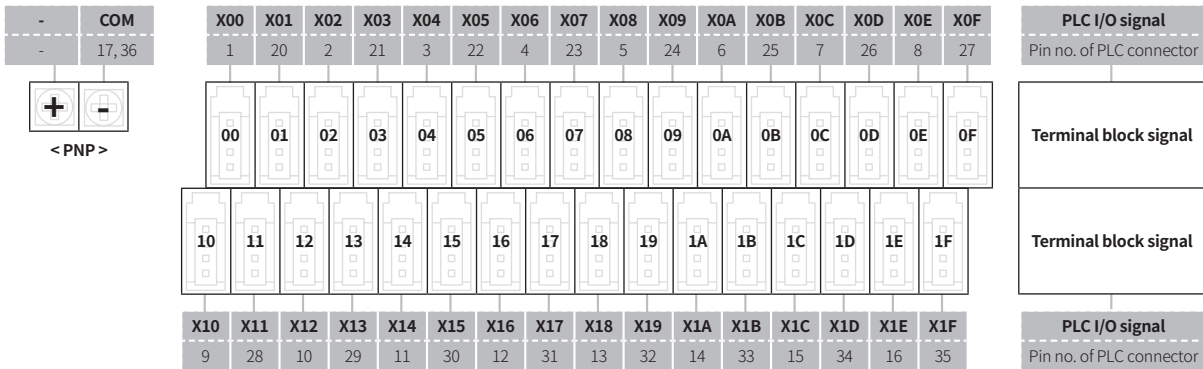
- Cable selection guide

Controller				Terminal block to connect			Proper cable	
Module name	I/O	No. of I/O	Logic	Type	Logic	Model name	Quantity	
QX81, QX81-S2	Input	32	PNP	Sensor connector terminal block	PNP	CH37-DP□-B6T2R	1	
QY81P	Output	32	PNP	Sensor connector terminal block	PNP	CH37-DP□-B6T1R	1	

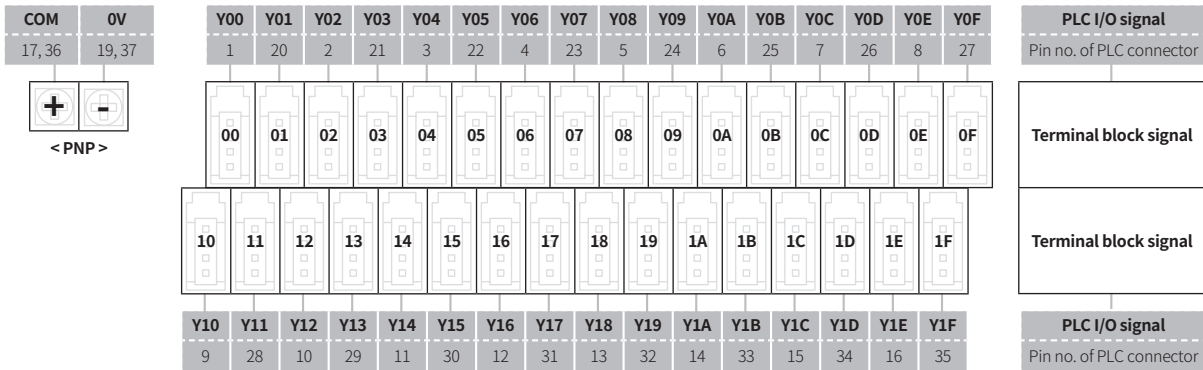
□ in proper cable model name stands for the cable length. Please refer to the cable length in 'Ordering Information'.

- Cable connection diagram

### - Sensor connector terminal block input



### - Sensor connector terminal block output





## ■ OMRON) CJ/NJ Series - Interface/Relay/SSR terminal block

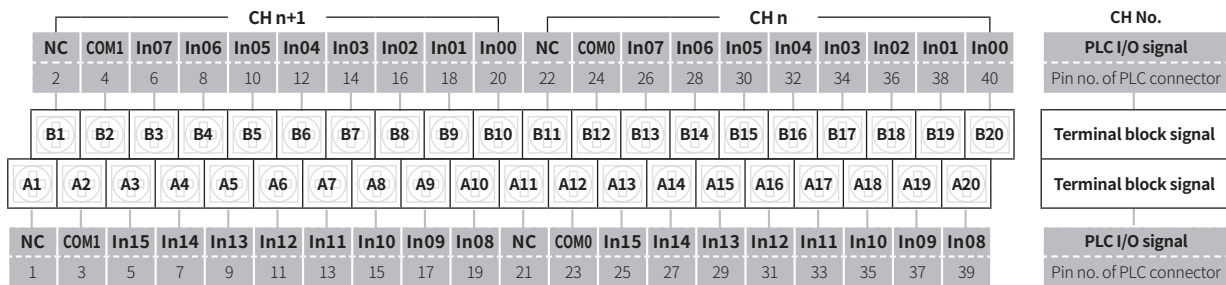
### • Cable selection guide

Controller				Terminal block to connect	Proper cable	
Module name	I/O	No. of I/O	Logic		Model name	Quantity
CJ1W-ID232, CJ1W-ID233	Input	32	-	Interface terminal block	CH40-HP□-4L	1
CJ1W-ID262	Input1	32	-	Interface terminal block	CH40-HP□-1R	1
	Input2	32	-	Interface terminal block	CH40-HP□-4L	1
CJ1W-OD233, CJ1W-OD234	Output	32	NPN	Interface terminal block	CH40-HP□-4L	1
	Output1	32	NPN	Relay/SSR terminal block	CH40-HP□-HCM1L	1
CJ1W-OD263	Output2	32	NPN	Interface terminal block	CH40-HP□-1R	1
	Output1	32	NPN	Interface terminal block	CH40-HP□-4L	1
	Output1	32	NPN	Relay/SSR terminal block	CH40-HP□-L9M4R	1
	Output2	32	NPN	Relay/SSR terminal block	CH40-HP□-HCM1L	1
CJ1W-OD232	Output	32	PNP	Interface terminal block	CH40-HP□-4L	1
	Output	32	PNP	Relay/SSR terminal block	CH40-HP□-HCM4L	1
CJ1W-OD262	Output1	32	PNP	Interface terminal block	CH40-HP□-1R	1
	Output2	32	PNP	Interface terminal block	CH40-HP□-4L	1
	Output1	32	PNP	Relay/SSR terminal block	CH40-HP□-L9M1R	1
	Output2	32	PNP	Relay/SSR terminal block	CH40-HP□-HCM4L	1
CJ1W-MD263	Input	32	-	Interface terminal block	CH40-HP□-4L	1
	Output	32	NPN	Interface terminal block	CH40-HP□-1R	1
	Output	32	NPN	Relay/SSR terminal block	CH40-HP□-L9M1R	1

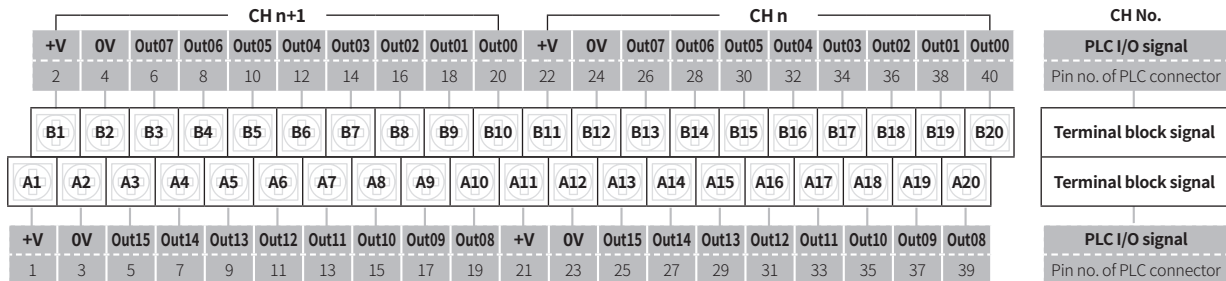
□ in proper cable model name stands for the cable length. Please refer to the cable length in 'Ordering Information'.

### • Cable connection diagram

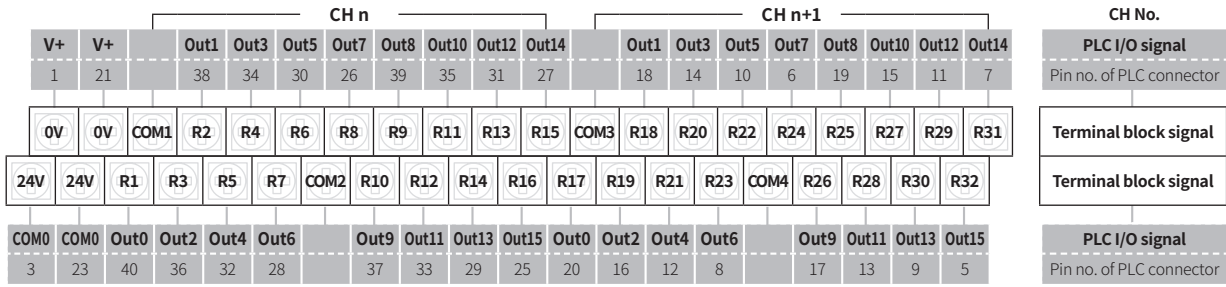
#### - Interface terminal block input



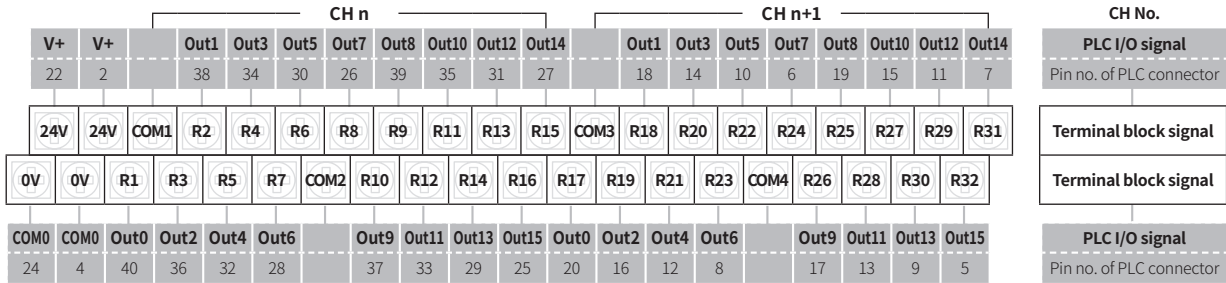
#### - Interface terminal block output



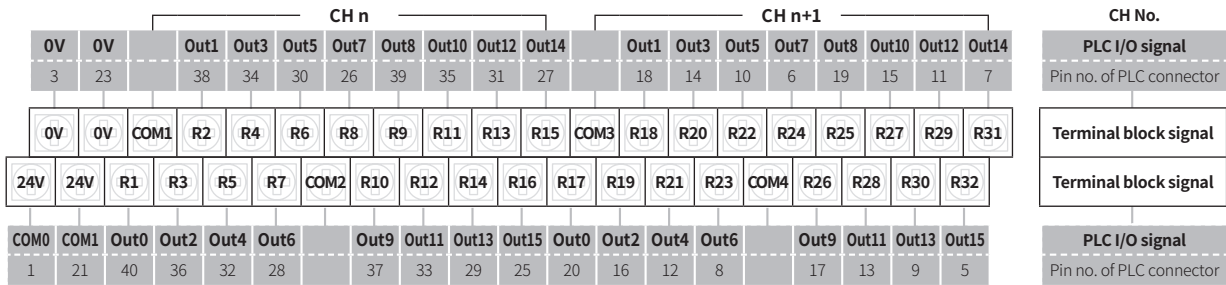
- Relay/SSR terminal block output, connector direction 'R' (NPN)



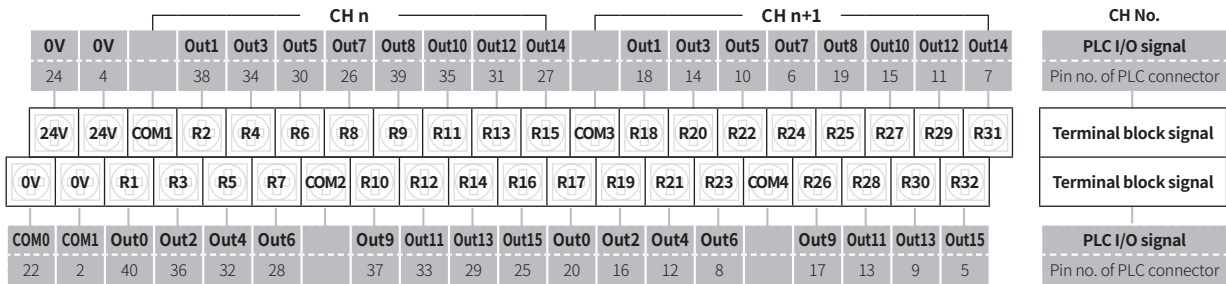
- Relay/SSR terminal block output, connector direction 'L' (NPN)



- Relay/SSR terminal block output, connector direction 'R' (PNP)



- Relay/SSR terminal block output, connector direction 'L' (PNP)



## ■ OMRON) CJ/NJ Series - Interface/Relay/SSR terminal block

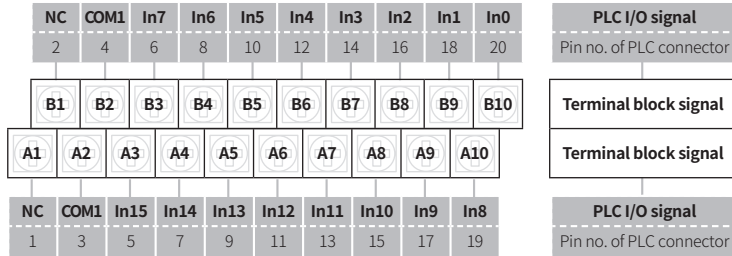
### • Cable selection guide

Controller				Terminal block to connect	Proper cable	
Module name	I/O	No. of I/O	Logic		Model name	Quantity
CJ1W-MD233	Input	16	-	Interface terminal block	CH20-HP□-4L	1
	Output	16	NPN	Interface terminal block	CH20-HP□-1R	1
	Output	16	NPN	Relay/SSR terminal block	CH20-HP□-C1T4R	1
CJ1W-MD232	Input	16	-	Interface terminal block	CH20-HP□-4L	1
	Output	16	PNP	Interface terminal block	CH20-HP□-1R	1
	Output	16	PNP	Relay/SSR terminal block	CH20-HP□-C1T4R	1

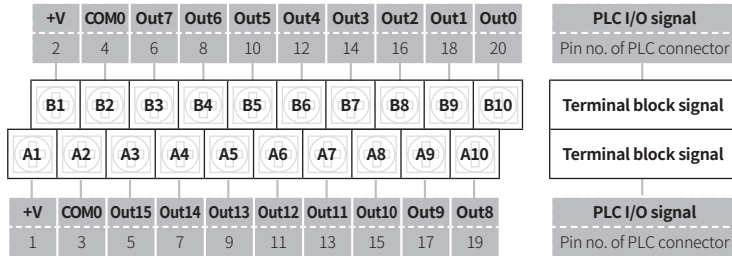
□ in proper cable model name stands for the cable length. Please refer to the cable length in 'Ordering Information'.

### • Cable connection diagram

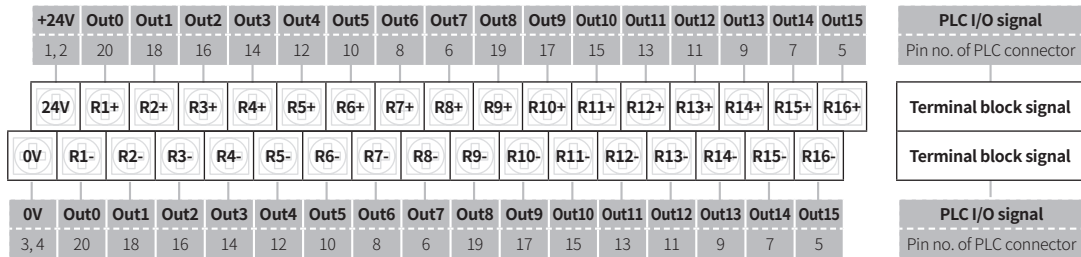
#### - Interface terminal block input



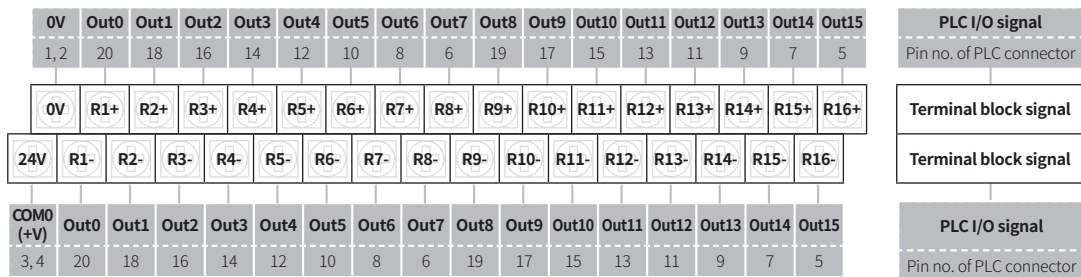
#### - Interface terminal block output



#### - Relay/SSR terminal block output (NPN)



#### - Relay/SSR terminal block output (PNP)



## ■ OMRON CJ/NJ Series - Interface/Relay/SSR terminal block

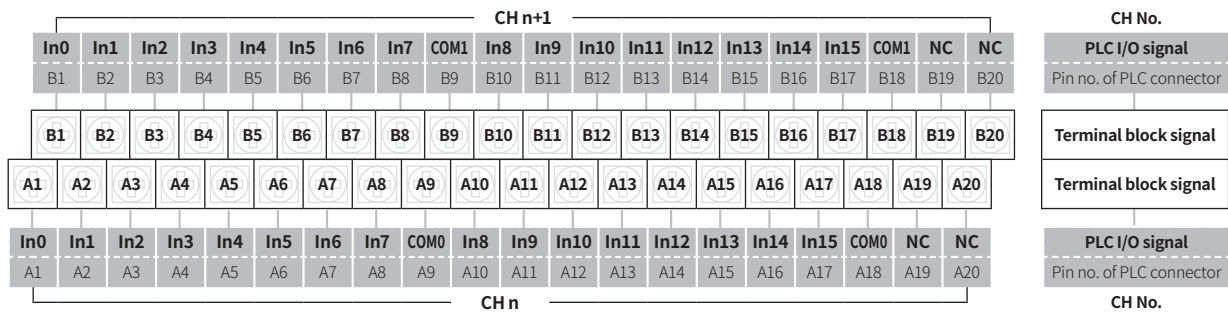
### • Cable selection guide

Controller				Terminal block to connect	Proper cable	
Module name	I/O	No. of I/O	Logic		Model name	Quantity
CJ1W-ID231	Input	32	-	Interface terminal block	CH40-FP□-4L	1
CJ1W-ID261	Input1	32	-	Interface terminal block	CH40-FP□-1R	1
	Input2	32	-	Interface terminal block	CH40-FP□-4L	1
CJ1W-OD231	Output	32	NPN	Interface terminal block	CH40-FP□-4L	1
	Output	32	NPN	Relay/SSR terminal block	CH40-FP□-L1T4L	1
CJ1W-OD261	Output1	32	NPN	Interface terminal block	CH40-FP□-1R	1
	Output2	32	NPN	Interface terminal block	CH40-FP□-4L	1
	Output1	32	NPN	Relay/SSR terminal block	CH40-FP□-I4T1R	1
	Output2	32	NPN	Relay/SSR terminal block	CH40-FP□-L1T4L	1
CJ1W-MD261	Input	32	-	Interface terminal block	CH40-FP□-4L	1
	Output	32	NPN	Interface terminal block	CH40-FP□-1R	1
	Output	32	NPN	Relay/SSR terminal block	CH40-FP□-I4T1R	1

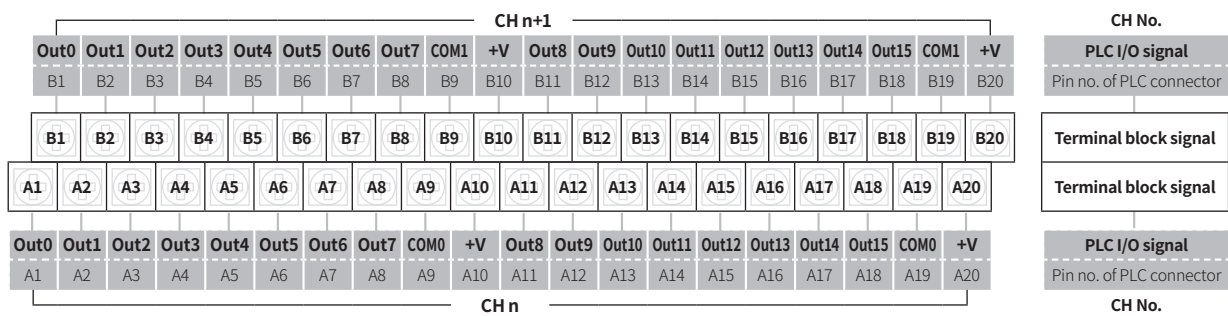
□ in proper cable model name stands for the cable length. Please refer to the cable length in 'Ordering Information'.

### • Cable connection diagram

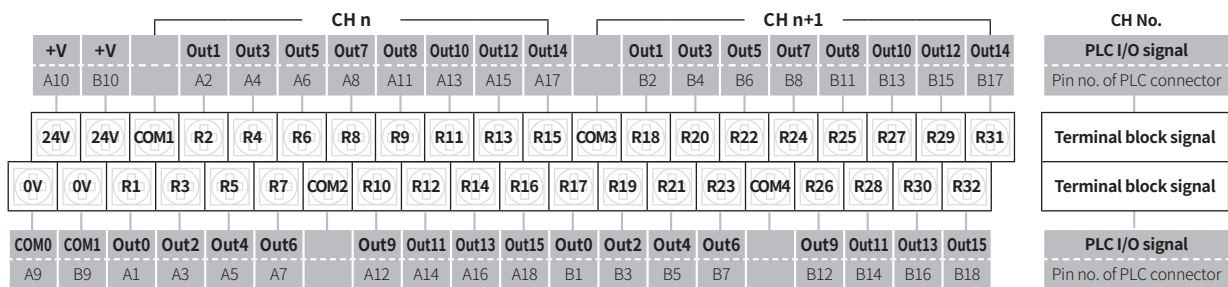
#### - Interface terminal block input



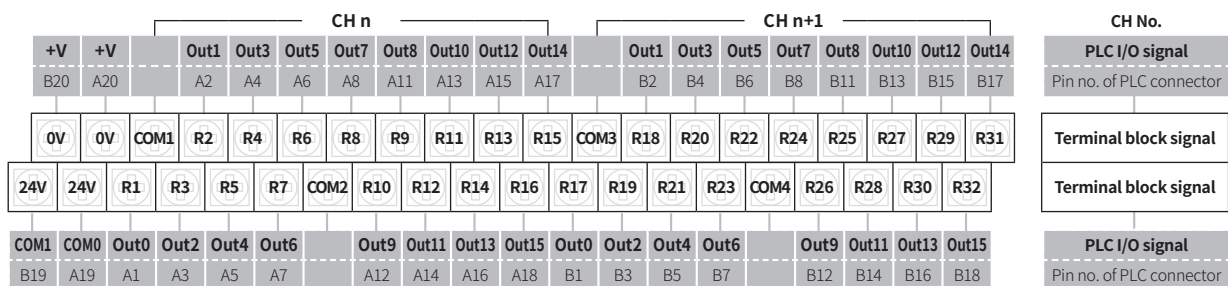
#### - Interface terminal block output



#### - Relay/SSR terminal block output, connector direction 'R' (NPN)



#### - Relay/SSR terminal block output, connector direction 'L' (NPN)



## ■ OMRON) CJ/NJ Series - Sensor connector terminal block

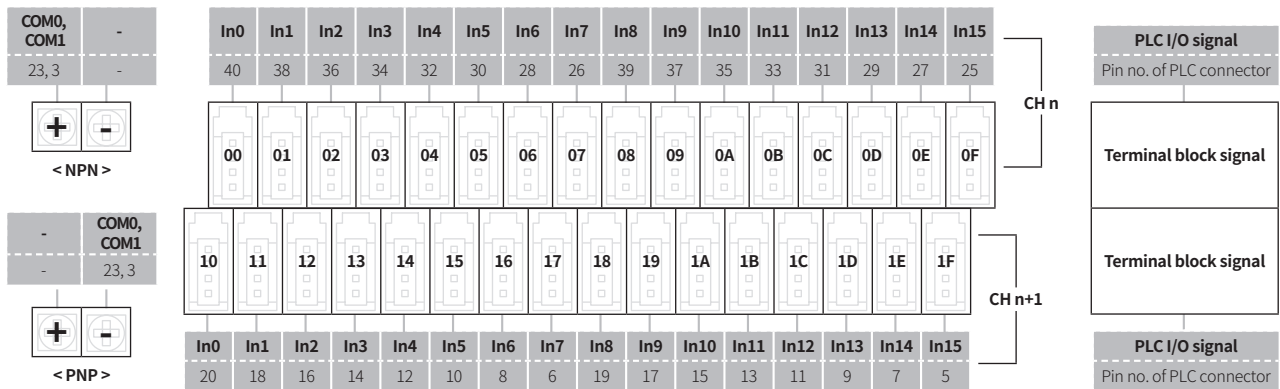
• Cable selection guide

Controller				Terminal block to connect		Proper cable	
Module name	I/O	No. of I/O	Logic	Type	Logic	Model name	Quantity
CJ1W-ID232, CJ1W-ID233	Input	32	NPN	Sensor connector terminal block	NPN	CH40-HP□-HCM3L	1
	Input	32	PNP	Sensor connector terminal block	PNP	CH40-HP□-HCM2L	1
CJ1W-ID262	Input1	32	NPN	Sensor connector terminal block	NPN	CH40-HP□-L9M3R	1
	Input1	32	PNP	Sensor connector terminal block	PNP	CH40-HP□-L9M6R	1
	Input2	32	NPN	Sensor connector terminal block	NPN	CH40-HP□-HCM3L	1
	Input2	32	PNP	Sensor connector terminal block	PNP	CH40-HP□-HCM2L	1
CJ1W-OD233, CJ1W-OD234	Output	32	NPN	Sensor connector terminal block	NPN	CH40-HP□-HCM1L	1
CJ1W-OD263	Output1	32	NPN	Sensor connector terminal block	NPN	CH40-HP□-L9M4R	1
	Output2	32	NPN	Sensor connector terminal block	NPN	CH40-HP□-HCM1L	1
CJ1W-OD232	Output	32	PNP	Sensor connector terminal block	PNP	CH40-HP□-HCM1L	1
CJ1W-OD262	Output1	32	PNP	Sensor connector terminal block	PNP	CH40-HP□-L9M4R	1
	Output2	32	PNP	Sensor connector terminal block	PNP	CH40-HP□-HCM1L	1
CJ1W-MD263	Input	32	NPN	Sensor connector terminal block	NPN	CH40-HP□-HCM3L	1
	Input	32	PNP	Sensor connector terminal block	PNP	CH40-HP□-HCM2L	1
	Output	32	NPN	Sensor connector terminal block	NPN	CH40-HP□-L9M4R	1

□ in proper cable model name stands for the cable length. Please refer to the cable length in 'Ordering Information'.

• Cable connection diagram

### - Sensor connector terminal block input, connector direction 'R'



### - Sensor connector terminal block input, connector direction 'L'

