The invisible hand for a more convenient world

Autonics sensors & controllers

Autonics
Sensors & Controllers

Highly durable & compatible

I/O Terminal Blocks & Cables

Connect with higher level controllers such as PLC and Motion controller etc.

Autonics I/O Terminal Blocks

AFS, ACS, AFE, ABS Series

Interface Terminal Blocks

AFS series (3 types)

Ideal for connector type PLC and dedicated controllers

Common Terminal Blocks

ACS series (6 types)

No Jumper bars required due to built-in PCB common

Sensor Connector Terminal Blocks

AFE series (2 types)

Realizing simple wiring work and saving time using sensor connector

Relay Terminal Blocks

ABS series (14 types)

Ideal solution to drive diverse loads using PLC output signals

Connector Transmission Cables

CJ Series

CJ-HPFP Series | CJ-HPDP37 Series | CJ-HPHP40 Series

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(C) I/O Cable

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※ : Ex-Rockwell Automation, Korea(SAMSUNG)

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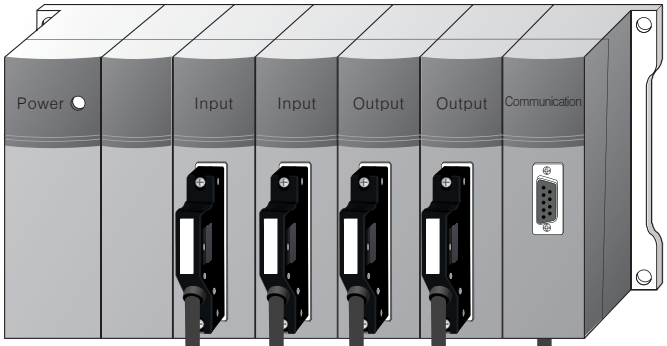
Connections



▣ Corresponding PLC with I/O cable
- MITSUBISHI
- LS industrial systems
- Autonics
- RS Automation
- YOKOGAWA
- FUJI
- KDT
- OMRON
- TELEMECANIQUE
- For SERVO

※ The cables for other PLC are manufactured by ordering.

I/O cable for connecting I/O terminal block and PLC

Twisted pair cable

Relay terminal block
ABS-S04

Relay terminal block
ABS-S01

Interface terminal block
AFS-H40

Relay terminal block
ABS-H32

Relay terminal block
ABS-H16

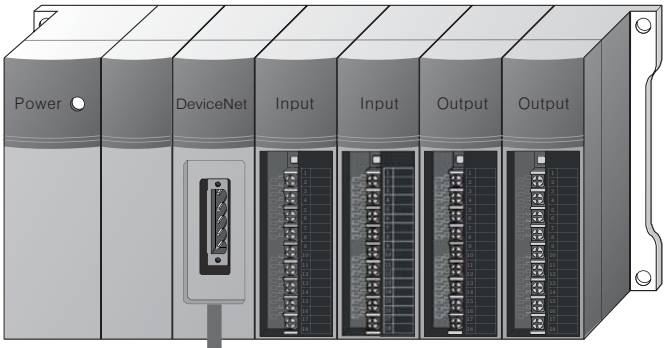
Sensor connector type terminal block
AFE4-H20

Modbus digital remote I/O sensor connector type
ARM-D□□□-4S
(Basic unit)
ARX-D□□□-4S
(Expansion unit)

Proximity sensor
PR Series

Photoelectric sensor
BJ Series

Fiber optic sensor
BF5 Series



DeviceNet network

Terminating resistance

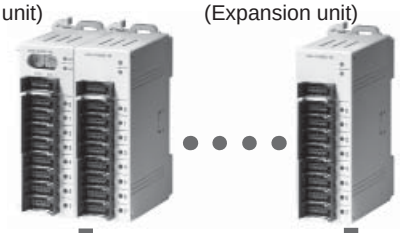
Terminating resistance

Network power

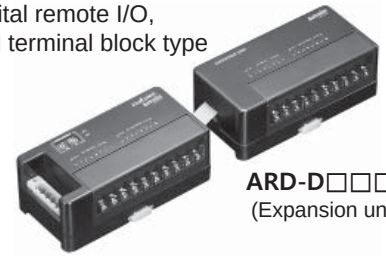
Digital remote I/O, sensor connector type

ARD-D□□□-4S
(Basic unit)

ARX-D□□□-4S
(Expansion unit)



Digital remote I/O,
standard terminal block type



ARD-D□□□E
(Expansion unit)

ARD-D□□□
(Basic unit)

Analog remote I/O,
standard terminal block type

ARD-AI04

Proximity sensor
PR Series

Photoelectric sensor
BJ Series

Fiber optic sensor
BF5 Series

Analog
Temperature sensor

Temperature·Humidity
transducer
THD Series

Panel meter
MT Series

Pressure sensor
PSAN Series

(A) Sensor connector

Product overview		A-2
CNE Series	(Wire mount plug)	A-3
	(Wire mount socket)	A-3
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Product Overview

Wire mount plug

Appearance	Model	Number of pins	Cover color	Applied wire		Reference
				Norminal cross section area(mm²)	Cover diameter(mm)	
	CNE-P03-WT	3	Transparent	0.05 to 0.08 AWG 30 to 28	ø0.6 to 0.8	A-3 to 5
	CNE-P04-WT	4				
	CNE-P03-YG	3	Yellow-Green		ø0.8 to 1.0	
	CNE-P04-YG	4				
	CNE-P03-VT	3	Violet		ø1.0 to 1.2	
	CNE-P04-VT	4				
	CNE-P03-RE	3	Red	0.13 to 0.21 AWG 26 to 24	ø0.8 to 1.0	
	CNE-P04-RE	4				
	CNE-P03-YW	3	Yellow		ø1.0 to 1.2	
	CNE-P04-YW	4				
	CNE-P03-OG	3	Orange		ø1.2 to 1.6	
	CNE-P04-OG	4				
	CNE-P03-GN	3	Green	0.32 to 0.5 AWG 22 to 20	ø1.0 to 1.2	
	CNE-P04-GN	4				
	CNE-P03-BL	3	Blue		ø1.2 to 1.6	
	CNE-P04-BL	4				
	CNE-P03-GY	3	Gray		ø1.6 to 2.0	
	CNE-P04-GY	4				

Wire mount socket

Appearance	Model	Number of pins	Cover color	Applied wire		Reference
				Norminal cross section area(mm²)	Cover diameter(mm)	
	CNE-S03-WT	3	Transparent	0.05 to 0.08 AWG 30 to 28	ø0.6 to 0.8	A-3 to 5
	CNE-S04-WT	4				
	CNE-S03-YG	3	Yellow-Green		ø0.8 to 1.0	
	CNE-S04-YG	4				
	CNE-S03-VT	3	Violet		ø1.0 to 1.2	
	CNE-S04-VT	4				
	CNE-S03-RE	3	Red	0.13 to 0.21 AWG 26 to 24	ø0.8 to 1.0	
	CNE-S04-RE	4				
	CNE-S03-YW	3	Yellow		ø1.0 to 1.2	
	CNE-S04-YW	4				
	CNE-S03-OG	3	Orange		ø1.2 to 1.6	
	CNE-S04-OG	4				
	CNE-S03-GN	3	Green	0.32 to 0.5 AWG 22 to 20	ø1.0 to 1.2	
	CNE-S04-GN	4				
	CNE-S03-BL	3	Blue		ø1.2 to 1.6	
	CNE-S04-BL	4				
	CNE-S03-GY	3	Gray		ø1.6 to 2.0	
	CNE-S04-GY	4				

Board mount socket

Appearance	Model	Lines	Number of pins	Connector	PCB	Reference
	CNE-B03	1	3	Wire mount plug	Fender plated-through hole ●Hole dia.: 1.0 mm ●Thickness: 1.0-2.2 mm	A-3 to 5
	CNE-B04		4			
	CNE-B203	2	3			
	CNE-B204		4			
	CNE-B403	4	3			
	CNE-B404		4			

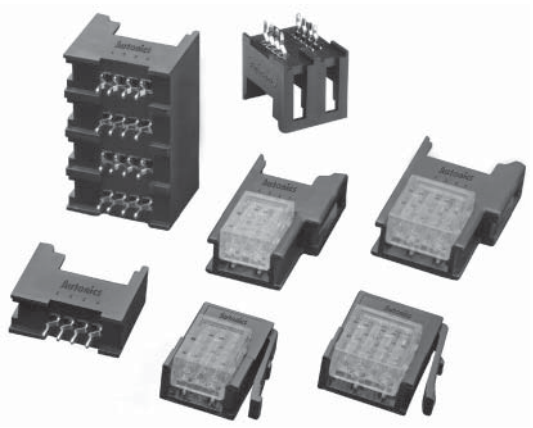
Sensor connector

▣ Features

■**Wire mount plug/socket**
- ●Compact and highly reliable of pressure welding connector
- ●Enables to connect wires as wire mount plug/socket
- ●Different 9 colors of cover by wire diameter
- ●Visible wiring status with translucent cover

■**Board mount socket**
- ●Enable to insert 4EA, 2EA, or 1EA wire mount plugs
- ●Contact placed in mold against electric shock and short-circuit
- ●Mountable on board closely

■**Commons**
- ●Significantly reduces connection time and effort
- ●Wide products range for various wires
- ●Compact and high density installation with 2 mm of contact pitch
- ●Compliance with e-CON
- ●Max. 3 A of current capacity by a pin



▣ Ordering information

CNE – P 03 WT

- Cover color(wire specifications)
  ※'**Cover color and wire specifications**' (Refer to A-4 page)
- Pins

03	3-pins
04	4-pins

- Connector type

P	Wire mount plug
S	Wire mount socket

- Item

CNE	Sensor connector

CNE – B 2 03

- Pins

03	3-pins
04	4-pins

- Lines

No-mark	1-line
2	2-line
4	4-line

- Connector type

B	Board mount socket

- Item

CNE	Sensor connector

▣ Specifications

Type		Wire mount plug	Wire mount socket	Board mount socket
Model		**CNE-P□-□**	**CNE-S□-□**	**CNE-B□□**
Appli-cation	Connector	Board mount socket/Wire mount socket	Wire mount plug	Wire mount plug
	Cable	AWG 30 to 20(ø 0.6 to ø2 .0)		———
	PCB	———		Fender plated-through hole, Hole dia. : 1.0 mm, PCB thickness : 1.0 to 2.2 mm
Rated voltage		Max. 250 VAC/DC		
Rated current		Max.3.0 A		
Temperature		-20 to 85 ℃(applying 1 A), -20 to 75 ℃(applying 2 A), -20 to 60 ℃(applying 3 A)		
Humidity		40 to 80%RH		
Terminal retention		1.4 kgf min.		
Pressure strength		• AWG20 : 1.0 kgf min. • AWG24 : 0.8 kgf min. • AWG30 : 0.5 kgf min.		
Extraction		0.49 N(50 gf)/pin min.		
Insertion		1.96 N(200 kf)/pin max.		
Dieleectric strength		1,000 VAC for 1 min.(between terminals)		
Insulated resistance		Min. 1,000 MΩ(between terminals)		
Contact resistance		0.05 Ω max. (short-current : 1 mA, max. open voltage : 20 mV)		
Material		Body : PCABS(UL94V-0), Terminal : C5210(Gold 0.2 ㎛), Case : PC(UL94-V0)		Body : PCABS(UL94-V0), Terminal : C5210(Gold 0.2 ㎛)

▣ Cover color and wire specifications

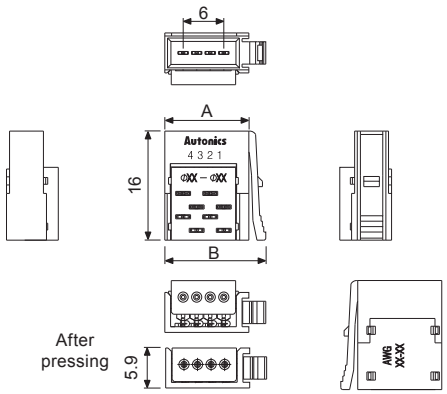
Cover color	3-pin	4-pin	Applied wire specifications	
			Norminal cross section area(mm²)	Cover diameter(mm)
Transparent(WT)	CNE-□03-WT	CNE-□04-WT	0.05 to 0.08 (AWG 30 to 28)	ø0.6 to 0.8
Yellow-Green(YG)	CNE-□03-YG	CNE-□04-YG		ø0.8 to 1.0
Violet(VT)	CNE-□03-VT	CNE-□04-VT		ø1.0 to 1.2
Red(RE)	CNE-□03-RE	CNE-□04-RE	0.13 to 0.21 (AWG 26 to 24)	ø0.8 to 1.0
Yellow(YW)	CNE-□03-YW	CNE-□04-YW		ø1.0 to 1.2
Orange(OG)	CNE-□03-OG	CNE-□04-OG		ø1.2 to 1.6
Green(GN)	CNE-□03-GN	CNE-□04-GN	0.32 to 0.5 (AWG 22 to 20)	ø1.0 to 1.2
Blue(BL)	CNE-□03-BL	CNE-□04-BL		ø1.2 to 1.6
Gray(GY)	CNE-□03-GY	CNE-□04-GY		ø1.6 to 2.0

※□ : P(Wire mount plug), S(Wire mount socket)

▣ Dimensions

◎Wire mount plug

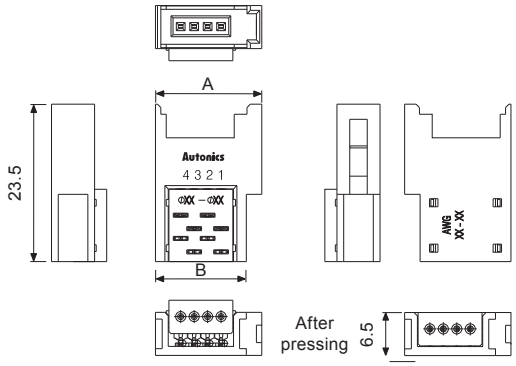
(unit: mm)



Pins	Model	A	B
3	CNE-P03-□	10.5	14.5
4	CNE-P04-□	12.5	16.5

◎Wire mount socket

(unit: mm)

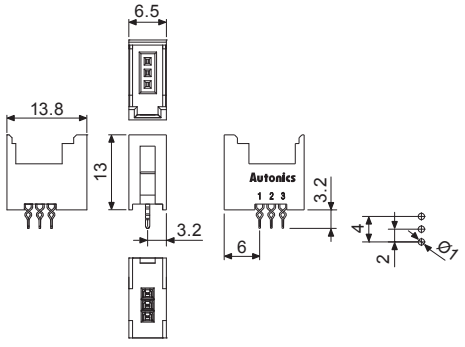


Pins	Model	A	B
3	CNE-S03-□	13.8	11.5
4	CNE-S04-□	15.8	13.5

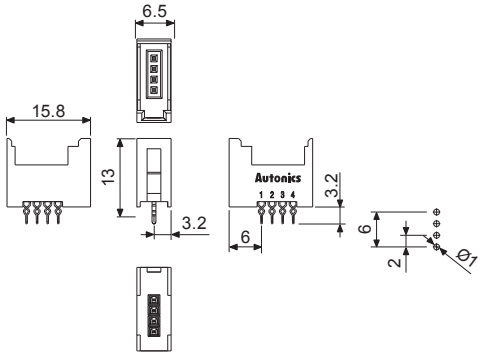
◎Board mount socket

(unit: mm)

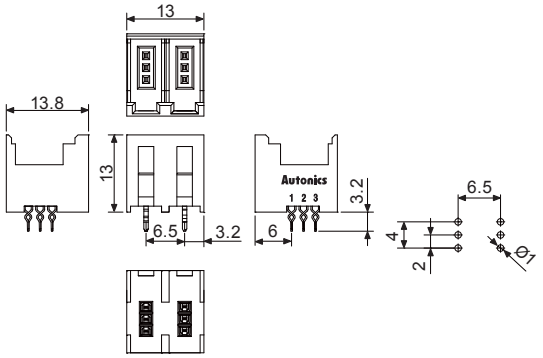
●CNE-B03(1-line×3-pin)



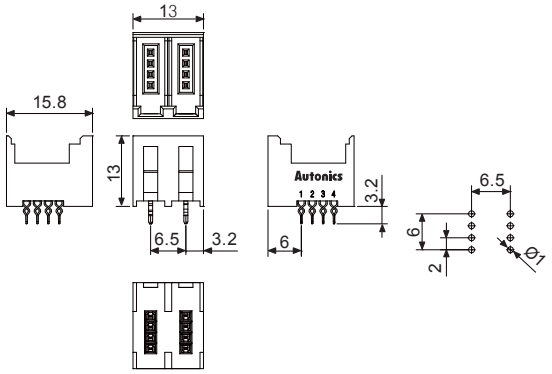
●CNE-B04(1-line×4-pin)



●CNE-B203(2-line×3-pin)

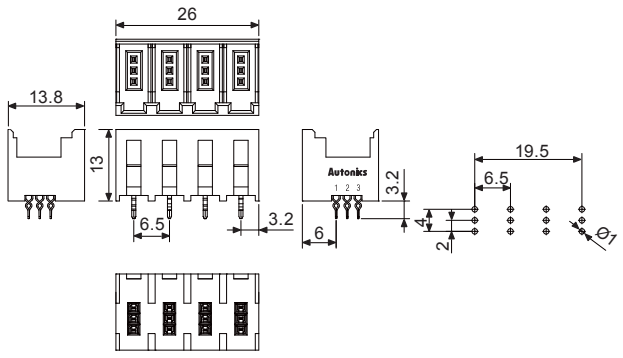


●CNE-B204(2-line×4-pin)

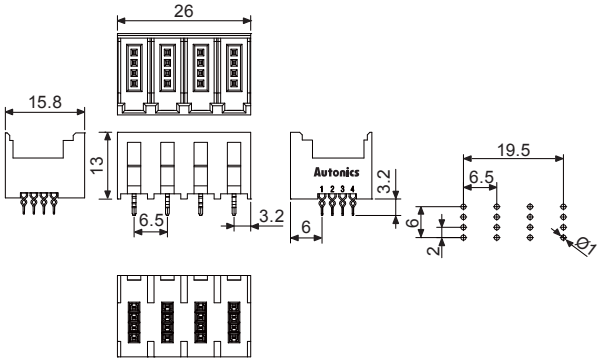


◎Board mount socket

●CNE-B403(4-line×3-pin)



●CNE-B404(4-line×4-pin)



▣ How to press sensor connector

1)Select connector.

●Check the wire specifications (conductor section, cover diameter).

●Select the proper color of sensor connector(model) by referring to the below table.

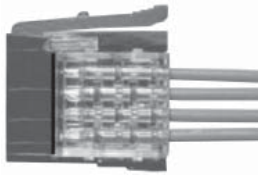
Cover color	Wire mount plug	Wire mount socket	Applied wire specifications	
			Norminal cross section area(mm²)	Cover diameter(mm)
Transparent(WT)	CNE-P□-WT	CNE-S□-WT	0.05 to 0.08 (AWG 30 to 28)	ø0.6 to 0.8
Yellow-Green(YG)	CNE-P□-YG	CNE-S□-YG		ø0.8 to 1.0
Violet(VT)	CNE-P□-VT	CNE-S□-VT		ø1.0 to 1.2
Red(RE)	CNE-P□-RE	CNE-S□-RE	0.13 to 0.21 (AWG 26 to 24)	ø0.8 to 1.0
Yellow(YW)	CNE-P□-YW	CNE-S□-YW		ø1.0 to 1.2
Orange(OG)	CNE-P□-OG	CNE-S□-OG		ø1.2 to 1.6
Green(GN)	CNE-P□-GN	CNE-S□-GN	0.32 to 0.5 (AWG 22 to 20)	ø1.0 to 1.2
Blue(BL)	CNE-P□-BL	CNE-S□-BL		ø1.2 to 1.6
Gray(GY)	CNE-P□-GY	CNE-S□-GY		ø1.6 to 2.0

※□ : Number of pins (03: 3-pin, 04: 4-pin)
※The proper sensor connector may be different by conductor of wire.
※Cover diameter of applied wire at connector (at translucent part) and AWG number of body backside are marked.

2)Insert wires.

●Check the pin number and insert wires at the insertion part of the cover.

●Check the wires are inserted at the end of cover.

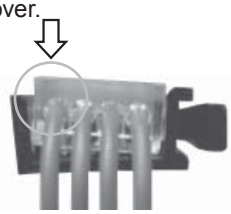


3)Press the connector.

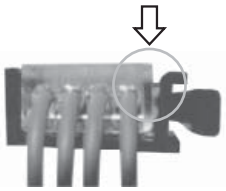
●Insert the cover to the body with tools (press fitting plier, etc).
※Press it with tools at the side direction as below figure.

4)Check the cover.

●Check the cover which has gaps and is even with the cover.



Wrong (1)
Not enough cover insertion.



Wrong (2)
Not enough cover insertion.

※Press the part of arrows again.

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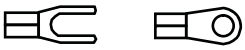
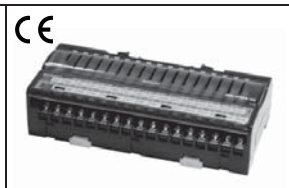
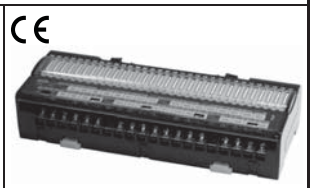
(B) I/O terminal block

Product overview		B-2
AFS Series	(Interface terminal block)	B-3
ACS Series	(Common terminal block)	B-7
AFE Series	(Sensor connector type terminal block)	B-10
ABS Series	(Relay terminal block)	B-14
Power Relay	(For relay terminal block)	B-20

Product Overview

Series	AFS Series		ACS Series	AFE Series	
Appearance					
Function	Interface terminal block		Common terminal block	Sensor connector type terminal block	
Rated voltage	125 VDC or 125 VAC		125 VDC or 125 VAC	12-24 VDC	
Applied connector	20-pin	Hirose connector (HIF3BA-20PA-2.54DSA)	–	20-pin	Hirose connector (HIF3BA-20PA-2.54DSA)
	40-pin	Hirose connector (HIF3BA-40PA-2.54DSA)		40-pin	Hirose connector (HIF3BA-40PA-2.54DSA)
	50-pin	Hirose connector (HIF3BA-50PA-2.54DSA)		–	
Terminal type	Forked, Round crimp terminal		Forked, Round crimp terminal	Board mount socket	
Terminal pitch	7.0 mm		7.0 mm	–	
Applied terminal & Cable	 (AWG 22-16 : 0.3-1.25 mm²)		(AWG 22-16 : 0.3-1.25 mm²)	(AWG 30-20 : 0.05-0.50 mm²)	
Reference	**B-3 to 6**		**B-7 to 9**	**B-10 to 13**	

Series		ABS Series				
Appearance						
Function		Relay terminal block				
Rated voltage		24 VDC				
Rated load voltage & current		250VAC 5A 30VDC※1	250VAC 3A, 30VDC 3A※1			250VAC 2A, 30VDC 2A※1 (2A/1-point, 8A/1COM)
Number of relays		1	1	4	16	32
Input logic		-	-	-	NPN (COM.+), PNP (COM.-)	NPN (COM.+), PNP (COM.-)
Connection type	Coil part	Screw	Screw	Screw	Hirose connector (HIF3BA-20PA-2.54DSA)	Hirose connector (HIF3BA-40PA-2.54DSA)
	Contact part	Screw	Screw	Screw	Screw	Screw
COMMON type	Coil part	Individual com	Individual com	Individual com	Individual com	8-point com
	Contact part	Individual com	Individual com	Individual com	Individual com	8-point com
Applied terminal & Cable		(AWG 22-16 : 0.3-1.25 mm²)				
Reference		**B-14 to 20**				

※1: Relay contact capacity for resistive load.

Interface terminal block

▣ Features

- ●Compact interface terminal block with 7 mm terminal pitch
- ●Optimized for connector type PLC and dedicated controller Input/Output
- ●Space saving with compact size
- ●2 ways of mounting (DIN rail, mounting with screws)

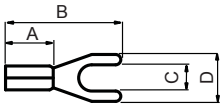
※ It is recommended for I/O cable to use Autonics CJ Series (connector transmission cable). Refer to C-1 page.

Please read "Caution for your safety" in operation manual before using this unit.

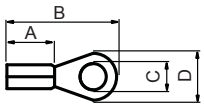
▣ Model

Model	Item	Terminal type	Connector type	Number of connector pins
AFS-H20	Interface terminal block	Screw	Hirose connector	20-pin
AFS-H40				40-pin
AFS-H50				50-pin

▣ Applied crimp terminal



<Forked>



<Round>

(unit: mm)

	A	B	C	D	Applied wire
Forked	Min. 4.1	Max. 16.0	Min. 3.0	Max. 5.9	AWG 22-16 (0.30 to 1.25 mm^2)
Round	Min. 4.1	Max. 16.0	Min. 3.0	Max. 5.9	

▣ Specifications

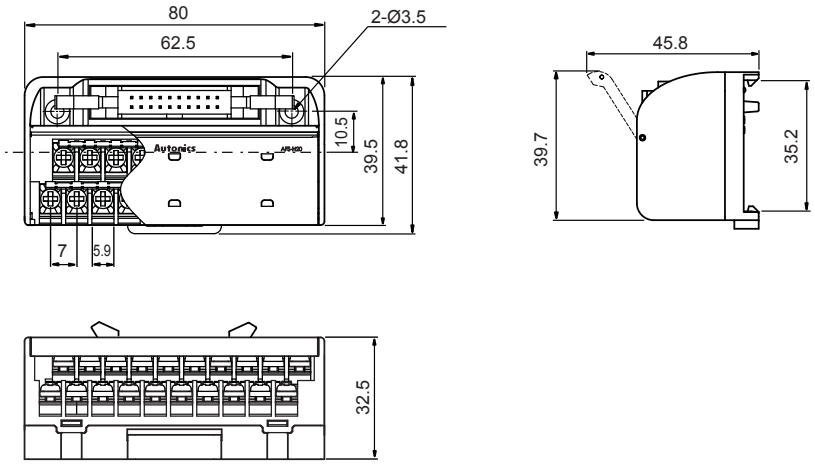
Model		AFS-H20	AFS-H40	AFS-H50
Rated voltage		Max. 125 VDC, 125 VAC 50/60 Hz		
Rated current		Max. 1 A		
Number of connector pins		20-pin	40-pin	50-pin
Number of terminals		20EA	40EA	50EA
Terminal pitch		7.0 mm		
Applied wire		Min. 1.25 mm²		
Insulation resistance		Min. 1,000 MΩ (at 500 VDC megger)		
Dielectric strength		600 VAC 50/60 Hz for 1 min.		
Vibration		0.75 mm amplitude at frequency of 10 to 55 Hz(for 1 min.) in each of X, Y, Z directions for 2 hours		
Shock		150 m/s^2(15 G) in each of X, Y, Z directions for 3 times		
Environment	Ambient temperature	-15 to 55 ℃, Storage : -25 to 65 ℃		
	Ambient humidity	35 to 85%RH, Storage : 35 to 85%RH		
Material		CASE : MPPO, TERMINAL PIN : Brass		
Tightening torque		0.4 to 0.6 N·m		
Approval		CE		
Unit weight		Approx. 71 g	Approx. 133 g	Approx. 163 g

※Environment resistance is rated at no freezing or condensation.

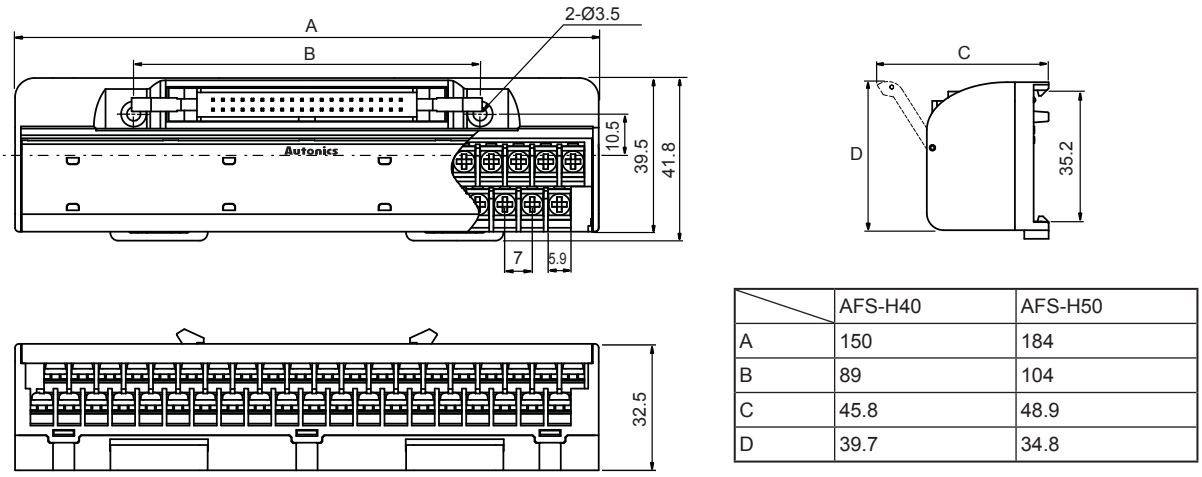
▣ Dimensions

(unit: mm)

●**AFS-H20**

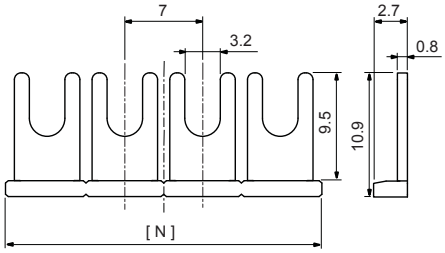


●**AFS-H40 / AFS-H50**



	AFS-H40	AFS-H50
A	150	184
B	89	104
C	45.8	48.9
D	39.7	34.8

●**Jumper Bar**



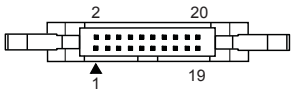
※Jumper Bar is sold separately.

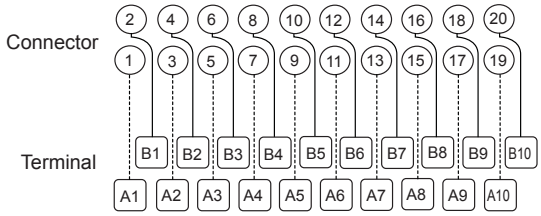
Model	JB-7-04	JB-7-10
Number of Jumper Bar pins	4EA	10EA
[**N**] size	27.5	69.5

▣ Connections

●AFS-H20

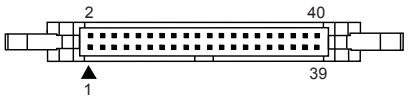
※Hirose connector model
: HIF3BA-20PA-2.54DSA



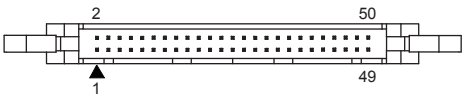


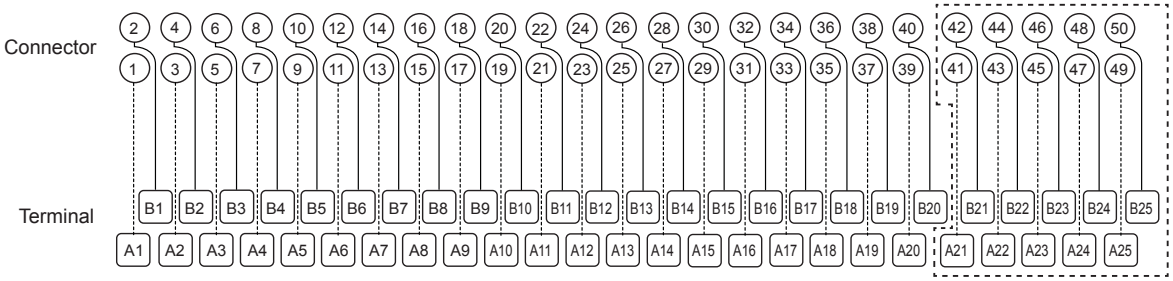
●AFS-H40 / AFS-H50

※Hirose connector model
: HIF3BA-40PA-2.54DSA



※Hirose connector model
: HIF3BA-50PA-2.54DSA





※Dot line part is only for AFS-H50 model.

▣ Installations

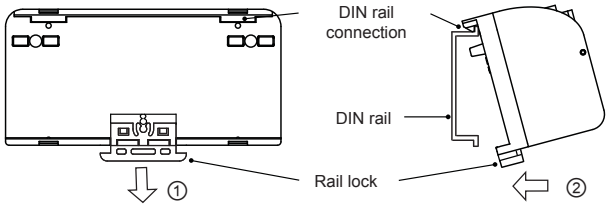
◎Mounting to and Removing from DIN rail

●Mounting

1)Push the rail lock to the direction "①".

2)Hook DIN rail connection onto DIN rail.

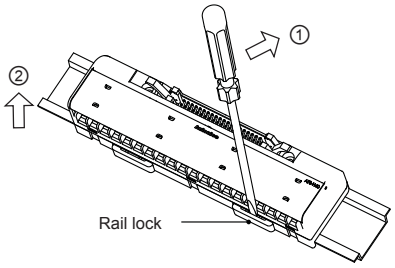
3)Push the unit down to the direction "②" and then push up the rail lock to the opposite direction "①".



●Removing

1)Insert a screwdrive into holes of rail lock and pull the lock out to the direction "①".

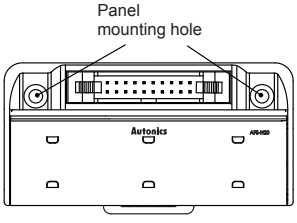
2)Removing the unit by pulling to the direction "②".



◎Mounting with screws

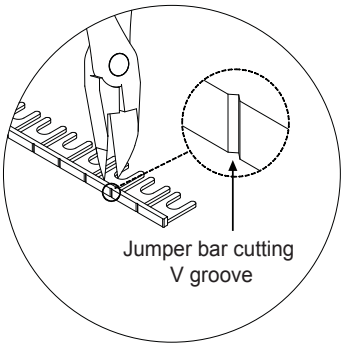
1)This unit is able to mount on the panel with mounting holes next to the hirose connector.

2)It is recommended to use M3×30 mm of spring washer screws and to use flat washers which are diameter Ø6. The tightening torque should be 0.5 to 0.7 N·m.

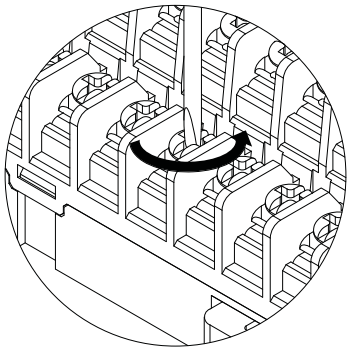


▣ How to install jumper bar

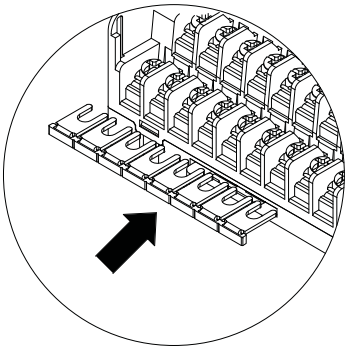
1)Cut a jumper bar for the desired length to fit cutting V groove with a nipper, etc.



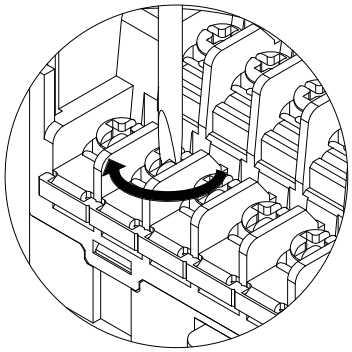
2)Unfasten the terminal screws for common.



3)Put jumper bar under the unfastend terminal screws.



4)Tighten all of screws upside the jumper bar.



▣ Caution for using

1. Use the product within the rated specifications for operating temperature and humidity.
2. Check voltage fluctuations in the power supply within the rated range.
3. When connecting PLC or other controllers, check the polarity of power before wiring.
4. Use AWG 16 (1.25 mm^2) wire and applied crimp terminals to the terminal block.
5. Turn OFF the power supply before wiring or removing connectors.
6. Do not use this unit at below places.
   ① Place where there is severe vibration or impact
   ② Place where strong alkalis or acids are used
   ③ Place where there are direct ray of the sun
   ④ Place where strong magnetic field or electric noise are generated
7. Installation environment
   ① It shall be used indoor.
   ② Altitude max. 2,000 m
   ③ Pollution Degree 2
   ④ Installation Category II

Common terminal block

▣ Features

- ●Compact common terminal block with 7 mm terminal pitch
- ●No Jumper bars required due to built-in PCB common
- ●Available for power supply expansion terminal block
- ●Space saving with compact size
- ●2 ways of mounting (DIN rail, mounting with screws)

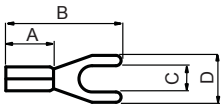
(A) Sensor connector
(B) I/O terminal block
(C) I/O cable
(D) Remote I/O terminal block

Please read "Caution for your safety" in operation manual before using this unit.

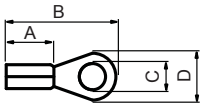
▣ Model

Model	Item	Terminal type	Number or terminals	Common type
ACS-20L	Common terminal block	Screw	20EA	Left-Right Common
ACS-20T				Top-Bottom Common
ACS-40L			40EA	Left-Right Common
ACS-40T				Top-Bottom Common
ACS-50L			50EA	Left-Right Common
ACS-50T				Top-Bottom Common

▣ Applied crimp terminal



<Forked>



<Round>

(unit:mm)

	A	B	C	D	Applied wire
Forked	Min. 4.1	Max. 16.0	Min. 3.0	Max. 5.9	AWG 22-16 (0.30 to 1.25 mm^2)
Round	Min. 4.1	Max. 16.0	Min. 3.0	Max. 5.9	

AFS
ACS
AFE
ABS
Relay

▣ Specifications

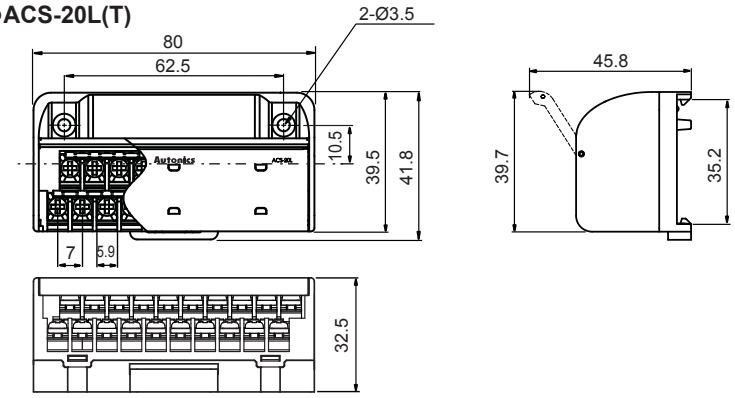
Model		ACS-20L	ACS-20T	ACS-40L	ACS-40T	ACS-50L	ACS-50T
Rated voltage		Max. 125 VDC, 125 VAC 50/60 Hz					
Rated current		Max. 10 A					
COMMON type		Left +COM, Right -COM	Top +COM, Bottom -COM	Left +COM, Right -COM	Top +COM, Bottom -COM	Left +COM, Right -COM	Top +COM, Bottom -COM
Number of terminals		20EA		40EA		50EA	
Terminal pitch		7.0 mm					
Applied wire		Min. 1.25 mm^2					
Insulation resistance		Min. 1,000 MΩ (at 500 VDC megger)					
Dielectric strength		600 VAC 50/60 Hz for 1 min.					
Vibration		0.75 mm amplitude at frequency of 10 to 55 Hz(for 1 min.) in each of X, Y, Z directions for 2 hours					
Shock		150 m/s^2(15G) in each of X, Y, Z directions for 3 times					
Environment	Ambient temperature	-15 to 55 ℃, Storage : -25 to 65 ℃					
	Ambient humidity	35 to 85%RH, Storage : 35 to 85%RH					
Material		CASE : MPPO, TERMINAL PIN : Brass					
Tightening torque		0.4 to 0.6 N·m					
Approval		CE					
Unit weight		Approx. 61 g		Approx. 115 g		Approx. 141 g	

※Environment resistance is rated at no freezing or condensation.

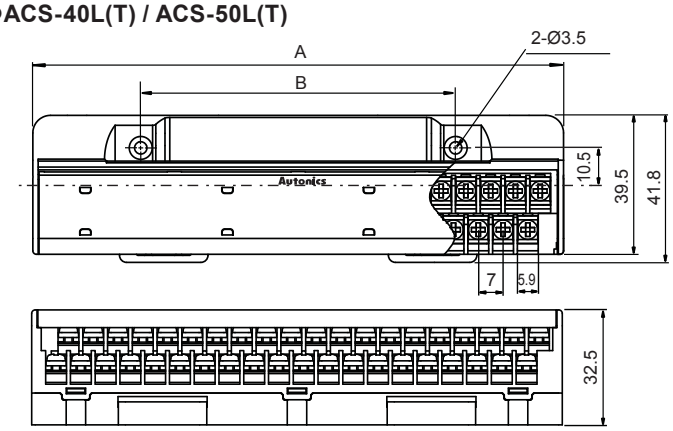
▣ Dimensions

(unit: mm)

●ACS-20L(T)



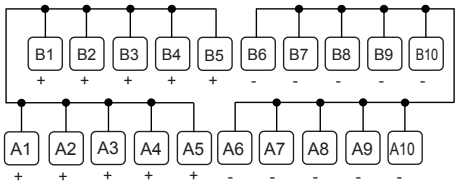
●ACS-40L(T) / ACS-50L(T)



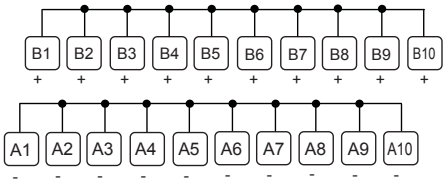
	ACS-40L(T)	ACS-50L(T)
A	150	184
B	89	104
C	45.8	48.9
D	39.7	34.8

▣ Connections

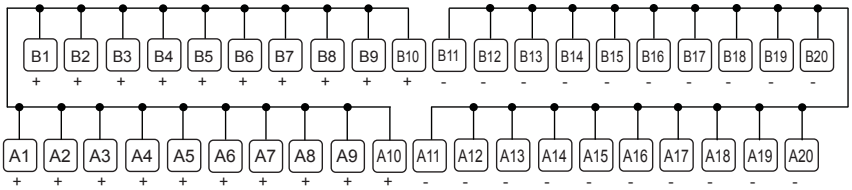
●ACS-20L



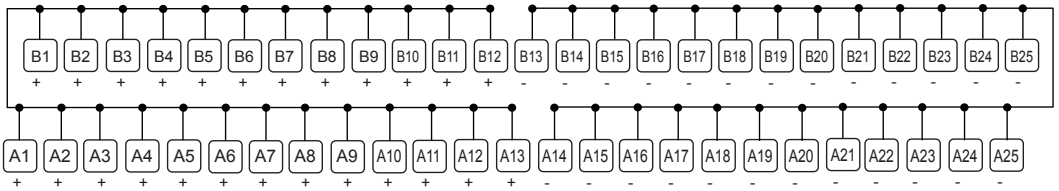
●ACS-20T



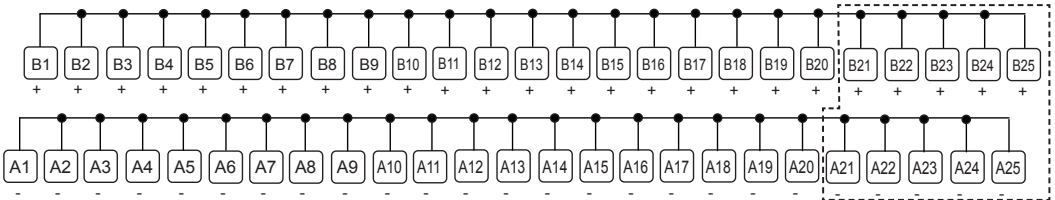
●ACS-40L



●ACS-50L



●ACS-40T / ACS-50T



※Dot line part is only for ACS-50T model.

▣ Installations

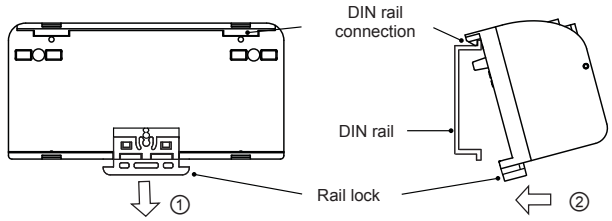
◎Mounting to and Removing from DIN rail

●Mounting

1)Push the rail lock to the direction "①".

2)Hook DIN rail connection onto DIN rail.

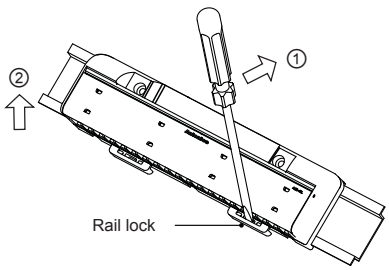
3)Push the unit down to the direction "②" and then push up the rail lock to the opposite direction "①".



●Removing

1)Insert a screwdrive into holes of rail lock and pull the lock out to the direction "①".

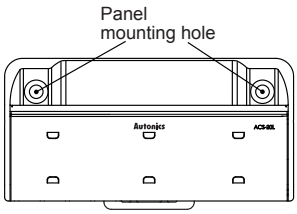
2)Removing the unit by pulling to the direction "②".



◎Mounting with screws

1)This unit is able to mount on the panel with mounting holes.

2)It is recommended to use M3×30 mm of spring washer screws and to use flat washers which are diameter Ø6. The tightening torque should be 0.5 to 0.7 N·m.



▣ Caution for using

1. Use the product within the rated specifications for operating temperature and humidity.
2. Check voltage fluctuations in the power supply within the rated range.
3. When connecting PLC or other controllers, check the polarity of power before wiring.
4. Use AWG 16 (1.25 mm^2) wire and applied crimp terminals to the terminal block.
5. Turn OFF the power supply before wiring or removing connectors.
6. Do not use this unit at below places.
   ① Place where there is severe vibration or impact
   ② Place where strong alkalis or acids are used
   ③ Place where there are direct ray of the sun
   ④ Place where strong magnetic field or electric noise are generated
7. Installation environment
   ① It shall be used indoor.
   ② Altitude max. 2,000 m
   ③ Pollution Degree 2
   ④ Installation Category II

Sensor connector type terminal block

▣ Features

- ●Easy wiring works and significant time saving combined with sensor connector
  [wire mount plug(CNE-P□-□, sold separately)]
- ●Unnecessary wire stripping and specific tools
- ●Space saving with compact size
- ●Easy check for operation status and for cable break by adopting LED signal
- ●2 ways of mounting (DIN rail, mounting with screws)
- ●Selectable NPN/PNP input (NPN/PNP selection switch)

※ For sensor connector wire plug (CNE Series), refer to A-2 to 5 pages.
※ It is recommended for I/O cable to use Autonics CJ Series (connector transmission cable). Refer to -1 page.

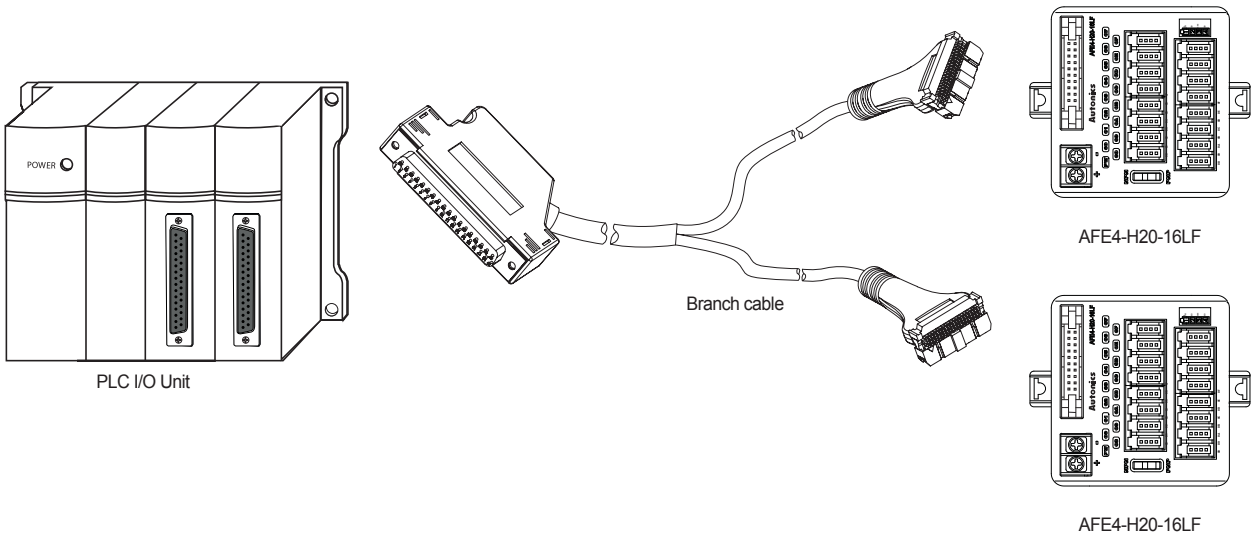
Please read "Caution for your safety" in operation manual before using this unit.

▣ Model

Model	Item	Connector type for primary	For secondary		Number of sensor connectors	LED	Case type
			Connector type	Number of connector pins			
AFE4-H20-16LF	Interface terminal	Sensor connector 4-pin socket	Hirose connector	20-pin	16EA	Yes	Full case type
AFE4-H40-32LF				40-pin	32EA		

▣ Example of sensor connector type terminal block connection

◎ Example of connection AFE4-H20-16LF and 40-point I/O module PLC with branch cable



▣ Specifications

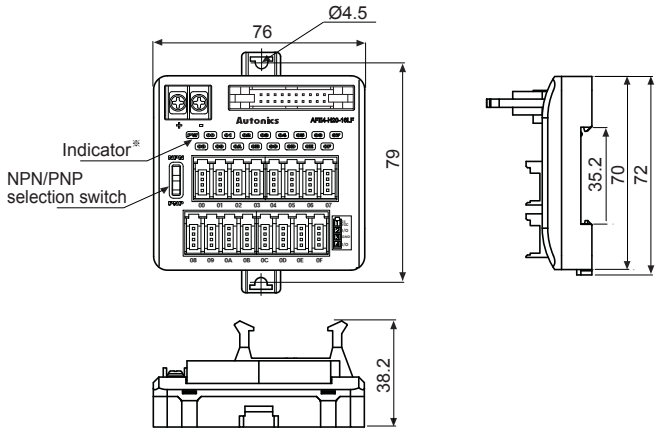
Model		AFE4-H20-16LF	AFE4-H40-32LF
Power supply		12-24 VDC	
Allowable voltage range		90 to 110% of rated voltage	
Rated current		Max. 1A ※1	
Number of connector pins		20-pin	40-pin
Number of sensor connectors		16EA	32EA
Insulation resistance		Min. 1,000 MΩ (at 500 VDC megger)	
Dielectric strength		600 VAC 50/60 Hz for 1 min.	
Vibration	Mechanical	0.75 mm amplitude at frequency of 10 to 55 Hz(for 1 min.) in each of X, Y, Z directions for 1 hour	
	Malfunction	0.75 mm amplitude at frequency of 10 to 55 Hz(for 1 min.) in each of X, Y, Z directions for 10 min.	
Shock	Mechanical	150 m/s^2(15G) in each of X, Y, Z directions for 3 times	
	Malfunction	100 m/s^2(10G) in each of X, Y, Z directions for 3 times	
Environ-ment	Ambient temperature	-15 to 55 ℃, storage : -25 to 65 ℃	
	Ambient humidity	35 to 85%RH, storage : 35 to 85%RH	
Material		CASE, BASE : PC	
Tightening torque		Max. 0.8 N·m	
Approval		CE	
Weight※2		Approx. 121 g(Approx. 69 g)	Approx. 203 g(Approx. 119 g)

※1: The rated current includes LED current of terminal block.
※2: The weight in parentheses is only unit weight.
※Environment resistance is rated at no freezing or condensation.

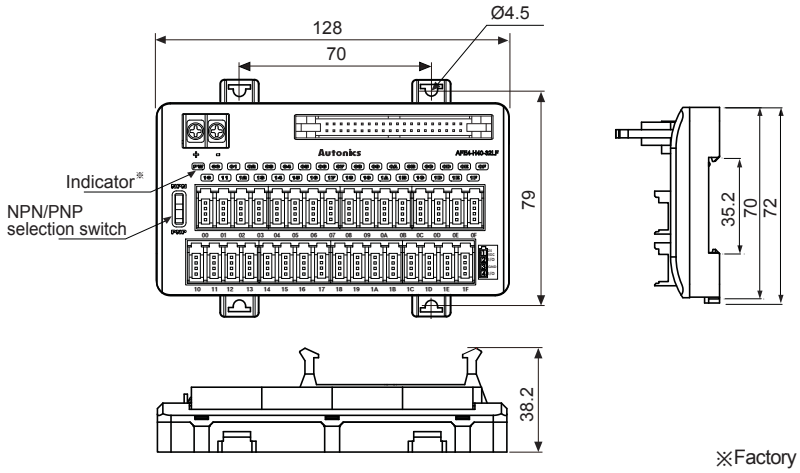
▣ Dimensions

(unit:mm)

●AFE4-H20-16LF



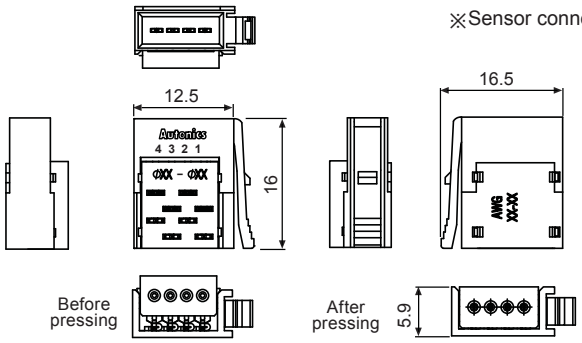
●AFE4-H40-32LF



※Factory default of the NPN/PNP selection switch is NPN.
※Indicator(PW: red LED, operation and disconnection: blue LED)

▣ Specifications of sensor connector wire mount plug

(unit: mm)



※Sensor connector plug is sold separately.

※Sensor connector wire plug is sold separately.
Refer to A-2 to 5 pages.

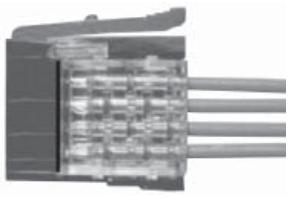
●**Cover color and wire specifications for sensor connector wire mount plug**

Model	Cover color	Applied wire specifications	
		Norminal cross section area (mm²)	Cover diameter (mm)
CNE-P04-WT	Transparent(WT)	0.05 to 0.08 (AWG 30 to 28)	0.6 to 0.8
CNE-P04-YG	Yellow-Green(YG)		0.8 to 1.0
CNE-P04-VT	Violet(VT)		1.0 to 1.2
CNE-P04-RE	Red(RE)	0.13 to 0.21 (AWG 26 to 24)	0.8 to 1.0
CNE-P04-YW	Yellow(YW)		1.0 to 1.2
CNE-P04-OG	Orange(OG)		1.2 to 1.6
CNE-P04-GN	Green(GN)	0.32 to 0.5 (AWG 22 to 20)	1.0 to 1.2
CNE-P04-BL	Blue(BL)		1.2 to 1.6
CNE-P04-GY	Gray(GY)		1.6 to 2.0

▣ How to press sensor connector wire plug

1)Insert wires.

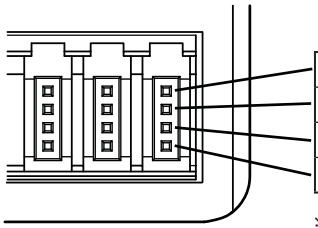
- ●Check the pin number and insert wires at the insertion part of the cover.
- ●Check the wires are inserted at the end of cover.



2)Press the connector.

- ●Insert the cover to the body with tools (press fitting plier, etc).
- ●Press it with tools at the side direction as below figure.

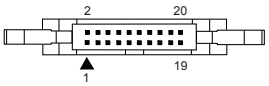
▣ Sensor connector socket arrangement



1	12-24VDC
2	I/O
3	GND
4	I/O

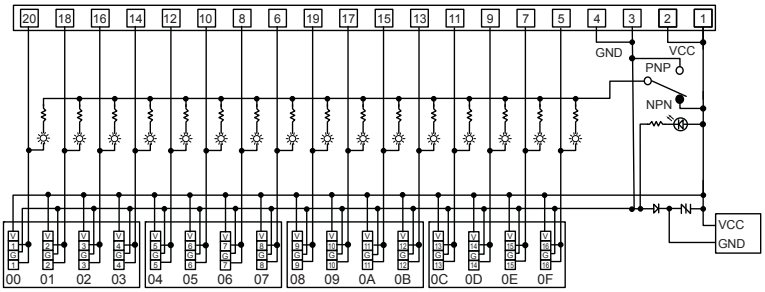
※No. 2 and 4 are connected

▣ Connections

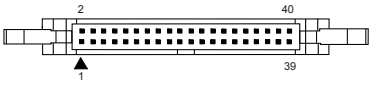


※Hirose connector model
: HIF3BA-20PA-2.54DSA

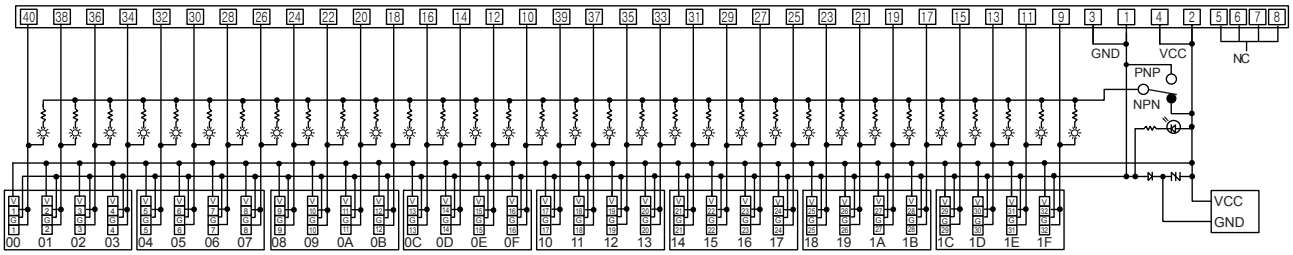
●AFE4-H20-16LF



※Hirose connector model
: HIF3BA-40PA-2.54DSA



●AFE4-H40-32LF



▣ Installations

◎Mounting to and Removing from DIN rail

●Mounting

1)Push the rail locks to the direction "①".

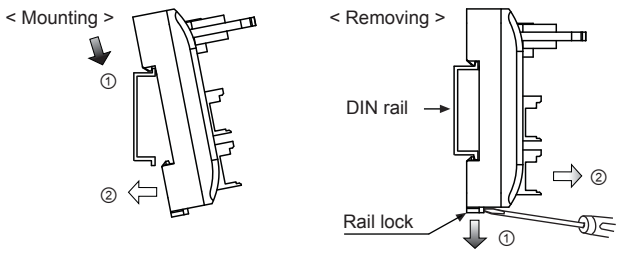
2)Hook DIN rail connection onto DIN rail.

3)Push the unit down to the direction "②" and then push up the rail locks to the opposite direction "①".

●Removing

1)Insert a screwdrive into holes of rail lock and pull the lock out to the direction "①".

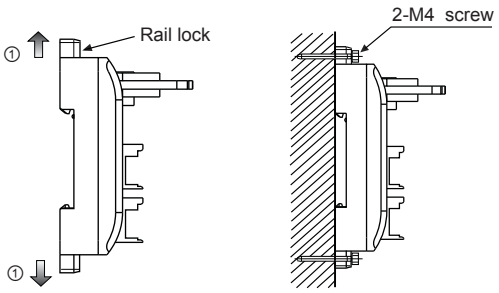
2)Removing the unit by pulling to the direction "②".



◎Mounting with screws

1)This unit is able to mount on the panel with rail locks.

2)It is recommended to use M4×15 mm of spring washer screws and to use flat washers which are diameter Ø6. The tightening torque should be 0.7 to 1.0 N·m.



▣ Caution for using

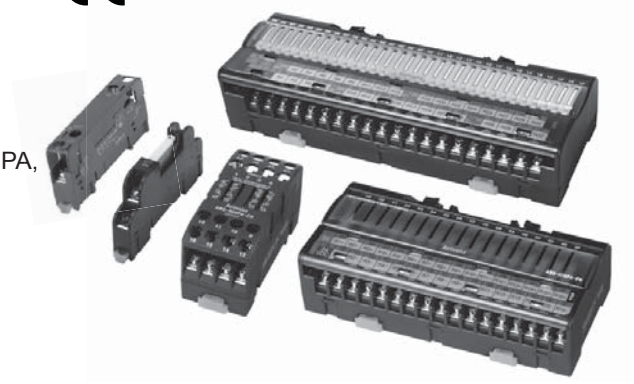
1. Use the product within the rated specifications for operating temperature and humidity.
2. Check voltage fluctuations in the power supply within the rated range.
3. When connecting PLC or other controllers, check the polarity of power before wiring.
4. Power wire should be AWG 16(1.25 mm^2).
5. Do not use NPN output sensor and PNP output sensor simultaneously.
6. Do not use this unit at below places.
   ① Place where there is severe vibration or impact
   ② Place where strong alkalis or acids are used
   ③ Place where there are direct ray of the sun
   ④ Place where strong magnetic field or electric noise are generated
7. Installation environment
   ①It shall be used indoor.
   ②Altitude max. 2,000 m
   ③Pollution Degree 2
   ④Installation Category II

Relay terminal block

▣ Features

CE (except 5A)

- ●Suitable to drive various loads using output signals of PLC
- ●Easy check for operation status and for cable break by adopting LED signal
- ●Available 2 types of relay
  [2A, 3A: TAKAMISAWA(Fujitsu) NYP/ MATSUSHITA(Panasonic) PA,
  5A: MATSUSHITA(Panasonic) PQ / OMRON]
  - Supplies a TWO WAY EJECTOR for replacing relay
  - Easy relay replacement with relay removal lever (1-point relay terminal block)
- ●2 ways of mounting (DIN rail, mounting with screws)
- ●Available close mounting and easy expansion with concave-convex structure between terminals (1-point relay terminal block)



Please read "Caution for your safety" in operation manual before using this unit.

※ It is recommended for I/O cable to use Autonics CJ Series (connector transmission cable).
Refer to C-1 page.

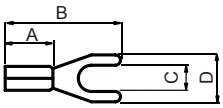
▣ Ordering information

AB S – H 16 PA – N N

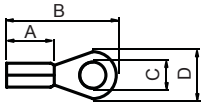
Varistor installation	N	Not installed
Input logic	C	Non-COM ※1
	N	NPN (COM+)
	P	PNP (COM-)
Relay type	TN	**T**AKAMISAWA (Fujitsu) **N**YP
	PA	MATSUSHITA (Panasonic) **PA**
	PQ	MATSUSHITA (Panasonic) **PQ**
	R6	OM**R**ON G**6**B
Number of relay points	01	01EA
	04	04EA
	16	16EA
	32	32EA
Connector type	S	Screw
	H	Hirose connector
Terminal type	S	Screw
Item	AB	Relay terminal block

※1: It is only for 1-point and 4-point models.

▣ Applied crimp terminal



<Forked>



<Round>

(unit: mm)

	A	B	C	D	Applied wire
Forked	Min. 4.1	Max. 16.0	Min. 3.0	Max. 5.9	AWG 22-16 (0.30 to 1.25mm^2)
Round	Min. 4.1	Max. 16.0	Min. 3.0	Max. 5.9	

▣ Specifications

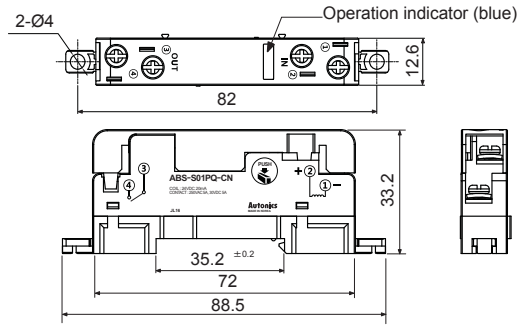
Model		ABS-S01PQ-CN ABS-S01R6-CN	ABS-S01PA-CN ABS-S01TN-CN	ABS-S04PA-CN ABS-S04TN-CN	ABS-H16PA-NN(PN) ABS-H16TN-NN(PN)	ABS-H32PA-NN(PN) ABS-H32TN-NN(PN)
Rated voltage		24VDC ±10%				
Rated load voltage & current		250VAC 5A, 30VDC 5A※1	250VAC 3A, 30VDC 3A※1			250VAC 2A, 30VDC 2A※1 (2A/1-point, 8A/1COM)
Current consumption	PQ/R6 type	Max. 20mA※2	–			
	PA type	–	Max. 10.5mA※2		Max. 10.5mA※2/Max. 15.5mA※3	
	TN type	–	Max. 8.5mA※2		Max. 8.5mA※2/Max. 13.5mA※3	
Contact type		1a contact relay output				
Applied relay model		PQ: PQ1a-24V (MATSUSHITA (Panasonic)), R6: G6B-1174P-FD-US (OMRON)	PA: PA1a-24V (MATSUSHITA (Panasonic)), TN: NYP24W-K (TAKAMISAWA (Fujitsu)			
Number of relays		1-point		4-point	16-point	32-point (8-point/1COM)
Number of connector pins		–			20-pin	40-pin
Applied wire		0.65 to 2.0 mm	Min. 1.25 mm²			
Insulation resistance		Min. 1,000 MΩ (at 500 VDC megger)				
Dielectric strength	Between coil-contact	4,000 VAC 50/60 Hz for 1min.	2,000 VAC 50/60 Hz for 1min.			
	Between same contacts	1,000 VAC 50/60 Hz for 1 min.※4				
Vibration	Mechanical	0.75 mm amplitude at frequency of 10 to 55 Hz(for 1 min.) in each of X, Y, Z directions for 2 hours				
	Malfunction	0.75 mm amplitude at frequency of 10 to 55 Hz(for 1 min.) in each of X, Y, Z directions for 10 min.				
Shock	Mechanical	1000 m/s²(100G) in each of X, Y, Z directions for 3 times	500 m/s²(50G) in each of X, Y, Z directions for 3 times			
	Malfunction	100 m/s²(10G) in each of X, Y, Z directions for 3 times	147 m/s²(15G) in each of X, Y, Z directions for 3 times			
Environment	Ambient temperature	-15 to 55 ℃, Storage : -25 to 65 ℃				
	Ambient humidity	35 to 85%RH, Storage : 35 to 85%RH				
Material		CASE & BASE: PA6, TERMINAL PIN: Brass		CASE & BASE: MPPO, TERMINAL PIN: Brass	CASE: MPPO, BASE: PA66(G25%) TERMINAL PIN: Brass	
Tightening torque		Max. 0.8 N·m	0.4 to 0.6 N·m			
Accessory※5		–		Jumper Bar: 2EA (Model:JB-7.62-04)	Jumper Bar: 2EA (Model:JB-7.62-08)	–
Approval		–	CE			
Weight ※6		PQ: Approx. 31 g (Approx. 430 g), R6: Approx. 30 g (Approx. 416 g)	PA: Approx. 21.5 g (Approx. 314.5 g), TN: Approx. 22.2 g (Approx.324.5 g)	PA: Approx. 68 g (Approx. 104 g), TN: Approx. 71 g (Approx. 107 g)	PA: Approx. 224 g (Approx. 307 g), TN: Approx. 235 g (Approx. 318 g)	PA: Approx. 345 g (Approx. 438 g), TN: Approx. 370 g (Approx. 463 g)

※1: Relay contact capacity for resistive load.
※2: The current consumption including LED current by one relay.
※3: The current consumption including power LED at '※2'.
※4: R6 type(OMRON relay) is 3,000VAC.
TN type(Fujitsu relay) is 750VAC.
※5: ABS-H32□□-NN(PN) does not supply a Jumper bar.
※6: The weight of 1-point relays is per 1EA and the weight of parenthesis is per 10EA with packing.
The weight of the others relays in parentheses is including packing.
※Environment resistance is rated at no freezing or condensation.

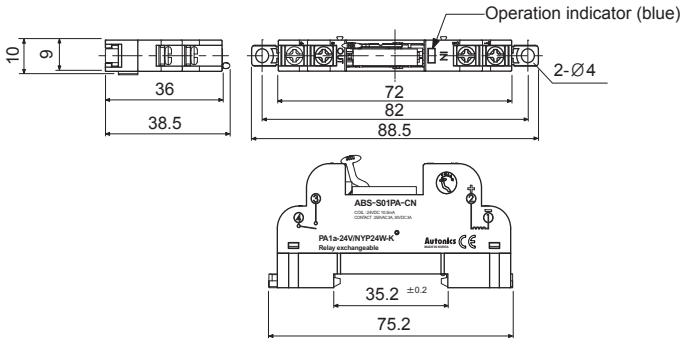
▣ Dimensions

(unit: mm)

●ABS-S01PQ-CN / ABS-S01R6-CN



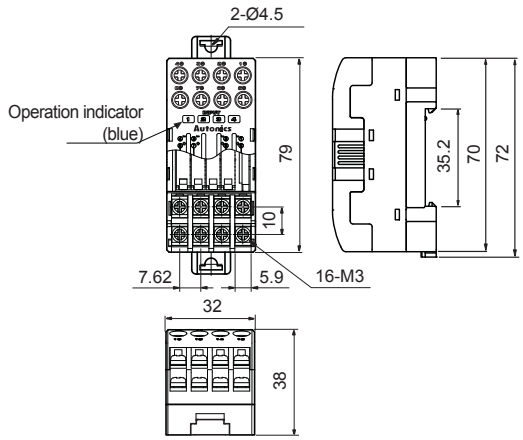
●ABS-S01PA-CN / ABS-S01TN-CN



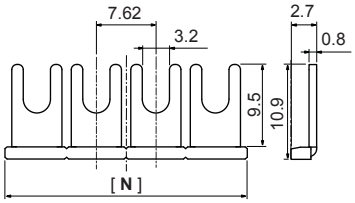
▣ Dimensions

(unit: mm)

●ABS-S04PA-CN / ABS-S04TN-CN

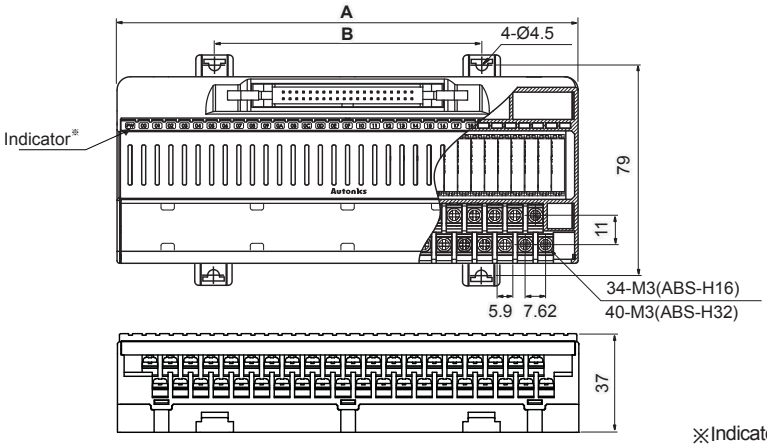


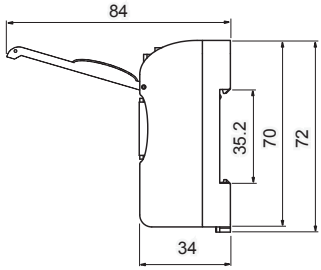
●Jumper Bar



Model	JB-7.62-04	JB-7.62-08
Number of Jumper Bar pins	4EA	8EA
[**N**] size	29.5	60.0

●ABS-H16PA-□N / ABS-H16TN-□N ●ABS-H32PA-□N / ABS-H32TN-□N



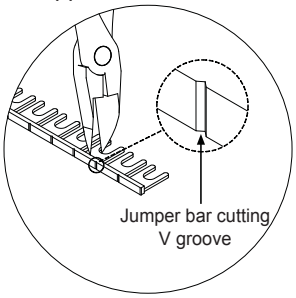


	ABS-H16 type	ABS-H32 type
A	140	173
B	70	100

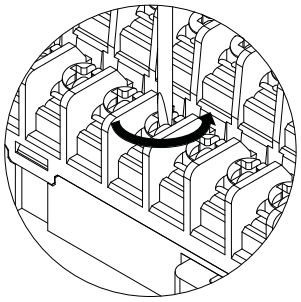
※Indicator(PW: red LED, operation and disconnection: blue LED)

▣ How to install jumper bar

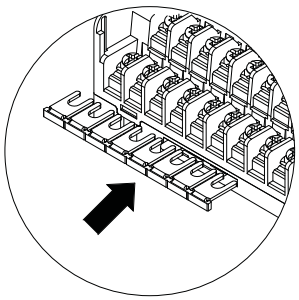
1)Cut a jumper bar for the desired length to fit cutting V groove with a nipper, etc.



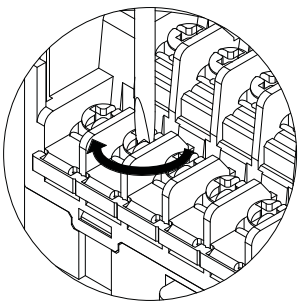
2)Unfasten the terminal screws for common.



3)Put jumper bar under the unfastend terminal screws.

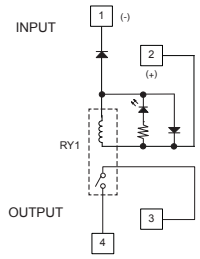


4)Tighten all of screws upside the jumper bar.

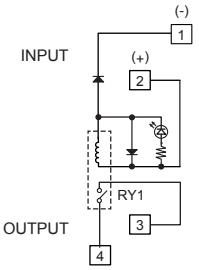


▣ Connections

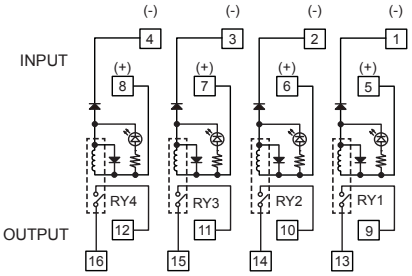
●ABS-S01PQ-CN / ABS-S01R6-CN



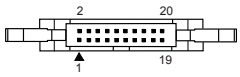
●ABS-S01PA-CN / ABS-S01TN-CN



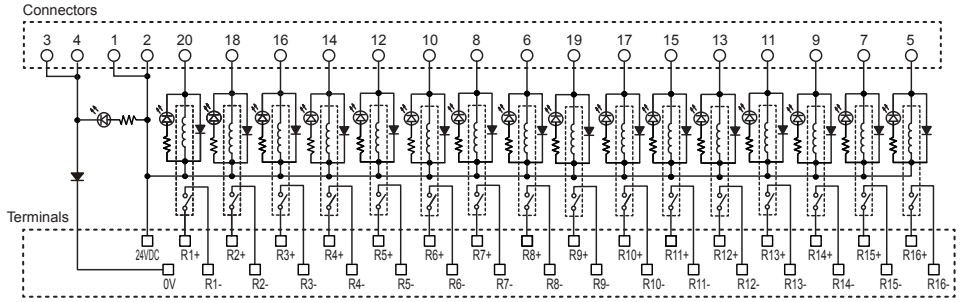
●ABS-S04PA-CN / ABS-S04TN-CN



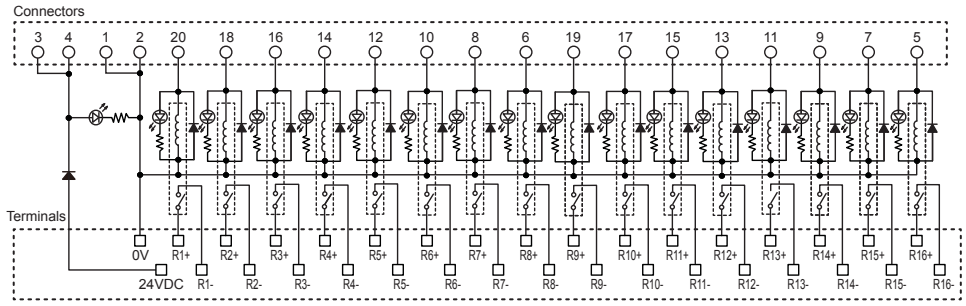
●ABS-H16□-NN



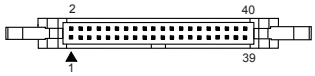
※Hirose connector socket model
: HIF3BA-20PA-2.54DSA



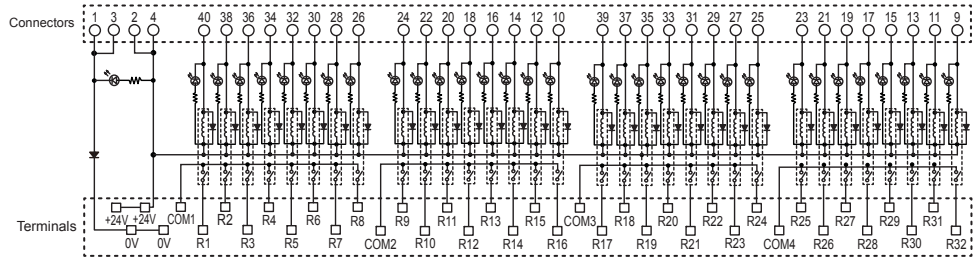
●ABS-H16□-PN



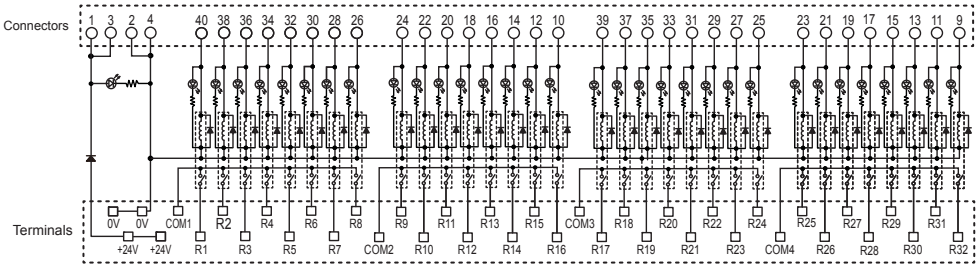
●ABS-H32□-NN



※Hirose connector socket model
: HIF3BA-40PA-2.54DSA



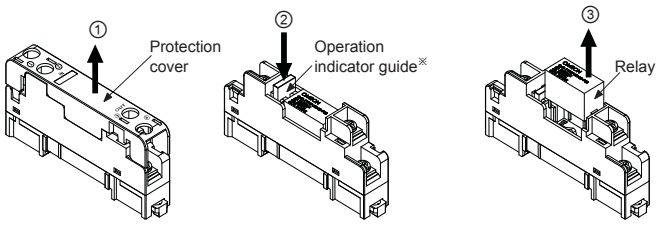
●ABS-H32□-PN



▣ How to replace relay

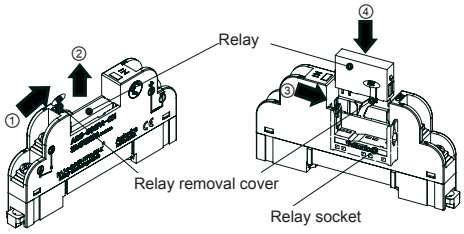
●ABS-S01PQ-CN / ABS-S01R6-CN

1)Pull the protection cover to the direction "①".
2)Press the operation indicator guide to the direction "②" and remove the relay to the direction "③".
3)Insert a new relay to the case.



●ABS-S01PA-CN / ABS-S01TN-CN

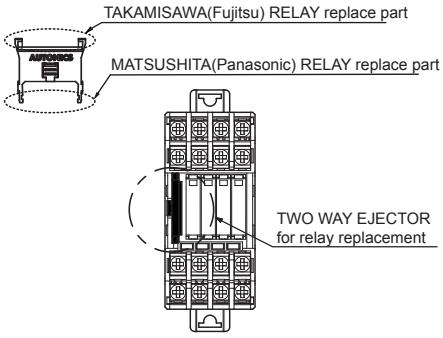
1)Press the relay removal lever to the direction "①" and an inserted relay is come up.
2)Remove this relay and lift up the relay removal lever to the direction "②".
3)Check the relay socket position and insert a new relay to relay socket.
※If pressing the relay removal lever to right or left, this lever may be broken.



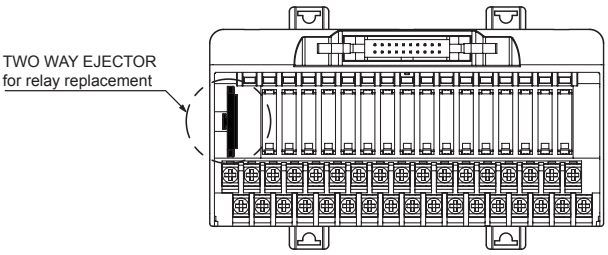
●ABS-S04PA-CN / ABS-S04TN-CN
●ABS-H16PA-□N / ABS-H16TN-□N
●ABS-H32PA-□N / ABS-H32TN-□N

• Two-way ejector position for relay replacement

< Two-way ejector >

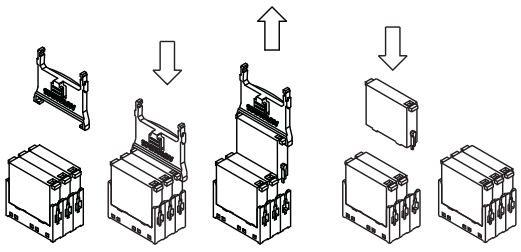


< ABS-S04 type >



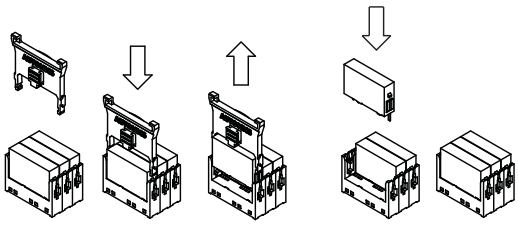
< ABS-H16 / ABS-H32 type >

• Insertion/Removal of TAKAMISAWA(Fujitsu) relay



< Relay removal > < Relay insertion >

• Insertion/Removal of MATSUSHITA(Panasonic) relay



< Relay removal > < Relay insertion >

※Relay socket can be used both TAKAMISAWA(Fujitsu) relay, NYP24W-K, and MATSUSHITA(Panasonic) relay, PA1a-24V.

▣ Installations

※The appearance of each mode is different by relay-point.

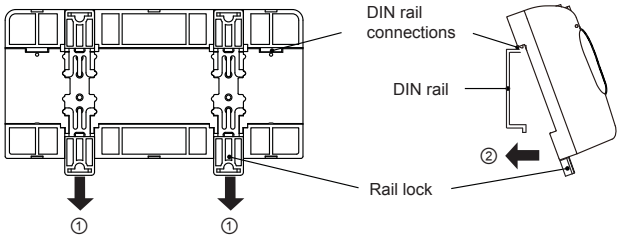
◎Mounting to and Removing from DIN rail

●Mounting

1) Push the rail locks to the direction "①".

2)Hook DIN rail connection onto DIN rail.

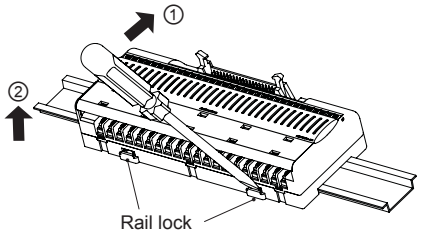
3)Push the unit down to the direction "②" and then push up the rail locks to the opposite direction "①".



●Removing

1)Insert a screwdrive into holes of rail lock and pull the lock out to the direction "①".

2)Removing the unit by pulling to the direction "②".

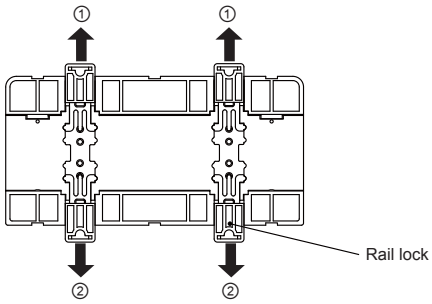


◎Mounting with screws

1)This unit is able to mount on the panel with rail locks.

2) Push the rail locks to the direction "①, ②".

3)It is recommended to use M4×15mm of spring washer screws and to use flat washers which are diameter Ø6. The tightening torque should be 0.7 to 1.0 N·m.

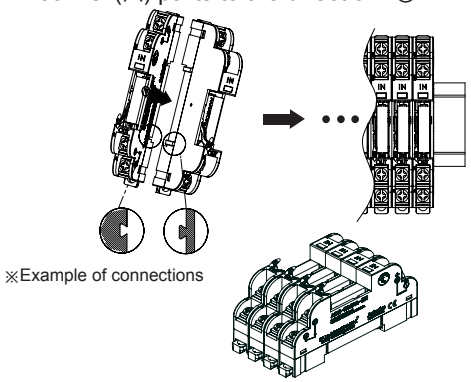


◎Connection between units
(1-point relay terminal block)

●ABS-S01PQ-CN / ABS-S01R6-CN

●ABS-S01PA-CN / ABS-S01TN-CN

Connect between units with concave(凹) and convex(凸) parts to the direction "①".



▣ Caution for using

1. Use the product within the rated specifications for operating temperature and humidity.
2. Check voltage fluctuations in the power supply within the rated range.
3. When connecting PLC or other controllers, check the polarity of power and COMMON before wiring.
4. Power wire should be AWG 16(1.25 mm^2)(5A: AWG19-14(0.65 to 2.0 mm^2)). Use proper crimp terminals for the terminals.
5. Turn OFF the power supply before wiring or removing connectors.
6. Turn OFF the power supply before replacing relays.
7. Do not use this unit at below places.
   - ① Place where there is severe vibration or impact
   - ② Place where strong alkalis or acids are used
   - ③ Place where there are direct ray of the sun
   - ④ Place where strong magnetic field or electric noise are generated
8. Installation environment
   - ① It shall be used indoor.
   - ② Altitude max. 2,000m
   - ③ Pollution Degree 2
   - ④ Installation Category II

TAKAMISAWA(Fujitsu) Power relay 1 POLE-5A NYP24W-K

▣ Features

- ●Slim type with 5 mm thickness
- ●Low power consumption and high sensitivity

▣ Coil ratings

Relay model	Rated voltage	Must operate voltage	Must release voltage	Rated current	Coil resistance	Power consumption
NYP24W-K	24 VDC	16.1 V	2.4 V	5 mA	4,800 Ω	120 mW

※All values in the table are measured at 20 ℃ with a tolerance of ±10%.

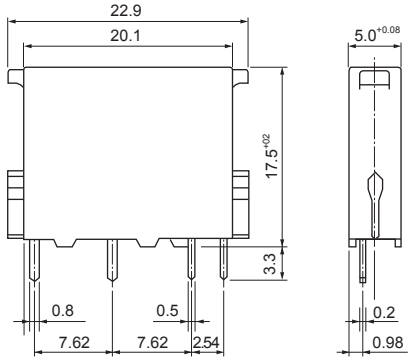
▣ Contact ratings

Manufacture			**T**AKAMISAWA(Fujitsu)	
Model			**NYP24W-K**	
Contact	Arrangement		1 Form A (SPST-1a)	
	Material		Gold overlay silver alloy	
	Resistance(initial)		30 mΩ (6 VDC 1A)	
Rating	Rating(resistive)		3 A 250 VAC	3 A 30 VDC
	Max. switching power		750 VA	90 W
	Min. switching capacity		5 VDC 1 mA	
	Max. switching voltage		270 VAC	150 VDC
	Max. switching currrnt		5 A	
Electrical characteristics	Insulation resistance		Min. 1,000 MΩ (at 500 VDC megger)	
	Dielectric strength	Coil and Contacts	3,000 VAC 50/60 Hz for 1 min.	
		Open contacts	750 VAC 50/60 Hz for 1 min.	
	Surge voltage		5,080 V	
	Operate time		Max. 10 ms	
	Release time		Max. 5 ms	
Mechanical characteristics	Vibration	Mechanical	5.0 mm amplitude at frequency of 10 to 55 Hz(for 1 min.) in each of X, Y, Z directions for 1 hour	
		Malfunction	1.5 mm amplitude at frequency of 10 to 55 Hz(for 1 min.) in each of X, Y, Z directions for 10 min.	
	Shock	Mechanical	1000 m/s^2 (100 G) in each of X, Y, Z directions for 3 times	
		Malfunction	100 m/s^2 (10 G) in each of X, Y, Z directions for 3 times	
Expected life	Mechanical		Min. 20,000,000 operations (at 180 times/min)	
	Electrical※1		Min. 100,000 operations(3A 250VAC, 30VDC resistive load)	
Environment	Ambient temperature		-40 to 90 ℃	
	Ambient humidity		35 to 80%RH	
Unit weight			Approx. 3.5 g	

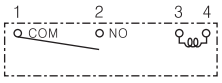
※1: 50,000 operations: min. 5 A 250 VAC, 5 A 30 VDC resistive load (per 20 times/min)
※Environment resistance is rated at no freezing or condensation.

▣ Dimensions

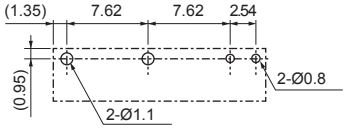
(unit: mm)



●Circuit diagram
(bottom view)



●PCB pattern



MATSUSHITA(Panasonic) Power relay 1 POLE-5A PA1a-24V

▣ Features

- ●Slim type with 5mm thickness
- ●Excellent durability resistance against vibration and shock

▣ Coil ratings

Relay model	Rated voltage	Must operate voltage	Must release voltage	Rated current	Coil resistance	Power consumption
PA1a-24V	24 VDC	70% max. of rated voltage	5% min. of Rated voltage	7.5 mA	3,200 Ω	180 mW

※All values in the table are measured at 20 ℃ with a tolerance of ±10%.

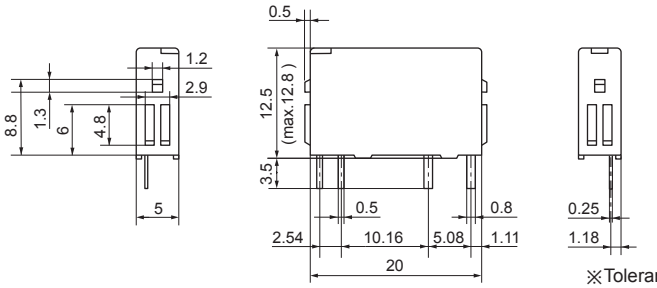
▣ Contact ratings

Manufacture			MATSUSHITA(Panasonic)	
Model			**PA1a-24V**	
Contact	Arrangement		1 Form A (SPST-1a)	
	Material		Au-clad AgNi type	
	Resistance(initial)		30 mΩ (6 VDC 1A)	
Rating	Rating(resistive)		5 A 250 VAC	5 A 30 VDC
	Max. switching power		1,250 VA	150 W
	Min. switching capacity		100 mVDC 100 uA	
	Max. switching voltage		250 VAC	110 VDC
	Max. switching currrnt		5 A	
Electrical characteristics	Insulation resistance		Min. 1,000 MΩ (at 500 VDC megger)	
	Dielectric strength	Coil and Contacts	2,000 VAC 50/60 Hz for 1 min.	
		Open contacts	1,000 VAC 50/60 Hz for 1 min.	
	Surge voltage		4,000 V	
	Operate time		Max. 10 ms	
	Release time		Max. 5 ms	
Mechanical characteristics	Vibration	Mechanical	3.5 mm amplitude at frequency of 10 to 55 Hz(for 1 min.) in each of X, Y, Z directions for 1 hour	
		Malfunction	2.5 mm amplitude at frequency of 10 to 55 Hz(for 1 min.) in each of X, Y, Z directions for 10 min.	
	Shock	Mechanical	980 m/s^2 (100 G) in each of X,Y,Z directions for 3 times	
		Malfunction	147 m/s^2 (15 G) in each of X,Y,Z directions for 3 times	
Expected life	Mechanical		Min. 20,000,000 operations (at 180 times/min)	
	Electrical※1		Min. 100,000 operations (3 A 250 VAC, 30 VDC resistive load)	
Environment	Ambient temperature		-40 to 70 ℃	
	Ambient humidity		5 to 85%RH	
Unit weight			Approx. 3 g	

※1: 50,000 operations: min.5A 250VAC, 5A 30VDC resistive load (per 20 times/min)
※Environment resistance is rated at no freezing or condensation.

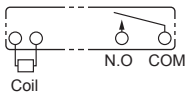
▣ Dimensions

(unit: mm)

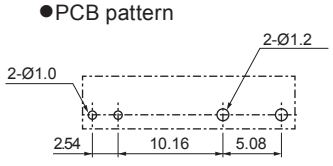


※Tolerance : ±0.3

●Circuit diagram (bottom view)



●PCB pattern



MATSUSHITA(Panasonic) Power relay 1 POLE-5A PQ1a-24V

▣ Features

- ●Slim type
- ●Excellent durability resistance against vibration and shock

▣ Coil ratings

Relay model	Rated voltage	Must operate voltage	Must release voltage	Rated current	Coil resistance	Power consumption
PQ1a-24V	24 VDC	75% max. of rated voltage	5% min. of rated voltage	8.3 mA	2,880 Ω	200 mW

※All values in the table are measured at 20 ℃ with a tolerance of ±10%.

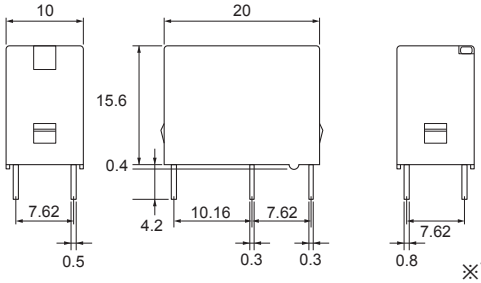
▣ Contact ratings

Manufacture			MATSUSHITA(Panasonic)	
Model			**PQ1a-24V**	
Contact	Arrangement		1 Form A (SPST-1a)	
	Material		Au-clad AgNi type	
	Resistance(initial)		50 mΩ (6 VDC 1 A)	
Rating	Rating(resistive)		5 A 250 VAC	5 A 30 VDC
	Max. switching power(resistive)		1,250 VA	150 W
	Max. switching voltage		250 VAC	110 VDC
	Max. switching currrnt		5 A	
Electrical character-istics	Insulation resistance(initial)		Min. 1,000 MΩ (at 500 VDC megger)	
	Dielectric strength	Coil and Contacts	4,000 VAC 50/60 Hz for 1 min.	
		Open contacts	1,000 VAC 50/60 Hz for 1 min.	
	Surge voltage		8,000 V	
	Operate time(rated voltage)		Max. 20 ms	
	Release time(rated voltage)		Max. 10 ms	
Mechanical character-istics	Vibration	Mechanical	3.5 mm amplitude at frequency of 10 to 55 Hz(for 1 min.) in each of X, Y, Z directions for 1 hour	
		Malfunction	2.0 mm amplitude at frequency of 10 to 55 Hz(for 1 min.) in each of X, Y, Z directions for 10 min.	
	Shock	Mechanical	980 m/s^2 (100 G) in each of X,Y,Z directions for 3 times	
		Malfunction	294 m/s^2 (15G) in each of X,Y,Z directions for 3 times	
Expected life	Mechanical		Min.20,000,000 operations (at 180 times/min)	
	Electrical※1		Min. 100,000 operations (5 A 250 VAC, 30 VDC resistive load)	
Environment	Ambient temperature		-40 to 70 ℃	
	Ambient humidity		5 to 85%RH	
Unit weight			Approx. 7 g	

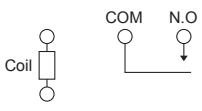
※1: 20 times per 1 minute
※Environment resistance is rated at no freezing or condensation.

▣ Dimensions

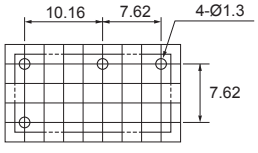
(unit: mm)



●Circuit diagram (bottom view)



●PCB pattern



※Tolerance : ±0.2(below 1 mm),
±0.3(over 1 mm to below 5 mm),
±0.4(over 5 mm)

※Tolerance: ±0.1

(C) I/O cable

Ordering information / Specifications		C-2
Cable selection & Connections	(MITSUBISHI)	C-4
	(LS industrial systems)	C-38
	(Autonics)	C-51
	(RS Automation)※	C-54
	(YOKOGAWA)	C-56
	(FUJI)	C-57
	(KDT)	C-59
	(OMRON)	C-62
	(TELEMECANIQUE)	C-65
	(For SERVO)	C-67
Color table for OPEN type cable		C-80
Cable appearance		C-83

※ : Ex-Rockwell Automation, Korea (SAMSUNG)

▣ Ordering information

CJ – **HPFP** **20** – **V** **1N** **010** – **1A** **N** **L**

Module connector direction	R	Right
	L	Left
	X	Right+Left
Connections (Terminal block - PLC)	N	+/- Forward
	P	+/- Reverse
Module details	Number+ Character	Module detailed type signal
Cable length	005	0.5 m
	010	1.0 m
	015	1.5 m
	020	2.0 m
Branch type	P	OPEN type
	1N	Non-branch
	2S	Short 2-branch(for terminal block)
	2L	Long 2-branch(for terminal block)
	F2	Short up-down 2-branch(for PLC)
	Y2	Short right-left 2-branch(for PLC)
Connector direction of PLC	V	Vertical
	H	Horizontal
The number of connector pins of PLC	20	20-pin
	37	37-pin
	40	40-pin
	50	50-pin
Connector (Terminal block - PLC)	HPHP	Hirose Plug - Hirose Plug
	HPFP	Hirose Plug - Fujitsu Plug
	HPDP	Hirose Plug - D - Sub Plug
	HPDS	Hirose Plug - D - Sub Socket
	HPMP※1	Hirose Plug-3M Plug(one-touch)
	HPMQ※1	Hirose Plug-3M Plug(screw)
	HP	OPEN - Hirose Plug
	FP	OPEN - Fujitsu Plug
	DP	OPEN - D - Sub Plug
	DS	OPEN - D - Sub Socket
	MP※1	OPEN - 3M Plug(one-touch)
Item	CJ	Junction Cable

※1 : This is cable for SERVO.

※If you combine above ordering information ramdomly, there may be non existing items. It is required to refer to the "**▣Cable selection & Connections, ▣Color table for OPEN type cable**".

▣ Specifications

Sereis		CJ Series
PLC connector		HIF3BA-20D-2.54R, HIF3BA-40D-2.54R, HIF3BA-50D-2.54R, D-SUB 37P/S, FCN-367J040-AU/F, MDR102 SERIES(20/50pin)
Terminal block connector		HIF3BA-20D-2.54R, HIF3BA-40D-2.54R
Applied wire		UL 20276 TWIST 20C/40C/50C
Conductor characteristics		7/0.127 mm (AWG 28)×20P, 7/0.127 mm (AWG 28)×10P
Insulation diameter		0.12 mm²
Cable diameter		ø7.2 mm(40C) / 8.9 mm(50C)
Rated current		Max. 1 A
Conductor resistance		Max. 0.223 Ω/m
Insulation voltage		500 VAC 50/60 Hz for 1 min.
Insulation resistance		Min. 15 MΩ/km
Environment	Ambient temperature	-15 to 55 ℃, Storage : -25 to 65 ℃
	Ambient humidity	35 to 85%RH, Storage : 35 to 85%RH
Unit weight		Refer to C-3 page

※Environment resistance is rated at no freezing or condensation.

※Applied cable color is black.

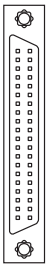
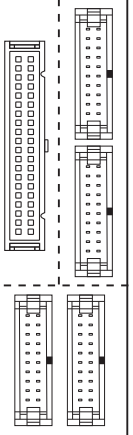
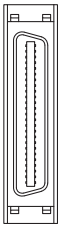
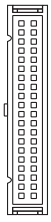
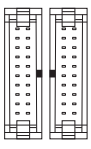
※Conductor resistance value is at 20℃.

●Cable weight

Cable model	Weight				Cable model	Weight			
	0.5 m	1 m	1.5 m	2 m		0.5m	1m	1.5m	2m
CJ-HPDP37-V1N□-□□□□	Approx. 90 g	Approx. 127 g	Approx. 164 g	Approx. 201 g	CJ-HPFP40-V1N□-□□□□	Approx. 85 g	Approx. 122 g	Approx. 159 g	Approx. 196 g
CJ-HPDS37-V1N□-□□□□	Approx. 90 g	Approx. 127 g	Approx. 164 g	Approx. 201 g	CJ-HPHP40-V1N□-□□□□	Approx. 58 g	Approx. 95 g	Approx. 132 g	Approx. 169 g
CJ-HPDP37-V2S□-□□□□	Approx. 84 g	Approx. 121 g	Approx. 158 g	Approx. 195 g	CJ-HPHP20-V1N□-□□□□	Approx. 37 g	Approx. 66 g	Approx. 95 g	Approx. 124 g
CJ-HPDP37-V2L□-□□□□	Approx. 84 g	Approx. 121 g	Approx. 158 g	Approx. 195 g	CJ-HPFP40-V2S□-□□□□	Approx. 88 g	Approx. 125 g	Approx. 162 g	Approx. 199 g
CJ-HPDS37-V2S□-□□□□	Approx. 84 g	Approx. 121 g	Approx. 158 g	Approx. 195 g	CJ-HPFP40-V2L□-□□□□	Approx. 88 g	Approx. 125 g	Approx. 162 g	Approx. 199 g
CJ-HPDS37-V2L□-□□□□	Approx. 84 g	Approx. 121 g	Approx. 158 g	Approx. 195 g	CJ-HPHP40-V2S□-□□□□	Approx. 55 g	Approx. 92 g	Approx. 129 g	Approx. 166 g
CJ-HPMP20-H1N□-□□□□	Approx. 46 g	Approx. 74 g	Approx. 102 g	Approx. 131 g	CJ-HPHP40-V2L□-□□□□	Approx. 55 g	Approx. 92 g	Approx. 129 g	Approx. 166 g
CJ-HPMP50-H1N□-□□□□	Approx. 95 g	Approx. 150 g	Approx. 204 g	Approx. 259 g	CJ-HPHP40-VY2□-□□□□	Approx. 58 g	Approx. 95 g	Approx. 132 g	Approx. 169 g
CJ-HPMQ50-H1N□-□□□□	Approx. 98 g	Approx. 153 g	Approx. 207 g	Approx. 262 g	CJ-HPHP40-VF2□-□□□□	Approx. 58 g	Approx. 95 g	Approx. 132 g	Approx. 169 g
CJ-FP40-VP□-□	-	Approx. 112 g	-	Approx. 186 g	CJ-HP20-VP□-□	-	Approx. 62 g	-	Approx. 120 g
CJ-HP40-VP□-□	-	Approx. 62 g	-	Approx. 150 g	CJ-MP20-HP□-□	-	Approx. 79 g	-	Approx. 137 g
CJ-DP37-VP□-□	-	Approx. 117 g	-	Approx. 191 g	CJ-MP50-HP□-□	-	Approx. 139 g	-	Approx. 248 g
CJ-DS37-VP□-□	-	Approx. 117 g	-	Approx. 191 g	CJ-HP50-HP□-□	-	Approx. 131 g	-	Approx. 240 g

※ Cable lengthes 0.5m, 1.5m of OPEN type cable are option.

▣ PLC connector direction

PLC module connector direction \ PLC connector type		Fujitsu Plug 40-pin	D-Sub Plug 37-pin	D-Sub Socket 37-pin	Hirose Plug 50-pin	Hirose Plug 40-pin	Hirose Plug 20-pin	3M Socket 50-pin	3M Socket 20-pin
R	Right								
L	Left				–			–	–
X	Right Left	–	–	–	–		–	–	–

※Connector direction of terminal block supports only 'R' type.

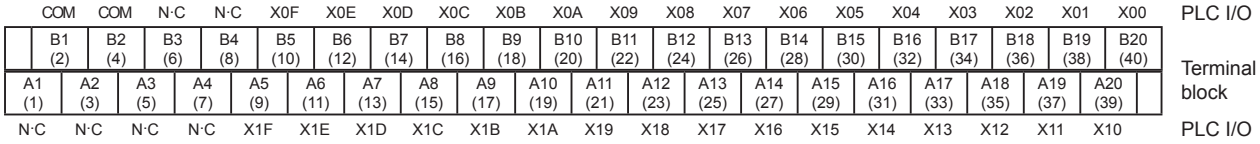
▣ Cable selection & Connections

◎MITSUBISHI (MELSEC-Q Series)-Interface terminal block

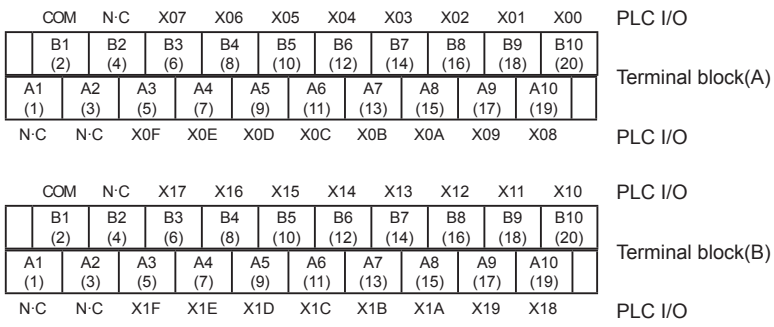
PLC Item	I/O module		I/O points	I/O	COM		Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model					Type	Model	Qty.	Model	Qty.	
MELSEC - Q	A	QX41, QX41-S1, QX41-S2	32	Input (Output)	+		Interface terminal block	AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
								AFS-H20	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
		QX42, QX42-S1	64	Input	+			AFS-H40	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
								AFS-H20	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11
		QX71	32	Input	Com.	+, -		AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
								AFS-H20	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
		QX72	64	Input	Com.	+, -		AFS-H40	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
								AFS-H20	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11
	B	QX81, QX81-S2	32	Input	-			AFS-H40	1	CJ-HPDP37-V1N□-1ANR (Ordering No. : DP-2-□)	1	2
	A	QX82, QX82-S1	64	Input	-			AFS-H40	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
								AFS-H20	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

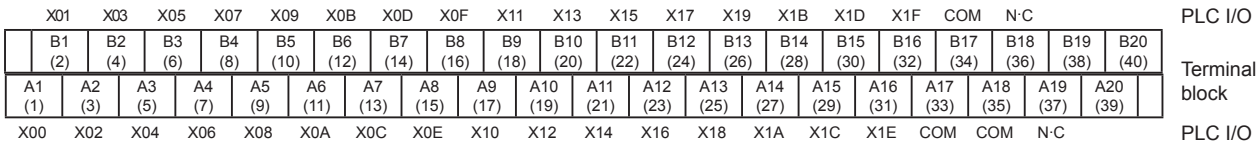
●I/O module(type A) and terminal block AFS-H40 connection



●I/O module(type A) and terminal block AFS-H20 connection



●I/O module(type B) and terminal block AFS-H40 connection



※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

▣ Cable selection & Connections

◎MITSUBISHI (MELSEC-Q Series)-Interface terminal block

PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM	Applied terminal block Type	Applied terminal block Model	Applied terminal block Qty.	Applied cable Model	Applied cable Qty.	(Note1) Appearance
MELSEC - Q	A	QY41P	32	Output	-	Interface terminal block	AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							AFS-H20	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
		QY42P	64	Output	-		AFS-H40	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
							AFS-H20	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11
		QY71	32	Output	-		AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							AFS-H20	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
	B	QY81P	32	Output	+		AFS-H40	1	CJ-HPDP37-V1N□-1ANR (Ordering No. : DP-2-□)	1	2

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block AFS-H40 connection

※1	※1	N·C	N·C	Y0F	Y0E	Y0D	Y0C	Y0B	Y0A	Y09	Y08	Y07	Y06	Y05	Y04	Y03	Y02	Y01	Y00	PLC I/O
B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)	Terminal block
A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)	
COM	COM	N·C	N·C	Y1F	Y1E	Y1D	Y1C	Y1B	Y1A	Y19	Y18	Y17	Y16	Y15	Y14	Y13	Y12	Y11	Y10	PLC I/O

※1: 12/24 VDC, 12/24 VDC

●I/O module(type A) and terminal block AFS-H20 connection

※1	COM	Y07	Y06	Y05	Y04	Y03	Y02	Y01	Y00	PLC I/O
B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	Terminal block(A)
A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	
N·C	N·C	Y0F	Y0E	Y0D	Y0C	Y0B	Y0A	Y09	Y08	PLC I/O

※1	COM	Y17	Y16	Y15	Y14	Y13	Y12	Y11	Y10	PLC I/O
B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	Terminal block(B)
A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	
N·C	N·C	Y1F	Y1E	Y1D	Y1C	Y1B	Y1A	Y19	Y18	PLC I/O

※1: 12/24 VDC

●I/O module(type B) and terminal block AFS-H40 connection

Y01	Y03	Y05	Y07	Y09	Y0B	Y0D	Y0F	Y11	Y13	Y15	Y17	Y19	Y1B	Y1D	Y1F	COM	0V	PLC I/O
B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)	Terminal block
A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)	
Y00	Y02	Y04	Y06	Y08	Y0A	Y0C	Y0E	Y10	Y12	Y14	Y16	Y18	Y1A	Y1C	Y1E	COM	COM	0V		PLC I/O

※**1:** For QY71 module, it is 5/12VDC.
※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

▣ Cable selection & Connections

◎MITSUBISHI (MELSEC-Q Series)-Interface terminal block

PLC Item	I/O module		I/O points	I/O	COM	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model				Type	Model	Qty.	Model	Qty.	
MELSEC - Q	A	QH42P	32	Mixed (Input)	+	Interface terminal block	AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							AFS-H20	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
	B		32	Mixed (Output)	-		AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							AFS-H20	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block AFS-H40 connection

	COM1	COM1	N·C	N·C	X0F	X0E	X0D	X0C	X0B	X0A	X09	X08	X07	X06	X05	X04	X03	X02	X01	X00	PLC I/O
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)	Terminal block
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)	
	N·C	N·C	N·C	N·C	X1F	X1E	X1D	X1C	X1B	X1A	X19	X18	X17	X16	X15	X14	X13	X12	X11	X10	PLC I/O

●I/O module(type A) and terminal block AFS-H20 connection

	COM1	N·C	X07	X06	X05	X04	X03	X02	X01	X00	PLC I/O
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	Terminal block(A)
	N·C	N·C	X0F	X0E	X0D	X0C	X0B	X0A	X09	X08	PLC I/O

	COM1	N·C	X17	X16	X15	X14	X13	X12	X11	X10	PLC I/O
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	Terminal block(B)
	N·C	N·C	X1F	X1E	X1D	X1C	X1B	X1A	X19	X18	PLC I/O

●I/O module(type B) and terminal block AFS-H40 connection

	12/24 VDC	12/24 VDC	N·C	N·C	Y0F	Y0E	Y0D	Y0C	Y0B	Y0A	Y09	Y08	Y07	Y06	Y05	Y04	Y03	Y02	Y01	Y00	PLC I/O
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)	Terminal block
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)	
	COM2	COM2	N·C	N·C	Y1F	Y1E	Y1D	Y1C	Y1B	Y1A	Y19	Y18	Y17	Y16	Y15	Y14	Y13	Y12	Y11	Y10	PLC I/O

●I/O module(type B) and terminal block AFS-H20 connection

	12/24 VDC	COM2	Y07	Y06	Y05	Y04	Y03	Y02	Y01	Y00	PLC I/O
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	Terminal block(A)
	N·C	N·C	Y0F	Y0E	Y0D	Y0C	Y0B	Y0A	Y09	Y08	PLC I/O

	12/24 VDC	COM2	Y17	Y16	Y15	Y14	Y13	Y12	Y11	Y10	PLC I/O
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	Terminal block(B)
	N·C	N·C	Y1F	Y1E	Y1D	Y1C	Y1B	Y1A	Y19	Y18	PLC I/O

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

▣ Cable selection & Connections

◎MITSUBISHI (MELSEC-Q Series)-Interface terminal block

PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM	Applied terminal block Type	Applied terminal block Model	Applied terminal block Qty.	Applied cable Model	Applied cable Qty.	(Note1) Appearance
MELSEC - Q	A	QX41Y41P	32	Mixed (Input)	+	Interface terminal block	AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							AFS-H20	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
	B		32	Mixed (Output)	-		AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							AFS-H20	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block AFS-H40 connection

COM1	COM1	N·C	N·C	X0F	X0E	X0D	X0C	X0B	X0A	X09	X08	X07	X06	X05	X04	X03	X02	X01	X00		PLC I/O
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)		Terminal block
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)		
N·C	N·C	N·C	N·C	X1F	X1E	X1D	X1C	X1B	X1A	X19	X18	X17	X16	X15	X14	X13	X12	X11	X10		PLC I/O

●I/O module(type A) and terminal block AFS-H20 connection

COM1	N·C	X07	X06	X05	X04	X03	X02	X01	X00	PLC I/O
B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	Terminal block(A)
A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	
N·C	N·C	X0F	X0E	X0D	X0C	X0B	X0A	X09	X08	PLC I/O

COM1	N·C	X17	X16	X15	X14	X13	X12	X11	X10	PLC I/O
B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	Terminal block(B)
A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	
N·C	N·C	X1F	X1E	X1D	X1C	X1B	X1A	X19	X18	PLC I/O

●I/O module(type B) and terminal block AFS-H40 connection

12/24 VDC	12/24 VDC	N·C	N·C	Y2F	Y2E	Y2D	Y2C	Y2B	Y2A	Y29	Y28	Y27	Y26	Y25	Y24	Y23	Y22	Y21	Y20		PLC I/O
B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)		Terminal block
A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)		
COM2	COM2	N·C	N·C	Y3F	Y3E	Y3D	Y3C	Y3B	Y3A	Y39	Y38	Y37	Y36	Y35	Y34	Y33	Y32	Y31	Y30		PLC I/O

●I/O module(type B) and terminal block AFS-H20 connection

12/24 VDC	COM2	Y27	Y26	Y25	Y24	Y23	Y22	Y21	Y20	PLC I/O
B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	Terminal block(A)
A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	
N·C	N·C	Y2F	Y2E	Y2D	Y2C	Y2B	Y2A	Y29	Y28	PLC I/O

12/24 VDC	COM2	Y37	Y36	Y35	Y34	Y33	Y32	Y31	Y30	PLC I/O
B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	Terminal block(B)
A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	
N·C	N·C	Y3F	Y3E	Y3D	Y3C	Y3B	Y3A	Y39	Y38	PLC I/O

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

▣ Cable selection & Connections

◎MITSUBISHI (MELSEC-Q Series)-Relay terminal block

PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM	Applied terminal block Type	Applied terminal block Model	Applied terminal block Qty.	Applied cable Model	Applied cable Qty.	(Note1) Appearance
MELSEC - Q	A	QY41P, QY71	32	Output	-	Relay terminal block	ABS-H32◈-NN	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							ABS-H16◈-NN	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
		QY42P	64	Output	-		ABS-H32◈-NN	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
							ABS-H16◈-NN	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11
	B	QY81P	32	Output	+		ABS-H32◈-PN	1	CJ-HPDP37-V1N□-1CPR (Ordering No. : DP-6-□)	1	2
							ABS-H16◈-PN	2	CJ-HPDP37-V2★□-1CPR (Ordering No. : DP-8★-□)	1	6,7
	A	QH42P	32	Mixed (Output)	-		ABS-H32◈-NN	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							ABS-H16◈-NN	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m) The other cable lengths are option.
※**"◈"** of relay terminal model is relay type. Two relay types are selectable. [TN:TAKAMISAWA(Fujitsu) NYP, PA: MATSUSHITA(Panasonic) PA]
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block ABS-H32◈-NN connection

※1

12/24 VDC	12/24 VDC		Y01	Y03	Y05	Y07	Y08	Y0A	Y0C	Y0E		Y11	Y13	Y15	Y17	Y18	Y1A	Y1C	Y1E			PLC I/O
24VDC (2)	24VDC (4)	COM1	R2 (38)	R4 (34)	R6 (30)	R8 (26)	R9 (24)	R11 (20)	R13 (16)	R15 (12)	COM3	R18 (37)	R20 (33)	R22 (29)	R24 (25)	R25 (23)	R27 (19)	R29 (15)	R31 (11)			Terminal block
	0V (1)	0V (3)	R1 (40)	R3 (36)	R5 (32)	R7 (28)	COM2	R10 (22)	R12 (18)	R14 (14)	R16 (10)	R17 (39)	R19 (35)	R21 (31)	R23 (27)	COM4	R26 (21)	R28 (17)	R30 (13)	R32 (9)		
	COM	COM	Y00	Y02	Y04	Y06		Y09	Y0B	Y0D	Y0F	Y10	Y12	Y14	Y16		Y19	Y1B	Y1D	Y1F		PLC I/O

●I/O module(type A) and terminal block ABS-H16◈-NN connection

※1

12/24 VDC	Y00	Y01	Y02	Y03	Y04	Y05	Y06	Y07	Y08	Y09	Y0A	Y0B	Y0C	Y0D	Y0E	Y0F	PLC I/O
24VDC (1, 2)	R1+ (20)	R2+ (18)	R3+ (16)	R4+ (14)	R5+ (12)	R6+ (10)	R7+ (8)	R8+ (6)	R9+ (19)	R10+ (17)	R11+ (15)	R12+ (13)	R13+ (11)	R14+ (9)	R15+ (7)	R16+ (5)	Terminal block(A)
0V (3, 4)	R1- (20)	R2- (18)	R3- (16)	R4- (14)	R5- (12)	R6- (10)	R7- (8)	R8- (6)	R9- (19)	R10- (17)	R11- (15)	R12- (13)	R13- (11)	R14- (9)	R15- (7)	R16- (5)	
COM	Y00	Y01	Y02	Y03	Y04	Y05	Y06	Y07	Y08	Y09	Y0A	Y0B	Y0C	Y0D	Y0E	Y0F	PLC I/O

※1

12/24 VDC	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y1A	Y1B	Y1C	Y1D	Y1E	Y1F	PLC I/O
24VDC (1, 2)	R1+ (20)	R2+ (18)	R3+ (16)	R4+ (14)	R5+ (12)	R6+ (10)	R7+ (8)	R8+ (6)	R9+ (19)	R10+ (17)	R11+ (15)	R12+ (13)	R13+ (11)	R14+ (9)	R15+ (7)	R16+ (5)	Terminal block(B)
0V (3, 4)	R1- (20)	R2- (18)	R3- (16)	R4- (14)	R5- (12)	R6- (10)	R7- (8)	R8- (6)	R9- (19)	R10- (17)	R11- (15)	R12- (13)	R13- (11)	R14- (9)	R15- (7)	R16- (5)	
COM	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y1A	Y1B	Y1C	Y1D	Y1E	Y1F	PLC I/O

●I/O module(type B) and terminal block ABS-H32◈-PN connection

0V	0V		Y01	Y03	Y05	Y07	Y08	Y0A	Y0C	Y0E		Y11	Y13	Y15	Y17	Y18	Y1A	Y1C	Y1E			PLC I/O
0V (2)	0V (4)	COM1	R2 (38)	R4 (34)	R6 (30)	R8 (26)	R9 (24)	R11 (20)	R13 (16)	R15 (12)	COM3	R18 (37)	R20 (33)	R22 (29)	R24 (25)	R25 (23)	R27 (19)	R29 (15)	R31 (11)			Terminal block
	24VDC (1)	24VDC (3)	R1 (40)	R3 (36)	R5 (32)	R7 (28)	COM2	R10 (22)	R12 (18)	R14 (14)	R16 (10)	R17 (39)	R19 (35)	R21 (31)	R23 (27)	COM4	R26 (21)	R28 (17)	R30 (13)	R32 (9)		
	COM	COM	Y00	Y02	Y04	Y06		Y09	Y0B	Y0D	Y0F	Y10	Y12	Y14	Y16		Y19	Y1B	Y1D	Y1F		PLC I/O

●I/O module(type B) and terminal block ABS-H16◈-PN connection

0V	Y00	Y01	Y02	Y03	Y04	Y05	Y06	Y07	Y08	Y09	Y0A	Y0B	Y0C	Y0D	Y0E	Y0F	PLC I/O
0V (1, 2)	R1+ (20)	R2+ (18)	R3+ (16)	R4+ (14)	R5+ (12)	R6+ (10)	R7+ (8)	R8+ (6)	R9+ (19)	R10+ (17)	R11+ (15)	R12+ (13)	R13+ (11)	R14+ (9)	R15+ (7)	R16+ (5)	Terminal block(A)
24VDC (3, 4)	R1- (20)	R2- (18)	R3- (16)	R4- (14)	R5- (12)	R6- (10)	R7- (8)	R8- (6)	R9- (19)	R10- (17)	R11- (15)	R12- (13)	R13- (11)	R14- (9)	R15- (7)	R16- (5)	
COM	Y00	Y01	Y02	Y03	Y04	Y05	Y06	Y07	Y08	Y09	Y0A	Y0B	Y0C	Y0D	Y0E	Y0F	PLC I/O

0V	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y1A	Y1B	Y1C	Y1D	Y1E	Y1F	PLC I/O
0V (1, 2)	R1+ (20)	R2+ (18)	R3+ (16)	R4+ (14)	R5+ (12)	R6+ (10)	R7+ (8)	R8+ (6)	R9+ (19)	R10+ (17)	R11+ (15)	R12+ (13)	R13+ (11)	R14+ (9)	R15+ (7)	R16+ (5)	Terminal block(B)
24VDC (3, 4)	R1- (20)	R2- (18)	R3- (16)	R4- (14)	R5- (12)	R6- (10)	R7- (8)	R8- (6)	R9- (19)	R10- (17)	R11- (15)	R12- (13)	R13- (11)	R14- (9)	R15- (7)	R16- (5)	
COM	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y1A	Y1B	Y1C	Y1D	Y1E	Y1F	PLC I/O

※**1:** For QY71 module, it is 5/12VDC.
※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

▣ Cable selection & Connections

◎MITSUBISHI (MELSEC-Q Series)-Relay terminal block

PLC Item	I/O module		I/O points	I/O	COM	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model				Type	Model	Qty.	Model	Qty.	
MELSEC - Q	A	QX41Y41P	32	Mixed (Output)	-	Relay terminal block	ABS-H32◈-NN	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							ABS-H16◈-NN	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※"◈" of relay terminal model is relay type. Two relay types are selectable. [TN:TAKAMISAWA(Fujitsu) NYP, PA: MATSUSHITA(Panasonic) PA]
※**(Note1)**The related number of "▣**Cable a**ppearance" at C-83 to 86 pages.

●I/O module(type A) and terminal block ABS-H32◈-NN connection

12/24 VDC	12/24 VDC		Y21	Y23	Y25	Y27	Y28	Y2A	Y2C	Y2E		Y31	Y33	Y35	Y37	Y38	Y3A	Y3C	Y3E	PLC I/O
24VDC (2)	24VDC (4)	COM1	R2 (38)	R4 (34)	R6 (30)	R8 (26)	R9 (24)	R11 (20)	R13 (16)	R15 (12)	COM3	R18 (37)	R20 (33)	R22 (29)	R24 (25)	R25 (23)	R27 (19)	R29 (15)	R31 (11)	Terminal block
	0V (1)	0V (3)	R1 (40)	R3 (36)	R5 (32)	R7 (28)	COM2	R10 (22)	R12 (18)	R14 (14)	R16 (10)	R17 (39)	R19 (35)	R21 (31)	R23 (27)	COM4	R26 (21)	R28 (17)	R30 (13)	R32 (9)	
	COM	COM	Y20	Y22	Y24	Y26		Y29	Y2B	Y2D	Y2F	Y30	Y32	Y34	Y36		Y39	Y3B	Y3D	Y3F	PLC I/O

●I/O module(type A) and terminal block ABS-H16◈-NN connection

12/24 VDC	Y20	Y21	Y22	Y23	Y24	Y25	Y26	Y27	Y28	Y29	Y2A	Y2B	Y2C	Y2D	Y2E	Y2F	PLC I/O
24VDC (1, 2)	R1+ (20)	R2+ (18)	R3+ (16)	R4+ (14)	R5+ (12)	R6+ (10)	R7+ (8)	R8+ (6)	R9+ (19)	R10+ (17)	R11+ (15)	R12+ (13)	R13+ (11)	R14+ (9)	R15+ (7)	R16+ (5)	Terminal block(A)
0V (3, 4)	R1- (20)	R2- (18)	R3- (16)	R4- (14)	R5- (12)	R6- (10)	R7- (8)	R8- (6)	R9- (19)	R10- (17)	R11- (15)	R12- (13)	R13- (11)	R14- (9)	R15- (7)	R16- (5)	
COM	Y20	Y21	Y22	Y23	Y24	Y25	Y26	Y27	Y28	Y029	Y2A	Y2B	Y2C	Y2D	Y2E	Y2F	PLC I/O

12/24 VDC	Y30	Y31	Y32	Y33	Y34	Y35	Y36	Y37	Y38	Y39	Y3A	Y3B	Y3C	Y3D	Y3E	Y3F	PLC I/O
24VDC (1, 2)	R1+ (20)	R2+ (18)	R3+ (16)	R4+ (14)	R5+ (12)	R6+ (10)	R7+ (8)	R8+ (6)	R9+ (19)	R10+ (17)	R11+ (15)	R12+ (13)	R13+ (11)	R14+ (9)	R15+ (7)	R16+ (5)	Terminal block(B)
0V (3, 4)	R1- (20)	R2- (18)	R3- (16)	R4- (14)	R5- (12)	R6- (10)	R7- (8)	R8- (6)	R9- (19)	R10- (17)	R11- (15)	R12- (13)	R13- (11)	R14- (9)	R15- (7)	R16- (5)	
COM	Y30	Y31	Y32	Y33	Y34	Y35	Y36	Y37	Y38	Y39	Y3A	Y3B	Y3C	Y3D	Y3E	Y3F	PLC I/O

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

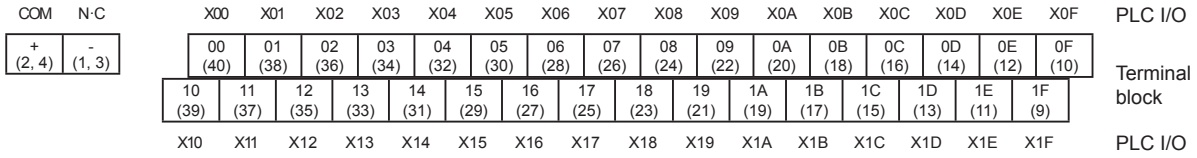
▣ Cable selection & Connections

◎MITSUBISHI (MELSEC-Q Series)-Sensor connector type terminal block

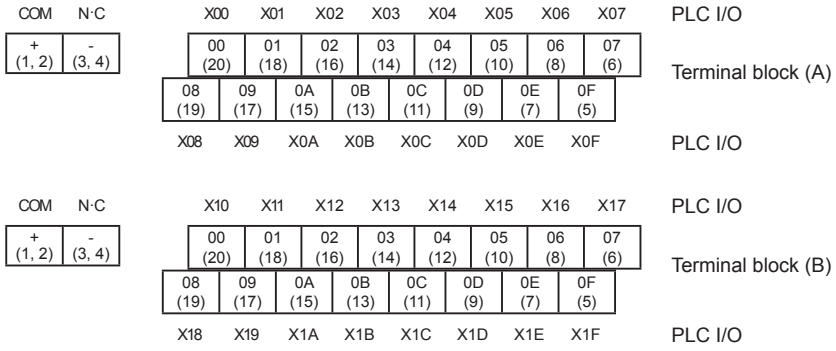
PLC Item	I/O module		I/O points	I/O	COM	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model				Type	Model	Qty.	Model	Qty.	
MELSEC - Q	A	QX41, QX41-S1 QX41-S2	32	Input	+	Sensor connector type terminal block	AFE4-H40-32LF	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							AFE4-H20-16LF	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
		QX42, QX42-S1	64	Input	+		AFE4-H40-32LF	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
							AFE4-H20-16LF	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block AFE4-H40-32LF connection



●I/O module(type A) and terminal block AFE4-H20-16LF connection



※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

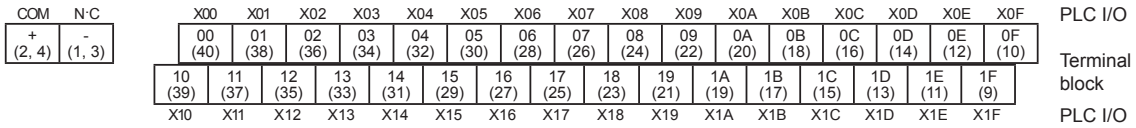
▣ Cable selection & Connections

◎MITSUBISHI (MELSEC-Q Series)-Sensor connector type terminal block

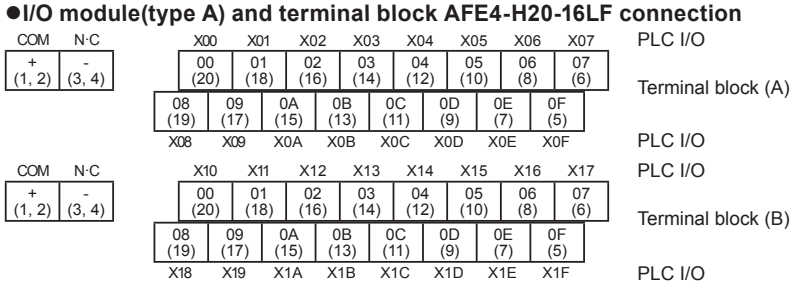
PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM		Applied terminal block Type	Applied terminal block Model	Applied terminal block Qty.	Applied cable Model	Applied cable Qty.	(Note1) Appearance
MELSEC - Q	A	QX71	32	Input	Com.	+	Sensor connector type terminal block	AFE4-H40-32LF	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
								AFE4-H20-16LF	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
	B			Input		-		AFE4-H40-32LF	1	CJ-HPFP40-V1N□-1APR (Ordering No. : FP-2-□)	1	4
								AFE4-H20-16LF	2	CJ-HPFP40-V2★□-1APR (Ordering No. : FP-12★-□)	1	10,11
	A	QX72	64	Input	Com.	+		AFE4-H40-32LF	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
								AFE4-H20-16LF	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11
	B			Input		-		AFE4-H40-32LF	2	CJ-HPFP40-V1N□-1APR (Ordering No. : FP-2-□)	2	4
								AFE4-H20-16LF	4	CJ-HPFP40-V2★□-1APR (Ordering No. : FP-12★-□)	2	10,11
	B	QX81, QX81-S2	32	Input	-			AFE4-H40-32LF	1	CJ-HPDP37-V1N□-1CPR (Ordering No. : DP-6-□)	1	2
								AFE4-H20-16LF	2	CJ-HPDP37-V2★□-1CPR (Ordering No. : DP-8★-□)	1	6,7
		QX82, QX82-S1	64	Input	-			AFE4-H40-32LF	2	CJ-HPFP40-V1N□-1APR (Ordering No. : FP-2-□)	2	4
								AFE4-H20-16LF	4	CJ-HPFP40-V2★□-1APR (Ordering No. : FP-12★-□)	2	10,11

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

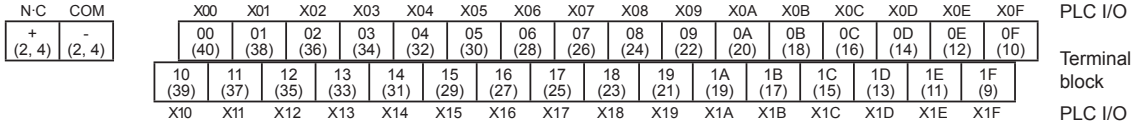
●I/O module(type A) and terminal block AFE4-H40-32LF connection



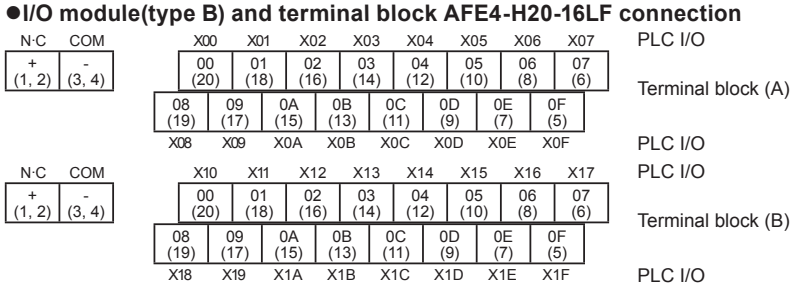
●I/O module(type A) and terminal block AFE4-H20-16LF connection



●I/O module(type B) and terminal block AFE4-H40-32LF connection



●I/O module(type B) and terminal block AFE4-H20-16LF connection



※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

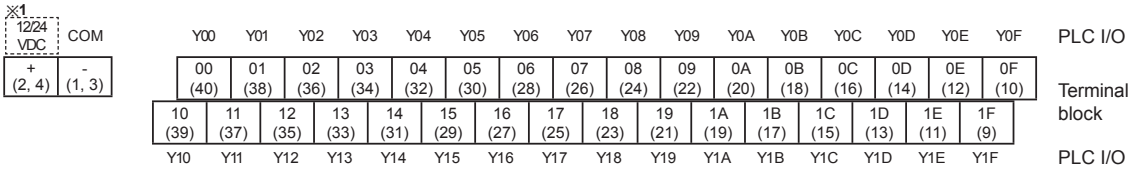
▣ Cable selection & Connections

◎MITSUBISHI (MELSEC-Q Series)-Sensor connector type terminal block

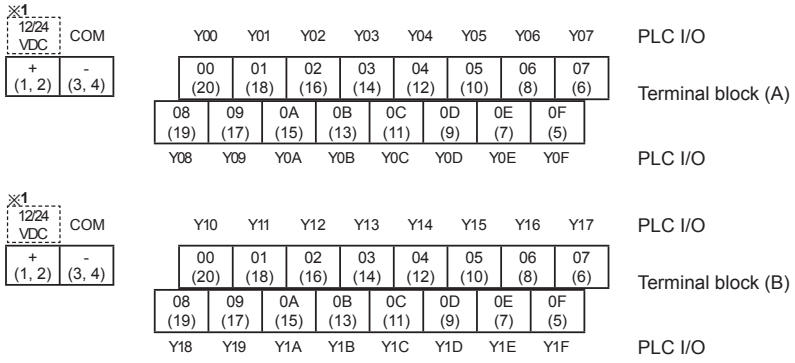
PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM	Applied terminal block Type	Applied terminal block Model	Applied terminal block Qty.	Applied cable Model	Applied cable Qty.	(Note1) Appearance
MELSEC - Q	A	QY41P	32	Output	-	Sensor connector type terminal block	AFE4-H40-32LF	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							AFE4-H20-16LF	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
		QY42P	64	Output	-		AFE4-H40-32LF	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
							AFE4-H20-16LF	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11
		QY71	32	Output	-		AFE4-H40-32LF	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							AFE4-H20-16LF	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
	B	QY81P	32	Output	+		AFE4-H40-32LF	1	CJ-HPDP37-V1N□-1CNR (Ordering No. : DP-4-□)	1	2

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

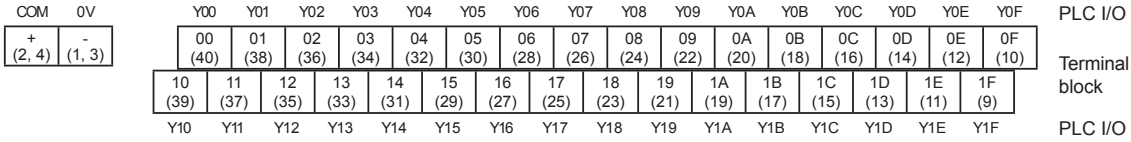
●I/O module(type A) and terminal block AFE4-H40-32LF connection



●I/O module(type A) and terminal block AFE4-H20-16LF connection



●I/O module(type B) and terminal block AFE4-H40-32LF connection



※**1:** QY71 module, it is 5/12VDC.
※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

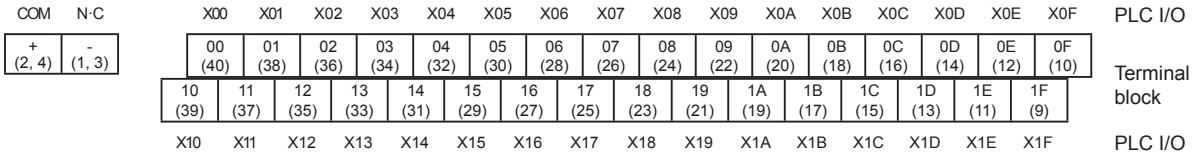
▣ Cable selection & Connections

◎MITSUBISHI (MELSEC-Q Series)-Sensor connector type terminal block

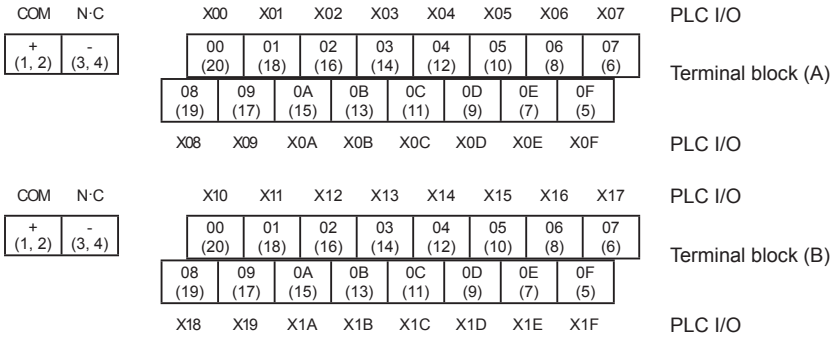
PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM	Applied terminal block Type	Applied terminal block Model	Applied terminal block Qty.	Applied cable Model	Applied cable Qty.	(Note1) Appearance
MELSEC - Q	A	QH42P	32	Mixed (Input)	+	Sensor connector type terminal block	AFE4-H40-32LF	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							AFE4-H20-16LF	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
	B		32	Mixed (Output)	-		AFE4-H40-32LF	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							AFE4-H20-16LF	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

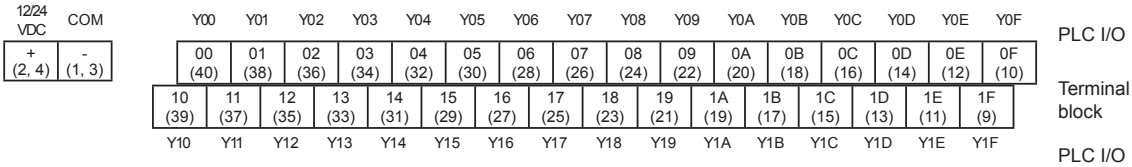
●I/O module(type A) and terminal block AFE4-H40-32LF connection



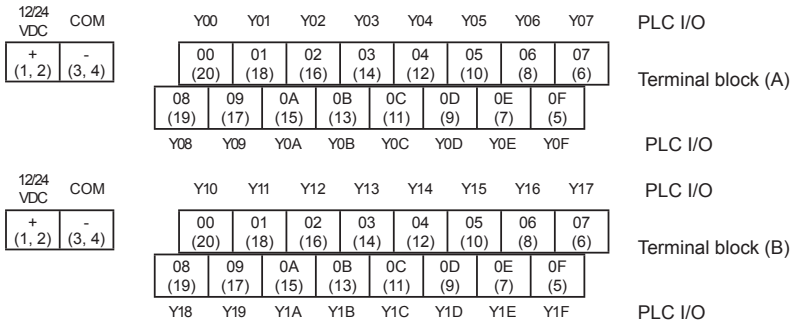
●I/O module(type A) and terminal block AFE4-H20-16LF connection



●I/O module(type B) and terminal block AFE4-H40-32LF connection



●I/O module(type B) and terminal block AFE4-H20-16LF connection



※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

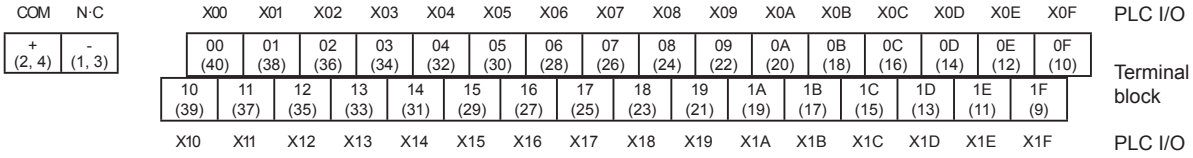
▣ Cable selection & Connections

◎MITSUBISHI (MELSEC-Q Series)-Sensor connector type terminal block

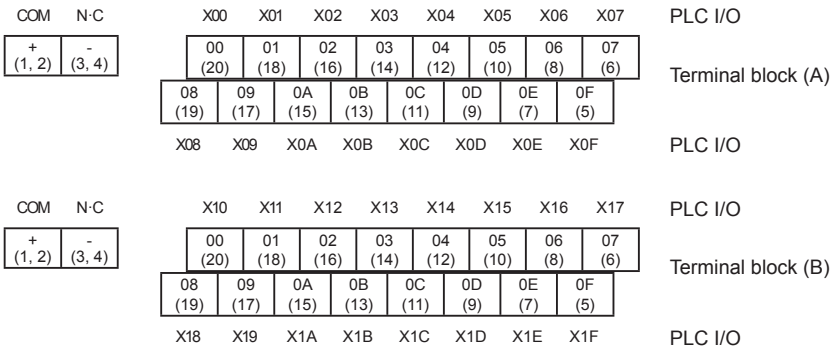
PLC Item	I/O module		I/O points	I/O	COM	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model				Type	Model	Qty.	Model	Qty.	
MELSEC - Q	A	QX41Y41P	32	Mixed (Input)	+	Sensor connector type terminal block	AFE4-H40-32LF	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							AFE4-H20-16LF	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
	B		32	Mixed (Output)	-		AFE4-H40-32LF	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							AFE4-H20-16LF	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

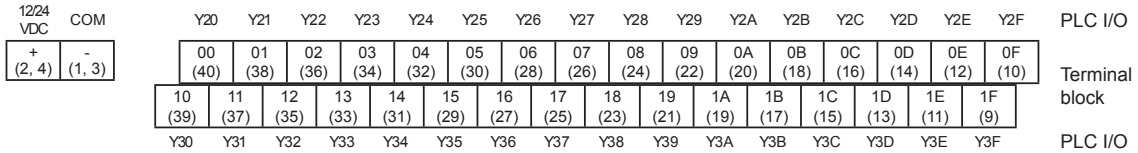
●I/O module(type A) and terminal block AFE4-H40-32LF connection



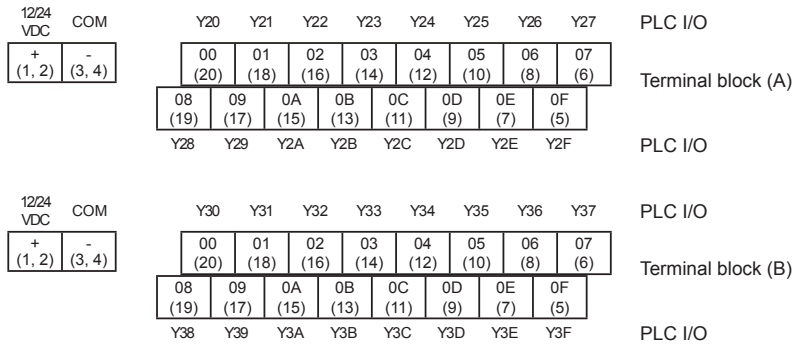
●I/O module(type A) and terminal block AFE4-H20-16LF connection



●I/O module(type B) and terminal block AFE4-H40-32LF connection



●I/O module(type B) and terminal block AFE4-H20-16LF connection



※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

▣ Cable selection & Connections

◎MITSUBISHI (MELSEC-AnS Series)-Interface terminal block

PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM		Applied terminal block Type	Applied terminal block Model	Applied terminal block Qty.	Applied cable Model	Applied cable Qty.	(Note1) Appearance
MELSEC - AnS	A	A1SX41, A1SX41-S1, A1SX41-S2	32	Input	+		Interface terminal block	AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
								AFS-H20	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
		A1SX42, A1SX42-S1, A1SX42-S2	64	Input	+			AFS-H40	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
								AFS-H20	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11
		A1SX71	32	Input	Com.	+, –		AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
								AFS-H20	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
	B	A1SX81, A1SX81-S2	32	Input	Com.	+, –		AFS-H40	1	CJ-HPDP37-V1N□-1ANL (Ordering No. : DP-1-□)	1	2
	A	A1SX82-S1	64	Input	Com.	+, –		AFS-H40	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
								AFS-H20	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block AFS-H40 connection

	COM	COM	N·C	N·C	X0F	X0E	X0D	X0C	X0B	X0A	X09	X08	X07	X06	X05	X04	X03	X02	X01	X00	
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)	Terminal block
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)	
	N·C	N·C	N·C	N·C	X1F	X1E	X1D	X1C	X1B	X1A	X19	X18	X17	X16	X15	X14	X13	X12	X11	X10	PLC I/O

●I/O module(type A) and terminal block AFS-H20 connection

	COM	N·C	X07	X06	X05	X04	X03	X02	X01	X00	
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	Terminal block (A)
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	
	N·C	N·C	X0F	X0E	X0D	X0C	X0B	X0A	X09	X08	PLC I/O

	COM	N·C	X17	X16	X15	X14	X13	X12	X11	X10	
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	Terminal block (B)
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	
	N·C	N·C	X1F	X1E	X1D	X1C	X1B	X1A	X19	X18	PLC I/O

●I/O module(type B) and terminal block AFS-H40 connection

	X01	X03	X05	X07	X09	X0B	X0D	X0F	X11	X13	X15	X17	X19	X1B	X1D	X1F	COM	N·C			
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)	Terminal block
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)	
	X00	X02	X04	X06	X08	X0A	X0C	X0E	X10	X12	X14	X16	X18	X1A	X1C	X1E	COM	COM	N·C		PLC I/O

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

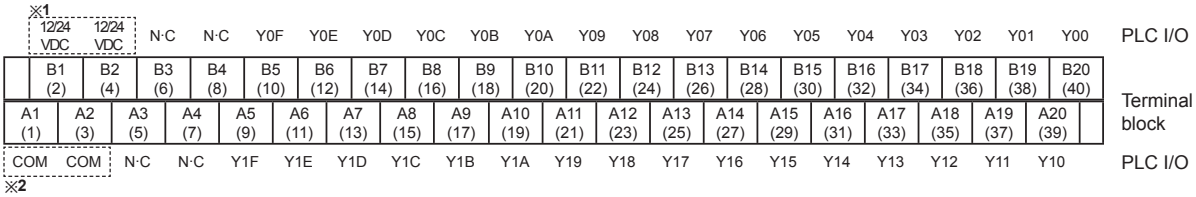
▣ Cable selection & Connections

◎MITSUBISHI (MELSEC-AnS Series)-Interface terminal block

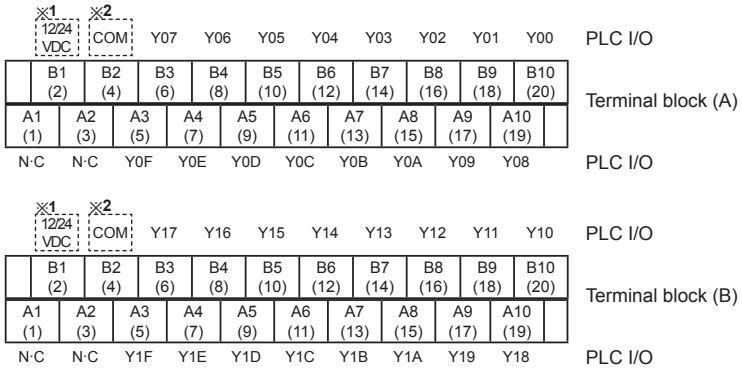
PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM	Applied terminal block Type	Applied terminal block Model	Applied terminal block Qty.	Applied cable Model	Applied cable Qty.	(Note1) Appearance
MELSEC - AnS	A	A1SY41, A1SY41P	32	Output	-	Interface terminal block	AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							AFS-H20	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
		A1SY42, A1SY42P	64	Output	-		AFS-H40	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
							AFS-H20	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11
		A1SY71	32	Output	-		AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							AFS-H20	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
	B	A1SY81, A1SY81EP	32	Output	+		AFS-H40	1	CJ-HPDP37-V1N□-1ANL (Ordering No. : DP-1-□)	1	2
	A	A1SY82	64	Output	+		AFS-H40	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
							AFS-H20	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

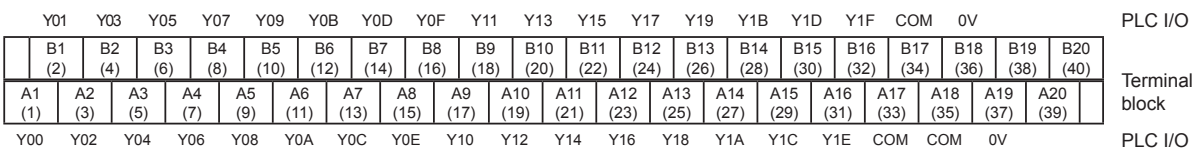
●I/O module(type A) and terminal block AFS-H40 connection



●I/O module(type A) and terminal block AFS-H20 connection



●I/O module(type B) and terminal block AFS-H40 connection



※**1:** For A1SY71 module, it is 5/12VDC. For A1SY82 module, it is COM.
※**2:** For A1SY82 module, it is 0V.
※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

▣ Cable selection & Connections

◎MITSUBISHI (MELSEC-AnS Series)-Interface terminal block

PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM	Applied terminal block Type	Applied terminal block Model	Applied terminal block Qty.	Applied cable Model	Applied cable Qty.	(Note1) Appearance
MELSEC - AnS	A	A1SH42, A1SH42-S1, A1SH42P, A1SH42P-S1	32	Mixed (Input)	+	Interface terminal block	AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							AFS-H20	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
	B			Mixed (Output)	-		AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							AFS-H20	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block AFS-H40 connection

※1	12/24 VDC	12/24 VDC	N·C	N·C	X0F	X0E	X0D	X0C	X0B	X0A	X09	X08	X07	X06	X05	X04	X03	X02	X01	X00	PLC I/O
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)	Terminal block
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)	
	N·C	N·C	N·C	N·C	X1F	X1E	X1D	X1C	X1B	X1A	X19	X18	X17	X16	X15	X14	X13	X12	X11	X10	PLC I/O

●I/O module(type A) and terminal block AFS-H20 connection

※1	12/24 VDC	N·C	X07	X06	X05	X04	X03	X02	X01	X00	PLC I/O
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	Terminal block (A)
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	
	N·C	N·C	X0F	X0E	X0D	X0C	X0B	X0A	X09	X08	PLC I/O

※1	12/24 VDC	N·C	X17	X16	X15	X14	X13	X12	X11	X10	PLC I/O
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	Terminal block (B)
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	
	N·C	N·C	X1F	X1E	X1D	X1C	X1B	X1A	X19	X18	PLC I/O

●I/O module(type B) and terminal block AFS-H40 connection

	12/24 VDC	12/24 VDC	N·C	N·C	Y0F	Y0E	Y0D	Y0C	Y0B	Y0A	Y09	Y08	Y07	Y06	Y05	Y04	Y03	Y02	Y01	Y00	PLC I/O
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)	Terminal block
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)	
	COM	COM	N·C	N·C	Y1F	Y1E	Y1D	Y1C	Y1B	Y1A	Y19	Y18	Y17	Y16	Y15	Y14	Y13	Y12	Y11	Y10	PLC I/O

●I/O module(type B) and terminal block AFS-H20 connection

	12/24 VDC	COM	Y07	Y06	Y05	Y04	Y03	Y02	Y01	Y00	PLC I/O
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	Terminal block (A)
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	
	N·C	N·C	Y0F	Y0E	Y0D	Y0C	Y0B	Y0A	Y09	Y08	PLC I/O

	12/24 VDC	COM	Y17	Y16	Y15	Y14	Y13	Y12	Y11	Y10	PLC I/O
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	Terminal block (B)
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	
	N·C	N·C	Y1F	Y1E	Y1D	Y1C	Y1B	Y1A	Y19	Y18	PLC I/O

※**1:** For A1SH42-S1, A1SH42P-S1 module, it is 24VDC.
※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

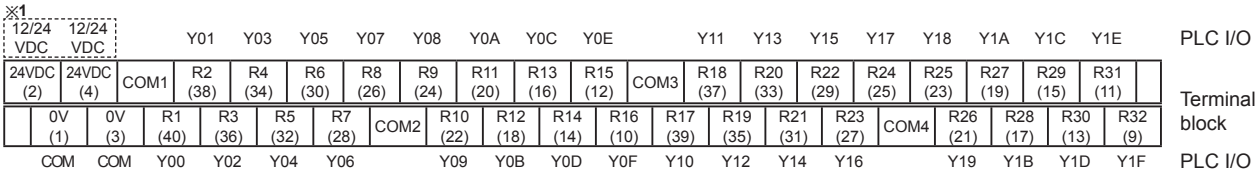
▣ Cable selection & Connections

◎MITSUBISHI (MELSEC-AnS Series)-Relay terminal block

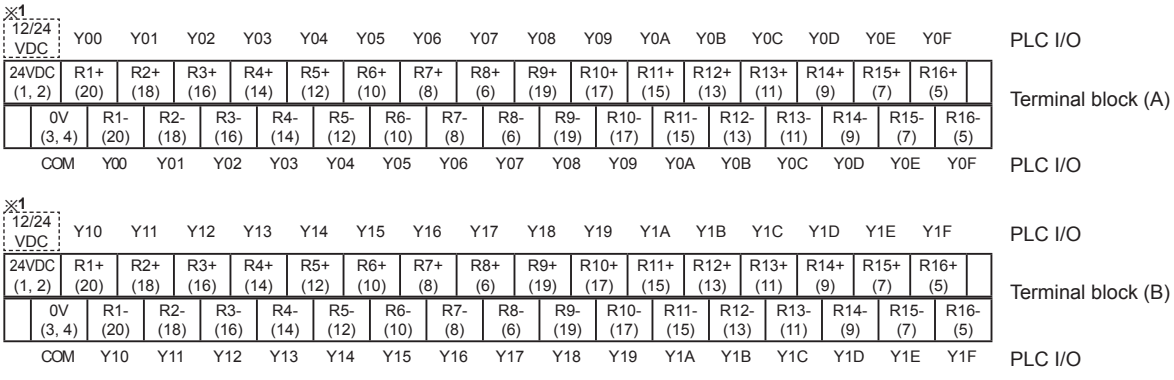
PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM	Applied terminal block Type	Applied terminal block Model	Applied terminal block Qty.	Applied cable Model	Applied cable Qty.	(Note1) Appearance
MELSEC - AnS	A	A1SY41, A1SY41P	32	Output	-	Relay terminal block	ABS-H32◈-NN	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							ABS-H16◈-NN	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
		A1SY42, A1SY42P	64	Output	-		ABS-H32◈-NN	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
							ABS-H16◈-NN	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11
		A1SY71	32	Output	-		ABS-H32◈-NN	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							ABS-H16◈-NN	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
		A1SH42, A1SH42-S1, A1SH42P, A1SH42P-S1	32	Mixed (Output)	-		ABS-H32◈-NN	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							ABS -H16◈-NN	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.
(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m) The other cable lengths are option.
※"◈" of relay terminal model is relay type. Two relay types are selectable. [TN:TAKAMISAWA(Fujitsu) NYP, PA: MATSUSHITA(Panasonic) PA]
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A)and terminal block ABS-H32◈-NN connection



●I/O module(type A) and terminal block ABS-H16◈-NN connection



※**1:** For A1SY71 module, it is 5/12VDC.
※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

▣ Cable selection & Connections

◎MITSUBISHI (MELSEC-AnS Series)-Relay terminal block

PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM	Applied terminal block Type	Applied terminal block Model	Applied terminal block Qty.	Applied cable Model	Applied cable Qty.	(Note1) Appearance
MELSEC - AnS	A	A1SY81, A1SY81EP	32	Output	+	Relay terminal block	ABS-H32◈-PN	1	CJ-HPDP37-V1N□-1CPL (Ordering No. : DP-5-□)	1	2
							ABS-H16◈-PN	2	CJ-HPDP37-V2★□-1CPL (Ordering No. : DP-7★-□)	1	6,7
		A1SY82	64	Output	+		ABS-H32◈-PN	2	CJ-HPFP40-V1N□-1APR (Ordering No. : FP-2-□)	2	4
							ABS-H16◈-PN	4	CJ-HPFP40-V2★□-1APR (Ordering No. : FP-12★-□)	2	10,11

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.
(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m) The other cable lengths are option.
※"◈" of relay terminal model is relay type. Two relay types are selectable. [TN:TAKAMISAWA(Fujitsu) NYP, PA: MATSUSHITA(Panasonic) PA]
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block ABS-H32◈-PN connection

0V	0V		Y01	Y03	Y05	Y07	Y08	Y0A	Y0C	Y0E		Y11	Y13	Y15	Y17	Y18	Y1A	Y1C	Y1E			PLC I/O
0V (2)	0V (4)	COM1	R2 (38)	R4 (34)	R6 (30)	R8 (26)	R9 (24)	R11 (20)	R13 (16)	R15 (12)	COM3	R18 (37)	R20 (33)	R22 (29)	R24 (25)	R25 (23)	R27 (19)	R29 (15)	R31 (11)			
	24VDC (1)	24VDC (3)	R1 (40)	R3 (36)	R5 (32)	R7 (28)	COM2	R10 (22)	R12 (18)	R14 (14)	R16 (10)	R17 (39)	R19 (35)	R21 (31)	R23 (27)	COM4	R26 (21)	R28 (17)	R30 (13)	R32 (9)			Terminal block
	COM	COM	Y00	Y02	Y04	Y06		Y09	Y0B	Y0D	Y0F	Y10	Y12	Y14	Y16		Y19	Y1B	Y1D	Y1F			PLC I/O

●I/O module(type A) and terminal block ABS-H16◈-PN connection

0V	Y00	Y01	Y02	Y03	Y04	Y05	Y06	Y07	Y08	Y09	Y0A	Y0B	Y0C	Y0D	Y0E	Y0F		PLC I/O
0V (1, 2)	R1+ (20)	R2+ (18)	R3+ (16)	R4+ (14)	R5+ (12)	R6+ (10)	R7+ (8)	R8+ (6)	R9+ (19)	R10+ (17)	R11+ (15)	R12+ (13)	R13+ (11)	R14+ (9)	R15+ (7)	R16+ (5)		
24VDC (3, 4)	R1- (20)	R2- (18)	R3- (16)	R4- (14)	R5- (12)	R6- (10)	R7- (8)	R8- (6)	R9- (19)	R10- (17)	R11- (15)	R12- (13)	R13- (11)	R14- (9)	R15- (7)	R16- (5)		Terminal block (A)
COM	Y00	Y01	Y02	Y03	Y04	Y05	Y06	Y07	Y08	Y09	Y0A	Y0B	Y0C	Y0D	Y0E	Y0F		PLC I/O

0V	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y1A	Y1B	Y1C	Y1D	Y1E	Y1F		PLC I/O
0V (1, 2)	R1+ (20)	R2+ (18)	R3+ (16)	R4+ (14)	R5+ (12)	R6+ (10)	R7+ (8)	R8+ (6)	R9+ (19)	R10+ (17)	R11+ (15)	R12+ (13)	R13+ (11)	R14+ (9)	R15+ (7)	R16+ (5)		
24VDC (3, 4)	R1- (20)	R2- (18)	R3- (16)	R4- (14)	R5- (12)	R6- (10)	R7- (8)	R8- (6)	R9- (19)	R10- (17)	R11- (15)	R12- (13)	R13- (11)	R14- (9)	R15- (7)	R16- (5)		Terminal block (B)
COM	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y1A	Y1B	Y1C	Y1D	Y1E	Y1F		PLC I/O

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

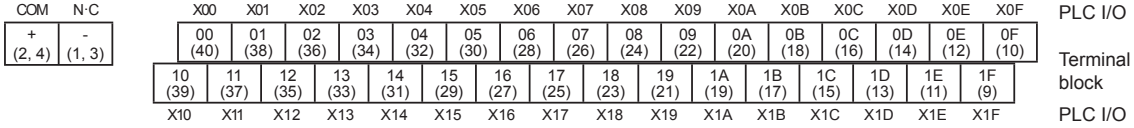
▣ Cable selection & Connections

◎**MITSUBISHI (MELSEC-AnS Series)-Sensor connector type terminal block**

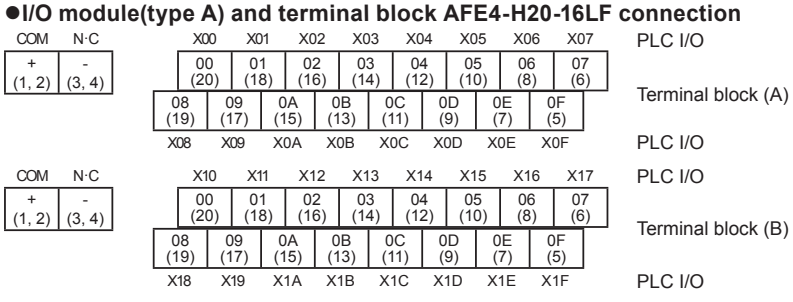
PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM		Applied terminal block Type	Applied terminal block Model	Qty.	Applied cable Model	Qty.	(Note1) Appearance
MELSEC - AnS	A	A1SX41, A1SX41-S1, A1SX41-S2	32	Input	+		Sensor connector type terminal block	AFE4-H40-32LF	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
								AFE4-H20-16LF	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
		A1SX42, A1SX42-S1, A1SX42-S2	64	Input	+			AFE4-H40-32LF	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
								AFE4-H20-16LF	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11
	A	A1SX71	32	Input	Com.	+		AFE4-H40-32LF	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
								AFE4-H20-16LF	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□	1	10,11
	B					-		AFE4-H40-32LF	1	CJ-HPFP40-V1N□-1APR (Ordering No. : FP-2-□)	1	4
								AFE4-H20-16LF	2	CJ-HPFP40-V2★□-1APR (Ordering No. : FP-12★-□)	1	10,11
	A	A1SX81, A1SX81-S2	32	Input	Com.	+		AFE4-H40-32LF	1	CJ-HPDP37-V1N□-1CNL (Ordering No. : DP-3-□)	1	2
	B					-		AFE4-H40-32LF	1	CJ-HPDP37-V1N□-1CPL (Ordering No. : DP-5-□)	1	2
								AFE4-H20-16LF	2	CJ-HPDP37-V2★□-1CPL (Ordering No. : DP-7★-□)	1	6,7
	A	A1SX82-S1	64	Input	Com.	+		AFE4-H40-32LF	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
								AFE4-H20-16LF	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11
	B					-		AFE4-H40-32LF	2	CJ-HPFP40-V1N□-1APR (Ordering No. : FP-2-□)	2	4
								AFE4-H20-16LF	4	CJ-HPFP40-V2★□-1APR (Ordering No. : FP-12★-□)	2	10,11

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m) The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

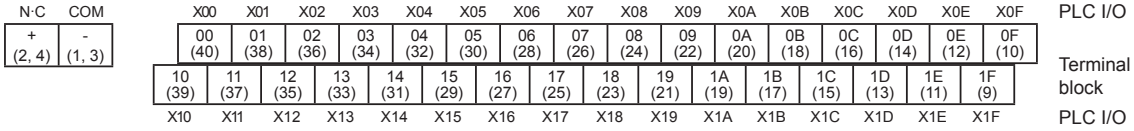
●I/O module(type A) and terminal block AFE4-H40-32LF connection



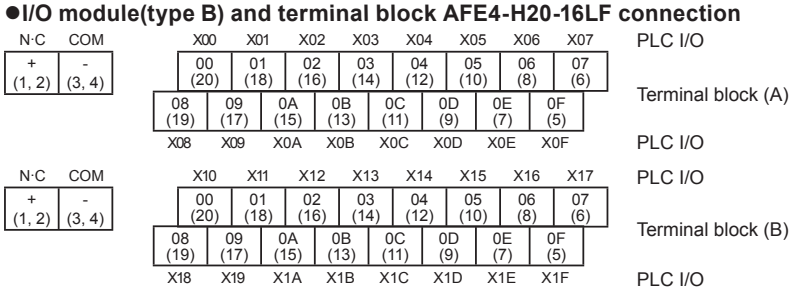
●I/O module(type A) and terminal block AFE4-H20-16LF connection



●I/O module(type B) and terminal block AFE4-H40-32LF connection



●I/O module(type B) and terminal block AFE4-H20-16LF connection



※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

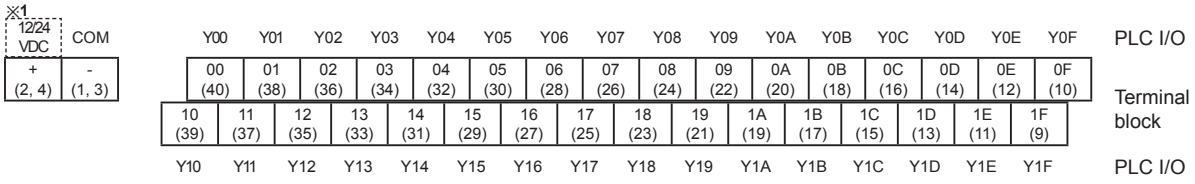
▣ Cable selection & Connections

◎MITSUBISHI (MELSEC-AnS Series)-Sensor connector type terminal block

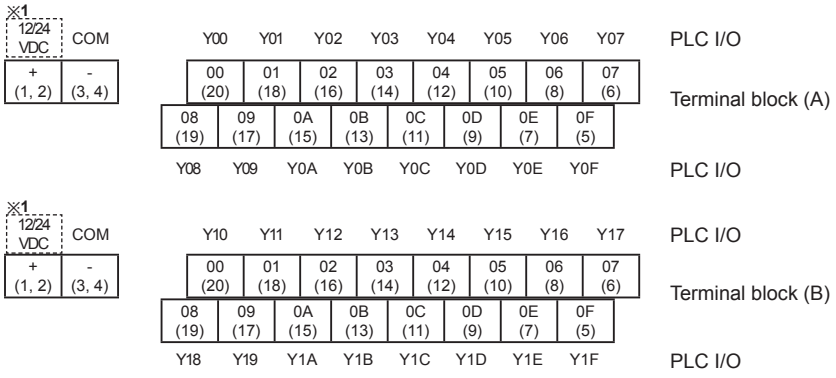
PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM	Applied terminal block Type	Applied terminal block Model	Applied terminal block Qty.	Applied cable Model	Applied cable Qty.	(Note1) Appearance
MELSEC - AnS	A	A1SY41, A1SY41P, A1SY71	32	Output	-	Sensor connector type terminal block	AFE4-H40-32LF	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							AFE4-H20-16LF	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
		A1SY42, A1SY42P	64	Output	-		AFE4-H40-32LF	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
							AFE4-H20-16LF	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11
	B	A1SY81, A1SY81EP	32	Output	+		AFE4-H40-32LF	1	CJ-HPDP37-V1N□-1CNL (Ordering No. : DP-3-□)	1	2
		A1SY82	64	Output	+		AFE4-H40-32LF	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

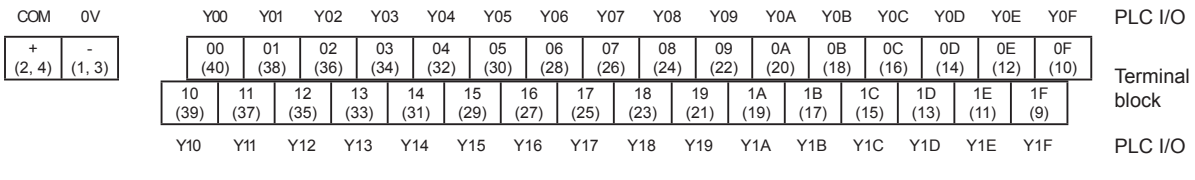
●I/O module(type A) and terminal block AFE4-H40-32LF connection



●I/O module(type A) and terminal block AFE4-H20-16LF connection



●I/O module(type B) and terminal block AFE4-H40-32LF connection



※**1:** For A1SY71 module, it is 5/12VDC.
※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

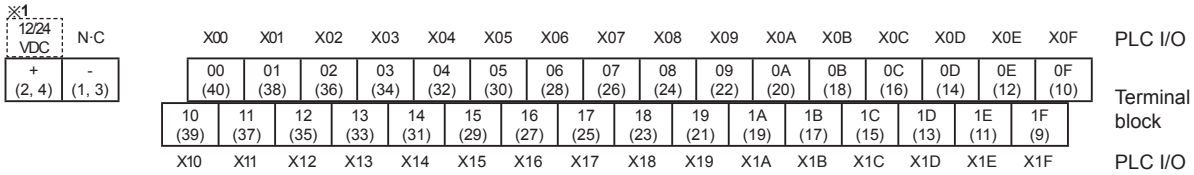
▣ Cable selection & Connections

◎MITSUBISHI (MELSEC-AnS Series)-Sensor connector type terminal block

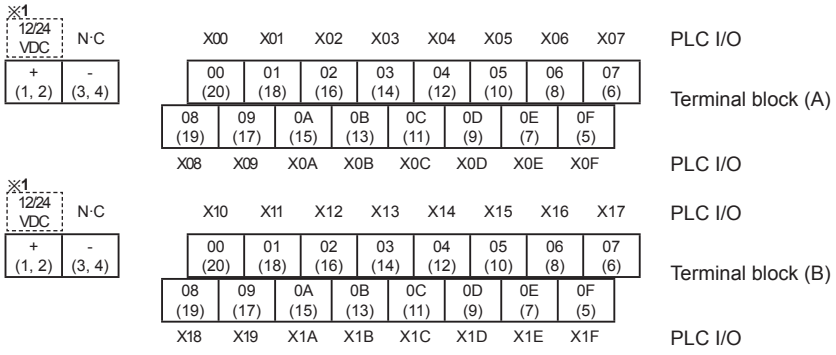
PLC Item	I/O module		I/O points	I/O	COM	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model				Type	Model	Qty.	Model	Qty.	
MELSEC - AnS	A	A1SH42, A1SH42-S1, A1SH42P, A1SH42P-S1	32	Mixed (Input)	+	Sensor connector type terminal block	AFE4-H40-32LF	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							AFE4-H20-16LF	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
	B		32	Mixed (Output)	-		AFE4-H40-32LF	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							AFE4-H20-16LF	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

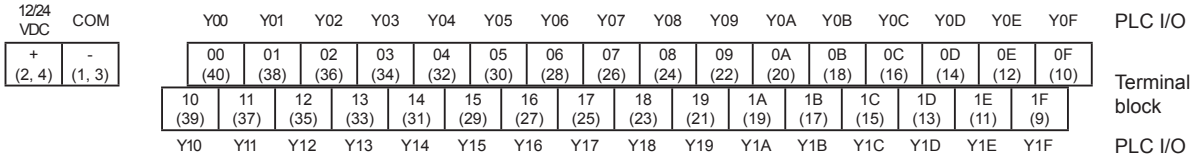
●I/O module(type A) and terminal block AFE4-H40-32LF connection



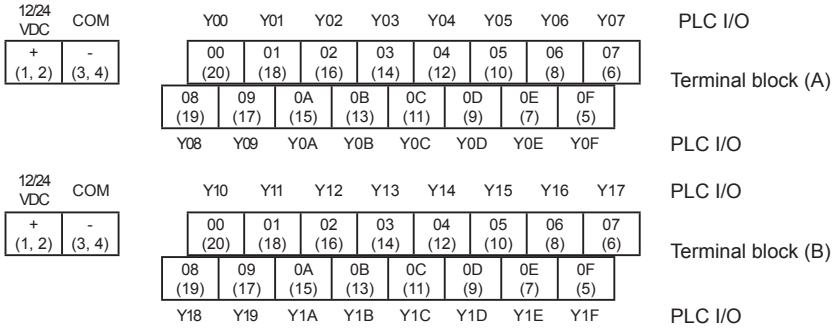
●I/O module(type A) and terminal block AFE4-H20-16LF connection



●I/O module(type B) and terminal block AFE4-H40-32LF connection



●I/O module(type B) and terminal block AFE4-H20-16LF connection



※**1:** For A1SH42-S1, A1SH42P-S1 module, it is 24VDC.
※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

▣ Cable selection & Connections

◎MITSUBISHI (MELSEC-A Series)-Interface terminal block

PLC Item	I/O module		I/O points	I/O	COM	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model				Type	Model	Qty.	Model	Qty.	
MELSEC - A	A	AX42, AX42-S1	64	Input	+	Interface terminal block	AFS-H40	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
							AFS-H20	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11
	B	AX82	64	Input	-		AFS-H40	2	CJ-HPDP37-V1N□-1ANL (Ordering No. : DP-1-□)	2	2

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block AFS-H40 connection

12/24 VDC	12/24 VDC	N·C	N·C	X0F	X0E	X0D	X0C	X0B	X0A	X09	X08	X07	X06	X05	X04	X03	X02	X01	X00	PLC I/O		
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)			
A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)		Terminal block	
N·C	N·C	N·C	N·C	X1F	X1E	X1D	X1C	X1B	X1A	X19	X18	X17	X16	X15	X14	X13	X12	X11	X10	PLC I/O		

●I/O module(type A) and terminal block AFS-H20 connection

12/24 VDC	N·C	X07	X06	X05	X04	X03	X02	X01	X00	PLC I/O
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	
A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	Terminal block (A)
N·C	N·C	X0F	X0E	X0D	X0C	X0B	X0A	X09	X08	PLC I/O

12/24 VDC	N·C	X17	X16	X15	X14	X13	X12	X11	X10	PLC I/O
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	
A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	Terminal block (B)
N·C	N·C	X1F	X1E	X1D	X1C	X1B	X1A	X19	X18	PLC I/O

●I/O module(type B) and terminal block AFS-H40 connection

X01	X03	X05	X07	X09	X0B	X0D	X0F	X11	X13	X15	X17	X19	X1B	X1D	X1F	0V	N·C					PLC I/O
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)			
A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)			Terminal block
X00	X02	X04	X06	X08	X0A	X0C	X0E	X10	X12	X14	X16	X18	X1A	X1C	X1E	0V	0V	N·C				PLC I/O

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

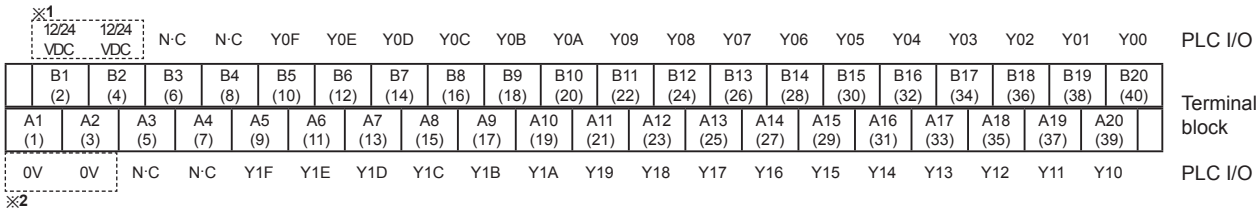
▣ Cable selection & Connections

◎MITSUBISHI (MELSEC-A Series)-Interface terminal block

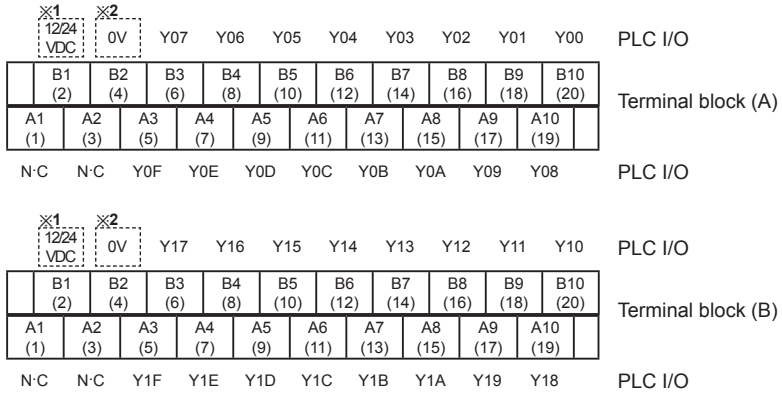
PLC Item	I/O module		I/O points	I/O	COM	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model				Type	Model	Qty.	Model	Qty.	
MELSEC - A	A	AY42, AY42-S1, AY42-S3	64	Output	-	Interface terminal block	AFS-H40	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
							AFS-H20	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11
		AY42-S4, AY72	64	Output	-		AFS-H40	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
							AFS-H20	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11
	B	AY82EP	64	Output	+		AFS-H40	2	CJ-HPDP37-V1N□-1ANL (Ordering No. : DP-1-□)	2	2

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

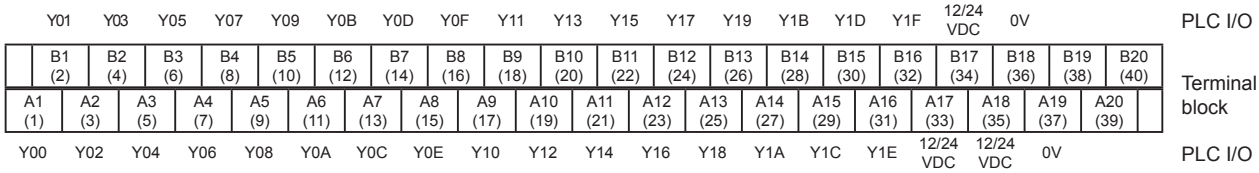
●I/O module(type A) and terminal block AFS-H40 connection



●I/O module(type A) and terminal block AFS-H20 connection



●I/O module(type B) and terminal block AFS-H40 connection



※**1:** For AY42-S4 module, it is N.C. For AY72 module, it is 5/12VDC.
※**2:** For AY42-S4 module, it is COM.
※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

▣ Cable selection & Connections

◎MITSUBISHI (MELSEC-A Series)-Interface terminal block

PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM	Applied terminal block Type	Applied terminal block Model	Applied terminal block Qty.	Applied cable Model	Applied cable Qty.	(Note1) Appearance
MELSEC - A	A	AH42	32	Mixed (Input)	+	Interface terminal block	AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							AFS-H20	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
	B		32	Mixed (Output)	-		AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							AFS-H20	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m) The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block AFS-H40 connection

	12/24 VDC	12/24 VDC	N·C	N·C	X0F	X0E	X0D	X0C	X0B	X0A	X09	X08	X07	X06	X05	X04	X03	X02	X01	X00	
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)	PLC I/O
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)	Terminal block
	N·C	N·C	N·C	N·C	X1F	X1E	X1D	X1C	X1B	X1A	X19	X18	X17	X16	X15	X14	X13	X12	X11	X10	PLC I/O

●I/O moduletype A) and terminal block AFS-H20 connection

	12/24 VDC	N·C	X07	X06	X05	X04	X03	X02	X01	X00	
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	Terminal block (A)
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	
	N·C	N·C	X0F	X0E	X0D	X0C	X0B	X0A	X09	X08	PLC I/O

	12/24 VDC	N·C	X17	X16	X15	X14	X13	X12	X11	X10	
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	Terminal block (B)
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	
	N·C	N·C	X1F	X1E	X1D	X1C	X1B	X1A	X19	X18	PLC I/O

●I/O module(type B) and terminal block AFS-H40 connection

	12/24 VDC	12/24 VDC	N·C	N·C	Y2F	Y2E	Y2D	Y2C	Y2B	Y2A	Y29	Y28	Y27	Y26	Y25	Y24	Y23	Y22	Y21	Y20	
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)	PLC I/O
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)	Terminal block
	0V	0V	N·C	N·C	Y3F	Y3E	Y3D	Y3C	Y3B	Y3A	Y39	Y38	Y37	Y36	Y35	Y34	Y33	Y32	Y31	Y30	PLC I/O

●I/O module(type B) and terminal block AFS-H20 connection

	12/24 VDC	0V	Y27	Y26	Y25	Y24	Y23	Y22	Y21	Y20	
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	Terminal block (A)
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	
	N·C	N·C	Y2F	Y2E	Y2D	Y2C	Y2B	Y2A	Y29	Y28	PLC I/O

	12/24 VDC	0V	Y37	Y36	Y35	Y34	Y33	Y32	Y31	Y30	
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	Terminal block (B)
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	
	N·C	N·C	Y3F	Y3E	Y3D	Y3C	Y3B	Y3A	Y39	Y38	PLC I/O

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

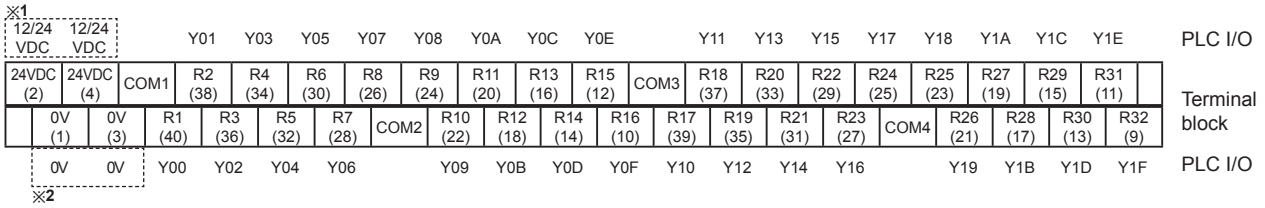
▣ Cable selection & Connections

◎MITSUBISHI (MELSEC-A Series)-Relay terminal block

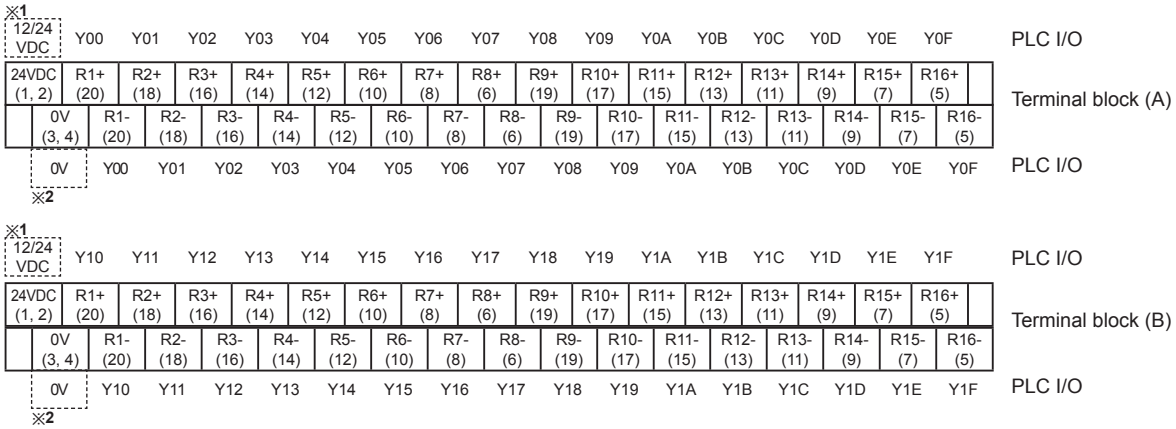
PLC Item	I/O module		I/O points	I/O	COM	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model				Type	Model	Qty.	Model	Qty.	
MELSEC - A	**A**	AY42, AY42-S1, AY42-S3, AY42-S4, AY72	64	Output	-	Relay terminal block	ABS-H32◈-NN	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
							ABS-H16◈-NN	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m) The other cable lengths are option.
※"◈" of relay terminal model is relay type. Two relay types are selectable. [TN:TAKAMISAWA(Fujitsu) NYP, PA: MATSUSHITA(Panasonic) PA]
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block ABS-H32◈-NN connection



●I/O module(type A) and terminal block ABS-H16◈-NN connection



※**1:** For AY42-S4 module, it is N.C. For AY72 module, it is 5/12VDC.
※**2:** For AY42-S4 module, it is COM.
※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

▣ Cable selection & Connections

◎MITSUBISHI (MELSEC-A Series)-Relay terminal block

PLC Item	I/O module		I/O points	I/O	COM	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model				Type	Model	Qty.	Model	Qty.	
MELSEC - A	A	AY82EP	64	Output	+	Relay terminal block	ABS-H32◈-PN	2	CJ-HPDP37-V1N□-1CPL (Ordering No. : DP-5-□)	2	2
							ABS-H16◈-PN	4	CJ-HPDP37-V2★□-1CPL (Ordering No. : DP-7★-□)	2	6,7
	B	AH42	32	Mixed (Output)	-		ABS-H32◈-NN	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							ABS-H16◈-NN	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m) The other cable lengths are option.
※"◈" of relay terminal model is relay type. Two relay types are selectable. [TN:TAKAMISAWA(Fujitsu) NYP, PA: MATSUSHITA(Panasonic) PA]
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block ABS-H32◈-PN connection

0V	0V		Y01	Y03	Y05	Y07	Y08	Y0A	Y0C	Y0E		Y11	Y13	Y15	Y17	Y18	Y1A	Y1C	Y1E		PLC I/O
0V (2)	0V (4)	COM1	R2 (38)	R4 (34)	R6 (30)	R8 (26)	R9 (24)	R11 (20)	R13 (16)	R15 (12)	COM3	R18 (37)	R20 (33)	R22 (29)	R24 (25)	R25 (23)	R27 (19)	R29 (15)	R31 (11)		Terminal block
24VDC (1)	24VDC (3)	R1 (40)	R3 (36)	R5 (32)	R7 (28)	COM2	R10 (22)	R12 (18)	R14 (14)	R16 (10)	R17 (39)	R19 (35)	R21 (31)	R23 (27)	COM4	R26 (21)	R28 (17)	R30 (13)	R32 (9)		
12/24 VDC	12/24 VDC	Y00	Y02	Y04	Y06		Y09	Y0B	Y0D	Y0F	Y10	Y12	Y14	Y16		Y19	Y1B	Y1D	Y1F		PLC I/O

●I/O module(type A) and terminal block ABS-H16◈-PN connection

0V	Y00	Y01	Y02	Y03	Y04	Y05	Y06	Y07	Y08	Y09	Y0A	Y0B	Y0C	Y0D	Y0E	Y0F	PLC I/O
0V (1, 2)	R1+ (20)	R2+ (18)	R3+ (16)	R4+ (14)	R5+ (12)	R6+ (10)	R7+ (8)	R8+ (6)	R9+ (19)	R10+ (17)	R11+ (15)	R12+ (13)	R13+ (11)	R14+ (9)	R15+ (7)	R16+ (5)	Terminal block (A)
24VDC (3, 4)	R1- (20)	R2- (18)	R3- (16)	R4- (14)	R5- (12)	R6- (10)	R7- (8)	R8- (6)	R9- (19)	R10- (17)	R11- (15)	R12- (13)	R13- (11)	R14- (9)	R15- (7)	R16- (5)	
12/24 VDC	Y00	Y01	Y02	Y03	Y04	Y05	Y06	Y07	Y08	Y09	Y0A	Y0B	Y0C	Y0D	Y0E	Y0F	PLC I/O

0V	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y1A	Y1B	Y1C	Y1D	Y1E	Y1F	PLC I/O
0V (1, 2)	R1+ (20)	R2+ (18)	R3+ (16)	R4+ (14)	R5+ (12)	R6+ (10)	R7+ (8)	R8+ (6)	R9+ (19)	R10+ (17)	R11+ (15)	R12+ (13)	R13+ (11)	R14+ (9)	R15+ (7)	R16+ (5)	Terminal block (B)
24VDC (3, 4)	R1- (20)	R2- (18)	R3- (16)	R4- (14)	R5- (12)	R6- (10)	R7- (8)	R8- (6)	R9- (19)	R10- (17)	R11- (15)	R12- (13)	R13- (11)	R14- (9)	R15- (7)	R16- (5)	
12/24 VDC	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y1A	Y1B	Y1C	Y1D	Y1E	Y1F	PLC I/O

●I/O module(type B) and terminal block ABS-H32◈-NN connection

12/24 VDC	12/24 VDC		Y21	Y23	Y25	Y27	Y28	Y2A	Y2C	Y2E		Y31	Y33	Y35	Y37	Y38	Y3A	Y3C	Y3E		PLC I/O
24VDC (2)	24VDC (4)	COM1	R2 (38)	R4 (34)	R6 (30)	R8 (26)	R9 (24)	R11 (20)	R13 (16)	R15 (12)	COM3	R18 (37)	R20 (33)	R22 (29)	R24 (25)	R25 (23)	R27 (19)	R29 (15)	R31 (11)		Terminal block
0V (1)	0V (3)	R1 (40)	R3 (36)	R5 (32)	R7 (28)	COM2	R10 (22)	R12 (18)	R14 (14)	R16 (10)	R17 (39)	R19 (35)	R21 (31)	R23 (27)	COM4	R26 (21)	R28 (17)	R30 (13)	R32 (9)		
0V	0V	Y20	Y22	Y24	Y26		Y29	Y2B	Y2D	Y2F	Y30	Y32	Y34	Y36		Y39	Y3B	Y3D	Y3F		PLC I/O

●I/O module(type B) and terminal block ABS-H16◈-NN connection

12/24 VDC	Y20	Y21	Y22	Y23	Y24	Y25	Y26	Y27	Y28	Y29	Y2A	Y2B	Y2C	Y2D	Y2E	Y2F	PLC I/O
24VDC (1, 2)	R1+ (20)	R2+ (18)	R3+ (16)	R4+ (14)	R5+ (12)	R6+ (10)	R7+ (8)	R8+ (6)	R9+ (19)	R10+ (17)	R11+ (15)	R12+ (13)	R13+ (11)	R14+ (9)	R15+ (7)	R16+ (5)	Terminal block (A)
0V (3, 4)	R1- (20)	R2- (18)	R3- (16)	R4- (14)	R5- (12)	R6- (10)	R7- (8)	R8- (6)	R9- (19)	R10- (17)	R11- (15)	R12- (13)	R13- (11)	R14- (9)	R15- (7)	R16- (5)	
0V	Y20	Y21	Y22	Y23	Y24	Y25	Y26	Y27	Y28	Y29	Y2A	Y2B	Y2C	Y2D	Y2E	Y2F	PLC I/O

12/24 VDC	Y30	Y31	Y32	Y33	Y34	Y35	Y36	Y37	Y38	Y39	Y3A	Y3B	Y3C	Y3D	Y3E	Y3F	PLC I/O
24VDC (1, 2)	R1+ (20)	R2+ (18)	R3+ (16)	R4+ (14)	R5+ (12)	R6+ (10)	R7+ (8)	R8+ (6)	R9+ (19)	R10+ (17)	R11+ (15)	R12+ (13)	R13+ (11)	R14+ (9)	R15+ (7)	R16+ (5)	Terminal block (B)
0V (3, 4)	R1- (20)	R2- (18)	R3- (16)	R4- (14)	R5- (12)	R6- (10)	R7- (8)	R8- (6)	R9- (19)	R10- (17)	R11- (15)	R12- (13)	R13- (11)	R14- (9)	R15- (7)	R16- (5)	
0V	Y30	Y31	Y32	Y33	Y34	Y35	Y36	Y37	Y38	Y39	Y3A	Y3B	Y3C	Y3D	Y3E	Y3F	PLC I/O

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

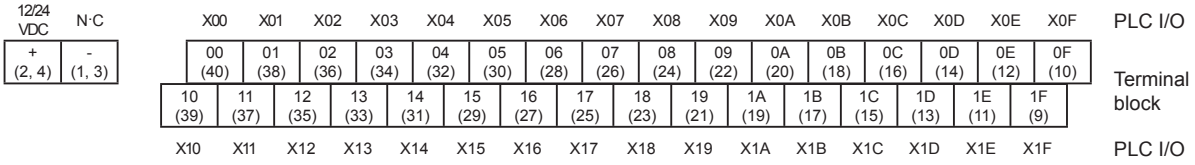
▣ Cable selection & Connections

◎MITSUBISHI (MELSEC-A Series)-Sensor connector type terminal block

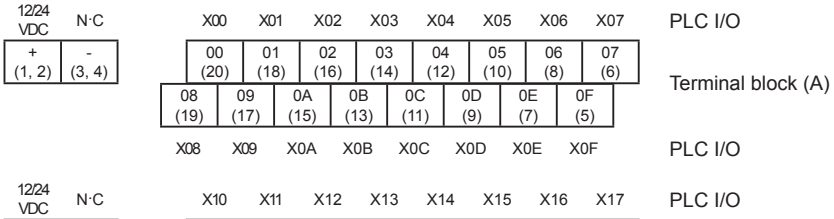
PLC Item	I/O module		I/O points	I/O	COM	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model				Type	Model	Qty.	Model	Qty.	
MELSEC - A	A	AX42, AX42-S1	64	Input	+	Sensor connector type terminal block	AFE4-H40-32LF	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
							AFE4-H20-16LF	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11
	B	AX82	64	Input	-		AFE4-H40-32LF	2	CJ-HPDP37-V1N□-1CPL (Ordering No. : DP-5-□)	2	2
							AFE4-H20-16LF	4	CJ-HPDP37-V2★□-1CPL (Ordering No. : DP-7★-□)	2	6,7

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m) The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

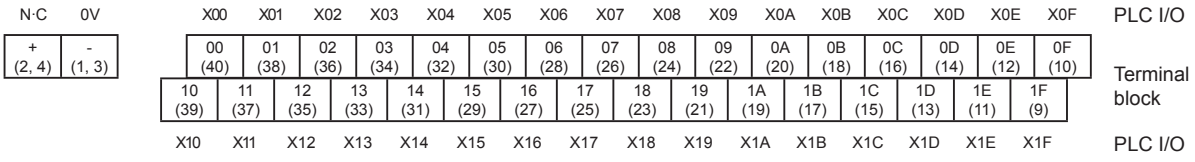
●I/O module(type A) and terminal block AFE4-H40-32LF connection



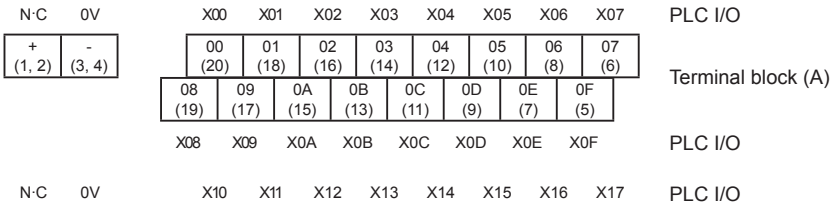
●I/O module(type A) and terminal block AFE4-H20-16LF connection



●I/O module(type B) and terminal block AFE4-H40-32LF connection



●I/O module(type B) and terminal block AFE4-H20-16LF connection



※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

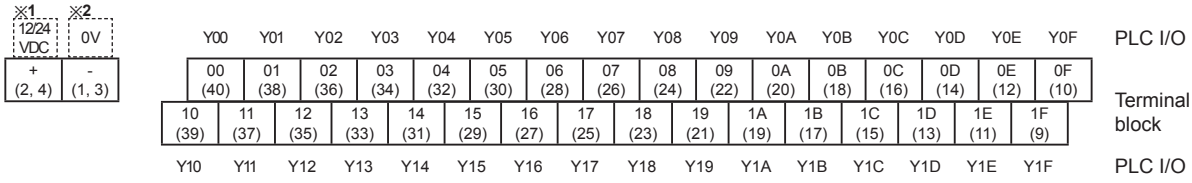
▣ Cable selection & Connections

◎MITSUBISHI (MELSEC-A Series)-Sensor connector type terminal block

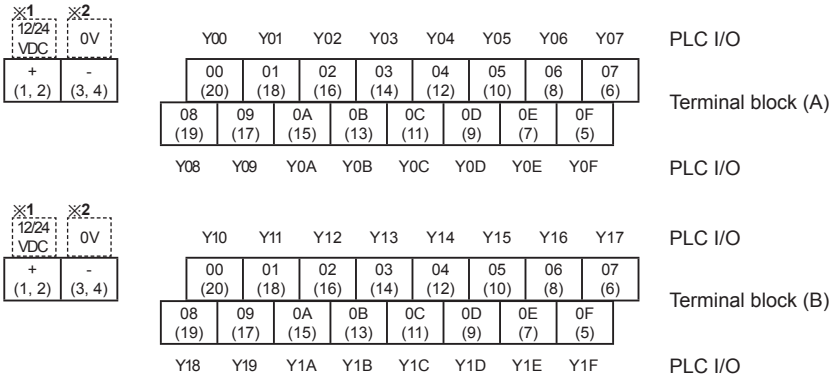
PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM	Applied terminal block Type	Applied terminal block Model	Applied terminal block Qty.	Applied cable Model	Applied cable Qty.	(Note1) Appearance
MELSEC - A	A	AY42, AY42-S1	64	Output	-	Sensor connector type terminal block	AFE4-H40-32LF	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
							AFE4-H20-16LF	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11
		AY42-S3, AY42-S4	64	Output	-		AFE4-H40-32LF	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
							AFE4-H20-16LF	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11
		AY72	64	Output	-		AFE4-H40-32LF	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
							AFE4-H20-16LF	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11
	B	AY82EP	64	Output	+		AFE4-H40-32LF	2	CJ-HPDP37-V1N□-1CNL (Ordering No. : DP-3-□)	2	2

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.
(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m) The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A, B) and terminal block AFE4-H40-32LF connection



●I/O module(type A) and terminal block AFE4-H20-16LF connection



※**1:** For AY42-S4 module, it is N.C. For AY72 module, it is 5/12VDC.
※**2:** For AY42-S4 module, it is COM.
※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

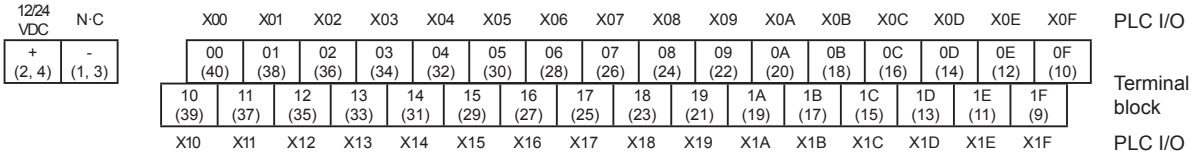
▣ Cable selection & Connections

◎MITSUBISHI (MELSEC-A Series)-Sensor connector type terminal block

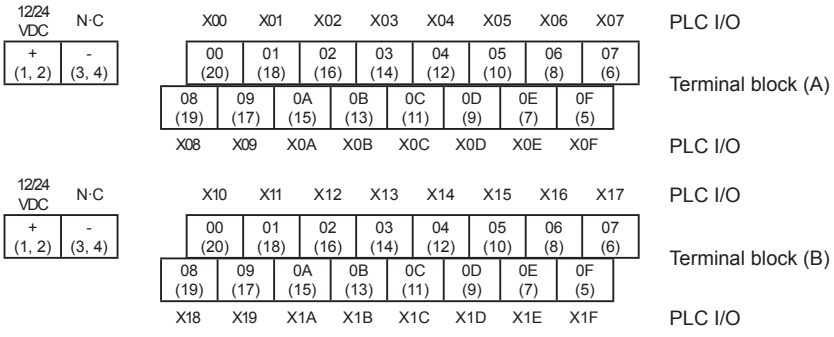
PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM	Applied terminal block Type	Applied terminal block Model	Applied terminal block Qty.	Applied cable Model	Applied cable Qty.	(Note1) Appearance
MELSEC - A	A	AH42	32	Mixed (Input)	+	Sensor connector type	AFE4-H40-32LF	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							AFE4-H20-16LF	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
	B		32	Mixed (Output)	-		AFE4-H40-32LF	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							AFE4-H20-16LF	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m) The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

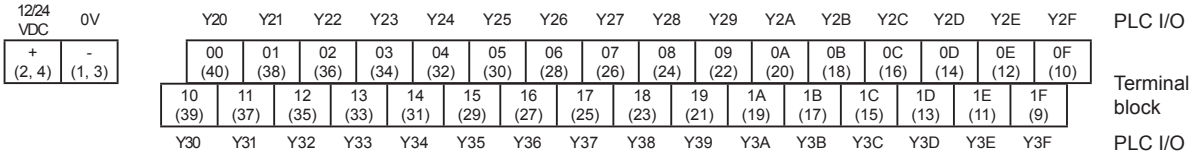
●I/O module(type A) and terminal block AFE4-H40-32LF connection



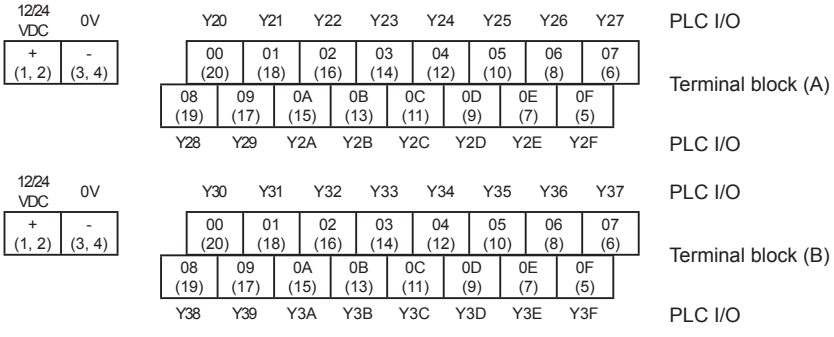
●I/O module(type A) and terminal block AFE4-H20-16LF connection



●I/O module(type B) and terminal block AFE4-H40-32LF connection



●I/O module(type B) and terminal block AFE4-H20-16LF connection



※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

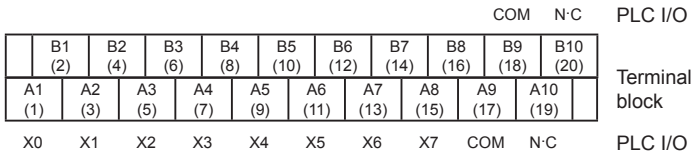
▣ Cable selection & Connections

◎MITSUBISHI (MELSEC-FX$_{2NC}$ Series)-Interface terminal block

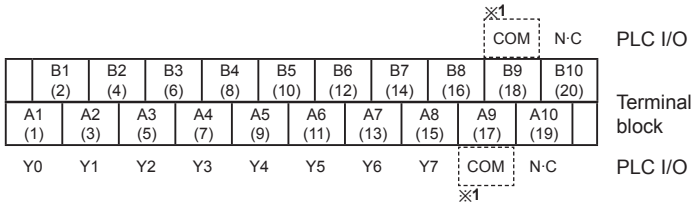
PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM	Applied terminal block Type	Applied terminal block Model	Applied terminal block Qty.	Applied cable Model	Applied cable Qty.	(Note1) Appearance
MELSEC - FX$_{2NC}$	**A**	16MT, 16MT-D/UL	8	Mixed (Input)	-		AFS-H20	1	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	1	1
	B		8	Mixed (Output)	-		AFS-H20	1	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	1	1
	C	16MT, 16MT-D/UL	8	Mixed (Input)	-		AFS-H40	1	CJ-HPHP40-VY2□-2ANR (Ordering No. : HP-14-□)	1	14
			8	Mixed (Output)	-						
	A	16MT-DSS	8	Mixed (Input)	Com. +, −		AFS-H20	1	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	1	1
	B		8	Mixed (Output)	+		AFS-H20	1	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	1	1
	C	16MT-DSS	8	Mixed (Input)	Com. +, −		AFS-H40	1	CJ-HPHP40-VY2□-2ANR (Ordering No. : HP-14-□)	1	14
			8	Mixed (Output)	+						

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length. (Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m) The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

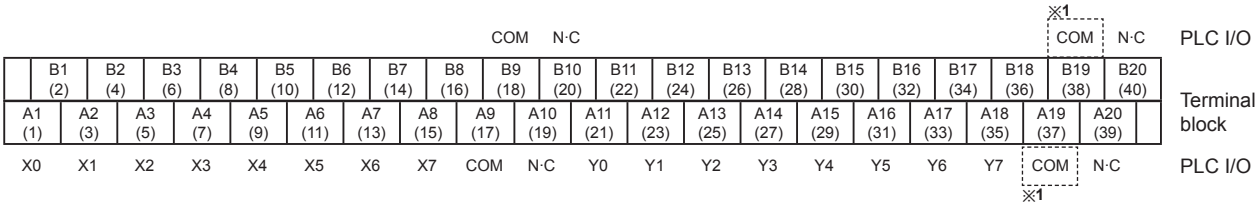
●I/O module(type A) and terminal block AFS-H20 connection



●I/O module(type B) and terminal block AFS-H20 connection



●I/O module(type C) and terminal block AFS-H40 connection



※**1:** For 16MT-DSS module, it is +V.
※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

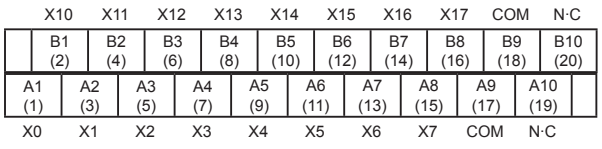
▣ Cable selection & Connections

◎**MITSUBISHI (MELSEC-FX$_{2NC}$ Series)-Interface terminal block**

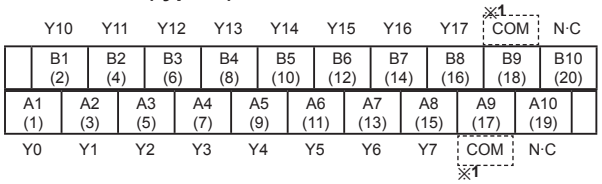
PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM	Applied terminal block Type	Applied terminal block Model	Applied terminal block Qty.	Applied cable Model	Applied cable Qty.	(Note1) Appearance
MELSEC - FX$_{2NC}$	A	32MT, 32MT-D/UL	16	Mixed(Input)	-	Interface terminal block	AFS-H20	1	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	1	1
	B		16	Mixed(Output)	-		AFS-H20	1	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	1	1
	C	32MT, 32MT-D/UL	16	Mixed(Input)	-		AFS-H40	1	CJ-HPHP40-VY2□-2ANR (Ordering No. : HP-14-□)	1	14
			16	Mixed(Output)	-						
	A	32MT-DSS	16	Mixed(Input)	Com. +, -		AFS-H20	1	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	1	1
	B		16	Mixed(Output)	+		AFS-H20	1	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	1	1
	C	32MT-DSS	16	Mixed(Input)	Com +, -		AFS-H40	1	CJ-HPHP40-VY2□-2ANR (Ordering No. : HP-14-□)	1	14
			16	Mixed(Output)	+						
	A	64MT, 64MT-D/UL	32	Mixed(Input)	-		AFS-H20	2	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	2	1
	B		32	Mixed(Output)	-		AFS-H20	2	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	2	1
	C	64MT, 64MT-D/UL	32	Mixed(Input)	-		AFS-H40	1	CJ-HPHP40-VY2□-2ANR (Ordering No. : HP-14-□)	1	14
			32	Mixed(Output)	-						
	A	64MT-DSS	32	Mixed(Input)	Com. +, -		AFS-H20	2	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	2	1
	B		32	Mixed(Output)	+		AFS-H20	2	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	2	1
	C	64MT-DSS	32	Mixed(Input)	Com. +, _		AFS-H40	2	CJ-HPHP40-VY2□-2ANR (Ordering No. : HP-14-□)	2	14
			32	Mixed(Output)	+						
	A	96MT, 96MT-D/UL	48	Mixed(Input)	-		AFS-H20	3	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	3	1
	B		48	Mixed(Output)	-		AFS-H20	3	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	3	1
	C	96MT, 96MT-D/UL	48	Mixed(Input)	-		AFS-H40	3	CJ-HPHP40-VY2□-2ANR (Ordering No. : HP-14-□)	3	14
			48	Mixed(Output)	-						
	A	96MT-DSS	48	Mixed(Input)	Com. +, _		AFS-H20	3	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	3	1
	B		48	Mixed(Output)	+		AFS-H20	3	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	3	1
	C	96MT-DSS	48	Mixed(Input)	Com. +, _		AFS-H40	3	CJ-HPHP40-VY2□-2ANR (Ordering No. : HP-14-□)	3	14
			48	Mixed(Output)	+						

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m) The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

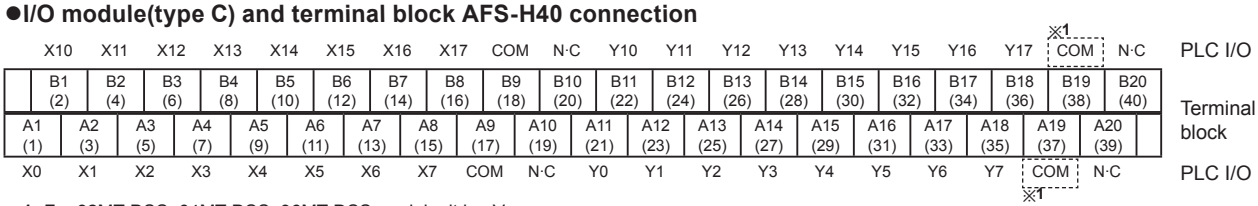
●I/O module(type A) and terminal block AFS-H20 connection



●I/O module(type B) and terminal block AFS-H20 connection



●I/O module(type C) and terminal block AFS-H40 connection



※**1:** For 32MT-DSS, 64MT-DSS, 96MT-DSS module, it is +V.
※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

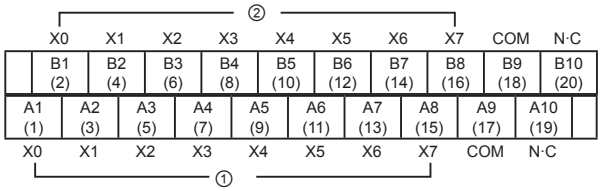
▣ Cable selection & Connections

◎MITSUBISHI (MELSEC-FX$_{2NC}$ Series)-Interface terminal block

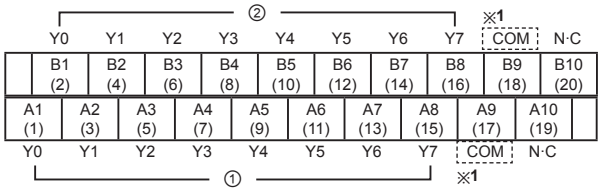
PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM		Applied terminal block Type	Applied terminal block Model	Applied terminal block Qty.	Applied cable Model	Applied cable Qty.	(Note1) Appearance
MELSEC - FX$_{2NC}$	A	16EX, 16EX-D/UL	16	Input	-		Interface terminal block	AFS-H20	1	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	1	1
		16EX-DS	16	Input	Com.	+, –		AFS-H20	1	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	1	1
	B	16EYT, 16EYT-D/UL	16	Output	-			AFS-H20	1	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	1	1
		16EYT-DSS	16	Output	+			AFS-H20	1	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	1	1
	C	32EX, 32EX-D/UL	32	Input	-			AFS-H20	2	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	2	1
								AFS-H40	1	CJ-HPHP40-VY2□-2ANR (Ordering No. : HP-14-□)	1	14
		32EX-DS	32	Input	Com.	+, –		AFS-H20	2	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	2	1
								AFS-H40	1	CJ-HPHP40-VY2□-2ANR (Ordering No. : HP-14-□)	1	14
	D	32EYT, 32EYT-D/UL	32	Output	-			AFS-H20	2	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	2	1
								AFS-H40	1	CJ-HPHP40-VY2□-2ANR (Ordering No. : HP-14-□)	1	14
		32EYT-DSS	32	Output	+			AFS-H20	2	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	2	1
								AFS-H40	1	CJ-HPHP40-VY2□-2ANR (Ordering No. : HP-14-□)	1	14

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m) The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

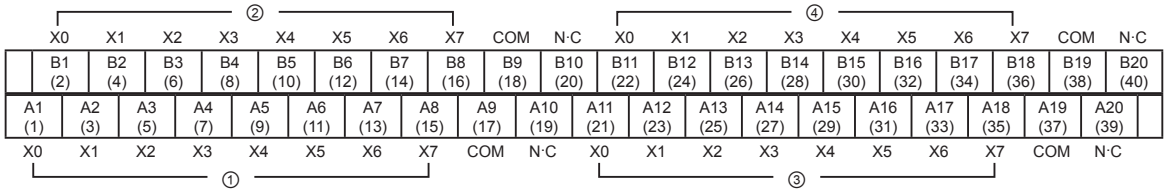
●I/O module(type A, C) and terminal block AFS-H20 connection



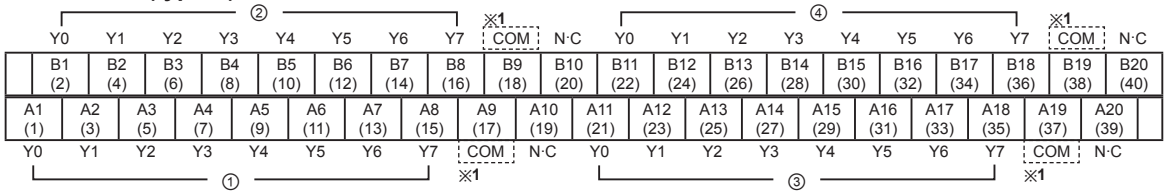
●I/O module(type B, D) and terminal block AFS-H20 connection



●I/O module(type C) and terminal block AFS-H40 connection



●I/O module(type D) and terminal block AFS-H40 connection



※**1:** For 16EYT-DSS, 32EYT-DSS module, it is +V.
※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

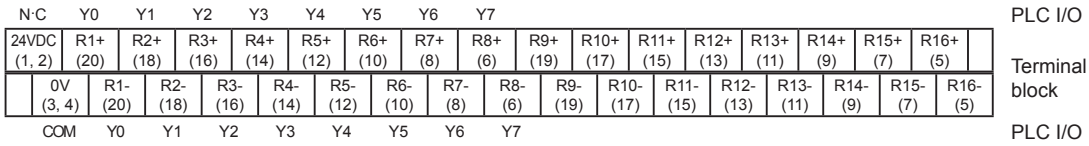
▣ Cable selection & Connections

◎MITSUBISHI (MELSEC-FX$_{2NC}$ Series)-Relay terminal block

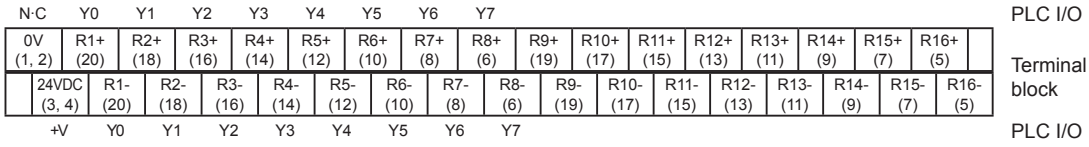
PLC Item	I/O module		I/O points	I/O	COM	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model				Type	Model	Qty.	Model	Qty.	
MELSEC - FX$_{2NC}$	A	16MT, 16MT-D/UL	8	Mixed(Output)	-	Relay terminal block	ABS-H16◈-NN	1	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	1	1
	B	16MT-DSS	8	Mixed(Output)	+		ABS-H16◈-PN	1	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	1	1
	C	32MT, 32MT-D/UL	16	Mixed(Output)	-		ABS-H16◈-NN	1	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	1	1
	D	32MT-DSS	16	Mixed(Output)	+		ABS-H16◈-PN	1	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	1	1
	C	64MT, 64MT-D/UL	32	Mixed(Output)	-		ABS-H16◈-NN	2	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	2	1
	D	64MT-DSS	32	Mixed(Output)	+		ABS-H16◈-PN	2	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	2	1
	C	96MT, 96MT-D/UL	48	Mixed(Output)	-		ABS-H16◈-NN	3	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	3	1
	D	96MT-DSS	48	Mixed(Output)	+		ABS-H16◈-PN	3	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	3	1
	E	16EYT, 16EYT-D/UL	16	Output	-		ABS-H16◈-NN	1	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	1	1

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m) The other cable lengths are option.
※"◈" of relay terminal model is relay type. Two relay types are selectable. [TN:TAKAMISAWA(Fujitsu) NYP, PA: MATSUSHITA(Panasonic) PA]
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

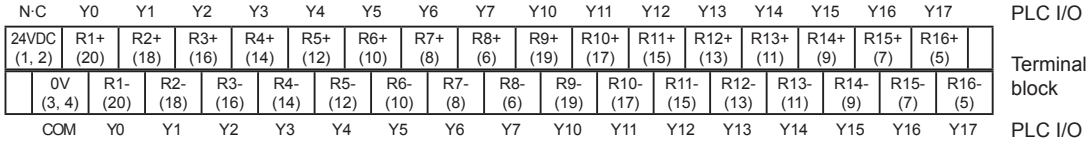
●I/O module(type A) and terminal block ABS-H16◈-NN connection



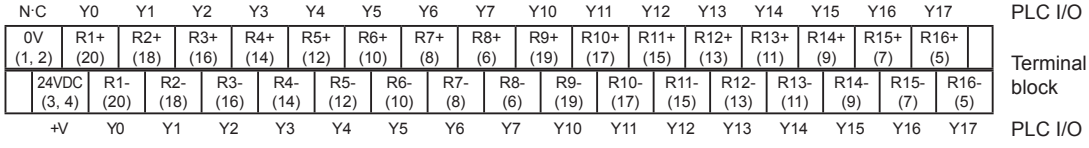
●I/O module(type B) and terminal block ABS-H16◈-PN connection



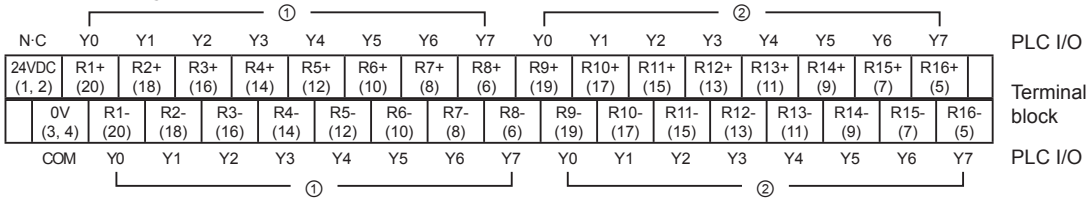
●I/O module(type C) and terminal block ABS-H16◈-NN connection



●I/O module(type D) and terminal block ABS-H16◈-PN connection



●I/O module(type E) and terminal block ABS-H16◈-NN connection



※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

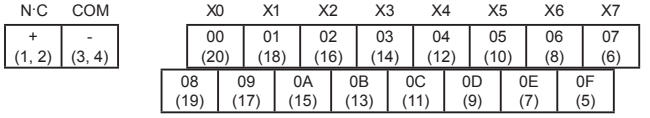
▣ Cable selection & Connections

◎MITSUBISHI (MELSEC-FX$_{2NC}$ Series)-Sensor connector type terminal block

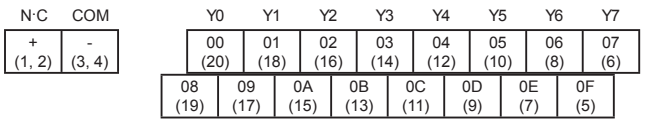
PLC Item	I/O module		I/O points	I/O	COM		Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model					Type	Model	Qty.	Model	Qty.	
MELSEC - FX$_{2NC}$	A	16MT, 16MT-D/UL	8	Mixed (Input)	-		Sensor connector type terminal block	AFE4-H20-16LF	1	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	1	1
	B		8	Mixed (Output)	-			AFE4-H20-16LF	1	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	1	1
	C	16MT-DSS	8	Mixed (Input)	Com.	+		AFE4-H20-16LF	1	CJ-HPHP20-V1N□-1APR (Ordering No. : HP-9-□)	1	1
	A					-		AFE4-H20-16LF	1	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	1	1
	D		8	Mixed (Output)	+			AFE4-H20-16LF	1	CJ-HPHP20-V1N□-1APR (Ordering No. : HP-9-□)	1	1

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length. (Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m) The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

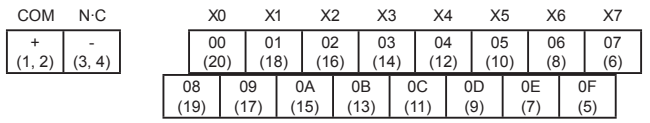
●I/O module(type A) and terminal block AFE4-H20-16LF connection



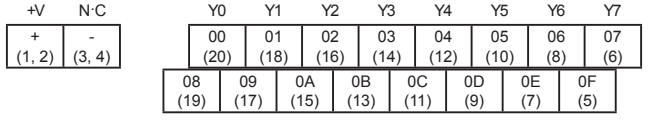
●I/O module(type B) and terminal block AFE4-H20-16LF connection



●I/O module(type C) and terminal block AFE4-H20-16LF connection



●I/O module(type D) and terminal block AFE4-H20-16LF connection



※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

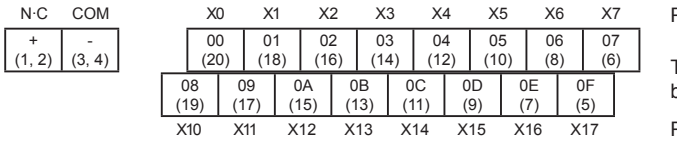
▣ Cable selection & Connections

◎**MITSUBISHI (MELSEC-FX$_{2NC}$ Series)-Sensor connector type terminal block**

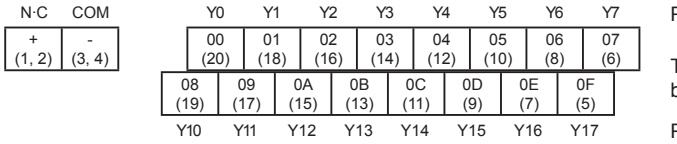
PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM		Applied terminal block Type	Applied terminal block Model	Qty.	Applied cable Model	Qty.	(Note1) Appearance
MELSEC - FX$_{2NC}$	**A**	32MT, 32MT-D/UL	16	Mixed (Input)	-		Sensor connector type terminal block	AFE4-H20-16LF	1	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	1	1
	B		16	Mixed (Output)	-			AFE4-H20-16LF	1	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	1	1
	C	32MT-DSS	16	Mixed (Input)	Com.	+		AFE4-H20-16LF	1	CJ-HPHP20-V1N□-1APR (Ordering No. : HP-9-□)	1	1
	A					-		AFE4-H20-16LF	1	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	1	1
	D		16	Mixed (Output)	+			AFE4-H20-16LF	1	CJ-HPHP20-V1N□-1APR (Ordering No. : HP-9-□)	1	1
	A	64MT, 64MT-D/UL	32	Mixed (Input)	-			AFE4-H20-16LF	2	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	2	1
	B		32	Mixed (Output)	-			AFE4-H20-16LF	2	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	2	1
	C	64MT-DSS	32	Mixed (Input)	Com.	+		AFE4-H20-16LF	2	CJ-HPHP20-V1N□-1APR (Ordering No. : HP-9-□)	2	1
	A					-		AFE4-H20-16LF	2	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	2	1
	D		32	Mixed (Output)	+			AFE4-H20-16LF	2	CJ-HPHP20-V1N□-1APR (Ordering No. : HP-9-□)	2	1
	A	96MT, 96MT-D/UL	48	Mixed (Input)	-			AFE4-H20-16LF	3	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	3	1
	B		48	Mixed (Output)	-			AFE4-H20-16LF	3	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	3	1
	C	96MT-DSS	48	Mixed (Input)	Com.	+		AFE4-H20-16LF	3	CJ-HPHP20-V1N□-1APR (Ordering No. : HP-9-□)	3	1
	A					-		AFE4-H20-16LF	3	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	3	1
	D		48	Mixed (Output)	+			AFE4-H20-16LF	3	CJ-HPHP20-V1N□-1APR (Ordering No. : HP-9-□)	3	1

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m) The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

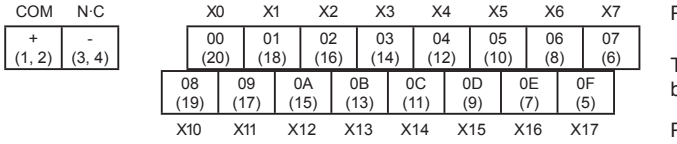
●I/O module(type A) and terminal block AFE4-H20-16LF connection



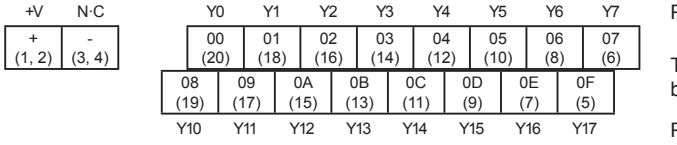
●I/O module(type B) and terminal block AFE4-H20-16LF connection



●I/O module(type C) and terminal block AFE4-H20-16LF connection



●I/O module(type D) and terminal block AFE4-H20-16LF connection



※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

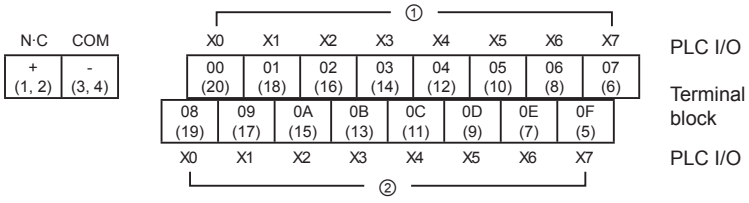
▣ Cable selection & Connections

◎MITSUBISHI (MELSEC-FX$_{2NC}$ Series)-Sensor connector type terminal block

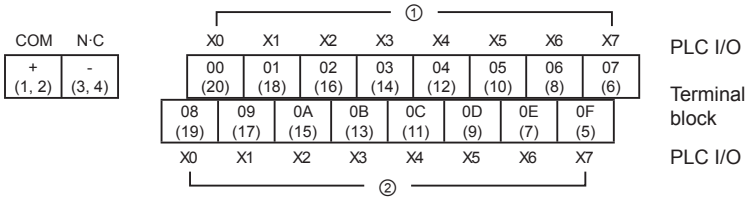
PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM		Applied terminal block Type	Applied terminal block Model	Applied terminal block Qty.	Applied cable Model	Applied cable Qty.	(Note1) Appearance
MELSEC - FX$_{2NC}$	A	16EX, 16EX-D/UL	16	Input	-		Sensor connector type terminal block	AFE4-H20-16LF	1	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	1	1
	B	16EX-DS	16	Input	Com.	+		AFE4-H20-16LF	1	CJ-HPHP20-V1N□-1APR (Ordering No. : HP-9-□)	1	1
	A					-		AFE4-H20-16LF	1	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	1	1
	C	16EYT, 16EYT-D/UL	16	Output	-			AFE4-H20-16LF	1	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	1	1
	D	16EYT-DSS	16	Output	+			AFE4-H20-16LF	1	CJ-HPHP20-V1N□-1APR (Ordering No. : HP-9-□)	1	1
	A	32EX, 32EX-D/UL	32	Input	_			AFE4-H20-16LF	2	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	2	1
	B	32EX-DS	32	Input	Com.	+		AFE4-H20-16LF	2	CJ-HPHP20-V1N□-1APR (Ordering No. : HP-9-□)	2	1
	A					-		AFE4-H20-16LF	2	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	2	1
	C	32EYT, 32EYT-D/UL	32	Output	_			AFE4-H20-16LF	2	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	2	1
	D	32EYT-DSS	32	Output	+			AFE4-H20-16LF	2	CJ-HPHP20-V1N□-1APR (Ordering No. : HP-9-□)	2	1

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m) The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

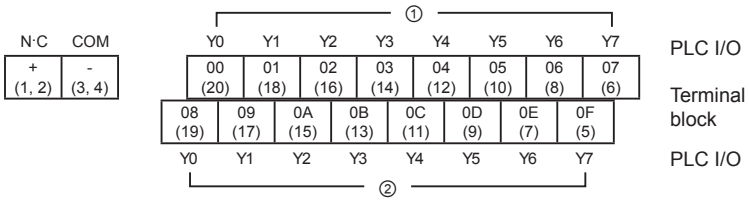
●I/O module(type A) and terminal block AFE4-H20-16LF connection



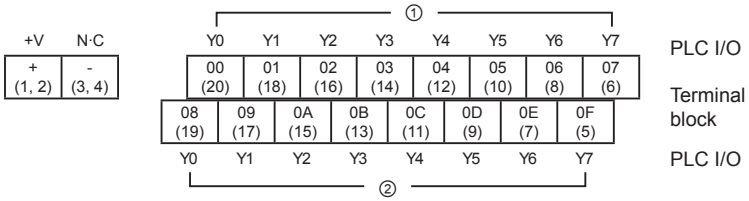
●I/O module(type B) and terminal block AFE4-H20-16LF connection



●I/O module(type C) and terminal block AFE4-H20-16LF connection



●I/O module(type D) and terminal block AFE4-H20-16LF connection



※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

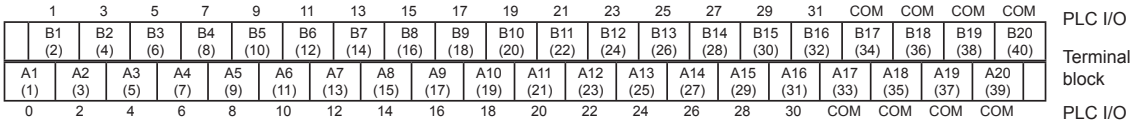
▣ Cable selection & Connections

◎LS industrial systems (GLOFA-GM Series)-Interface terminal block

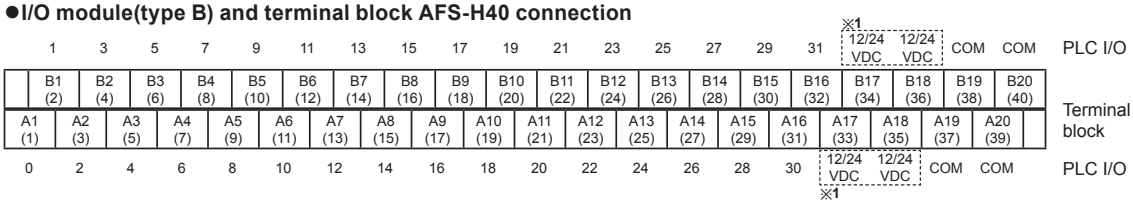
PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM	Applied terminal block Type	Applied terminal block Model	Applied terminal block Qty.	Applied cable Model	Applied cable Qty.	(Note1) Appearance
GLOFA -GM	A	G3I-D28A	64	Input	Com. +, –	Interface terminal block	AFS-H40	2	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	2	4
	B	G3Q-TR8A	64	Output	-		AFS-H40	2	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	2	4
		G3Q-TR8B	64	Output	+		AFS-H40	2	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	2	4
	C	G4I-D24A	32	Input	Com. +, –		AFS-H40	1	CJ-HPDS37-V1N□-1ANR (Ordering No. : DS-1-□)	1	3
		G4I-D24B	32	Input	+		AFS-H40	1	CJ-HPDS37-V1N□-1ANR (Ordering No. : DS-1-□)	1	3
	A	G4I-D28A	32	Input(right)	Com. +, –		AFS-H40	1	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	1	4
			32	Input(left)			AFS-H40	1	CJ-HPFP40-V1N□-2ANR (Ordering No. : FP-5-□)	1	4
	D	G4Q-TR4A	32	Output	-		AFS-H40	1	CJ-HPDS37-V1N□-1ANR (Ordering No. : DS-1-□)	1	3
	E	G4Q-TR4B	32	Output	+		AFS-H40	1	CJ-HPDS37-V1N□-1ANR (Ordering No. : DS-1-□)	1	3
	B	G4Q-TR8A	32	Output(right)	-		AFS-H40	1	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	1	4
			32	Output(left)	-		AFS-H40	1	CJ-HPFP40-V1N□-2ANR (Ordering No. : FP-5-□)	1	4
	C	G6I-D24A	32	Input	Com. +, –		AFS-H40	1	CJ-HPDS37-V1N□-1ANR (Ordering No. : DS-1-□)	1	3
		G6I-D24B	32	Input	+		AFS-H40	1	CJ-HPDS37-V1N□-1ANR (Ordering No. : DS-1-□)	1	3
	D	G6Q-TR4A	32	Output	-		AFS-H40	1	CJ-HPDS37-V1N□-1ANR (Ordering No. : DS-1-□)	1	3
	E	G6Q-TR4B	32	Output	+		AFS-H40	1	CJ-HPDS37-V1N□-1ANR (Ordering No. : DS-1-□)	1	3

※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m) The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

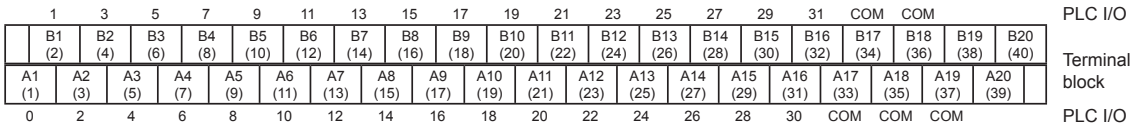
●I/O module(type A) and terminal block AFS-H40 connection



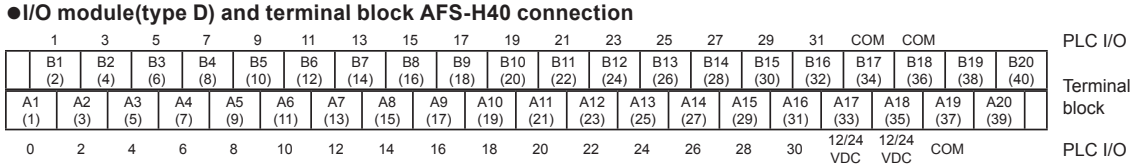
●I/O module(type B) and terminal block AFS-H40 connection



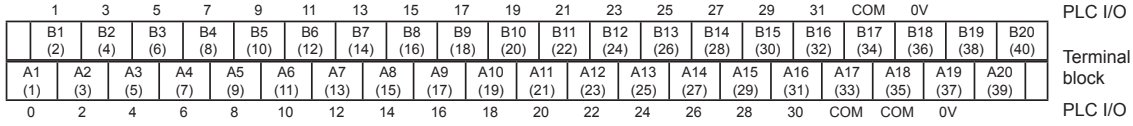
●I/O module(type C) and terminal block AFS-H40 connection



●I/O module(type D) and terminal block AFS-H40 connection



●I/O module(type E) and terminal block AFS-H40 connection



※**1:** For G3Q-TR8B module, it is 0V. ※Number of ( ) is connector pin number of terminal block.
※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.

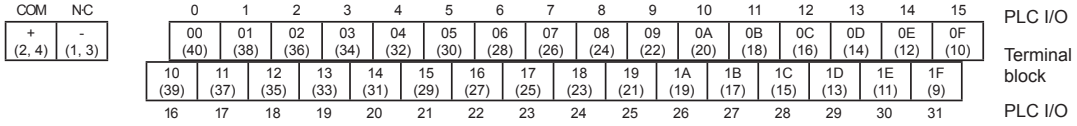
▣ Cable selection & Connections

◎LS industrial systems (GLOFA-GM Series)-Sensor connector type terminal block

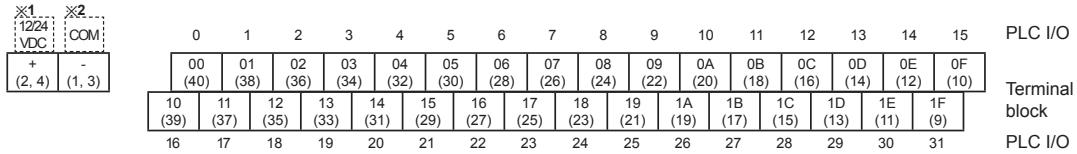
PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM	Applied terminal block Type	Applied terminal block Model	Applied terminal block Qty.	Applied cable Model	Applied cable Qty.	(Note1) Appearance
GLOFA -GM	A	G3I-D28A	64	Input	+	Sensor connector type terminal block	AFE4-H40-32LF	2	CJ-HPFP40-V1N□-3BNL (Ordering No. : FP-6-□)	2	4
	B	G3Q-TR8A	64	Output	-		AFE4-H40-32LF	2	CJ-HPFP40-V1N□-1CNL (Ordering No. : FP-8-□)	2	4
							AFE4-H20-16LF	4	CJ-HPFP40-V2★□-1CNL (Ordering No. : FP-13★-□)	2	10,11
	C	G3Q-TR8B	64	Output	+		AFE4-H40-32LF	2	CJ-HPFP40-V1N□-1CPL (Ordering No. : FP-10-□)	2	4
	A	G4I-D24A, G4I-D24B	32	Input	+		AFE4-H40-32LF	1	CJ-HPDS37-V1N□-1BNR (Ordering No. : DS-2-□)	1	3
		G4I-D28A	32	Input(right)	+		AFE4-H40-32LF	1	CJ-HPFP40-V1N□-3BNL (Ordering No. : FP-6-□)	1	4
			32	Input(left)	+		AFE4-H40-32LF	1	CJ-HPFP40-V1N□-3BNR (Ordering No. : FP-7-□)	1	4
	B	G4Q-TR4A	32	Output	-		AFE4-H40-32LF	1	CJ-HPDS37-V1N□-1CNR (Ordering No. : DS-3-□)	1	3
							AFE4-H20-16LF	2	CJ-HPDS37-V2★□-1CNR (Ordering No. : DS-5★-□)	1	8,9
		G4Q-TR4B	32	Output	+		AFE4-H40-32LF	1	CJ-HPDS37-V1N□-1CNR (Ordering No. : DS-3-□)	1	3
							AFE4-H20-16LF	2	CJ-HPDS37-V2★□-1CNR (Ordering No. : DS-5★-□)	1	8,9
		G4Q-TR8A	32	Output(right)	-		AFE4-H40-32LF	1	CJ-HPFP40-V1N□-1CNL (Ordering No. : FP-8-□)	1	4
							AFE4-H20-16LF	2	CJ-HPFP40-V2★□-1CNL (Ordering No. : FP-13★-□)	1	10,11
			32	Output(left)	-		AFE4-H40-32LF	1	CJ-HPFP40-V1N□-1CNR (Ordering No. : FP-9-□)	1	4
							AFE4-H20-16LF	2	CJ-HPFP40-V2★□-1CNR (Ordering No. : FP-14★-□)	1	10,11
	A	G6I-D24A, G6I-D24B	32	Input	+		AFE4-H40-32LF	1	CJ-HPDS37-V1N□-1BNR (Ordering No. : DS-2-□)	1	3
	B	G6Q-TR4A	32	Output	-		AFE4-H40-32LF	1	CJ-HPDS37-V1N□-1CNR (Ordering No. : DS-3-□)	1	3
							AFE4-H20-16LF	2	CJ-HPDS37-V2★□-1CNR (Ordering No. : DS-5★-□)	1	8,9
		G6Q-TR4B	32	Output	+		AFE4-H40-32LF	1	CJ-HPDS37-V1N□-1CNR (Ordering No. : DS-3-□)	1	3
							AFE4-H20-16LF	2	CJ-HPDS37-V2★□-1CNR (Ordering No. : DS-5★-□)	1	8,9

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m) The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

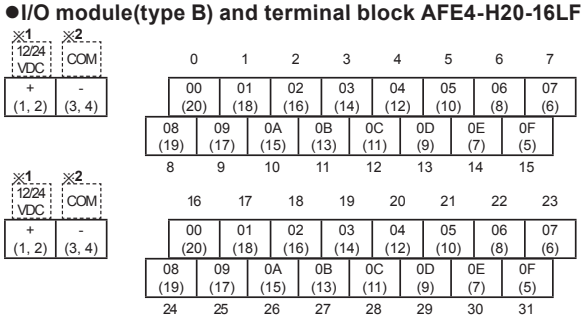
●I/O module(type A) and terminal block AFE4-H40-32LF connection



●I/O module(type B, C) and terminal block AFE4-H40-32LF connection



●I/O module(type B) and terminal block AFE4-H20-16LF connection



※**1:** G3Q-TR8B, G4Q-TR4B, G6Q-TR4B module, it is COM. ※**2:** G3Q-TR8B, G4Q-TR4B, G6Q-TR4B module, it is 0V.
※Number of ( ) is connector pin number of terminal block.
※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.

▣ Cable selection & Connections

◎LS industrial systems (GLOFA-GM Series)-Relay terminal block

PLC Item	I/O module		I/O points	I/O	COM	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model				Type	Model	Qty.	Model	Qty.	
GLOFA -GM	A	G3Q-TR8A	64	Output	-	Relay terminal block	ABS-H32⋇-NN	2	CJ-HPFP40-V1N□-1CNL (Ordering No. : FP-8-□)	2	4
							ABS-H16⋇-NN	4	CJ-HPFP40-V2★□-1CNL (Ordering No. : FP-13★-□)	2	10,11
	B	G3Q-TR8B	64	Output	+		ABS-H32⋇-PN	2	CJ-HPFP40-V1N□-1CNL (Ordering No. : FP-8-□)	2	4
							ABS-H16⋇-PN	4	CJ-HPFP40-V2★□-1CNL (Ordering No. : FP-13★-□)	2	10,11
	A	G4Q-TR4A	32	Output	-		ABS-H32⋇-NN	1	CJ-HPDS37-V1N□-1CNR (Ordering No. : DS-3-□)	1	3
							ABS-H16⋇-NN	2	CJ-HPDS37-V2★□-1CNR (Ordering No. : DS-5★-□)	1	8,9
	B	G4Q-TR4B	32	Output	+		ABS-H32⋇-PN	1	CJ-HPDS37-V1N□-1CPR (Ordering No. : DS-4-□)	1	3
							ABS-H16⋇-PN	2	CJ-HPDS37-V2★□-1CPR (Ordering No. : DS-6★-□)	1	8,9
	A	G4Q-TR8A	32	Output(right)	-		ABS-H32⋇-NN	1	CJ-HPFP40-V1N□-1CNL (Ordering No. : FP-8-□)	1	4
							ABS-H16⋇-NN	2	CJ-HPFP40-V2★□-1CNL (Ordering No. : FP-13★-□)	1	10,11
			32	Output(left)	-		ABS-H32⋇-NN	1	CJ-HPFP40-V1N□-1CNR (Ordering No. : FP-9-□)	1	4
							ABS-H16⋇-NN	2	CJ-HPFP40-V2★□-1CNR (Ordering No. : FP-14★-□)	1	10,11
		G6Q-TR4A	32	Output	-		ABS-H32⋇-NN	1	CJ-HPDS37-V1N□-1CNR (Ordering No. : DS-3-□)	1	3
							ABS-H16⋇-NN	2	CJ-HPDS37-V2★□-1CNR (Ordering No. : DS-5★-□)	1	8,9
	B	G6Q-TR4B	32	Output	+		ABS-H32⋇-PN	1	CJ-HPDS37-V1N□-1CPR (Ordering No. : DS-4-□)	1	3
							ABS-H16⋇-PN	2	CJ-HPDS37-V2★□-1CPR (Ordering No. : DS-6★-□)	1	8,9

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m) The other cable lengths are option.
※"⋇" of relay terminal model is relay type. Two relay types are selectable. [TN:TAKAMISAWA(Fujitsu) NYP, PA: MATSUSHITA(Panasonic) PA]
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block ABS-H32⋇-NN connection

12/24 VDC	12/24 VDC		1	3	5	7	8	10	12	14		17	19	21	23	24	26	28	30	PLC I/O
24VDC (2)	24VDC (4)	COM1	R2 (38)	R4 (34)	R6 (30)	R8 (26)	R9 (24)	R11 (20)	R13 (16)	R15 (12)	COM3	R18 (37)	R20 (33)	R22 (29)	R24 (25)	R25 (23)	R27 (19)	R29 (15)	R31 (11)	
																				Terminal block
	0V (1)	0V (3)	R1 (40)	R3 (36)	R5 (32)	R7 (28)	COM2	R10 (22)	R12 (18)	R14 (14)	R16 (10)	R17 (39)	R19 (35)	R21 (31)	R23 (27)	COM4	R26 (21)	R28 (17)	R30 (13)	R32 (9)	
	COM	COM	0	2	4	6		9	11	13	15	16	18	20	22		25	27	29	31	PLC I/O

●I/O module(type A) and terminal block ABS-H16⋇-NN connection

12/24 VDC	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	PLC I/O
24VDC (1, 2)	R1+ (20)	R2+ (18)	R3+ (16)	R4+ (14)	R5+ (12)	R6+ (10)	R7+ (8)	R8+ (6)	R9+ (19)	R10+ (17)	R11+ (15)	R12+ (13)	R13+ (11)	R14+ (9)	R15+ (7)	R16+ (5)	
																	Terminal block (A)
0V (3, 4)	R1- (20)	R2- (18)	R3- (16)	R4- (14)	R5- (12)	R6- (10)	R7- (8)	R8- (6)	R9- (19)	R10- (17)	R11- (15)	R12- (13)	R13- (11)	R14- (9)	R15- (7)	R16- (5)	
COM	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	PLC I/O

12/24 VDC	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	PLC I/O
24VDC (1, 2)	R1+ (20)	R2+ (18)	R3+ (16)	R4+ (14)	R5+ (12)	R6+ (10)	R7+ (8)	R8+ (6)	R9+ (19)	R10+ (17)	R11+ (15)	R12+ (13)	R13+ (11)	R14+ (9)	R15+ (7)	R16+ (5)	
																	Terminal block (B)
0V (3, 4)	R1- (20)	R2- (18)	R3- (16)	R4- (14)	R5- (12)	R6- (10)	R7- (8)	R8- (6)	R9- (19)	R10- (17)	R11- (15)	R12- (13)	R13- (11)	R14- (9)	R15- (7)	R16- (5)	
COM	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	PLC I/O

●I/O module(type B) and terminal block ABS-H32⋇-PN connection

0V	0V		1	3	5	7	8	10	12	14		17	19	21	23	24	26	28	30	PLC I/O
0V (2)	0V (4)	COM1	R2 (38)	R4 (34)	R6 (30)	R8 (26)	R9 (24)	R11 (20)	R13 (16)	R15 (12)	COM3	R18 (37)	R20 (33)	R22 (29)	R24 (25)	R25 (23)	R27 (19)	R29 (15)	R31 (11)	
																				Terminal block
24VDC (1)	24VDC (3)	R1 (40)	R3 (36)	R5 (32)	R7 (28)	COM2	R10 (22)	R12 (18)	R14 (14)	R16 (10)	R17 (39)	R19 (35)	R21 (31)	R23 (27)	COM4	R26 (21)	R28 (17)	R30 (13)	R32 (9)	
COM	COM	0	2	4	6		9	11	13	15	16	18	20	22		25	27	29	31	PLC I/O

●I/O module(type B) and terminal block ABS-H16⋇-PN connection

0V	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	PLC I/O
0V (1, 2)	R1+ (20)	R2+ (18)	R3+ (16)	R4+ (14)	R5+ (12)	R6+ (10)	R7+ (8)	R8+ (6)	R9+ (19)	R10+ (17)	R11+ (15)	R12+ (13)	R13+ (11)	R14+ (9)	R15+ (7)	R16+ (5)	
																	Terminal block (A)
24VDC (3, 4)	R1- (20)	R2- (18)	R3- (16)	R4- (14)	R5- (12)	R6- (10)	R7- (8)	R8- (6)	R9- (19)	R10- (17)	R11- (15)	R12- (13)	R13- (11)	R14- (9)	R15- (7)	R16- (5)	
COM	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	PLC I/O

0V	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	PLC I/O
0V (1, 2)	R1+ (20)	R2+ (18)	R3+ (16)	R4+ (14)	R5+ (12)	R6+ (10)	R7+ (8)	R8+ (6)	R9+ (19)	R10+ (17)	R11+ (15)	R12+ (13)	R13+ (11)	R14+ (9)	R15+ (7)	R16+ (5)	
																	Terminal block (B)
24VDC (3, 4)	R1- (20)	R2- (18)	R3- (16)	R4- (14)	R5- (12)	R6- (10)	R7- (8)	R8- (6)	R9- (19)	R10- (17)	R11- (15)	R12- (13)	R13- (11)	R14- (9)	R15- (7)	R16- (5)	
COM	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	PLC I/O

※Number of ( ) is connector pin number of terminal block.
※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.

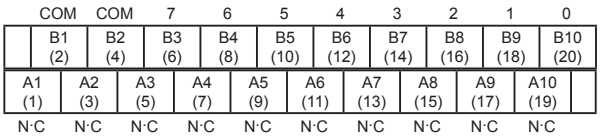
▣ Cable selection & Connections

◎LS industrial systems (XGB Series)-Interface terminal block

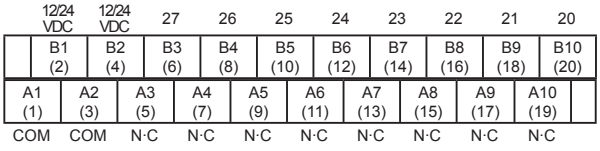
PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM		Applied terminal block Type	Applied terminal block Model	Applied terminal block Qty.	Applied cable Model	Applied cable Qty.	(Note1) Appearance
XGB	A	XBM-DN16S	8	Mixed(Input)	Com.	+, –	Interface terminal block	AFS-H20	1	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	1	1
	B		8	Mixed(Output)	-			AFS-H20	1	CJ-HPHP20-V1N□-1ANL (Ordering No. : HP-7-□)	1	1
	C	XBM-DN16S	8	Mixed(Input)	Com.	+, –		AFS-H40	1	CJ-HPHP40-VY2□-2ANX (Ordering No. : HP-16-□)	1	15
			8	Mixed(Output)	-							
	D	XBM-DN32S	16	Mixed(Input)	Com.	+, –		AFS-H20	1	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	1	1
	E		16	Mixed(Output)	-			AFS-H20	1	CJ-HPHP20-V1N□-1ANL (Ordering No. : HP-7-□)	1	1
	F	XBM-DN32S	16	Mixed(Input)	Com.	+, –		AFS-H40	1	CJ-HPHP40-VY2□-2ANX (Ordering No. : HP-16-□)	1	15
			16	Mixed(Output)	-							

※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

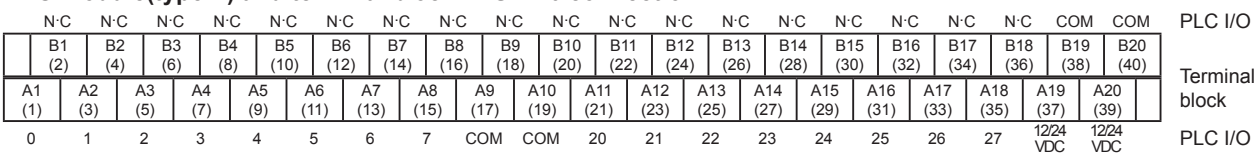
●I/O module(type A) and terminal block AFS-H20 connection



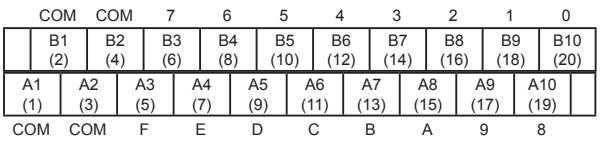
●I/O module(type B) and terminal block AFS-H20 connection



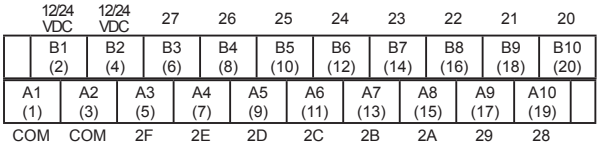
●I/O module(type C) and terminal block AFS-H40 connection



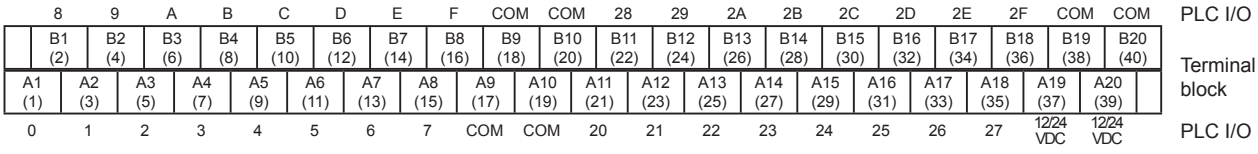
●I/O module(type D) and terminal block AFS-H20 connection



●I/O module(type E) and terminal block AFS-H20 connection



●I/O module(type F) and terminal block AFS-H40 connection



※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

▣ Cable selection & Connections

◎LS industrial systems (XGB Series)-Interface terminal block

PLC Item	I/O module		I/O points	I/O	COM		Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model					Type	Model	Qty.	Model	Qty.	
XGB	A	XBE-DC32A	32	Input	Com.	+, −	Interface terminal block	AFS-H40	1	CJ-HPHP40-V1N□-6ANL (Ordering No. : HP-4-□)	1	5
		XBE-DC64A	64	Input				AFS-H40	2	CJ-HPHP40-V1N□-6ANL (Ordering No. : HP-4-□)	2	5
	B	XBE-TN32A	32	Output	-			AFS-H40	1	CJ-HPHP40-V1N□-6ANL (Ordering No. : HP-4-□)	1	5
		XBE-TN64A	64	Output	-			AFS-H40	2	CJ-HPHP40-V1N□-6ANL (Ordering No. : HP-4-□)	2	5
	C	XBE-TP32A	32	Output	+			AFS-H40	1	CJ-HPHP40-V1N□-6ANL (Ordering No. : HP-4-□)	1	5
		XBE-TP64A	64	Output	+			AFS-H40	2	CJ-HPHP40-V1N□-6ANL (Ordering No. : HP-4-□)	2	5

※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block AFS-H40 connection

	01	03	05	07	09	0B	0D	0F	N·C	COM	11	13	15	17	19	1B	1D	1F	N·C	COM	PLC I/O
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)	
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)	Terminal block
	00	02	04	06	08	0A	0C	0E	N·C	COM	10	12	14	16	18	1A	1C	1E	N·C	COM	PLC I/O

●I/O module(type B) and terminal block AFS-H40 connection

	01	03	05	07	09	0B	0D	0F	N·C	12/24 VDC	11	13	15	17	19	1B	1D	1F	N·C	COM	PLC I/O
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)	
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)	Terminal block
	00	02	04	06	08	0A	0C	0E	N·C	12/24 VDC	10	12	14	16	18	1A	1C	1E	N·C	COM	PLC I/O

●I/O module(type C) and terminal block AFS-H40 connection

	01	03	05	07	09	0B	0D	0F	N·C	COM	11	13	15	17	19	1B	1D	1F	N·C	0V	PLC I/O
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)	
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)	Terminal block
	00	02	04	06	08	0A	0C	0E	N·C	COM	10	12	14	16	18	1A	1C	1E	N·C	0V	PLC I/O

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

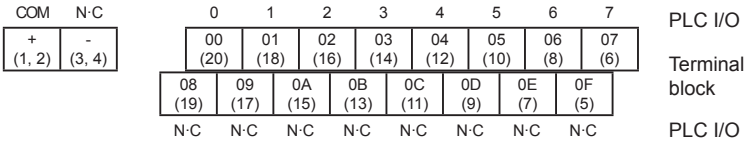
▣ Cable selection & Connections

◎LS industrial systems (XGB Series)-Sensor connector type terminal block

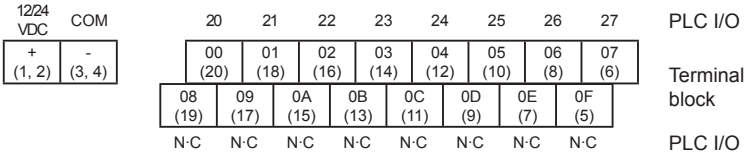
PLC Item	I/O module		I/O points	I/O	COM	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model				Type	Model	Qty.	Model	Qty.	
XGB	A	XBM-DN16S	8	Mixed (Input)	+	Sensor connector type terminal block	AFE4-H20-16LF	1	CJ-HPHP20-V1N□-1CNR (Ordering No. : HP-13-□)	1	1
	B		8	Mixed (Output)	-		AFE4-H20-16LF	1	CJ-HPHP20-V1N□-1CNL (Ordering No. : HP-12-□)	1	1
	C	XBM-DN32S	16	Mixed (Input)	+		AFE4-H20-16LF	1	CJ-HPHP20-V1N□-1BNR (Ordering No. : HP-10-□)	1	1
	D		16	Mixed (Output)	-		AFE4-H20-16LF	1	CJ-HPHP20-V1N□-1CNL (Ordering No. : HP-12-□)	1	1

※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

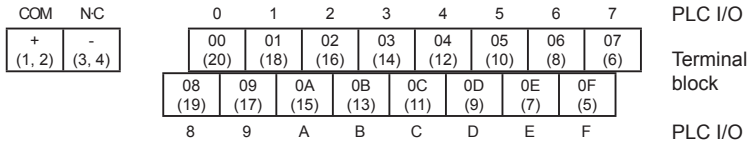
●I/O module(type A) and terminal block AFE4-H20-16LF connection



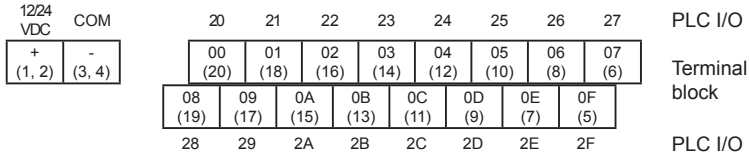
●I/O module(type B) and terminal block AFE4-H20-16LF connection



●I/O module(type C) and terminal block AFE4-H20-16LF connection



●I/O module(type D) and terminal block AFE4-H20-16LF connection



※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

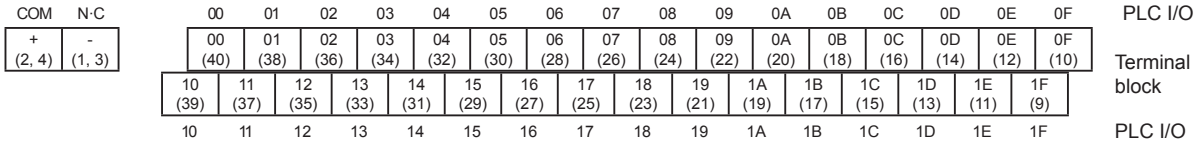
▣ Cable selection & Connections

◎LS industrial systems (XGB Series)-Sensor connector type terminal block

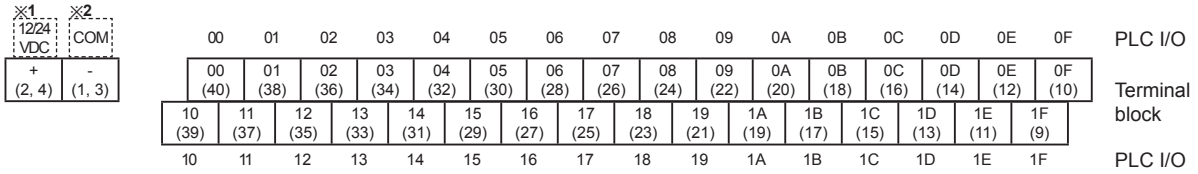
PLC Item	I/O module		I/O points	I/O	COM	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model				Type	Model	Qty.	Model	Qty.	
XGB	A	XBE-DC32A	32	Input	+	Sensor connector type terminal block	AFE4-H40-32LF	1	CJ-HPHP40-V1N□-1BNL (Ordering No. : HP-3-□)	1	5
		XBE-DC64A	64	Input	+		AFE4-H40-32LF	2	CJ-HPHP40-V1N□-1BNL (Ordering No. : HP-3-□)	2	5
	B	XBE-TN32A	32	Output	-		AFE4-H40-32LF	1	CJ-HPHP40-V1N□-1ANL (Ordering No. : HP-1-□)	1	5
							AFE4-H20-16LF	2	CJ-HPHP40-V2★□-1ANL (Ordering No. : HP-5★-□)	1	12,13
		XBE-TN64A	64	Output	-		AFE4-H40-32LF	2	CJ-HPHP40-V1N□-1ANL (Ordering No. : HP-1-□)	2	5
							AFE4-H20-16LF	4	CJ-HPHP40-V2★□-1ANL (Ordering No. : HP-5★-□)	2	12,13
		XBE-TP32A	32	Output	+		AFE4-H40-32LF	1	CJ-HPHP40-V1N□-1ANL (Ordering No. : HP-1-□)	1	5
							AFE4-H20-16LF	2	CJ-HPHP40-V2★□-1ANL (Ordering No. : HP-5★-□)	1	12,13
		XBE-TP64A	64	Output	+		AFE4-H40-32LF	2	CJ-HPHP40-V1N□-1ANL (Ordering No. : HP-1-□)	2	5
							AFE4-H20-16LF	4	CJ-HPHP40-V2★□-1ANL (Ordering No. : HP-5★-□)	2	12,13

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m) The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

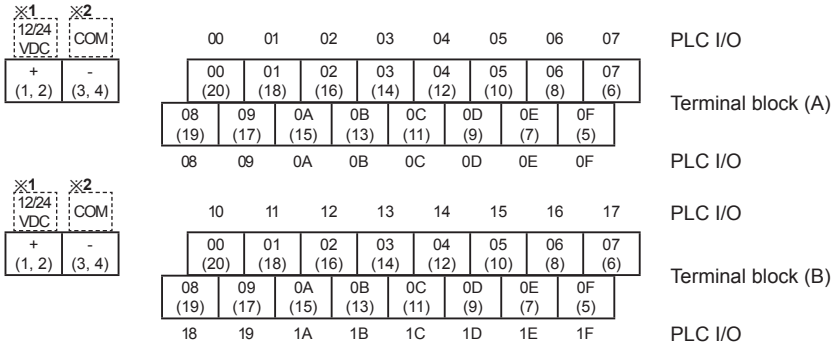
●I/O module(type A) and terminal block AFE4-H40-32LF connection



●I/O module(type B) and terminal block AFE4-H40-32LF connection



●I/O module(type B) and terminal block AFE4-H20-16LF connection



※**1:** For XBE-TP32A, XBE-TP64A module, it is COM.
※**2:** For XBE-TP32A, XBE-TP64A module, it is 0V.
※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

▣ Cable selection & Connections

◎LS industrial systems (XGB Series)-Relay terminal block

PLC Item	I/O module		I/O points	I/O	COM	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model				Type	Model	Qty.	Model	Qty.	
XGB	A	XBM-DN16S	8	Mixed (Output)	-	Relay terminal block	ABS-H16◈-NN	1	CJ-HPHP20-V1N□-1CNL (Ordering No. : HP-12-□)	1	1
	B	XBM-DN32S	16	Mixed (Output)	-		ABS-H16◈-NN	1	CJ-HPHP20-V1N□-1CNL (Ordering No. : HP-12-□)	1	1
	C	XBE-TN32A	32	Output	-		ABS-H32◈-NN	1	CJ-HPHP40-V1N□-1ANL (Ordering No. : HP-1-□)	1	5
							ABS-H16◈-NN	2	CJ-HPHP40-V2★□-1ANL (Ordering No. : HP-5★-□)	1	12,13
		XBE-TN64A	64	Output	-		ABS-H32◈-NN	2	CJ-HPHP40-V1N□-1ANL (Ordering No. : HP-1-□)	2	5
							ABS-H16◈-NN	4	CJ-HPHP40-V2★□-1ANL (Ordering No. : HP-5★-□)	2	12,13

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m) The other cable lengths are option.
※"◈" of relay terminal model is relay type. Two relay types are selectable. [TN:TAKAMISAWA(Fujitsu) NYP, PA: MATSUSHITA(Panasonic) PA]
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block ABS-H16◈-NN connection

12/24 VDC	20	21	22	23	24	25	26	27	N·C	N·C	N·C	N·C	N·C	N·C	N·C	N·C	
24VDC (1, 2)	R1+ (20)	R2+ (18)	R3+ (16)	R4+ (14)	R5+ (12)	R6+ (10)	R7+ (8)	R8+ (6)	R9+ (19)	R10+ (17)	R11+ (15)	R12+ (13)	R13+ (11)	R14+ (9)	R15+ (7)	R16+ (5)	Terminal block
0V (3, 4)	R1- (20)	R2- (18)	R3- (16)	R4- (14)	R5- (12)	R6- (10)	R7- (8)	R8- (6)	R9- (19)	R10- (17)	R11- (15)	R12- (13)	R13- (11)	R14- (9)	R15- (7)	R16- (5)	
COM	20	21	22	23	24	25	26	27	N·C	N·C	N·C	N·C	N·C	N·C	N·C	N·C	PLC I/O

●I/O module(type B) and terminal block ABS-H16◈-NN connection

12/24 VDC	20	21	22	23	24	25	26	27	28	29	2A	2B	2C	2D	2E	2F	
24VDC (1, 2)	R1+ (20)	R2+ (18)	R3+ (16)	R4+ (14)	R5+ (12)	R6+ (10)	R7+ (8)	R8+ (6)	R9+ (19)	R10+ (17)	R11+ (15)	R12+ (13)	R13+ (11)	R14+ (9)	R15+ (7)	R16+ (5)	Terminal block
0V (3, 4)	R1- (20)	R2- (18)	R3- (16)	R4- (14)	R5- (12)	R6- (10)	R7- (8)	R8- (6)	R9- (19)	R10- (17)	R11- (15)	R12- (13)	R13- (11)	R14- (9)	R15- (7)	R16- (5)	
COM	20	21	22	23	24	25	26	27	28	29	2A	2B	2C	2D	2E	2F	PLC I/O

●I/O module(type C) and terminal block ABS-H32◈-NN connection

12/24 VDC	12/24 VDC		01	03	05	07	08	0A	0C	0E		11	13	15	17	18	1A	1C	1E	
24VDC (2)	24VDC (4)	COM1	R2 (38)	R4 (34)	R6 (30)	R8 (26)	R9 (24)	R11 (20)	R13 (16)	R15 (12)	COM3	R18 (37)	R20 (33)	R22 (29)	R24 (25)	R25 (23)	R27 (19)	R29 (15)	R31 (11)	Terminal block
0V (1)	0V (3)	R1 (40)	R3 (36)	R5 (32)	R7 (28)	COM2	R10 (22)	R12 (18)	R14 (14)	R16 (10)	R17 (39)	R19 (35)	R21 (31)	R23 (27)	COM4	R26 (21)	R28 (17)	R30 (13)	R32 (9)	
COM	COM	00	02	04	06		09	0B	0D	0F	10	12	14	16		19	1B	1D	1F	PLC I/O

●I/O module(type C) and terminal block ABS-H16◈-NN connection

12/24 VDC	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	
24VDC (1, 2)	R1+ (20)	R2+ (18)	R3+ (16)	R4+ (14)	R5+ (12)	R6+ (10)	R7+ (8)	R8+ (6)	R9+ (19)	R10+ (17)	R11+ (15)	R12+ (13)	R13+ (11)	R14+ (9)	R15+ (7)	R16+ (5)	Terminal block (A)
0V (3, 4)	R1- (20)	R2- (18)	R3- (16)	R4- (14)	R5- (12)	R6- (10)	R7- (8)	R8- (6)	R9- (19)	R10- (17)	R11- (15)	R12- (13)	R13- (11)	R14- (9)	R15- (7)	R16- (5)	
COM	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	PLC I/O

12/24 VDC	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F	
24VDC (1, 2)	R1+ (20)	R2+ (18)	R3+ (16)	R4+ (14)	R5+ (12)	R6+ (10)	R7+ (8)	R8+ (6)	R9+ (19)	R10+ (17)	R11+ (15)	R12+ (13)	R13+ (11)	R14+ (9)	R15+ (7)	R16+ (5)	Terminal block (B)
0V (3, 4)	R1- (20)	R2- (18)	R3- (16)	R4- (14)	R5- (12)	R6- (10)	R7- (8)	R8- (6)	R9- (19)	R10- (17)	R11- (15)	R12- (13)	R13- (11)	R14- (9)	R15- (7)	R16- (5)	
COM	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F	PLC I/O

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

▣ Cable selection & Connections

◎LS industrial systems (XGB Series)-Relay terminal block

PLC Item	I/O module		I/O points	I/O	COM	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model				Type	Model	Qty.	Model	Qty.	
XGB	A	XBE-TP32A	32	Output	+	Relay terminal block	ABS-H32◈-PN	1	CJ-HPHP40-V1N□-1APL (Ordering No. : HP-2-□)	1	5
							ABS-H16◈-PN	2	CJ-HPHP40-V2★□-1APL (Ordering No. : HP-6★-□)	1	12,13
		XBE-TP64A	64	Output	+		ABS-H32◈-PN	2	CJ-HPHP40-V1N□-1APL (Ordering No. : HP-2-□)	2	5
							ABS-H16◈-PN	4	CJ-HPHP40-V2★□-1APL (Ordering No. : HP-6★-□)	2	12,13

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m) The other cable lengths are option.
※"◈" of relay terminal model is relay type. Two relay types are selectable. [TN:TAKAMISAWA(Fujitsu) NYP, PA: MATSUSHITA(Panasonic) PA]
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block ABS-H32◈-PN connection

0V	0V		01	03	05	07	08	0A	0C	0E		11	13	15	17	18	1A	1C	1E	PLC I/O
0V (2)	0V (4)	COM1	R2 (38)	R4 (34)	R6 (30)	R8 (26)	R9 (24)	R11 (20)	R13 (16)	R15 (12)	COM3	R18 (37)	R20 (33)	R22 (29)	R24 (25)	R25 (23)	R27 (19)	R29 (15)	R31 (11)	
24VDC (1)	24VDC (3)	R1 (40)	R3 (36)	R5 (32)	R7 (28)	COM2	R10 (22)	R12 (18)	R14 (14)	R16 (10)	R17 (39)	R19 (35)	R21 (31)	R23 (27)	COM4	R26 (21)	R28 (17)	R30 (13)	R32 (9)	Terminal block
COM	COM	00	02	04	06		09	0B	0D	0F	10	12	14	16		19	1B	1D	1F	PLC I/O

●I/O module(type A) and terminal block ABS-H16◈-PN connection

0V	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	PLC I/O
0V (1, 2)	R1+ (20)	R2+ (18)	R3+ (16)	R4+ (14)	R5+ (12)	R6+ (10)	R7+ (8)	R8+ (6)	R9+ (19)	R10+ (17)	R11+ (15)	R12+ (13)	R13+ (11)	R14+ (9)	R15+ (7)	R16+ (5)	
24VDC (3, 4)	R1- (20)	R2- (18)	R3- (16)	R4- (14)	R5- (12)	R6- (10)	R7- (8)	R8- (6)	R9- (19)	R10- (17)	R11- (15)	R12- (13)	R13- (11)	R14- (9)	R15- (7)	R16- (5)	Terminal block (A)
COM	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	PLC I/O

0V	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F	PLC I/O
0V (1, 2)	R1+ (20)	R2+ (18)	R3+ (16)	R4+ (14)	R5+ (12)	R6+ (10)	R7+ (8)	R8+ (6)	R9+ (19)	R10+ (17)	R11+ (15)	R12+ (13)	R13+ (11)	R14+ (9)	R15+ (7)	R16+ (5)	
24VDC (3, 4)	R1- (20)	R2- (18)	R3- (16)	R4- (14)	R5- (12)	R6- (10)	R7- (8)	R8- (6)	R9- (19)	R10- (17)	R11- (15)	R12- (13)	R13- (11)	R14- (9)	R15- (7)	R16- (5)	Terminal block (B)
COM	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F	PLC I/O

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

▣ Cable selection & Connections

◎LS industrial systems (XGT Series)-Interface terminal block

PLC Item	I/O module		I/O points	I/O	COM		Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model					Type	Model	Qty.	Model	Qty.	
XGT	A	XGI-D24A	32	Input	Com.	+, –	Interface terminal block	AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
								AFS-H20	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
		XGI-D24B	32	Input	+			AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
								AFS-H20	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
		XGI-D28A	64	Input	Com.	+, –		AFS-H40	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
								AFS-H20	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11
		XGI-D28B	64	Input	+			AFS-H40	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
								AFS-H20	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block AFS-H40 connection

	COM	COM	N·C	N·C	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
PLC I/O																					
Terminal block		B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)	
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)		
PLC I/O	COM	COM	N·C	N·C	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	

※1

●I/O module(type A) and terminal block AFS-H20 connection

		COM	※1 COM	7	6	5	4	3	2	1	0	
PLC I/O												
Terminal block (A)		B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)		
PLC I/O	N·C	N·C	15	14	13	12	11	10	9	8		

		COM	※1 COM	23	22	21	20	19	18	17	16	
PLC I/O												
Terminal block (B)		B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)		
PLC I/O	N·C	N·C	31	30	29	28	27	26	25	24		

※**1:** For XGI-D28A, XGI-D28B module, it is N.C.
※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

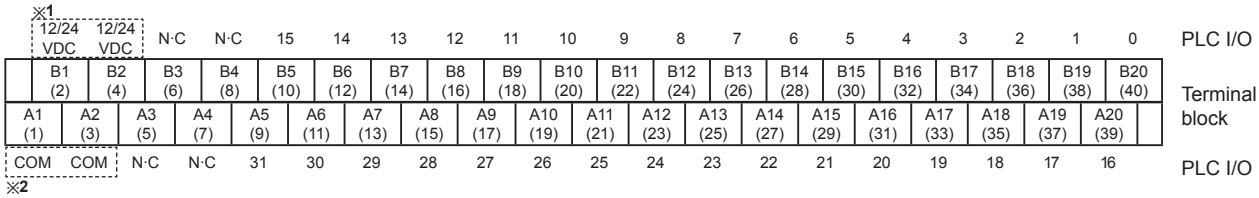
▣ Cable selection & Connections

◎LS industrial systems (XGT Series)-Interface terminal block

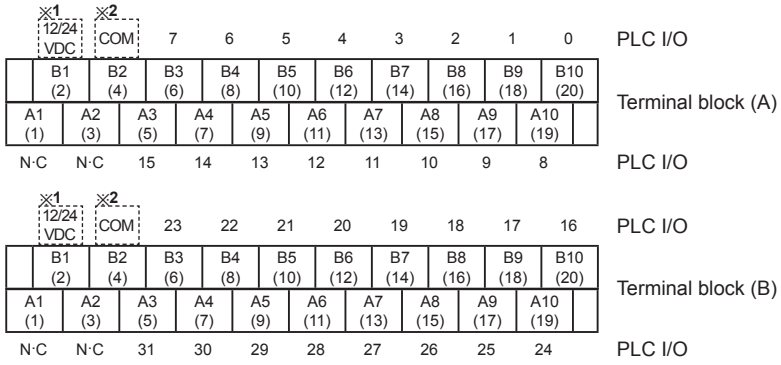
PLC Item	I/O module		I/O points	I/O	COM	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model				Type	Model	Qty.	Model	Qty.	
XGT	A	XGQ-TR4A	32	Output	-	Interface terminal block	AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							AFS-H20	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
		XGQ-TR4B	32	Output	+		AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							AFS-H20	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
		XGQ-TR8A	64	Output	-		AFS-H40	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
							AFS-H20	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11
		XGQ-TR8B	64	Output	+		AFS-H40	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
							AFS-H20	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block AFS-H40 connection



●I/O module(type A) and terminal block AFS-H20 connection



※**1:** For XGQ-TR4B, XGQ-TR8B module, it is COM.
※**2:** For XGQ-TR4B, XGQ-TR8B module, it is 0V.
※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

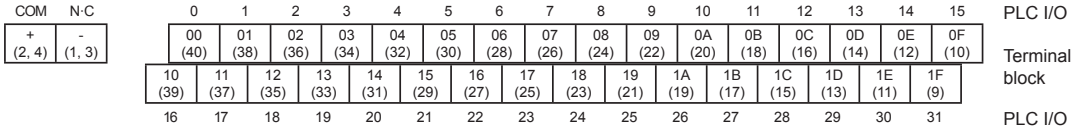
▣ Cable selection & Connections

◎LS industrial systems (XGT Series)-Sensor connector type terminal block

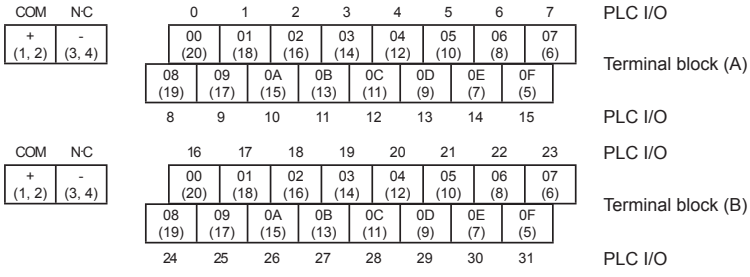
PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM	Applied terminal block Type	Applied terminal block Model	Applied terminal block Qty.	Applied cable Model	Applied cable Qty.	(Note1) Appearance
XGT	A	XGI-D24A, XGI-D24B	32	Input	+	Sensor connector type terminal block	AFE4-H40-32LF	1	CJ-HPFP40-V1N□-1BNR (Ordering No. : FP-3-□)	1	4
	B	XGI-D28A, XGI-D28B	64	Input	+		AFE4-H40-32LF	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
							AFE4-H20-16LF	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11
	C	XGQ-TR4A	32	Output	-		AFE4-H40-32LF	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							AFE4-H20-16LF	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
		XGQ-TR4B	32	Output	+		AFE4-H40-32LF	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							AFE4-H20-16LF	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
		XGQ-TR8A	64	Output	-		AFE4-H40-32LF	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
							AFE4-H20-16LF	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11
		XGQ-TR8B	64	Output	+		AFE4-H40-32LF	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
							AFE4-H20-16LF	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m) The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

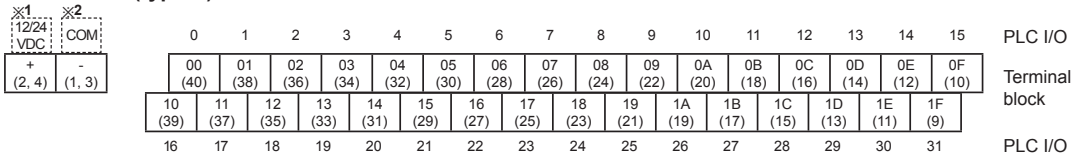
●I/O module(type A, B) and terminal block AFE4-H40-32LF connection



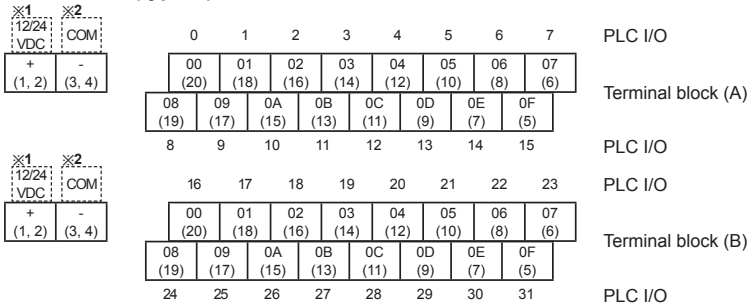
●I/O module(type B) and terminal block AFE4-H20-16LF connection



●I/O module(type C) and terminal block AFE4-H40-32LF connection



●I/O module(type C) and terminal block AFE4-H20-16LF connection



※**1:** For XGQ-TR4B, XGQ-TR8B module, it is COM. ※**2:** For XGQ-TR4B, XGQ-TR8B module, it is 0V.
※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

▣ Cable selection & Connections

◎LS industrial systems (XGT Series)-Relay terminal block

PLC Item	I/O module		I/O points	I/O	COM	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model				Type	Model	Qty.	Model	Qty.	
XGT	A	XGQ-TR4A	32	Output	-	Relay terminal block	ABS-H32◈-NN	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
							ABS-H16◈-NN	2	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	1	10,11
	B	XGQ-TR4B	32	Output	+		ABS-H32◈-PN	1	CJ-HPFP40-V1N□-1APR (Ordering No. : FP-2-□)	1	4
							ABS-H16◈-PN	2	CJ-HPFP40-V2★□-1APR (Ordering No. : FP-12★-□)	1	10,11
	A	XGQ-TR8A	64	Output	-		ABS-H32◈-NN	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
							ABS-H16◈-NN	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11
	B	XGQ-TR8B	64	Output	+		ABS-H32◈-PN	2	CJ-HPFP40-V1N□-1APR (Ordering No. : FP-2-□)	2	4
							ABS-H16◈-PN	4	CJ-HPFP40-V2★□-1APR (Ordering No. : FP-12★-□)	2	10,11

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m) The other cable lengths are option.
※"◈" of relay terminal model is relay type. Two relay types are selectable. [TN:TAKAMISAWA(Fujitsu) NYP, PA: MATSUSHITA(Panasonic) PA]
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block ABS-H32◈-NN connection

12/24 VDC	12/24 VDC		1	3	5	7	8	10	12	14		17	19	21	23	24	26	28	30	PLC I/O
24VDC (2)	24VDC (4)	COM1	R2 (38)	R4 (34)	R6 (30)	R8 (26)	R9 (24)	R11 (20)	R13 (16)	R15 (12)	COM3	R18 (37)	R20 (33)	R22 (29)	R24 (25)	R25 (23)	R27 (19)	R29 (15)	R31 (11)	Terminal block
	0V (1)	0V (3)	R1 (40)	R3 (36)	R5 (32)	R7 (28)	COM2	R10 (22)	R12 (18)	R14 (14)	R16 (10)	R17 (39)	R19 (35)	R21 (31)	R23 (27)	COM4	R26 (21)	R28 (17)	R30 (13)	R32 (9)	
	COM	COM	0	2	4	6		9	11	13	15	16	18	20	22		25	27	29	31	PLC I/O

●I/O module(type A) and terminal block ABS-H16◈-NN connection

12/24 VDC	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	PLC I/O
24VDC (1, 2)	R1+ (20)	R2+ (18)	R3+ (16)	R4+ (14)	R5+ (12)	R6+ (10)	R7+ (8)	R8+ (6)	R9+ (19)	R10+ (17)	R11+ (15)	R12+ (13)	R13+ (11)	R14+ (9)	R15+ (7)	R16+ (5)	Terminal block (A)
0V (3, 4)	R1- (20)	R2- (18)	R3- (16)	R4- (14)	R5- (12)	R6- (10)	R7- (8)	R8- (6)	R9- (19)	R10- (17)	R11- (15)	R12- (13)	R13- (11)	R14- (9)	R15- (7)	R16- (5)	
COM	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	PLC I/O

12/24 VDC	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	PLC I/O
24VDC (1, 2)	R1+ (20)	R2+ (18)	R3+ (16)	R4+ (14)	R5+ (12)	R6+ (10)	R7+ (8)	R8+ (6)	R9+ (19)	R10+ (17)	R11+ (15)	R12+ (13)	R13+ (11)	R14+ (9)	R15+ (7)	R16+ (5)	Terminal block (B)
0V (3, 4)	R1- (20)	R2- (18)	R3- (16)	R4- (14)	R5- (12)	R6- (10)	R7- (8)	R8- (6)	R9- (19)	R10- (17)	R11- (15)	R12- (13)	R13- (11)	R14- (9)	R15- (7)	R16- (5)	
COM	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	PLC I/O

●I/O module(type B) and terminal block ABS-H32◈-PN connection

0V	0V		1	3	5	7	8	10	12	14		17	19	21	23	24	26	28	30	PLC I/O
0V (2)	0V (4)	COM1	R2 (38)	R4 (34)	R6 (30)	R8 (26)	R9 (24)	R11 (20)	R13 (16)	R15 (12)	COM3	R18 (37)	R20 (33)	R22 (29)	R24 (25)	R25 (23)	R27 (19)	R29 (15)	R31 (11)	Terminal block
	24VDC (1)	24VDC (3)	R1 (40)	R3 (36)	R5 (32)	R7 (28)	COM2	R10 (22)	R12 (18)	R14 (14)	R16 (10)	R17 (39)	R19 (35)	R21 (31)	R23 (27)	COM4	R26 (21)	R28 (17)	R30 (13)	R32 (9)	
	COM	COM	0	2	4	6		9	11	13	15	16	18	20	22		25	27	29	31	PLC I/O

●I/O module(type B) and terminal block ABS-H16◈-PN connection

0V	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	PLC I/O
0V (1, 2)	R1+ (20)	R2+ (18)	R3+ (16)	R4+ (14)	R5+ (12)	R6+ (10)	R7+ (8)	R8+ (6)	R9+ (19)	R10+ (17)	R11+ (15)	R12+ (13)	R13+ (11)	R14+ (9)	R15+ (7)	R16+ (5)	Terminal block (A)
24VDC (3, 4)	R1- (20)	R2- (18)	R3- (16)	R4- (14)	R5- (12)	R6- (10)	R7- (8)	R8- (6)	R9- (19)	R10- (17)	R11- (15)	R12- (13)	R13- (11)	R14- (9)	R15- (7)	R16- (5)	
COM	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	PLC I/O

0V	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	PLC I/O
0V (1, 2)	R1+ (20)	R2+ (18)	R3+ (16)	R4+ (14)	R5+ (12)	R6+ (10)	R7+ (8)	R8+ (6)	R9+ (19)	R10+ (17)	R11+ (15)	R12+ (13)	R13+ (11)	R14+ (9)	R15+ (7)	R16+ (5)	Terminal block (B)
24VDC (3, 4)	R1- (20)	R2- (18)	R3- (16)	R4- (14)	R5- (12)	R6- (10)	R7- (8)	R8- (6)	R9- (19)	R10- (17)	R11- (15)	R12- (13)	R13- (11)	R14- (9)	R15- (7)	R16- (5)	
COM	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	PLC I/O

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

▣ Cable selection & Connections

◎Autonics (LP-S044/S070)-Interface terminal block

PLC Item	I/O module		I/O points	I/O	COM	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model				Type	Model	Qty.	Model	Qty.	
LP-S044	A	LP-S044-S1D0-C5R-A, LP-S044-S1D1-C5R-A	16	Mixed (Input)	+	Interface terminal block	AFS-H20	1	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	1	1
	B		16	Mixed (Output)	-						
	C	LP-S044-S1D0-C5R-A, LP-S044-S1D1-C5R-A	16	Mixed (Input)	+		AFS-H40	1	CJ-HPHP40-VY2□-2ANR (Ordering No. : HP-14-□)	1	14
			16	Mixed (Output)	-						
LP-S070	A	LP-S070-T9D6-C5R, LP-S070-T9D7-C5R	16	Mixed (Input)	+		AFS-H20	1	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	1	1
	B		16	Mixed (Output)	-						
	C	LP-S070-T9D6-C5R, LP-S070-T9D7-C5R	16	Mixed (Input)	+		AFS-H40	1	CJ-HPHP40-VF2□-2ANR (Ordering No. : HP-18-□)	1	16
			16	Mixed (Output)	-						

※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block AFS-H20 connection

	X8	X9	XA	XB	XC	XD	XE	XF	COM2	COM4	PLC I/O
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	Terminal block
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	
	X0	X1	X2	X3	X4	X5	X6	X7	C0M1	COM3	PLC I/O

●I/O module(type B) and terminal block AFS-H20 connection

	Y8	Y9	YA	YB	YC	YD	YE	YF	+	-	PLC I/O
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	Terminal block
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	
	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	+	-	PLC I/O

●I/O module(type C) and terminal block AFS-H40 connection

	X8	X9	XA	XB	XC	XD	XE	XF	COM2	COM4	Y8	Y9	YA	YB	YC	YD	YE	YF	+	-	PLC I/O
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)	Terminal block
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)	
	X0	X1	X2	X3	X4	X5	X6	X7	COM1	COM3	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	+	-	PLC I/O

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

▣ Cable selection & Connections

◎Autonics (PMC)-Interface terminal block

PLC Item	I/O module		I/O points	I/O	COM	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model				Type	Model	Qty.	Model	Qty.	
PMC	A	PMC-1HS(PI/F), PMC-2HS(PI/F)	20	I/O	-	Interface terminal block	AFS-H20	1	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	1	1
	B	PMC-2HSP(PI/F), PMC-2HSN(PI/F)	20	I/O	-		AFS-H20	1	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	1	1

※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block AFS-H20 connection

	HOME	X/SCAN Y+	REGSL0/ RUN+/ SCAN X+	REGSL2/ SPD0	REGSL4/ SCAN	MODE 0	X DRIVE/ END	X ERROR	GEX	VEX	PLC signal
	Input	Input	Input	Input	Input	Input	Output	Output	0V	+24V	PLC I/O
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	Terminal block
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	
	Input	Input	Input	Input	Input	Input	Input	Output	Output	0V	PLC I/O
	RESET	STROBE	Y/SCAN Y-	REGSL1/ RUN-/ SCAN X-	REGSL3/ SPD1	REGSL5/ STOP	MODE 1	Y DRIVE/ END	Y ERROR	GEX	PLC signal

●I/O module(type B) and terminal block AFS-H20 connection

	HOME	X/JOG Y+	STEPSL0/ RUN+/ JOG X+	STEPSL2/ SPD0	STEPSL4/ JOG	MODE 0	X DRIVE/ END	X ERROR	GEX	VEX	PLC signal
	Input	Input	Input	Input	Input	Input	Output	Output	0V	+24V	PLC I/O
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	Terminal block
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	
	Input	Input	Input	Input	Input	Input	Input	Output	Output	0V	PLC I/O
	RESET	STROBE	Y/JOG Y-	STEPSL1/ RUN-/ JOG X-	STEPSL3/ SPD1	STEPSL5/ STOP	MODE 1	Y DRIVE/ END	Y ERROR	GEX	PLC signal

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

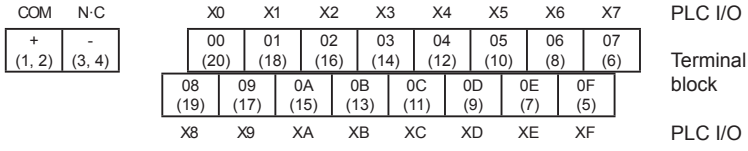
▣ Cable selection & Connections

◎Autonics (LP-S044/S070)-Sensor connector type terminal block, Relay terminal block

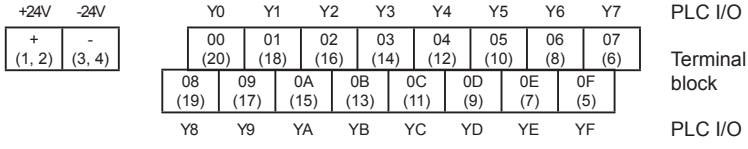
PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM	Applied terminal block Type	Applied terminal block Model	Applied terminal block Qty.	Applied cable Model	Applied cable Qty.	(Note1) Appearance
LP-S044	A	LP-S044-S1D0-C5R-A, LP-S044-S1D1-C5R-A	16	Mixed (Input)	+	Sensor connector type terminal block	AFE4-H20-16LF	1	CJ-HPHP20-V1N□-1BNR (Ordering No. : HP-10-□)	1	1
	B		16	Mixed (Output)	-		AFE4-H20-16LF	1	CJ-HPHP20-V1N□-1APR (Ordering No. : HP-9-□)	1	1
LP-S070	A	LP-S070-T9D6-C5R, LP-S070-T9D7-C5R	16	Mixed (Input)	+		AFE4-H20-16LF	1	CJ-HPHP20-V1N□-1BNR (Ordering No. : HP-10-□)	1	1
	B		16	Mixed (Output)	-		AFE4-H20-16LF	1	CJ-HPHP20-V1N□-1APR (Ordering No. : HP-9-□)	1	1
LP-S044	C	LP-S044-S1D0-C5R-A, LP-S044-S1D1-C5R-A	16	Mixed (Output)	-	Relay terminal block	ABS-H16◈-NN	1	CJ-HPHP20-V1N□-1APR (Ordering No. : HP-9-□)	1	1
LP-S070		LP-S070-T9D6-C5R, LP-S070-T9D7-C5R	16	Mixed (Output)	-		ABS-H16◈-NN	1	CJ-HPHP20-V1N□-1APR (Ordering No. : HP-9-□)	1	1

※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※"◈" of relay terminal model is relay type. Two relay types are selectable. [TN:TAKAMISAWA(Fujitsu) NYP, PA: MATSUSHITA(Panasonic) PA]
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

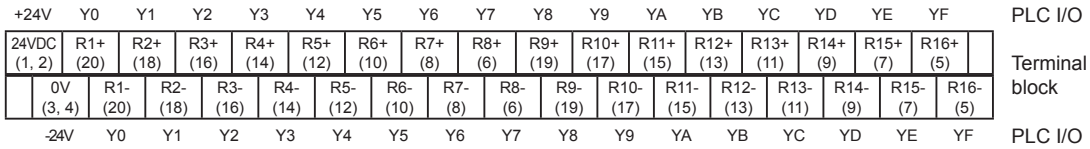
●I/O module(type A) and terminal block AFE4-H20-16LF connection



●I/O module(type B) and terminal block AFE4-H20-16LF connection



●I/O module(type C) and terminal block ABS-H16◈-NN connection



※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

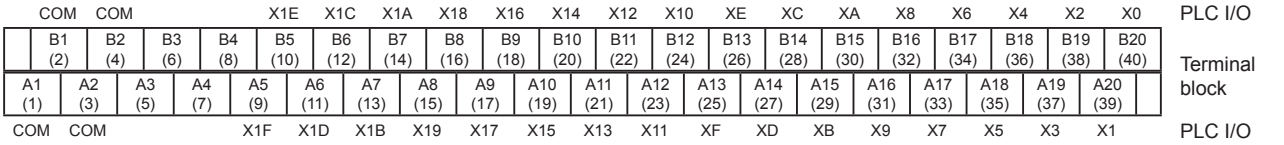
▣ Cable selection & Connections

◎RS Automation (NX700/NX70 Series)-Interface terminal block

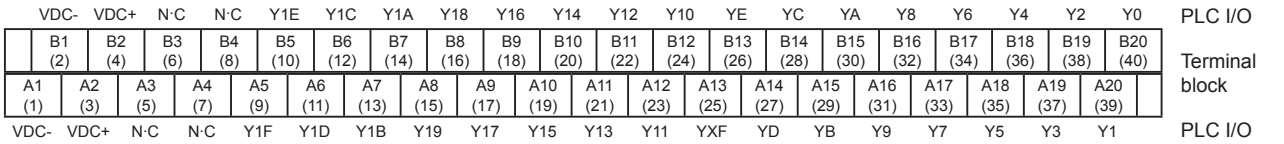
PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM		Applied terminal block Type	Applied terminal block Model	Applied terminal block Qty.	Applied cable Model	Applied cable Qty.	(Note1) Appearance
NX700	A	NX-X32D	32	Input	Com.	+, -	Interface terminal block	AFS-H40	1	CJ-HPHP40-V1N□-1ANL (Ordering No. : HP-1-□)	1	5
	B	NX-Y32T	32	Output	-			AFS-H40	1	CJ-HPHP40-V1N□-1ANL (Ordering No. : HP-1-□)	1	5
		NX-Y64T	64	Output	-			AFS-H40	2	CJ-HPHP40-V1N□-1ANL (Ordering No. : HP-1-□)	2	5
NX70	C	NX70-X32D, NX70-X32D1	16	Input(right)	Com.	+, -		AFS-H20	1	CJ-HPHP20-V1N□-1ANL (Ordering No. : HP-7-□)	1	1
			16	Input(left)				AFS-H20	1	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	1	1
	D	NX70-Y32T	16	Output(right)	-			AFS-H20	1	CJ-HPHP20-V1N□-1ANL (Ordering No. : HP-7-□)	1	1
			16	Output(left)				AFS-H20	1	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	1	1
		NX70-Y32P	16	Output(right)	+			AFS-H20	1	CJ-HPHP20-V1N□-1ANL (Ordering No. : HP-7-□)	1	1
			16	Output(left)				AFS-H20	1	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	1	1
	C	NX70-XY32	16	Mixed(Input)	Com.	+, -		AFS-H20	1	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	1	1
	D		16	Mixed(Output)	-			AFS-H20	1	CJ-HPHP20-V1N□-1ANL (Ordering No. : HP-7-□)	1	1

※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

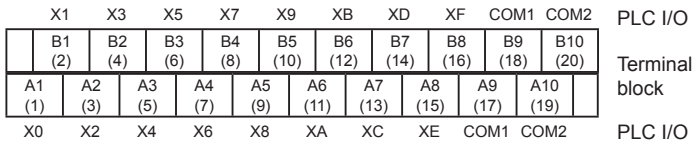
●I/O module(type A) and terminal block AFS-H40 connection



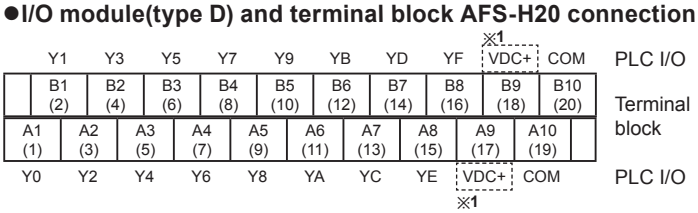
●I/O module(type B) and terminal block AFS-H40 connection



●I/O module(type C) and terminal block AFS-H20 connection



●I/O module(type D) and terminal block AFS-H20 connection



※**1:** For NX70-Y32P module, it is VDC-.
※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

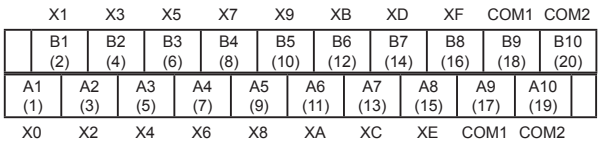
▣ Cable selection & Connections

◎RS Automation (N700/N70 Series)-Interface terminal block

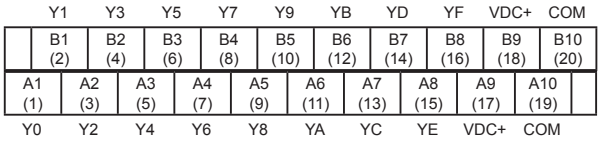
PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM		Applied terminal block Type	Applied terminal block Model	Applied terminal block Qty.	Applied cable Model	Applied cable Qty.	(Note1) Appearance
N700	A	CPL73024	32	Input	Com.	+, -	Interface terminal block	AFS-H20	2	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	2	1
		CPL73027	32	Input(right)	Com.	+, -		AFS-H20	2	CJ-HPHP20-V1N□-1ANL (Ordering No. : HP-7-□)	2	1
			32	Input(left)				AFS-H20	2	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	2	1
	B	CPL73484	32	Output	-			AFS-H20	2	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	2	1
		CPL73487	32	Output(right)	-			AFS-H20	2	CJ-HPHP20-V1N□-1ANL (Ordering No. : HP-7-□)	2	1
			32	Output(left)				AFS-H20	2	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	2	1
N70	C	CPL93024, CPL93034	16	Input(right)	Com.	+, -		AFS-H20	1	CJ-HPHP20-V1N□-1ANL (Ordering No. : HP-7-□)	1	1
			16	Input(left)				AFS-H20	1	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	1	1
	D	CPL93484	16	Output(right)	-			AFS-H20	1	CJ-HPHP20-V1N□-1ANL (Ordering No. : HP-7-□)	1	1
			16	Output(left)				AFS-H20	1	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	1	1
		CPL93584	16	Output(right)	+			AFS-H20	1	CJ-HPHP20-V1N□-1ANL (Ordering No. : HP-7-□)	1	1
			16	Output(left)				AFS-H20	1	CJ-HPHP20-V1N□-2ANR (Ordering No. : HP-11-□)	1	1

※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

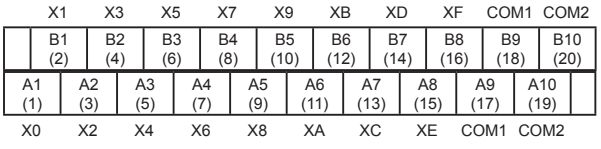
●I/O module(type A) and terminal block AFS-H20 connection



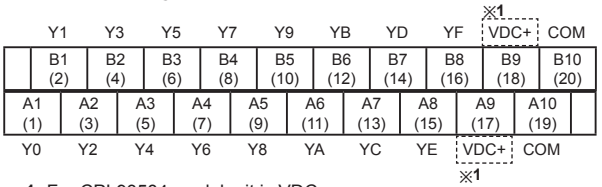
●I/O module(type B) and terminal block AFS-H20 connection



●I/O module(type C) and terminal block AFS-H20 connection



●I/O module(type D) and terminal block AFS-H20 connection



※**1:** For CPL93584 module, it is VDC-.
※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

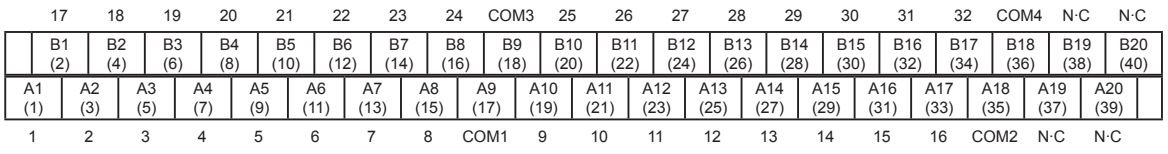
▣ Cable selection & Connections

◎YOKOGAWA (FA-M3 Series)-Interface terminal block

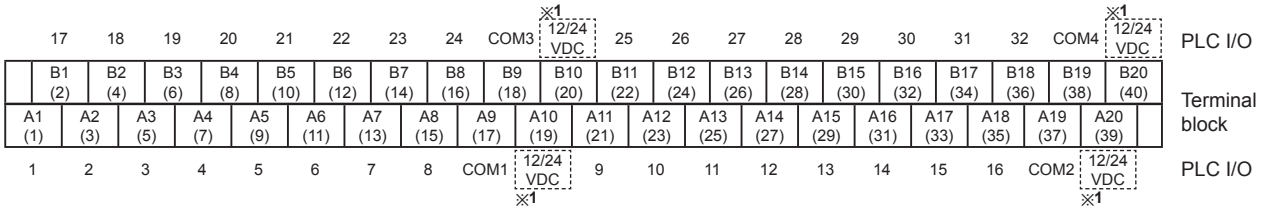
PLC Item	I/O module		I/O points	I/O	COM		Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model					Type	Model	Qty.	Model	Qty.	
FA-M3	A	F3XD32-3F, F3XD32-4F, F3XD32-5F	32	Input	Com.	+, -	Interface terminal block	AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
	A	F3XD32-3N, F3XD32-4N, F3XD32-5N	32	Input	Com.	+, -		AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
	B	F3YD32-1A, F3YD32-1T	32	Output	-			AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
	B	F3YD32-1B	32	Output	+			AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
	A	F3XD64-3F, F3XD64-4F	64	Input	Com.	+, -		AFS-H40	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
	A	F3XD64-3N, F3XD64-4N	64	Input	Com.	+, -		AFS-H40	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
	B	F3YD64-1A, F3YD64-1F	64	Output	-			AFS-H40	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
	A	F3WD64-3F, F3WD64-4F	32	Input	Com.	+, -		AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
	C		32	Output	-			AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
	A	F3WD64-3N, F3WD64-4N	32	Input	Com.	+, -		AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
	C		32	Output	-			AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m) The other cable lengths are option.
※**(Note1)** The related number of **"▣Cable appearance"** at C-83 to 86 pages.

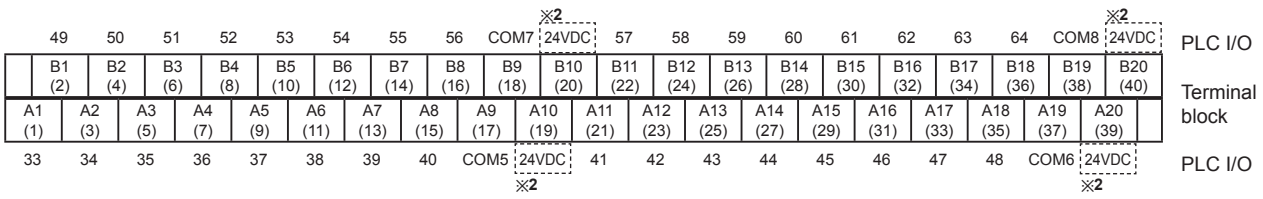
●I/O module(type A) and terminal block AFS-H40 connection



●I/O module(type B) and terminal block AFS-H40 connection



●I/O module(type C) and terminal block AFS-H40 connection



※**1:** For F3YD32-1B module, it is 0V. For F3YD32-1T module, it is 5VDC. For F3YD64-1A, F3YD64-1F module, it is 24VDC.
※**2:** For F3WD64-4F, F3WD64-4N module, it is 12VDC.
※Number of ( ) is connector pin number of terminal block.
※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.

▣ Cable selection & Connections

◎FUJI (MICREX-F Series)-Interface terminal block

PLC Item	I/O module		I/O points	I/O	COM		Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model					Type	Model	Qty.	Model	Qty.	
MICREX -F13	A	FTU127C	32	Input	Com.	+, –	Interface terminal block	AFS-H40	1	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	1	4
	B	FTU227C	32	Output	-			AFS-H40	1	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	1	4
	C	FTU126A FTU125A	32	Input(left)	+			AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
	D		32	Input(right)				AFS-H40	1	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	1	4
MICREX -F70	A	NC1X3202-W	32	Input	Com.	+, –		AFS-H40	1	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	1	4
		NC1X3204, NC1X3206	32	Input	-			AFS-H40	1	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	1	4
	B	NC1Y32T05P1	32	Output	-			AFS-H40	1	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	1	4
	C	NC1X6404	32	Input(left)	+			AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
	D		32	Input(right)				AFS-H40	1	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	1	4

※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)** The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block AFS-H40 connection

	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F	N·C	N·C	N·C	N·C	
PLC I/O	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)	Terminal block
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)	
PLC I/O	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	C1	C1	N·C	N·C	

●I/O module(type B) and terminal block AFS-H40 connection

	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F	N·C	N·C	M1	M1	
PLC I/O	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)	Terminal block
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)	
PLC I/O	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	P	P	N·C	N·C	

●I/O module(type C) and terminal block AFS-H40 connection

	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F	N·C	N·C	N·C	N·C	
PLC I/O	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)	Terminal block
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)	
PLC I/O	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	C1	C1	N·C	N·C	

●I/O module(type D) and terminal block AFS-H40 connection

	30	31	32	33	34	35	36	37	38	39	3A	3B	3C	3D	3E	3F	N·C	N·C	N·C	N·C	
PLC I/O	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)	Terminal block
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)	
PLC I/O	20	21	22	23	24	25	26	27	28	29	2A	2B	2C	2D	2E	2F	C2	C2	N·C	N·C	

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

▣ Cable selection & Connections

◎FUJI (MICREX-F Series)-Interface terminal block

PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM		Applied terminal block Type	Applied terminal block Model	Applied terminal block Qty.	Applied cable Model	Applied cable Qty.	(Note1) Appearance
MICREX -F13	A	FTU222A	32	Output(left)	+		Interface terminal block	AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
	B		32	Output(right)				AFS-H40	1	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	1	4
	C	FTU612A	32	Input	Com.	+, −		AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
	D		32	Output	-			AFS-H40	1	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	1	4
MICREX -F70	A	NC1Y64T05P1-1	32	Output(left)	+			AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
	B		32	Output(right)				AFS-H40	1	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	1	4

※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)** The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block AFS-H40 connection

10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F	N·C	N·C	M1	M1	PLC I/O
B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)	Terminal block
A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)	
00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	P1	P1	N·C	N·C	PLC I/O

●I/O module(type B) and terminal block AFS-H40 connection

30	31	32	33	34	35	36	37	38	39	3A	3B	3C	3D	3E	3F	N·C	N·C	M2	M2	PLC I/O
B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)	Terminal block
A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)	
20	21	22	23	24	25	26	27	28	29	2A	2B	2C	2D	2E	2F	P2	P2	N·C	N·C	PLC I/O

●I/O module(type C) and terminal block AFS-H40 connection

10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F	N·C	N·C	N·C	N·C	PLC I/O
B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)	Terminal block
A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)	
00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	C1	C1	N·C	N·C	PLC I/O

●I/O module(type D) and terminal block AFS-H40 connection

10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F	N·C	N·C	M1	M1	PLC I/O
B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)	Terminal block
A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)	
00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	P1	P1	N·C	N·C	PLC I/O

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

▣ Cable selection & Connections

◎KDT (CIMON_CM1 Series)-Interface terminal block

PLC Item	I/O module		I/O points	I/O	COM		Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model					Type	Model	Qty.	Model	Qty.	
CM1	**A**	XD32C	32	Input	Com.	+, –	Interface terminal block	AFS-H40	1	CJ-HPDS37-V1N□-1ANR (Ordering No. : DS-1-□)	1	3
	B	YT32A	32	Output	+			AFS-H40	1	CJ-HPDS37-V1N□-1ANR (Ordering No. : DS-1-□)	1	3
	C	YT32B	32	Output	-			AFS-H40	1	CJ-HPDS37-V1N□-1ANR (Ordering No. : DS-1-□)	1	3

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block AFS-H40 connection

X01	X03	X05	X07	X08	X0A	X0C	X0E	COM	X11	X13	X15	X17	X18	X1A	X1C	X1E	COM				PLC I/O
B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)		Terminal block
A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)		
X00	X02	X04	X06	COM	X09	X0B	X0D	X0F	X10	X12	X14	X16	COM	X19	X1B	X1D	X1F	N·C			PLC I/O

●I/O module(type B) and terminal block AFS-H40 connection

Y01	Y03	Y05	Y07	Y09	Y0B	Y0D	Y0F	Y11	Y13	Y15	Y17	Y19	Y1B	Y1D	Y1F	COM	0V				PLC I/O
B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)		Terminal block
A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)		
Y00	Y02	Y04	Y06	Y08	Y0A	Y0C	Y0E	Y10	Y12	Y14	Y16	Y18	Y1A	Y1C	Y1E	N·C	COM	0V			PLC I/O

●I/O module(type C) and terminal block AFS-H40 connection

Y01	Y03	Y05	Y07	Y09	Y0B	Y0D	Y0F	Y11	Y13	Y15	Y17	Y19	Y1B	Y1D	Y1F	+24V	COM				PLC I/O
B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)		Terminal block
A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)		
Y00	Y02	Y04	Y06	Y08	Y0A	Y0C	Y0E	Y10	Y12	Y14	Y16	Y18	Y1A	Y1C	Y1E	N·C	+24V	COM			PLC I/O

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

▣ Cable selection & Connections

◎KDT (CIMON_CM1 Series)-Interface terminal block

PLC Item	I/O module		I/O points	I/O	COM		Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model					Type	Model	Qty.	Model	Qty.	
CM1	A	XD64C	64	Input	Com.	+, −	Interface terminal block	AFS-H40	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
								AFS-H20	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11
	B	YT64A	64	Output	+			AFS-H40	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
								AFS-H20	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block AFS-H40 connection

COM	COM	N·C	N·C	X0F	X0E	X0D	X0C	X0B	X0A	X09	X08	X07	X06	X05	X04	X03	X02	X01	X00	PLC I/O
B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)	Terminal block
A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)	
N·C	N·C	N·C	N·C	X1F	X1E	X1D	X1C	X1B	X1A	X19	X18	X17	X16	X15	X14	X13	X12	X11	X10	PLC I/O

●I/O module(type A) and terminal block AFS-H20 connection

COM	N·C	X07	X06	X05	X04	X03	X02	X01	X00	PLC I/O
B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	Terminal block (A)
A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	
N·C	N·C	X0F	X0E	X0D	X0C	X0B	X0A	X09	X08	PLC I/O

COM	N·C	X17	X16	X15	X14	X13	X12	X11	X10	PLC I/O
B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	Terminal block (B)
A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	
N·C	N·C	X1F	X1E	X1D	X1C	X1B	X1A	X19	X18	PLC I/O

●I/O module(type B) and terminal block AFS-H40 connection

COM	COM	N·C	N·C	Y0F	Y0E	Y0D	Y0C	Y0B	Y0A	Y09	Y08	Y07	Y06	Y05	Y04	Y03	Y02	Y01	Y00	PLC I/O
B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)	Terminal block
A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)	
0V	0V	N·C	N·C	Y1F	Y1E	Y1D	Y1C	Y1B	Y1A	Y19	Y18	Y17	Y16	Y15	Y14	Y13	Y12	Y11	Y10	PLC I/O

●I/O module(type B) and terminal block AFS-H20 connection

COM	0V	Y07	Y06	Y05	Y04	Y03	Y02	Y01	Y00	PLC I/O
B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	Terminal block (A)
A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	
N·C	N·C	Y0F	Y0E	Y0D	Y0C	Y0B	Y0A	Y09	Y08	PLC I/O

COM	0V	Y17	Y16	Y15	Y14	Y13	Y12	Y11	Y10	PLC I/O
B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	Terminal block (B)
A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	
N·C	N·C	Y1F	Y1E	Y1D	Y1C	Y1B	Y1A	Y19	Y18	PLC I/O

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

▣ Cable selection & Connections

◎KDT (CIMON_CM1 Series)-Relay terminal block

PLC Item	I/O module		I/O points	I/O	COM	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model				Type	Model	Qty.	Model	Qty.	
CM1	**A**	YT64A	64	Output	+	Relay terminal block	ABS-H32◈-NN	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
							ABS-H16◈-NN	4	CJ-HPFP40-V2★□-1ANR (Ordering No. : FP-11★-□)	2	10,11

※"★" of cable model is cable branch length. (**L** : Long type, **S** : Short type)
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※"◈" of relay terminal model is relay type. Two relay types are selectable. [TN:TAKAMISAWA(Fujitsu) NYP, PA: MATSUSHITA(Panasonic) PA]
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block ABS-H32◈-NN connection

COM	COM		Y01	Y03	Y05	Y07	Y08	Y0A	Y0C	Y0E		Y11	Y13	Y15	Y17	Y18	Y1A	Y1C	Y1E				PLC I/O
24VDC (2)	24VDC (4)	COM1	R2 (38)	R4 (34)	R6 (30)	R8 (26)	R9 (24)	R11 (20)	R13 (16)	R15 (12)	COM3	R18 (37)	R20 (33)	R22 (29)	R24 (25)	R25 (23)	R27 (19)	R29 (15)	R31 (11)				Terminal block
	0V (1)	0V (3)	R1 (40)	R3 (36)	R5 (32)	R7 (28)	COM2	R10 (22)	R12 (18)	R14 (14)	R16 (10)	R17 (39)	R19 (35)	R21 (31)	R23 (27)	COM4	R26 (21)	R28 (17)	R30 (13)	R32 (9)			
0V	0V	Y00	Y02	Y04	Y06		Y09	Y0B	Y0D	Y0F	Y10	Y12	Y14	Y16		Y19	Y1B	Y1D	Y1F				PLC I/O

●I/O module(type A) and terminal block ABS-H16◈-NN connection

COM	Y00	Y01	Y02	Y03	Y04	Y05	Y06	Y07	Y08	Y09	Y0A	Y0B	Y0C	Y0D	Y0E	Y0F		PLC I/O
24VDC (1, 2)	R1+ (20)	R2+ (18)	R3+ (16)	R4+ (14)	R5+ (12)	R6+ (10)	R7+ (8)	R8+ (6)	R9+ (19)	R10+ (17)	R11+ (15)	R12+ (13)	R13+ (11)	R14+ (9)	R15+ (7)	R16+ (5)		Terminal block (A)
0V (3, 4)	R1- (20)	R2- (18)	R3- (16)	R4- (14)	R5- (12)	R6- (10)	R7- (8)	R8- (6)	R9- (19)	R10- (17)	R11- (15)	R12- (13)	R13- (11)	R14- (9)	R15- (7)	R16- (5)		
0V	Y00	Y01	Y02	Y03	Y04	Y05	Y06	Y07	Y08	Y09	Y0A	Y0B	Y0C	Y0D	Y0E	Y0F		PLC I/O

COM	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y1A	Y1B	Y1C	Y1D	Y1E	Y1F		PLC I/O
24VDC (1, 2)	R1+ (20)	R2+ (18)	R3+ (16)	R4+ (14)	R5+ (12)	R6+ (10)	R7+ (8)	R8+ (6)	R9+ (19)	R10+ (17)	R11+ (15)	R12+ (13)	R13+ (11)	R14+ (9)	R15+ (7)	R16+ (5)		Terminal block (B)
0V (3, 4)	R1- (20)	R2- (18)	R3- (16)	R4- (14)	R5- (12)	R6- (10)	R7- (8)	R8- (6)	R9- (19)	R10- (17)	R11- (15)	R12- (13)	R13- (11)	R14- (9)	R15- (7)	R16- (5)		
0V	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y1A	Y1B	Y1C	Y1D	Y1E	Y1F		PLC I/O

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

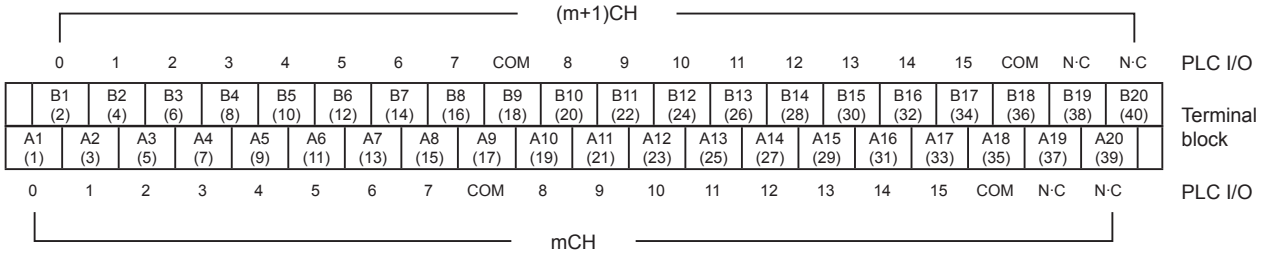
▣ Cable selection & Connections

◎OMRON (C200/C500/CQM1 Series)-Interface terminal block

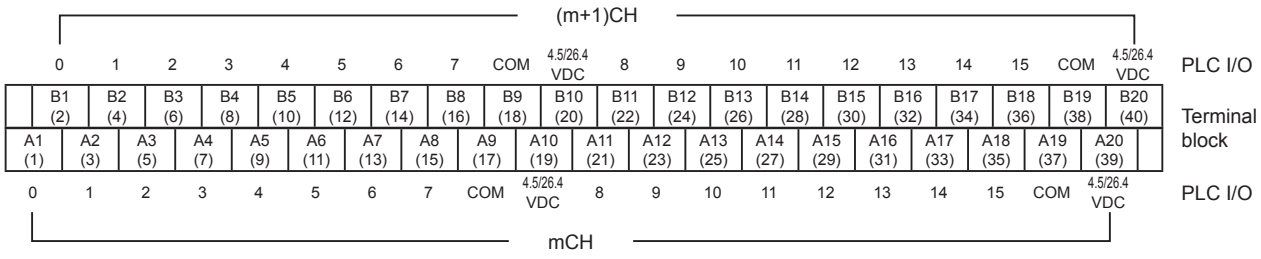
PLC Item	I/O module		I/O points	I/O	COM		Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model					Type	Model	Qty.	Model	Qty.	
C200	A	C200H-ID216	32	Input	+		Interface terminal block	AFS-H40	1	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	1	4
	B	C200H-OD218	32	Output	-			AFS-H40	1	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	1	4
	A	C200H-ID111, C200H-ID217	32	Input(left)	+			AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
			32	Input(right)				AFS-H40	1	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	1	4
	B	C200H-OD219	32	Output(left)	-			AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
			32	Output(right)				AFS-H40	1	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	1	4
C500	A	C500-ID114, C500-ID119	32	Input(left)	Com.	+, −		AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
			32	Input(right)				AFS-H40	1	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	1	4
	B	C500-OD213	32	Output(left)	-			AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
			32	Output(right)				AFS-H40	1	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	1	4
CQM1	A	CQM1-ID213, CQM1-ID112	32	Input	Com.	+, −		AFS-H40	1	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	1	4
	B	CQM1-OD213	32	Output	-			AFS-H40	1	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	1	4

※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block AFS-H40 connection



●I/O module(type B) and terminal block AFS-H40 connection



※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

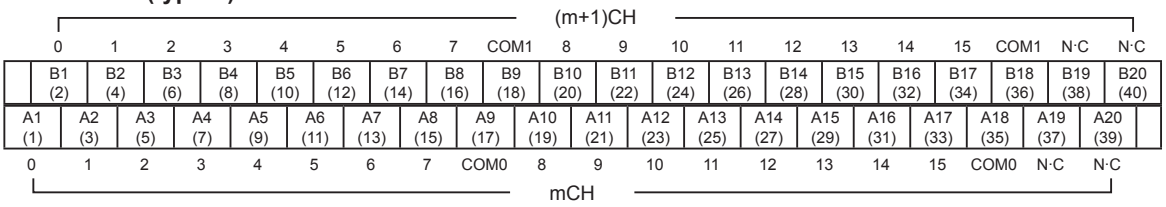
▣ Cable selection & Connections

◎OMRON (CJ1/CS1 Series)-Interface terminal block

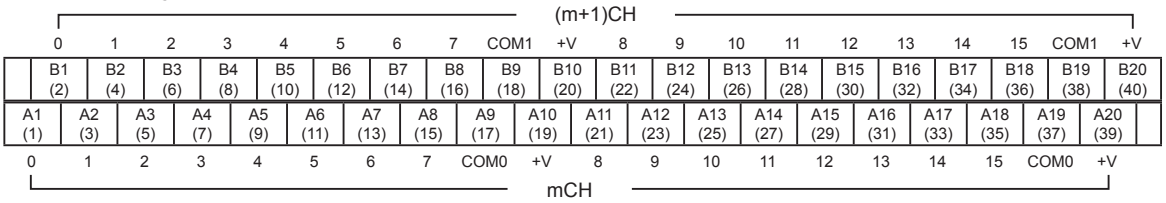
PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM		Applied terminal block Type	Applied terminal block Model	Applied terminal block Qty.	Applied cable Model	Applied cable Qty.	(Note1) Appearance
CJ1	A	CJ1W-ID231	32	Input	Com.	+, −	Interface terminal block	AFS-H40	1	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	1	4
		CJ1W-ID261	32	Input(left)	Com.	+, −		AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
			32	Input(right)				AFS-H40	1	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	1	4
	B	CJ1W-OD231	32	Output	-			AFS-H40	1	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	1	4
		CJ1W-OD261	32	Output(left)	-			AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
			32	Output(right)				AFS-H40	1	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	1	4
CS1	A	CS1W-ID231	32	Input	Com.	+, −		AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
		CS1W-ID261	32	Input(left)	Com.	+, −		AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
			32	Input(right)				AFS-H40	1	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	1	4
	B	CS1W-OD231	32	Output	-			AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
	C	CS1W-OD232	32	Output	+			AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
	B	CS1W-OD261	32	Output(left)	-			AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
			32	Output(right)				AFS-H40	1	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	1	4
	C	CS1W-OD262	32	Output(left)	+			AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
			32	Output(right)				AFS-H40	1	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	1	4

※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

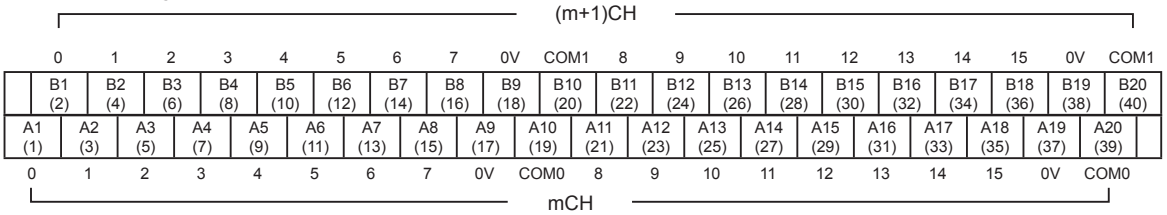
●I/O module(type A) and terminal block AFS-H40 connection



●I/O module(type B) and terminal block AFS-H40 connection



●I/O module(type C) and terminal block AFS-H40 connection



※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

▣ Cable selection & Connections

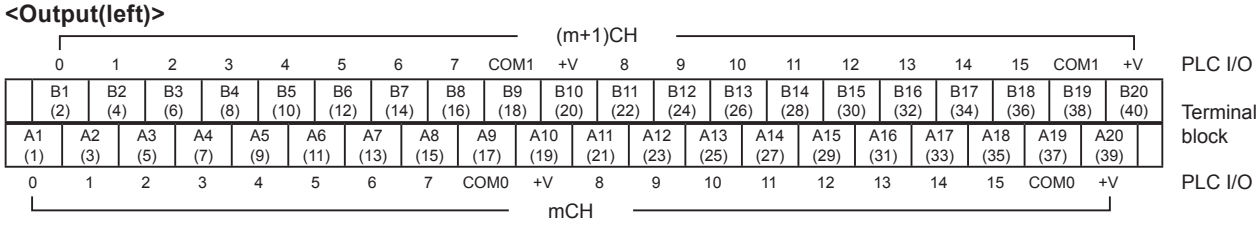
◎**OMRON (CS1 Series)-Interface terminal block**

PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM		Applied terminal block Type	Applied terminal block Model	Applied terminal block Qty.	Applied cable Model	Applied cable Qty.	(Note1) Appearance
CS1	**A**	CS1W-MD261	32	Output(left)	-		Interface terminal block	AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
			32	Input(right)	Com.	+, –		AFS-H40	1	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	1	4
	B	CS1W-MD262	32	Output(left)	+			AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
			32	Input(right)	Com.	+, –		AFS-H40	1	CJ-HPFP40-V1N□-2ANL (Ordering No. : FP-4-□)	1	4

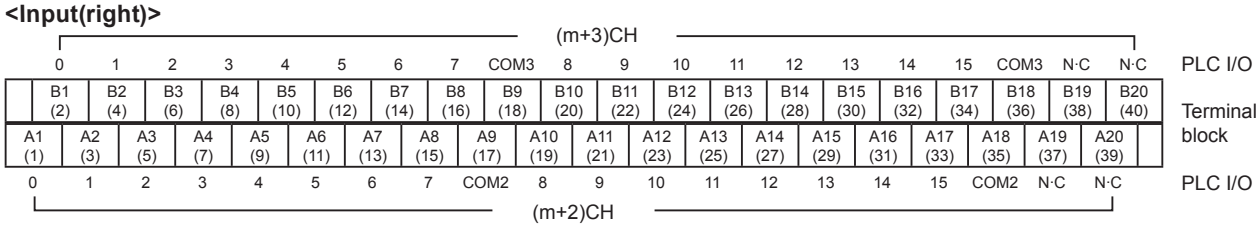
※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block AFS-H40 connection

<Output(left)>

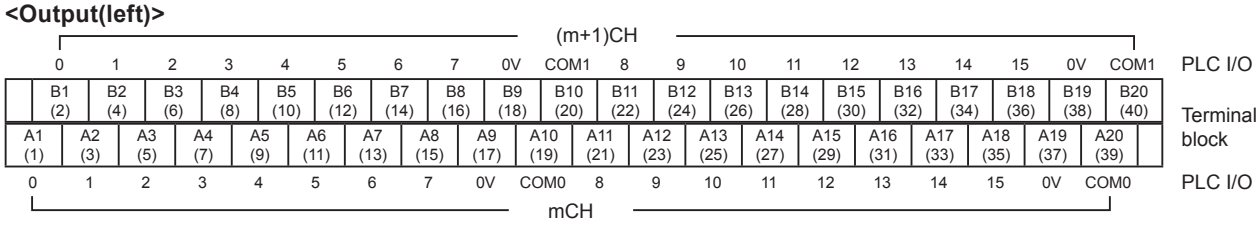


<Input(right)>

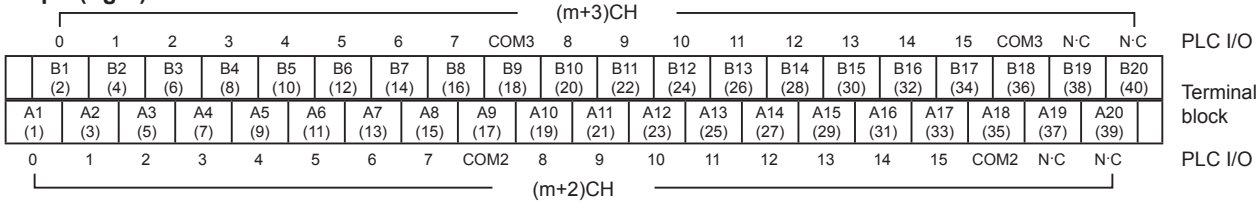


●I/O module(type B) and terminal block AFS-H40 connection

<Output(left)>



<Input(right)>



※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

▣ Cable selection & Connections

◎TELEMECANIQUE (M340/TWIDO)-Interface terminal block

PLC Item	I/O module Type	I/O module Model	I/O points	I/O	COM	Applied terminal block Type	Applied terminal block Model	Applied terminal block Qty.	Applied cable Model	Applied cable Qty.	(Note1) Appearance
M340	A	BMX DDI 3202K	32	Input	-	Interface terminal block	AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
		BMX DDI 6402K	64	Input	-		AFS-H40	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
	B	BMX DDO 3202K	32	Output	+		AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
		BMX DDO 6402K	64	Output	+		AFS-H40	2	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	2	4
	C	BMX DDM 32O2K	32	I/O	-/+		AFS-H40	1	CJ-HPFP40-V1N□-1ANR (Ordering No. : FP-1-□)	1	4
TWIDO	D	TWD DDI 16DK	16	Input	Com. +, −		AFS-H20	1	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	1	1
		TWD DDI 32DK	32	Input	Com. +, −		AFS-H20	2	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	2	1
	E	TWD DDO 16UK	16	Output	-		AFS-H20	1	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	1	1
	F	TWD DDO 16TK	16	Output	+		AFS-H20	1	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	1	1
	E	TWD DDO 32UK	32	Output	-		AFS-H20	2	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	2	1
	F	TWD DDO 32TK	32	Output	+		AFS-H20	2	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	2	1

※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m) The other cable lengths are option.
※**(Note1)** The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block AFS-H40 connection

	SPS2+	SPS2+	I30	I28	I26	I24	I22	I20	I18	I16	SPS1+	SPS1+	I14	I12	I10	I8	I6	I4	I2	I0	
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)	PLC I/O
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)	Terminal block
	SPS1-	SPS1-	I31	I29	I27	I25	I23	I21	I19	I17	SPS1-	SPS1-	I15	I13	I11	I9	I7	I5	I3	I1	PLC I/O

●I/O module(type B) and terminal block AFS-H40 connection

	PPS2+	PPS2+	Q30	Q28	Q26	Q24	Q22	Q20	Q18	Q16	PPS1+	PPS1+	Q14	Q12	Q10	Q8	Q6	Q4	Q2	Q0	
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)	PLC I/O
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)	Terminal block
	PPS2-	PPS2-	Q31	Q29	Q27	Q25	Q23	Q21	Q19	Q17	PPS1-	PPS1-	Q15	Q13	Q11	Q9	Q7	Q5	Q3	Q1	PLC I/O

●I/O module(type C) and terminal block AFS-H40 connection

	PPS+	PPS+	Q30	Q28	Q26	Q24	Q22	Q20	Q18	Q16	SPS+	SPS+	I14	I12	I10	I8	I6	I4	I2	I0	
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	B11 (22)	B12 (24)	B13 (26)	B14 (28)	B15 (30)	B16 (32)	B17 (34)	B18 (36)	B19 (38)	B20 (40)	PLC I/O
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	A11 (21)	A12 (23)	A13 (25)	A14 (27)	A15 (29)	A16 (31)	A17 (33)	A18 (35)	A19 (37)	A20 (39)	Terminal block
	PPS-	PPS-	Q31	Q29	Q27	Q25	Q23	Q21	Q19	Q17	SPS-	SPS-	I15	I13	I11	I9	I7	I5	I3	I1	PLC I/O

●I/O module(type D) and terminal block AFS-H20 connection

	N·C	COM	I7	I6	I5	I4	I3	I2	I1	I0	
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	PLC I/O
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	Terminal block
	N·C	COM	I15	I14	I13	I12	I11	I10	I9	I8	PLC I/O

●I/O module(type E) and terminal block AFS-H20 connection

	+V	COM(-)	Q7	Q6	Q5	Q4	Q3	Q2	Q1	Q0	
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	PLC I/O
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	Terminal block
	+V	COM(-)	Q15	Q14	Q13	Q12	Q11	Q10	Q9	Q8	PLC I/O

●I/O module(type F) and terminal block AFS-H20 connection

	-V	COM(+)	Q7	Q6	Q5	Q4	Q3	Q2	Q1	Q0	
	B1 (2)	B2 (4)	B3 (6)	B4 (8)	B5 (10)	B6 (12)	B7 (14)	B8 (16)	B9 (18)	B10 (20)	PLC I/O
	A1 (1)	A2 (3)	A3 (5)	A4 (7)	A5 (9)	A6 (11)	A7 (13)	A8 (15)	A9 (17)	A10 (19)	Terminal block
	-V	COM(+)	Q15	Q14	Q13	Q12	Q11	Q10	Q9	Q8	PLC I/O

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

▣ Cable selection & Connections

◎TELEMECANIQUE (TWIDO)-Relay terminal block

PLC Item	I/O module		I/O points	I/O	COM	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model				Type	Model	Qty.	Model	Qty.	
TWIDO	**A**	TWD DDO 16UK	16	Output	-	Relay terminal block	ABS-H16◈-NN	1	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	1	1
	B	TWD DDO 16TK	16	Output	+		ABS-H16◈-PN	1	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	1	1
	A	TWD DDO 32UK	32	Output	-		ABS-H16◈-NN	2	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	2	1
	B	TWD DDO 32TK	32	Output	+		ABS-H16◈-PN	2	CJ-HPHP20-V1N□-1ANR (Ordering No. : HP-8-□)	2	1

※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
The other cable lengths are option.
※"◈" of relay terminal model is relay type. Two relay types are selectable. [TN:TAKAMISAWA(Fujitsu) NYP, PA: MATSUSHITA(Panasonic) PA]
※**(Note1)**The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block ABS-H16◈-NN connection

	+V	Q0	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	
PLC I/O																		
Terminal block	24VDC (1, 2)	R1+ (20)	R2+ (18)	R3+ (16)	R4+ (14)	R5+ (12)	R6+ (10)	R7+ (8)	R8+ (6)	R9+ (19)	R10+ (17)	R11+ (15)	R12+ (13)	R13+ (11)	R14+ (9)	R15+ (7)	R16+ (5)	
	0V (3, 4)	R1- (20)	R2- (18)	R3- (16)	R4- (14)	R5- (12)	R6- (10)	R7- (8)	R8- (6)	R9- (19)	R10- (17)	R11- (15)	R12- (13)	R13- (11)	R14- (9)	R15- (7)	R16- (5)	
PLC I/O	COM(-)	Q0	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	

●I/O module(type B) and terminal block ABS-H16◈-PN connection

	-V	Q0	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	
PLC I/O																		
Terminal block	0V (1, 2)	R1+ (20)	R2+ (18)	R3+ (16)	R4+ (14)	R5+ (12)	R6+ (10)	R7+ (8)	R8+ (6)	R9+ (19)	R10+ (17)	R11+ (15)	R12+ (13)	R13+ (11)	R14+ (9)	R15+ (7)	R16+ (5)	
	24VDC (3, 4)	R1- (20)	R2- (18)	R3- (16)	R4- (14)	R5- (12)	R6- (10)	R7- (8)	R8- (6)	R9- (19)	R10- (17)	R11- (15)	R12- (13)	R13- (11)	R14- (9)	R15- (7)	R16- (5)	
PLC I/O	COM(+)	Q0	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.
※Number of ( ) is connector pin number of terminal block.

▣ Cable selection & Connections(SERVO)

◎MITSUBISHI-Interface terminal block

PLC Item	I/O module		I/O	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model		Type	Model	Qty.	Model	Qty.	
MITSUBISHI MR-J4	**A**	MR-J4-□A	CN1	Interface terminal block	AFS-H50	1	CJ-HPMP50-H1N□-1ANR (Ordering No. : MP-3-□)	1	18
MITSUBISHI MR-J3	**A**	MR-J3-□A	CN1		AFS-H50	1	CJ-HPMP50-H1N□-1ANR (Ordering No. : MP-3-□)	1	18
	B	MR-J3-D01	CN10		AFS-H50	1	CJ-HPMP50-H1N□-1ANR (Ordering No. : MP-3-□)	1	18

※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
※**(Note1)** The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block AFS-H50 connection

Module connector pin no.	Applied terminal no.	Signal by control mode					
		Position	Position/ Speed	Speed	Speed/ Torque	Torque	Torque/ Position
1	A1	P15R	P15R	P15R	P15R	P15R	P15R
2	B1		-/VC	VC	VC/VLA	VLA	VLA/-
3	A2	LG	LG	LG	LG	LG	LG
4	B2	LA	LA	LA	LA	LA	LA
5	A3	LAR	LAR	LAR	LAR	LAR	LAR
6	B3	LB	LB	LB	LB	LB	LB
7	A4	LBR	LBR	LBR	LBR	LBR	LBR
8	B4	LZ	LZ	LZ	LZ	LZ	LZ
9	A5	LZR	LZR	LZR	LZR	LZR	LZR
10	B5	PP	PP/-				-/PP
11	A6	PG	PG/-				-/PG
12	B6	OPC	OPC/-				-/OPC
13	A7						
14	B7						
15	A8	SON	SON	SON	SON	SON	SON
16	B8		-/SP2	SP2	SP2/SP2	SP2	SP2/-
17	A9	PC	PC/ST1	ST1	ST1/RS2	RS2	RS2/PC
18	B9	TL	TL/ST2	ST2	ST2/RS1	RS1	RS1/TL
19	A10	RES	RES	RES	RES	RES	RES
20	B10	DICOM	DICOM	DICOM	DICOM	DICOM	DICOM
21	A11	DICOM	DICOM	DICOM	DICOM	DICOM	DICOM
22	B11	INP	INP/SA	SA	SA/-		-/INP
23	A12	ZSP	ZSP	ZSP	ZSP	ZSP	ZSP
24	B12	INP	INP/SA	SA	SA/-		-/INP
25	A13	TLC	TLC	TLC	TLC/VLC	VLC	VLC/TLC
26	B13						
27	A14	TLA	TLA	TLA	TLA/TC	TC	TC/TLA
28	B14	LG	LG	LG	LG	LG	LG
29	A15						
30	B15	LG	LG	LG	LG	LG	LG
31	A16						
32	B16						
33	A17	OP	OP	OP	OP	OP	OP
34	B17	LG	LG	LG	LG	LG	LG
35	A18	NP	NP/-				-/NP
36	B18	NG	NG/-				-/NG
37	A19						
38	B19						
39	A20						
40	B20						
41	A21	CR	CR/SP1	SP1	SP1/SP1	SP1	SP1/CR
42	B21	EM2	EM2	EM2	EM2	EM2	EM2
43	A22	LSP	LSP	LSP	LSP/-		-/LSP
44	B22	LSN	LSN	LSN	LSN/-		-/LSN
45	A23	LOP	LOP	LOP	LOP	LOP	LOP
46	B23	DOCOM	DOCOM	DOCOM	DOCOM	DOCOM	DOCOM
47	A24	DOCOM	DOCOM	DOCOM	DOCOM	DOCOM	DOCOM
48	B24	ALM	ALM	ALM	ALM	ALM	ALM
49	A25	RD	RD	RD	RD	RD	RD
50	B25						

(※1)

●I/O module(type B) and terminal block AFS-H50 connection

Module connector pin no.	Applied terminal no.	Signal	
		Point table	BCD input
1	A1	DI0	POS00
2	B1	DI1	POS01
3	A2	DI2	POS02
4	B2	DI3	POS03
5	A3	DI4	POS10
6	B3	DI5	POS11
7	A4	DI6	POS12
8	B4	DI7	POS13
9	A5		POS20
10	B5		POS21
11	A6		POS22
12	B6		POS23
13	A7	DICOMD	
14	B7	DICOMD	
15	A8		POSP
16	B8		POSN
17	A9		STRB
18	B9		SP0
19	A10		SP1
20	B10		SP2
21	A11	SON	
22	B11	ACD0	
23	A12	ACD1	
24	B12	ACD2	
25	A13	ACD3	
26	B13	RES	
27	A14	TL	
28	B14	TL1	
29	A15	TP	
30	B15	TP1	
31	A16	OVR	
32	B16	MD0	
33	A17	TSTP	
34	B17	PC	
35	A18	ST1	
36	B18	ST2	
37	A19	DOCOMD	
38	B19	MCD00	
39	A20	MCD01	
40	B20	MCD02	
41	A21	MCD03	
42	B21	MCD10	
43	A22	MCD11	
44	B22	MCD12	PRQ1
45	A23	MCD13	PRQ2
46	B23	PUS	
47	A24	MEND	
48	B24	CPO	
49	A25	INP	
50	B25	SD	

※**1:** For MR-J3-□A module, it is EMG.
※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.

▣ Cable selection & Connections(SERVO)

◎**MITSUBISHI-Interface terminal block**

PLC Item	I/O module		I/O	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model		Type	Model	Qty.	Model	Qty.	
MITSUBISHI MR-J4	**A**	MR-J4-□B	CN3	Interface terminal block	AFS-H20	1	CJ-HPMP20-H1N□-1ANR (Ordering No. : MP-1-□)	1	17
MITSUBISHI MR-J3	**B**	MR-J3-□B	CN3		AFS-H20	1	CJ-HPMP20-H1N□-1ANR (Ordering No. : MP-1-□)	1	17
	C	MR-J3-D01	CN20		AFS-H20	1	CJ-HPMP20-H1N□-1ANR (Ordering No. : MP-1-□)	1	17

※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
※**(Note1)** The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A)and terminal block AFS-H20 connection

Module connector pin no.	Applied terminal no.	Signal
1	A1	LG
2	B1	DI1
3	A2	DOCOM
4	B2	MO1
5	A3	DICOM
6	B3	LA
7	A4	LB
8	B4	LZ
9	A5	INP
10	B5	DICOM
11	A6	LG
12	B6	DI2
13	A7	MBR
14	B7	MO2
15	A8	ALM
16	B8	LAR
17	A9	LBR
18	B9	LZR
19	A10	DI3
20	B10	EM2

●I/O module(type B)and terminal block AFS-H20 connection

Module connector pin no.	Applied terminal no.	Signal
1	A1	LG
2	B1	DI2
3	A2	DOCOM
4	B2	MO1
5	A3	DICOM
6	B3	LA
7	A4	LB
8	B4	LZ
9	A5	INP
10	B5	DICOM
11	A6	LG
12	B6	DI3
13	A7	MBR
14	B7	MO2
15	A8	ALM
16	B8	LAR
17	A9	LBR
18	B9	LZR
19	A10	DI1
20	B10	EM1

●I/O module(type C)and terminal block AFS-H20 connection

Module connector pin no.	Applied terminal no.	Signal
1	A1	LG
2	B1	VC
3	A2	
4	B2	MO1
5	A3	
6	B3	
7	A4	
8	B4	
9	A5	LG
10	B5	
11	A6	LG
12	B6	TLA
13	A7	P15R
14	B7	MO2
15	A8	N12R
16	B8	
17	A9	
18	B9	
19	A10	
20	B10	

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.

▣ Cable selection & Connections(SERVO)

◎MITSUBISHI-Interface terminal block

PLC Item	I/O module		I/O	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model		Type	Model	Qty.	Model	Qty.	
MITSUBISHI MR-2S	A	MR-J2S-□A	CN1A	Interface terminal block	AFS-H20	1	CJ-HPMP20-H1N□-3ANR(**Note2**) (Ordering No. : MP-2-□)	1	17
			CN1B		AFS-H20	1	CJ-HPMP20-H1N□-3ANR (Ordering No. : MP-2-□)	1	17

※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
※**(Note1)** The related number of "▣**Cable appearance**" at C-83 to 86 pages.
※**(Note2)** For the positioning unit (FX-10GM), CN1A are not available.

●I/O module(type A) and terminal block AFS-H50 connection

Connector	Module connector pin no.	Applied terminal no.	Signal by control mode					
			Position	Position/ Speed	Speed	Speed/Torque	Torque	Torque/ Position
CN1A	1	B1	LG	LG	LG	LG	LG	LG
	2	A1	NP	NP/-				-/NP
	3	B2	PP	PP/-				-/PR
	4	A2	P15R	P15R/P15R	P15R	P15R	P15R	P15R
	5	B3	LZ	LZ	LZ	LZ	LZ	LZ
	6	A3	LA	LA	LA	LA	LA	LA
	7	B4	LB	LB	LB	LB	LB	LB
	8	A4	CR	CR/SP1	SP1	SP1/SP1	SP1	SP1/CR
	9	B5	COM	COM	COM	COM	COM	COM
	10	A5	SG	SG	SG	SG	SG	SG
	11	B6	OPC	OPC/-				-/OPC
	12	A6	NG	NG/-				-/NG
	13	B7	PG	PG/-				-/PG
	14	A7	OP	OP	OP	OP	OP	OP
	15	B8	LZR	LZR	LZR	LZR	LZR	LZR
	16	A8	LAR	LAR	LAR	LAR	LAR	LAR
	17	B9	LBR	LBR	LBR	LBR	LBR	LBR
	18	A9	INP	INP/SA	SA	SA/-		-/INP
	19	B10	RD	RD	RD	RD	RD	RD
	20	A10	SG	SG	SG	SG	SG	SG
CN1B	1	B1	LG	LG	LG	LG	LG	LG
	2	A1		-/VC	VC	VC/VLA	VLA	VLA/-
	3	B2	VDD	VDD	VDD	VDD	VDD	VDD
	4	A2	DO1	DO1	DO1	DO1	DO1	DO1
	5	B3	SON	SON	SON	SON	SON	SON
	6	A3	TLC	TLC	TLC	TLC/VLC	VLC	VLC/TLC
	7	B4		LOP	SP2	LOP	SP2	LOP
	8	A4	PC	PC/ST1	ST1	ST1/RS2	RS2	RS2/PC
	9	B5	TL	TL/ST2	ST2	ST2/RS1	RS1	RS1/TL
	10	A5	SG	SG	SG	SG	SG	SG
	11	B6	P15R	P15R	P15R	P15R	P15R	P15R
	12	A6	TLA	TLA/TLA	TLA	TLA/TC	TC	TC/TLA
	13	B7	COM	COM	COM	COM	COM	COM
	14	A7	RES	RES	RES	RES	RES	RES
	15	B8	EMG	EMG	EMG	EMG	EMG	EMG
	16	A8	LSP	LSP	LSP	LSP/-		-/LSP
	17	B9	LSN	LSN	LSN	LSN/-		-/LSN
	18	A9	ALM	ALM	ALM	ALM	ALM	ALM
	19	B10	ZSP	ZSP	ZSP	ZSP	ZSP	ZSP
	20	A10	SG	SG	SG	SG	SG	SG

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.

▣ Cable selection & Connections(SERVO)

◎MITSUBISHI-Interface terminal block

PLC Item	I/O module		I/O	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model		Type	Model	Qty.	Model	Qty.	
MITSUBISHI MR-2S	**A**	MR-J2S-□CP	CN1A, CN1B	Interface terminal block	AFS-H20	2	CJ-HPMP20-H1N□-1ANR (Ordering No. : MP-1-□)	2	17
	B	MR-J2S-□CL	CN1A, CN1B		AFS-H20	2	CJ-HPMP20-H1N□-3ANR (Ordering No. : MP-2-□)	2	17

※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
※**(Note1)** The related number of **"▣Cable appearance"** at C-83 to 86 pages.

●I/O module(type A) and terminal block AFS-H20 connection

<CN1A>

Module connector pin no.	Applied terminal no.	Signal
1	A1	LG
2	B1	NP
3	A2	PP
4	B2	P15R
5	A3	
6	B3	
7	A4	
8	B4	DOG
9	A5	COM
10	B5	SG
11	A6	OPC
12	B6	
13	A7	
14	B7	
15	A8	
16	B8	
17	A9	
18	B9	ZP
19	A10	
20	B10	SG

<CN1B>

Module connector pin no.	Applied terminal no.	Signal
1	A1	LG
2	B1	VC
3	A2	VDD
4	B2	CPO
5	A3	D10
6	B3	MEND
7	A4	MD0
8	B4	ST1
9	A5	ST2
10	B5	SG
11	A6	P15R
12	B6	TLA
13	A7	COM
14	B7	DI1
15	A8	SON
16	B8	LSP
17	A9	LSN
18	B9	ALM
19	A10	RD
20	B10	SG

●I/O module(type B) and terminal block AFS-H20 connection

<CN1A>

Module connector pin no.	Applied terminal no.	Signal
1	B1	LG
2	A1	NP
3	B2	PP
4	A2	P15R
5	B3	
6	A3	
7	B4	
8	A4	DOG
9	B5	COM
10	A5	SG
11	B6	OPC
12	A6	
13	B7	
14	A7	
15	B8	
16	A8	
17	B9	
18	A9	ZP
19	B10	SON
20	A10	SG

<CN1B>

Module connector pin no.	Applied terminal no.	Signal
1	B1	LG
2	A1	VC
3	B2	VDD
4	A2	OUT1
5	B3	DI0
6	A3	PED
7	B4	ST1
8	A4	PI1
9	B5	PI2
10	A5	SG
11	B6	P15R
12	A6	TLA
13	B7	COM
14	A7	DI1
15	B8	RST
16	A8	LSP
17	B9	LSN
18	A9	ALM
19	B10	RD
20	A10	SG

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.

▣ Cable selection & Connections(SERVO)

◎YASKAWA-Interface terminal block

PLC Item	I/O module		I/O	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model		Type	Model	Qty.	Model	Qty.	
YASKAWA Σ - V	A	SGDV	CN1	Interface terminal block	AFS-H50	1	CJ-HPMP50-H1N□-1ANR(Note2) (Ordering No. : MP-3-□), CJ-HPMQ50-H1N□-1ANR(Note2) (Ordering No. : MQ-1-□)	1	18/19
YASKAWA Σ - III	B	SGDS	CN1		AFS-H50	1	CJ-HPMP50-H1N□-1ANR(Note2) (Ordering No. : MP-3-□), CJ-HPMQ50-H1N□-1ANR(Note2) (Ordering No. : MQ-1-□)	1	18/19

※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
※**(Note1)** The related number of **"▣Cable appearance"** at C-83 to 86 pages.
※**(Note2)** Select the proper cable after checking one-touch of socket and screw method for SERVO.

●I/O module(type A) and terminal block AFS-H50 connection

Module connector pin no.	Applied terminal no.	Signal
1	A1	SG
2	B1	GND
3	A2	PL1
4	B2	SEN
5	A3	V-REF
6	B3	SG
7	A4	PULS
8	B4	PULS
9	A5	T-REF
10	B5	GND
11	A6	SIGN
12	B6	SIGN
13	A7	PL2
14	B7	CLR
15	A8	CLR
16	B8	-
17	A9	-
18	B9	PL3
19	A10	PCO
20	B10	PCO
21	A11	BAT(+)
22	B11	BAT(-)
23	A12	-
24	B12	-
25	A13	V-CMP+
26	B13	V-CMP-
27	A14	TGON+
28	B14	TGON-
29	A15	S-RDY+
30	B15	S-RDY-
31	A16	ALM+
32	B16	ALM-
33	A17	PAO
34	B17	PAO
35	A18	PBO
36	B18	PBO
37	A19	ALO1
38	B19	ALO2
39	A20	ALO3
40	B20	S-ON
41	A21	P-CON
42	B21	P-OT
43	A22	N-OT
44	B22	ALM-RST
45	A23	P-CL
46	B23	N-CL
47	A24	+24V IN
48	B24	-
49	A25	-
50	B25	-

●I/O module(type B) and terminal block AFS-H50 connection

Module connector pin no.	Applied terminal no.	Signal
1	A1	+24V IN
2	B1	CCW-OT
3	A2	CW-OT
4	B2	HOME
5	A3	EXSTOP+
6	B3	EXSTOP-
7	A4	USER0
8	B4	USER1
9	A5	USER+
10	B5	USER-
11	A6	BRK+
12	B6	BRK-
13	A7	ALM+
14	B7	ALM-
15	A8	MS-G
16	B8	MS-R
17	A9	MS-COM
18	B9	NS-G
19	A10	GND
20	B10	NS-COM
21	A11	ENC_A+
22	B11	ENC_A-
23	A12	ENC_B+
24	B12	ENC_B-
25	A13	ENC_C+
26	B13	ENC_C-
27	A14	
28	B14	
29	A15	
30	B15	
31	A16	
32	B16	
33	A17	
34	B17	
35	A18	
36	B18	
37	A19	
38	B19	
39	A20	
40	B20	
41	A21	
42	B21	
43	A22	
44	B22	
45	A23	
46	B23	
47	A24	
48	B24	
49	A25	
50	B25	

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.

▣ Cable selection & Connections(SERVO)

◎PANASONIC-Interface terminal block

PLC Item	I/O module		I/O	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model		Type	Model	Qty.	Model	Qty.	
PANASONIC MINAS	**A**	A	CN I/F	Interface terminal block	AFS-H50	1	CJ-HPMP50-H1N□-1ANR**(Note2)** (Ordering No. : MP-3-□), CJ-HPMQ50-H1N□-1ANR**(Note2)** (Ordering No. : MQ-1-□)	1	18/19

※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
※**(Note1)** The related number of **"▣Cable appearance"** at C-83 to 86 pages.
※**(Note2)** Select the proper cable after checking one-touch of socket and screw method for SERVO.

●I/O module(type A) and terminal block AFS-H50 connection

Module connector pin no.	Applied terminal no.	Signal by control mode			
		Position	Speed	Torque	Full close
1	A1				
2	B1				
3	A2	PULS1			ULS1
4	B2	PULS2			PULS2
5	A3	SIGN1			SIGN1
6	B3	SIGN2			SIGN2
7	A4	COM+	COM+	COM+	COM+
8	B4	CWL	CWL	CWL	CWL/SMOOTH
9	A5	CCWL	CCWL	CCWL	CCWL/DIV2
10	B5	BRK-OFF-	BRK-OFF-	BRK-OFF-	BRK-OFF-
11	A6	BRK-OFF+	BRK-OFF+	BRK-OFF+	BRK-OFF+
12	B6	ZSP	ZSP	ZSP	ZSP
13	A7	GND	GND	GND	GND
14	B7		SPR/TRQR	SPR/TRQR	SPR/TRQR
15	A8	GND	GND	GND	GND
16	B8		CCWTL/TRQR	CCWTL/TRQR	CCWTL/TRQR
17	A9	GND	GND	GND	GND
18	B9		CWTL	CWTL	CWTL
19	A10	CZ	CZ	CZ	CZ
20	B10				
21	A11	OA+	OA+	OA+	OA+
22	B11	OA-	OA-	OA-	OA-
23	A12	OZ+	OZ+	OZ+	OZ+
24	B12	OZ-	OZ-	OZ-	V
25	A13	GND	GND	GND	GND
26	B13	ZEROSPD	ZEROSPD	ZEROSPD	ZEROSPD
27	A14	GAIN	GAIN	GAIN	GAIN
28	B14	DIV			DIV
29	A15	SRV-ON	SRV-ON	SRV-ON	SRV-ON
30	B15	CL	CL	CL	CL/INTSPD2
31	A16	A-CLR	A-CLR	A-CLR	A-CLR
32	B16	C-MODE	C-MODE	C-MODE	C-MODE
33	A17	INH	INH	INH	INH/INTSPD1/ SC-ERR
34	B17	S-RDY-	S-RDY-	S-RDY-	S-RDY-
35	A18	S-RDY+	S-RDY+	S-RDY+	S-RDY+
36	B18	ALM-	ALM-	ALM-	ALM-
37	A19	ALM+	ALM+	ALM+	ALM+
38	B19	COIN-	COIN-	COIN-	COIN-
39	A20	COIN+	COIN+	COIN+	COIN+
40	B20	TLC	TLC	TLC	TLC
41	A21	COM-	COM-	COM-	COM-
42	B21	IM	IM	IM	IM
43	A22	SP	SP	SP	SP
44	B22	BATT+			BATT+
45	A23	BATT-			BATT-
46	B23				TX+
47	A24				TX-
48	B24	OB+	OB+	OB+	OB+
49	A25	OB-	OB-	OB-	OB-
50	B25	FG	FG	FG	FG

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.

▣ Cable selection & Connections(SERVO)

◎PANASONIC-Interface terminal block

PLC Item	I/O module		I/O	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model		Type	Model	Qty.	Model	Qty.	
PANASONIC MINAS	**A**	A3	CN X5	Interface terminal block	AFS-H50	1	CJ-HPMP50-H1N□-1ANR**(Note2)** (Ordering No. : MP-3-□), CJ-HPMQ50-H1N□-1ANR**(Note2)** (Ordering No. : MQ-1-□)	1	18/19

※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
※**(Note1)** The related number of **"▣Cable appearance"** at C-83 to 86 pages.
※**(Note2)** Select the proper cable after checking one-touch of socket and screw method for SERVO.

●I/O module(type A) and terminal block AFS-H50 connection

Module connector pin no.	Applied terminal no.	Signal by control mode			
		Position	Speed	Torque	Full close
1	A1				
2	B1				
3	A2	PULS1			PULS1
4	B2	PULS2			PULS2
5	A3	SIGN1			SIGN1
6	B3	SIGN2			SIGN2
7	A4	COM+	COM+	COM+	COM+
8	B4	CWL	CWL	CWL	CWL/SMOOTH
9	A5	CCWL	CCWL	CCWL	CCWL/DIV2
10	B5	BRK-.OFF-	BRK-OFF-	BRK-OFF-	BRK-OFF-
11	A6	BRK-OFF+	BRK-OFF+	BRK-OFF+	BRK-OFF+
12	B6	ZSP	ZSP	ZSP	
13	A7	GND	GND	GND	GND
14	B7	SPR/TRQR	SPR/TRQR	SPR/TRQR	SPR/TRQR
15	A8	GND	GND	GND	GND
16	B8	CCWTL/TRQR	CCWTL/TRQR	CCWTL/TRQR	CCWTL/TRQR
17	A9	GND	GND	GND	GND
18	B9	CWTL	CWTL	CWTL	CWTL
19	A10	CZ	CZ	CZ	CZ
20	B10				
21	A11	OA+	OA+	OA+	OA+
22	B11	OA-	OA-	OA-	OA-
23	A12	OZ+	OZ+	OZ+	OZ+
24	B12	OZ-	OZ-	OZ-	OZ-
25	A13	GND	GND	GND	GND
26	B13	ZEROSPD	ZEROSPD	ZEROSPD	ZEROSPD
27	A14	GAIN	GAIN	GAIN	GAIN
28	B14	DIV			DIV
29	A15	SRV-ON	SRV-ON	SRV-ON	SRV-ON
30	B15	CL	CL	CL	CL/INTSPD2
31	A16	A-CLR	A-CLR	A-CLR	A-CLR
32	B16	C-MODE	C-MODE	C-MODE	C-MODE
33	A17	INH	INH	INH	INH/INTSPD1/ SC-ERR
34	B17	S-RDY-	S-RDY-	S-RDY-	S-RDY-
35	A18	S-RDY+	S-RDY+	S-RDY+	S-RDY+
36	B18	ALM-	ALM-	ALM-	ALM-
37	A19	ALM+	ALM+	ALM+	ALM+
38	B19	COIN-	COIN-	COIN-	COIN-
39	A20	COIN+	COIN+	COIN+	COIN+
40	B20	TLC	TLC	TLC	TLC
41	A21	COM-	COM-	COM-	COM-
42	B21	IM	IM	IM	IM
43	A22	SP	SP	SP	SP
44	B22	BATT+	BATT+	BATT+	BATT+
45	A23	BATT-	BATT-	BATT-	BATT-
46	B23				TX+
47	A24				TX-
48	B24	OB+	OB+	OB+	OB+
49	A25	OB-	OB-	OB-	OB-
50	B25	FG	FG	FG	FG

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.

▣ Cable selection & Connections(SERVO)

◎PANASONIC-Interface terminal block

PLC Item	I/O module		I/O	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model		Type	Model	Qty.	Model	Qty.	
PANASONIC MINAS	**A**	A4	CN X5	Interface terminal block	AFS-H50	1	CJ-HPMP50-H1N□-1ANR**(Note2)** (Ordering No. : MP-3-□), CJ-HPMQ50-H1N□-1ANR**(Note2)** (Ordering No. : MQ-1-□)	1	18/19
	B	A4P							

※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
※**(Note1)** The related number of **"▣Cable appearance"** at C-83 to 86 pages.
※**(Note2)** Select the proper cable after checking one-touch of socket and screw method for SERVO.

●I/O module(type A) and terminal block AFS-H50 connection

Module connector pin no.	Applied terminal no.	Signal by control mode			
		Position	Speed	Torque	Full close
1	A1	OPC1			OPC1
2	B1	OPC2			OPC2
3	A2	PULS1			PULS1
4	B2	PULS2			PULS2
5	A3	SIGN1			SIGN1
6	B3	SIGN2			SIGN2
7	A4	COM+	COM+	COM+	COM+
8	B4	CWL	CWL	CWL	CWL
9	A5	CCWL	CCWL	CCWL	CCWL
10	B5	BRKOFF-	BRKOFF-	BRKOFF-	BRKOFF-
11	A6	BRKOFF+	BRKOFF+	BRKOFF+	BRKOFF+
12	B6	ZSP	ZSP	ZSP	ZSP
13	A7	GND			GND
14	B7	SPR/TRQR	SPR/TRQR	SPR/TRQR	SPR/TRQR
15	A8	GND	GND	GND	GND
16	B8	CCWTL/ TRQR	CCWTL/TRQR	CCWTL/TRQR	CCWTL/TRQR
17	A9	GND	GND	GND	GND
18	B9	CWTL	CWTL	CWTL	CWTL
19	A10	CZ	CZ	CZ	CZ
20	B10				
21	A11	OA+	OA+	OA+	OA+
22	B11	OA-	OA-	OA-	OA-
23	A12	OZ+	OZ+	OZ+	OZ+
24	B12	OZ-	OZ-	OZ-	OZ-
25	A13	GND	GND	GND	GND
26	B13	VS-SEL	ZEROSPD	ZEROSPD	VS-SEL
27	A14	GAIN	GAIN	GAIN	
28	B14	DIV	INTSPD3	DIV	DIV
29	A15	SRV-ON	SRV-ON	SRV-ON	SRV-ON
30	B15	CL	INTSPD2	CL	CL
31	A16	A-CLR	A-CLR	A-CLR	A-CLR
32	B16	C-MODE	C-MODE	C-MODE	C-MODE
33	A17	INH	INTSPD1	INH	INH
34	B17	S-RDY-	S-RDY-	S-RDY-	S-RDY-
35	A18	S-RDY+	S-RDY+	S-RDY+	S-RDY+
36	B18	ALM-	ALM-	ALM-	ALM-
37	A19	ALM+	ALM+	ALM+	ALM+
38	B19	COIN-	AT-SPEED-	AT-SPEED-	EX-COIN-
39	A20	COIN+	AT-SPEED+	AT-SPEED+	EX-COIN+
40	B20	TLC	TLC	TLC	TLC
41	A21	COM-	COM-	COM-	COM-
42	B21	IM	IM	IM	IM
43	A22	SP	SP	SP	SP
44	B22	PULSH1			PULSH1
45	A23	PULSH2			PULSH2
46	B23	SIGNH1			SIGNH1
47	A24	SIGNH2			SIGNH2
48	B24	OB+	OB+	OB+	OB+
49	A25	OB-	OB-	OB-	OB-
50	B25	FG	FG	FG	FG

●I/O module(type B) and terminal block AFS-H50 connection

Module connector pin no.	Applied terminal no.	Signal
1	A1	COM+
2	B1	EMG-STP
3	A2	P1IN
4	B2	P2IN
5	A3	P4IN
6	B3	P8IN
7	A4	P16IN
8	B4	P32IN
9	A5	OZ+
10	B5	OZ-
11	A6	OA+
12	B6	OA-
13	A7	OB+
14	B7	OB-
15	A8	ALM
16	B8	CZ
17	A9	COM-
18	B9	FG
19	A10	CCWL
20	B10	CWL
21	A11	Z.LS
22	B11	EX.IN1
23	A12	SRV.ON
24	B12	STB
25	A13	EX-IN2
26	B13	GND
27	A14	COIN/ DCLON
28	B14	BUSY
29	A15	P1OUT
30	B15	P2OUT
31	A16	P4OUT
32	B16	P8OUT
33	A17	P16OUT
34	B17	P32OUT
35	A18	
36	B18	BRK-OFF
37	A19	
38	B19	
39	A20	
40	B20	
41	A21	
42	B21	
43	A22	
44	B22	
45	A23	
46	B23	
47	A24	
48	B24	
49	A25	
50	B25	

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.

▣ Cable selection & Connections(SERVO)

◎YASKAWA-Interface terminal block

PLC Item	I/O module		I/O	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model		Type	Model	Qty.	Model	Qty.	
PANASONIC MINAS	**A**	A5	CN X4	Interface terminal block	AFS-H50	1	CJ-HPMP50-H1N□-1ANR**(Note2)** (Ordering No. : MP-3-□), CJ-HPMQ50-H1N□-1ANR**(Note2)** (Ordering No. : MQ-1-□)	1	18/19

※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
※**(Note1)** The related number of **"▣Cable appearance"** at C-83 to 86 pages.
※**(Note2)** Select the proper cable after checking one-touch of socket and screw method for SERVO.

●I/O module(type A) and terminal block AFS-H50 connection

Module connector pin no.	Applied terminal no.	Signal by control mode			
		Position	Speed	Torque	Full close
1	A1	OPC1			OPC1
2	B1	OPC2			OPC2
3	A2	PULS1			PULS1
4	B2	PULS2			PULS2
5	A3	SIGN1			SIGN1
6	B3	SIGN2			SIGN2
7	A4	COM+	COM+	COM+	COM+
8	B4	NOT	NOT	NOT	NOT
9	A5	POT	POT	POT	POT
10	B5	BRKOFF-	BRKOFF-	BRKOFF-	BRKOFF-
11	A6	BRKOFF+	BRKOFF+	BRKOFF+	BRKOFF+
12	B6	ZSP	ZSP	ZSP	ZSP
13	A7	GND			GND
14	B7	SPR/TRQR/SPL	SPR/TRQR/SPL	SPR/TRQR/SPL	SPR/TRQR/SPL
15	A8	GND	GND	GND	GND
16	B8	P-ATL/TRQR	P-ATL/TRQR	P-ATL/TRQR	P-ATL/TRQR
17	A9	GND	GND	GND	GND
18	B9	N-ATL	N-ATL	N-ATL	N-ATL
19	A10	CZ	CZ	CZ	CZ
20	B10				
21	A11	OA+	OA+	OA+	OA+
22	B11	OA-	OA-	OA-	OA-
23	A12	OZ+	OZ+	OZ+	OZ+
24	B12	OZ-	OZ-	OZ-	OZ-
25	A13	GND	GND	GND	GND
26	B13	VS-SEL1	ZEROSPD	ZEROSPD	VS-SEL1
27	A14	GAIN	GAIN	GAIN	GAIN
28	B14	DIV1	INTSPD3	DIV1	DIV1
29	A15	SRV-ON	SRV-ON	SRV-ON	SRV-ON
30	B15	CL	INTSPD2	CL	CL
31	A16	A-CLR	A-CLR	A-CLR	A-CLR
32	B16	C-MODE	C-MODE	C-MODE	C-MODE
33	A17	INH	INTSPD1	INH	INH
34	B17	S-RDY-	S-RDY-	S-RDY-	S-RDY-
35	A18	S-RDY+	S-RDY+	S-RDY+	S-RDY+
36	B18	ALM-	ALM-	ALM-	ALM-
37	A19	ALM+	ALM+	ALM+	ALM+
38	B19	INP-	AT.SPEED-	AT.SPEED-	INP-
39	A20	INP+	AT.SPEED+	AT.SPEED+	INP+
40	B20	TLC	TLC	TLC	TLC
41	A21	COM-	COM-	COM-	COM-
42	B21	IM	IM	IM	IM
43	A22	SP	SP	SP	SP
44	B22	PULSH1			PULSH1
45	A23	PULSH2			PULSH2
46	B23	SIGN1			SIGN1
47	A24	SIGN2			SIGN2
48	B24	OB+	OB+	OB+	OB+
49	A25	OB-	OB-	OB-	OB-
50	B25	FG	FG	FG	FG

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.

▣ Cable selection & Connections(SERVO)

◎LS Mecapion-Interface terminal block

PLC Item	I/O module		I/O	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model		Type	Model	Qty.	Model	Qty.	
LS Mecapion APD	**A**	APD-VS	CN1	Interface terminal block	AFS-H50	1	CJ-HPMP50-H1N□-1ANR**(Note2)** (Ordering No. : MP-3-□), CJ-HPMQ50-H1N□-1ANR**(Note2)** (Ordering No. : MQ-1-□)	1	18/19

※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
※**(Note1)** The related number of "▣**Cable appearance**" at C-83 to 86 pages.
※**(Note2)** Select the proper cable after checking one-touch of socket and screw method for SERVO.

●I/O module(type A) and terminal block AFS-H50 connection

Module connector pin no.	Applied terminal no.	Signal by control mode					
		Position	Speed/ Position	Speed	Speed/Torque	Torque	Position/Torque
1	A1	TRQLIM	TRQLIM	TRQLIM	TRQLIM/COM	TRQCOM	TRQLIM/COM
2	B1						
3	A2	OPCZO	OPCZO	OPCZO	OPCZO	OPCZO	OPCZO
4	B2	ZO	ZO	ZO	ZO	ZO	ZO
5	A3	/ZO	/ZO	/ZO	/ZO	/ZO	/ZO
6	B3						
7	A4						
8	B4	GND	GND	GND	GND	GND	GND
9	A5	PF+	PF+				PF+
10	B5	PF-	PF-				PF-
11	A6	PR+	PR+				PR+
12	B6	PR-	PR-				PR-
13	A7	PCON	PCON	PCON	PCON		PCON
14	B7	GAIN2	GAIN2	GAIN2	GAIN2		GAIN2
15	A8	PCLEAR	PCLEAR				PCLEAR
16	B8	TLIMIT	TLIMIT	TLIMIT	TLIMIT		TLIMIT
17	A9	ALMRST	ALMRST	ALMRST	ALMRST	ALMRST	ALMRST
18	B9	EMG	EMG	EMG	EMG	EMG	EMG
19	A10	CWLIM	CWLIM	CWLIM	CWLIM	CWLIM	CWLIM
20	B10	CCWLIM	CCWLIM	CCWLIM	CCWLIM	CCWLIM	CCWLIM
21	A11		MODE	SDP3	MODE		MODE
22	B11	EGEAR2	SPD2/ERG2	SDP2	SDP2	SDP2	EGR2/SPD2
23	A12	EGEAR1	SPD1/ERG1	SDP1	SDP1	SDP1	EGR1/SPD1
24	B12	GND24	GND24	GND24	GND24	GND24	GND24
25	A13	GND24	GND24	GND24	GND24	GND24	GND24
26	B13						
27	A14		SPDCOM	SPDCOM	SPDCOM/LIM	SPDLIM	SPDLIM
28	B14	MONIT1	MONIT1	MONIT1	MONIT1	MONIT1	MONIT1
29	A15	MONIT2	MONIT2	MONIT2	MONIT2	MONIT2	MONIT2
30	B15	BO	BO	BO	BO	BO	BO
31	A16	/BO	/BO	/BO	/BO	/BO	/BO
32	B16	AO	AO	AO	AO	AO	AO
33	A17	/AO	/AO	/AO	/AO	/AO	/AO
34	B17						
35	A18						
36	B18	GND	GND	GND	GND	GND	GND
37	A19	GND	GND	GND	GND		GND
38	B19	ALARM+	ALARM+	ALARM+	ALARM+	ALARM+	ALARM+
39	A20	ALARM-	ALARM-	ALARM-	ALARM-	ALARM-	ALARM-
40	B20	RDY+	RDY+	RDY+	RDY+	RDY+	RDY+
41	A21	RDY-	RDY-	RDY-	RDY-	RDY-	RDY-
42	B21	TLOUT	TLOUT	TLOUT	TLOUT	TCONT	TLOUT
43	A22	ZSPD	ZSPD	ZSPD	ZSPD	ZSPD	ZSPD
44	B22	BRAKE	BRAKE	BRAKE	BRAKE	BRAKE	BRAKE
45	A23	INPOS	INSPD/POS	INSPD	INSPD	INSPD	INPOS
46	B23		DIR	DIR	DIR		
47	A24	SVON	SVON	SVON	SVON	SVON	SVON
48	B24		STOP	STOP	STOP	STOP	STOP
49	A25	PULCOM	PULCOM				PULCOM
50	B25	+24V IN	+24V IN	+24V IN	+24V IN	+24V IN	+24V IN

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.

▣ Cable selection & Connections(SERVO)

◎LS Mecapion-Interface terminal block

PLC Item	I/O module		I/O	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model		Type	Model	Qty.	Model	Qty.	
LS Mecapion APD	**A**	APD-VP	CN1	Interface terminal block	AFS-H50	1	CJ-HPMP50-H1N□-1ANR**(Note2)** (Ordering No. : MP-3-□), CJ-HPMQ50-H1N□-1ANR**(Note2)** (Ordering No. : MQ-1-□)	1	18/19

※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
※**(Note1)** The related number of **"▣Cable appearance"** at C-83 to 86 pages.
※**(Note2)** Select the proper cable after checking one-touch of socket and screw method for SERVO.

●I/O module(type A) and terminal block AFS-H50 connection

Module connector pin no.	Applied terminal no.	Signal by control mode				
		Linear coordinates position drive (Drive mode : 1 to 5, 8, 9)	Linear coordinates position drive (Drive mode: 6)	Rotary coordinates position drive	Feeder and sensor-input position drive	Program operation drive
1	A1	GND	GND	GND	GND	GND
2	B1	ZO	ZO	ZO	ZO	ZO
3	A2	/ZO	/ZO	/ZO	/ZO	/ZO
4	B2	MONIT1	MONIT1	MONIT1	MONIT1	MONIT1
5	A3	MONIT2	MONIT2	MONIT2	MONIT2	MONIT2
6	B3	PF+	PF+	PF+		
7	A4	PF-	PF-	PF-		
8	B4	PR+	PR+	PR+		
9	A5	PR-	PR-	PR-		
10	B5	SPD1/DATA2-2	PSEL0	SPD1	SPD1/DATA2-2	
11	A6	P-JOG	P-JOG	P-JOG	P-JOG	P-JOG
12	B6	N-JOG	N-JOG	N-JOG	N-JOG	N-JOG
13	A7	START	START	START	START	AUTO_RUN
14	B7	STOP	STOP	STOP	STOP	STOP
15	A8	ORGIN	ORGIN	ORGIN	SEN1	ORG/HOME
16	B8	DOGIN	DOGIN	DOGIN	SEN2	DOGIN
17	A9	ALMRST	ALMRST	ALMRST	ALMRST	ALMRST
18	B9	EMG	EMG	EMG	EMG	EMG
19	A10	CWLIM	CWLIM	CWLIM	MOVESEL	CWLIM
20	B10	CCWLIM	CCWLIM	CCWLIM	AUTO	CCWLIM
21	A11	MPGEN/DATA2-1	MPGEN	MPGEN	SPD0/DATA2-1	SENSOR
22	B11	SPD2/DATA2-4	PSEL1	SPD2	X/DATA2-4	SPD1
23	A12	SPD3/DATA2-8	SPD1	SPD3	X/DATA2-8	SPD2
24	B12	GND24	GND24	GND24	GND24	GND24
25	A13	GND24	GND24	GND24	GND24	GND24
26	B13					
27	A14	SPDCOM	SPDCOM	SPDCOM	SPDCOM	
28	B14	A-COM	A-COM	A-COM	A-COM	
29	A15	BO	BO	BO	BO	BO
30	B15	/BO	/BO	/BO	/BO	/BO
31	A16	AO	AO	AO	AO	AO
32	B16	/AO	/AO	/AO	/AO	/AO
33	A17	BRAKE	BRAKE	BRAKE/OP4	BRAKE	BRK
34	B17	ORG-OUT	ORG-OUT	ORG-OUT	PITCH	ORG
35	A18	ALARM+	ALARM+	ALARM+	ALARM+	RDY/ALM+
36	B18	ALARM-	ALARM-	ALARM-	ALARM-	RDY/ALM-
37	A19	RDY+	RDY+	RDY+	RDY+	STEP_END+
38	B19	RDY-	RDY-	RDY-	RDY-	STEP_END-
39	A20	INPOS	INPOS	INPOS	INPOS	PROG_END
40	B20	OP1/SEL1	SEL1	OP0	SEL1	RUN
41	A21	OP2/SEL2	SEL2	OP1	SEL2	OUT0
42	B21	OP3/SEL3	SEL3	OP2	SEL3	OUT1
43	A22	OP4/SEL4	SEL4	OP3	SEL4	OUT2
44	B22	PSEL0/DATA1-1	DATA1-1	PSEL0	PSEL0/DATA1-1	STEP_RUN
45	A23	PSEL1/DATA1-2	DATA1-2	PSEL1	PSEL1/DATA1-2	HOLD
46	B23	PSEL2/DATA1-4	DATA1-4	PSEL2	PSEL2/DATA1-4	PROG_0
47	A24	PSEL3/DATA1-8	DATA1-8	PSEL3	PSEL3/DATA1-8	PROG_1
48	B24	PSEL4/READEN	READEN	PSEL4	READEN	PROG_2
49	A25	SVON	SVON	SVON	SVON	SVON
50	B25	+24V IN	+24V IN	+24V IN	+24V IN	+24V IN

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.

▣ Cable selection & Connections(SERVO)

◎LS Mecapion-Interface terminal block

PLC Item	I/O module		I/O	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model		Type	Model	Qty.	Model	Qty.	
LS Mecapion APD	**A**	APD-VN	CN1	Interface terminal block	AFS-H50	1	CJ-HPMP50-H1N□-1ANR**(Note2)** (Ordering No. : MP-3-□), CJ-HPMQ50-H1N□-1ANR**(Note2)** (Ordering No. : MQ-1-□)	1	18/19

※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
※**(Note1)** The related number of "▣**Cable appearance**" at C-83 to 86 pages.
※**(Note2)** Select the proper cable after checking one-touch of socket and screw method for SERVO.

●I/O module(type A) and terminal block AFS-H50 connection

Module connector pin no.	Applied terminal no.	Signal by control mode					
		Position	Speed/Position	Speed	Speed/Torque	Torque	Position/Torque
1	A1	PF+	PF+				PF+
2	B1	PF-	PF-				PF-
3	A2	PR+	PR+				PR+
4	B2	PR-	PR-				PR-
5	A3	+15V	+15V	+15V	+15V	+15V	+15V
6	B3	-15V	-15V	-15V	-15V	-15V	-15V
7	A4	GND	GND	GND	GND	GND	GND
8	B4	TRQLIM	TRQLIM	TRQLIM	TRQLIM/TRQCOM	TRQCOM	TRQLIM/TRQCOM
9	A5		SPDCOM	SPDCOM	SPDCOM/SPDLIM	SPDLIM	SPDLIM
10	B5						
11	A6	ALARM+	ALARM+	ALARM+	ALARM+	ALARM+	ALARM+
12	B6	ALARM-	ALARM-	ALARM-	ALARM-	ALARM-	ALARM-
13	A7	INPOS+	INSPD+/NPOS+	INSPD+	INSPD+	INSPD+	INSPD+
14	B7	INPOS-	INSPD-/NPOS-	INSPD-	INSPD-	INSPD-	INSPD-
15	A8	RDY/BRK/TLO+	RDY/BRK/TLO+	RDY/BRK/TLO+	RDY/BRK/TLO+	RDY/BRK/TLO+	RDY/BRK/TLO+
16	B8	RDY/BRK/TLO-	RDY/BRK/TLO-	RDY/BRK/TLO-	RDY/BRK/TLO-	RDY/BRK/TLO-	RDY/BRK/TLO-
17	A9	EGEAR2	SPD2/EGEAR2	SPD2	SPD2	SPD2	EGEAR2/SPD2
18	B9	EGEAR1	SPD1/EGEAR1	SPD1	SPD1	SPD1	EGEAR1/SPD1
19	A10	ZO	ZO	ZO	ZO	ZO	ZO
20	B10	/ZO	/ZO	/ZO	/ZO	/ZO	/ZO
21	A11	AO	AO	AO	AO	AO	AO
22	B11	/AO	/AO	/AO	/AO	/AO	/AO
23	A12	BO	BO	BO	BO	BO	BO
24	B12	/BO	BO	/BO	/BO	/BO	/BO
25	A13	MONIT1	MONIT1	MONIT1	MONIT1	MONIT1	MONIT1
26	B13	MONIT2	MONIT2	MONIT2	MONIT2	MONIT2	MONIT2
27	A14	GND	GND	GND	GND	GND	GND
28	B14	TRQLIM	MODE	TRQLIM	MODE		MODE
29	A15	PULCOM	PULCOM				PULCOM
30	B15	SVON	SVON	SVON	SVON	SVON	SVON
31	A16	CCWLIM	CCWLIM	CCWLIM	CCWLIM	CCWLIM	CCWLIM
32	B16	CWLIM	CWLIM	CWLIM	CWLIM	CWLIM	CWLIM
33	A17	ALMRST	ALMRST	ALMRST	ALMRST	ALMRST	ALMRST
34	B17		DIR	DIR	DIR	DIR	
35	A18	PCLR	STOP/PCLR	STOP	STOP/TCLR	TCLR	PCLR/TCLR
36	B18	+24V IN	+24V IN	+24V IN	+24V IN	+24V IN	+24V IN
37	A19						
38	B19						
39	A20						
40	B20						
41	A21						
42	B21						
43	A22						
44	B22						
45	A23						
46	B23						
47	A24						
48	B24						
49	A25						
50	B25						

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.

▣ Cable selection & Connections(SERVO)

◎LS Mecapion-Interface terminal block

PLC Item	I/O module		I/O	Applied terminal block			Applied cable		(Note1) Appearance
	Type	Model		Type	Model	Qty.	Model	Qty.	
LS Mecapion APD	**A**	APD-L7	CN1	Interface terminal block	AFS-H50	1	CJ-HPMP50-H1N□-1ANR(Note2) (Ordering No. : MP-3-□), CJ-HPMQ50-H1N□-1ANR(Note2) (Ordering No. : MQ-1-□)	1	18/19

※"□" of cable model is cable length.(Standard specifications ☞ **005**: 0.5m, **010**: 1.0m, **015**: 1.5m, **020**: 2.0m)
※**(Note1)** The related number of "▣**Cable appearance**" at C-83 to 86 pages.
※**(Note2)** Select the proper cable after checking one-touch of socket and screw method for SERVO.

●I/O module(type A) and terminal block AFS-H50 connection

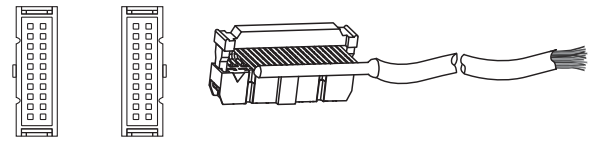
Module connector pin no.	Applied terminal no.	Signal by control mode					
		Position	Speed/ Position	Speed	Speed/ Torque	Torque	Position/ Torque
1	A1	TRQCOM	TRQCOM	TRQCOM	TRQCOM	TRQCOM	TRQCOM
2	B1						
3	A2						
4	B2	ZO	ZO	ZO	ZO	ZO	ZO
5	A3	/ZO	/ZO	/ZO	/ZO	/ZO	/ZO
6	B3						
7	A4						
8	B4	GND	GND	GND	GND	GND	GND
9	A5	PF+	PF+				PF+
10	B5	PF-	PF-				PF-
11	A6	PR+	PR+				PR+
12	B6	PR-	PR-				PR-
13	A7						
14	B7	ALO2	ALO2	ALO2	ALO2	ALO2	ALO2
15	A8	ALO1	ALO1	ALO1	ALO1	ALO1	ALO1
16	B8	ALO0	ALO0	ALO0	ALO0	ALO0	ALO0
17	A9	ALMRST	ALMRST	ALMRST	ALMRST	ALMRST	ALMRST
18	B9	EMG	EMG	EMG	EMG	EMG	EMG
19	A10	CWLIM	CWLIM	CWLIM	CWLIM	CWLIM	CWLIM
20	B10	CCWLIM	CCWLIM	CCWLIM	CCWLIM	CCWLIM	CCWLIM
21	A11	SPD3	SPD3	SPD3	SPD3	SPD3	SPD3
22	B11	SPD2	SPD2	SPD2	SPD2	SPD2	SPD2
23	A12	SPD1	SPD1	SPD1	SPD1	SPD1	SPD1
24	B12	GND24	GND24	GND24	GND24	GND24	GND24
25	A13	GND24	GND24	GND24	GND24	GND24	GND24
26	B13						
27	A14		SPDCOM	SPDCOM	SPDCOM	SPDCOM	SPDCOM
28	B14	MONIT1	MONIT1	MONIT1	MONIT1	MONIT1	MONIT1
29	A15	MONIT2	MONIT2	MONIT2	MONIT2	MONIT2	MONIT2
30	B15	BO	BO	BO	BO	BO	BO
31	A16	/BO	/BO	/BO	/BO	/BO	/BO
32	B16	AO	AO	AO	AO	AO	AO
33	A17	/AO	/AO	/AO	/AO	/AO	/AO
34	B17	+12VA	+12VA	+12VA	+12VA	+12VA	+12VA
35	A18	-12VA	-12VA	-12VA	-12VA	-12VA	-12VA
36	B18	SG	SG	SG	SG	SG	SG
37	A19	GND	GND	GND	GND	GND	GND
38	B19	ALARM+	ALARM+	ALARM+	ALARM+	ALARM+	ALARM+
39	A20	ALARM-	ALARM-	ALARM-	ALARM-	ALARM-	ALARM-
40	B20	READY+	READY+	READY+	READY+	READY+	READY+
41	A21	READY-	READY-	READY-	READY-	READY-	READY-
42	B21						
43	A22	ZSPD	ZSPD	ZSPD	ZSPD	ZSPD	ZSPD
44	B22	BRAKE	BRAKE	BRAKE	BRAKE	BRAKE	BRAKE
45	A23	INPOS	INPOS	INPOS	INPOS	INPOS	INPOS
46	B23	DIR	DIR	DIR	DIR	DIR	DIR
47	A24	SVON	SVON	SVON	SVON	SVON	SVON
48	B24	STOP	STOP	STOP	STOP	STOP	STOP
49	A25	PULCOM	PULCOM				PULCOM
50	B25	+24V IN	+24V IN	+24V IN	+24V IN	+24V IN	+24V IN

※This connections are only for reference. You must check the power and I/O arrangement of the PLC manufacture before wiring it.

▣ Color table for OPEN type cable

1)Hirose, 3M 20-pin connector insulator color

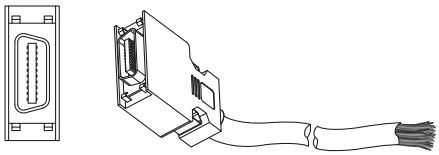
●**CJ-HP20-VP□-R, CJ-HP20-VP□-L**



< L direction > < R direction >

Connector pin no.	Insulator color	Mark point color	Number of mark points
1	Yellow	Black	1EA
2	Yellow	Red	1EA
3	Yellow	Black	2EA
4	Yellow	Red	2EA
5	Yellow	Black	3EA
6	Yellow	Red	3EA
7	Yellow	Black	4EA
8	Yellow	Red	4EA
9	Yellow	Black	5EA
10	Yellow	Red	5EA

●**CJ-MP20-HP-R**



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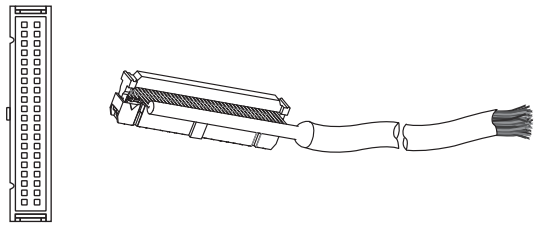
Connector pin no.	Insulator color	Mark point color	Number of mark points
11	White	Black	1EA
12	White	Red	1EA
13	White	Black	2EA
14	White	Red	2EA
15	White	Black	3EA
16	White	Red	3EA
17	White	Black	4EA
18	White	Red	4EA
19	White	Black	5EA
20	White	Red	5EA

2)Hirose, Fujitsu 40-pin connector insulator color

●**CJ-HP40-VP□-L**



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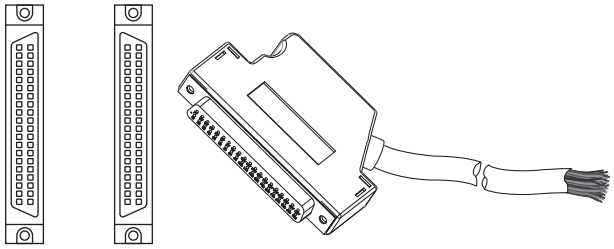
Connector pin no.	Insulator color	Mark point color	Number of mark points
1	Orange	Black	1EA
2	Orange	Red	1EA
3	Orange	Black	2EA
4	Orange	Red	2EA
5	Orange	Black	3EA
6	Orange	Red	3EA
7	Orange	Black	4EA
8	Orange	Red	4EA
9	Yellow	Black	1EA
10	Yellow	Red	1EA
11	Yellow	Black	2EA
12	Yellow	Red	2EA
13	Yellow	Black	3EA
14	Yellow	Red	3EA
15	Yellow	Black	4EA
16	Yellow	Red	4EA
17	White	Black	1EA
18	White	Red	1EA
19	White	Black	2EA
20	White	Red	2EA

●**CJ-FP40-VP□-R, CJ-FP40-VP□-L**



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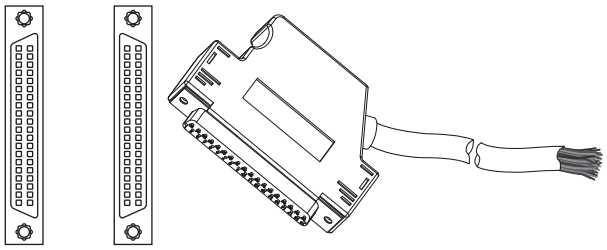
Connector pin no.	Insulator color	Mark point color	Number of mark points
21	White	Black	3EA
22	White	Red	3EA
23	White	Black	4EA
24	White	Red	4EA
25	Gray	Black	1EA
26	Gray	Red	1EA
27	Gray	Black	2EA
28	Gray	Red	2EA
29	Gray	Black	3EA
30	Gray	Red	3EA
31	Gray	Black	4EA
32	Gray	Red	4EA
33	Pink	Black	1EA
34	Pink	Red	1EA
35	Pink	Black	2EA
36	Pink	Red	2EA
37	Pink	Black	3EA
38	Pink	Red	3EA
39	Pink	Black	4EA
40	Pink	Red	4EA

▣ Color table for OPEN type cable

3)D-Sub 37-pin connector insulator color

●CJ-DP37-VP□-R, CJ-DP37-VP□-L



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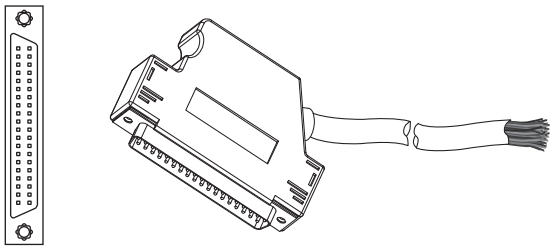
Connector pin no.	Insulator color	Mark point color	Number of mark points
1	Orange	Black	1EA
2	Yellow	Black	1EA
3	White	Black	1EA
4	Gray	Black	1EA
5	Pink	Black	1EA
6	Orange	Black	2EA
7	Yellow	Black	2EA
8	White	Black	2EA
9	Gray	Black	2EA
10	Pink	Black	2EA
11	Orange	Black	3EA
12	Yellow	Black	3EA
13	White	Black	3EA
14	Gray	Black	3EA
15	Pink	Black	3EA
16	Orange	Black	4EA
17	Yellow	Black	4EA
18	White	Black	4EA
19	Gray	Black	4EA
20	Orange	Red	1EA

●CJ-DS37-VP□-R



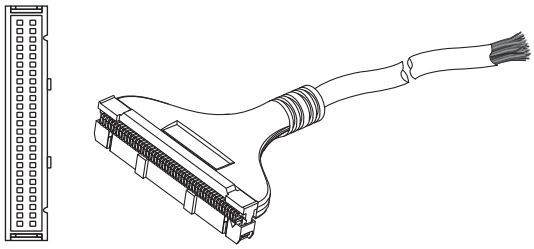
< R direction >

Connector pin no.	Insulator color	Mark point color	Number of mark points
21	Yellow	Red	1EA
22	White	Red	1EA
23	Gray	Red	1EA
24	Pink	Red	1EA
25	Orange	Red	2EA
26	Yellow	Red	2EA
27	White	Red	2EA
28	Gray	Red	2EA
29	Pink	Red	2EA
30	Orange	Red	3EA
31	Yellow	Red	3EA
32	White	Red	3EA
33	Gray	Red	3EA
34	Pink	Red	3EA
35	Orange	Red	4EA
36	Yellow	Red	4EA
37	White	Red	4EA

▣ Color table for OPEN type cable

4)Hirose, 3M 50-pin connector insulator color

●CJ-HP50-HP□-R



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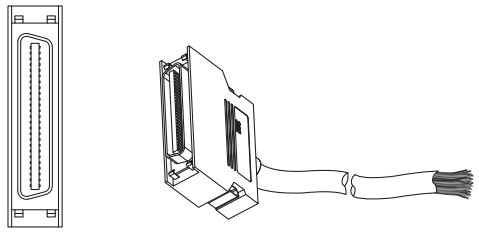
Connector pin no.	Insulator color	Mark point color	Number of mark points
1	Orange	Black	1EA
2	Orange	Red	1EA
3	Orange	Black	2EA
4	Orange	Red	2EA
5	Orange	Black	3EA
6	Orange	Red	3EA
7	Orange	Black	4EA
8	Orange	Red	4EA
9	Orange	Black	5EA
10	Orange	Red	5EA
11	Yellow	Black	1EA
12	Yellow	Red	1EA
13	Yellow	Black	2EA
14	Yellow	Red	2EA
15	Yellow	Black	3EA
16	Yellow	Red	3EA
17	Yellow	Black	4EA
18	Yellow	Red	4EA
19	Yellow	Black	5EA
20	Yellow	Red	5EA
21	White	Black	1EA
22	White	Red	1EA
23	White	Black	2EA
24	White	Red	2EA
25	White	Black	3EA

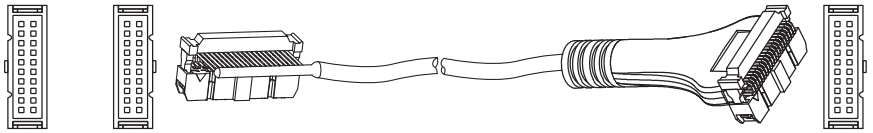
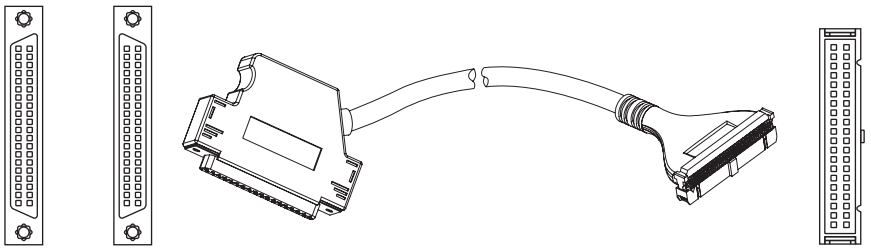
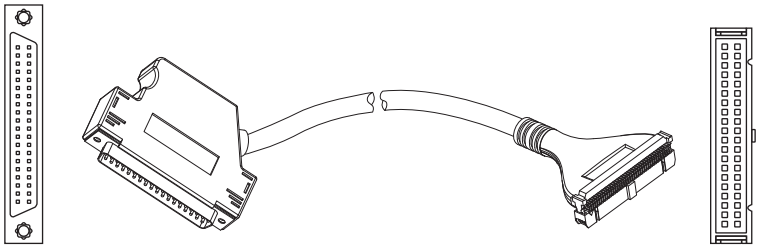
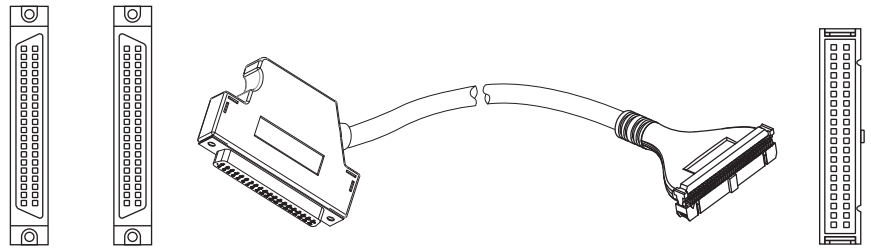
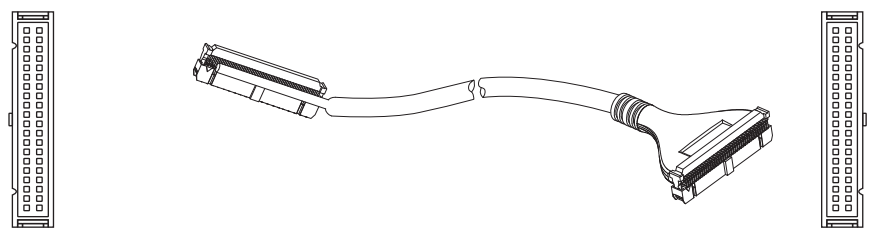
●CJ-MP50-HP□-R



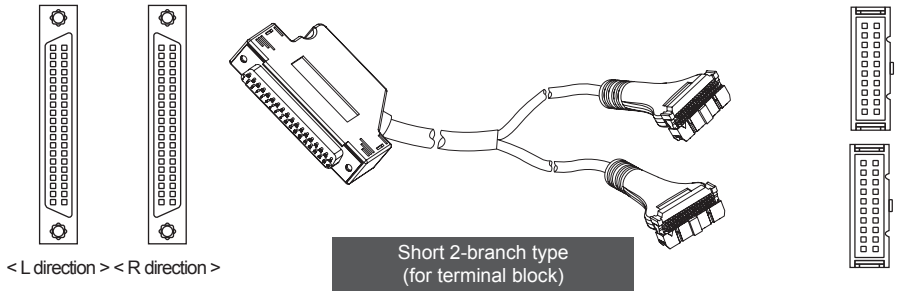
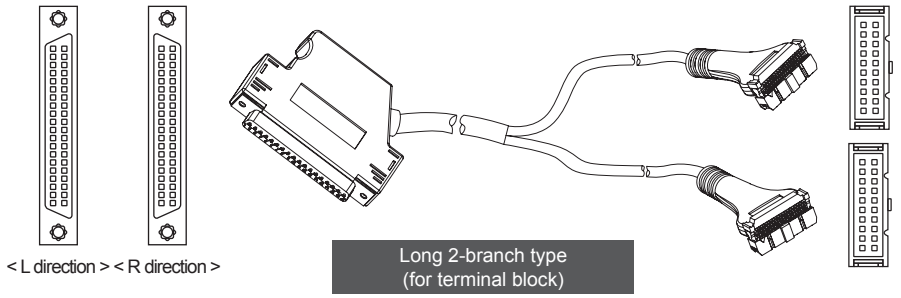
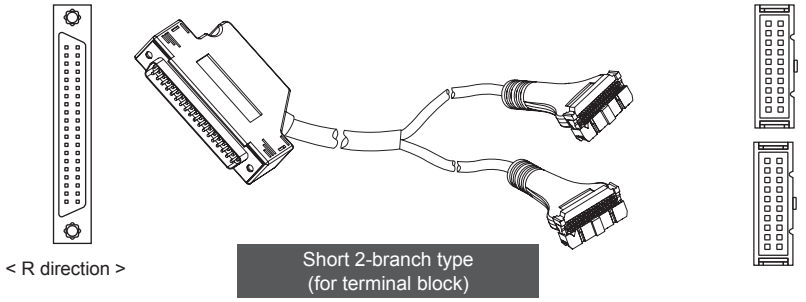
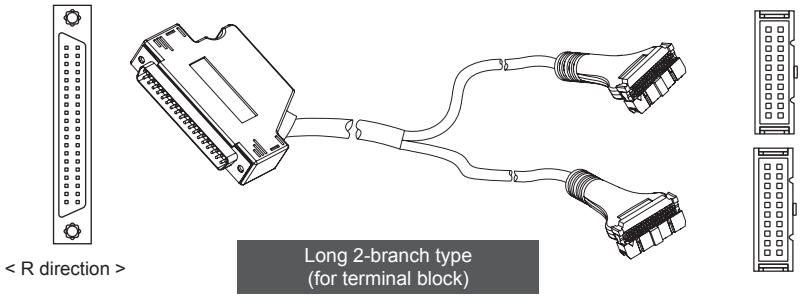
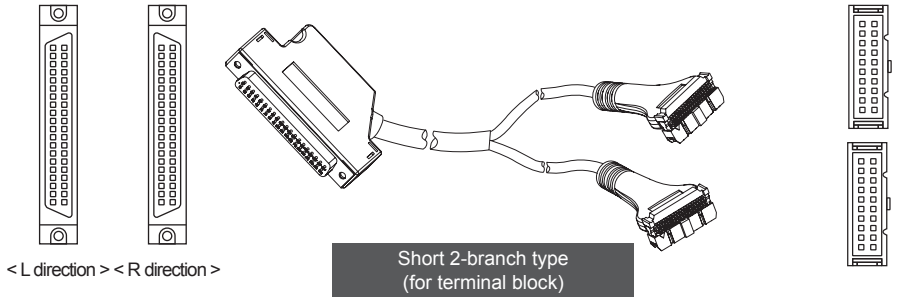
< R direction >

Connector pin no.	Insulator color	Mark point color	Number of mark points
26	White	Red	3EA
27	White	Black	4EA
28	White	Red	4EA
29	White	Black	5EA
30	White	Red	5EA
31	Gray	Black	1EA
32	Gray	Red	1EA
33	Gray	Black	2EA
34	Gray	Red	2EA
35	Gray	Black	3EA
36	Gray	Red	3EA
37	Gray	Black	4EA
38	Gray	Red	4EA
39	Gray	Black	5EA
40	Gray	Red	5EA
41	Pink	Black	1EA
42	Pink	Red	1EA
43	Pink	Black	2EA
44	Pink	Red	2EA
45	Pink	Black	3EA
46	Pink	Red	3EA
47	Pink	Black	4EA
48	Pink	Red	4EA
49	Pink	Black	5EA
50	Pink	Red	5EA

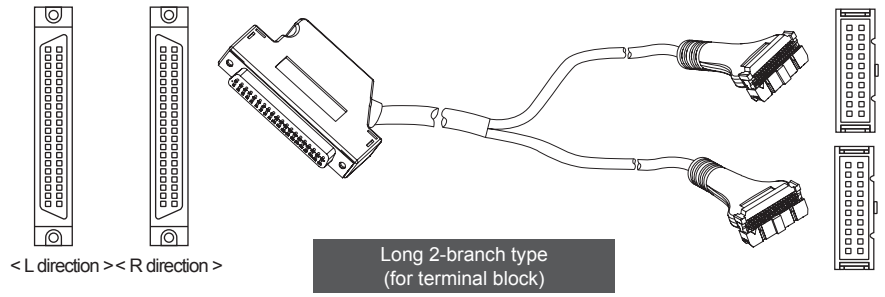
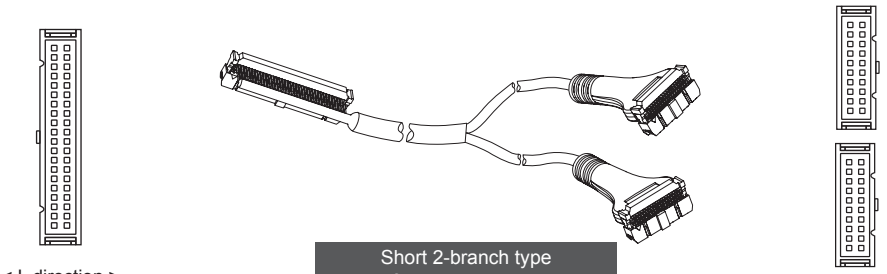
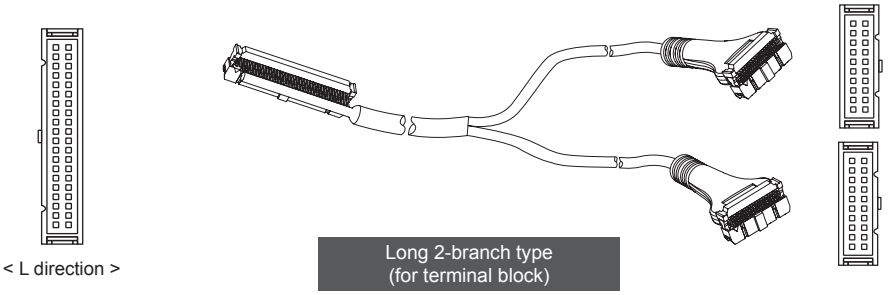
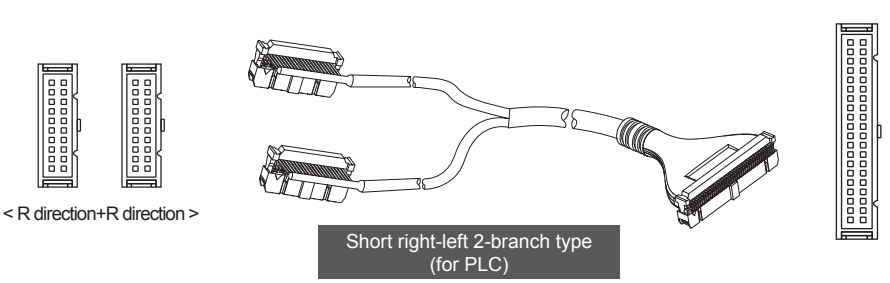
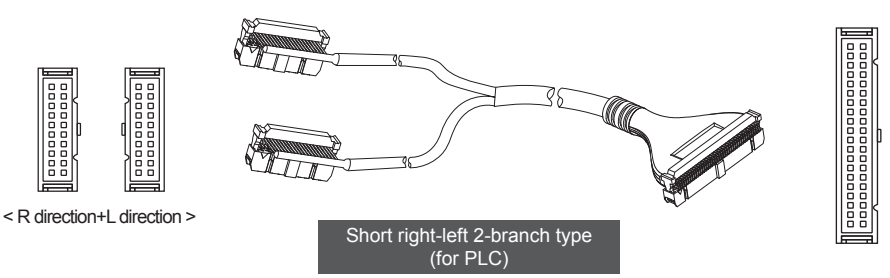
▣ Cable appearance

Cable model	Cable appearance
(1) CJ-HPHP20-V1N□-□□□R CJ-HPHP20-V1N□-□□□L	 < L direction > < R direction >
(2) CJ-HPDP37-V1N□-□□□R CJ-HPDP37-V1N□-□□□L	 < L direction > < R direction >
(3) CJ-HPDS37-V1N□-□□□R	 < R direction >
(4) CJ-HPFP40-V1N□-□□□R CJ-HPFP40-V1N□-□□□L	 < L direction > < R direction >
(5) CJ-HPHP40-V1N□-□□□L	 < L direction >

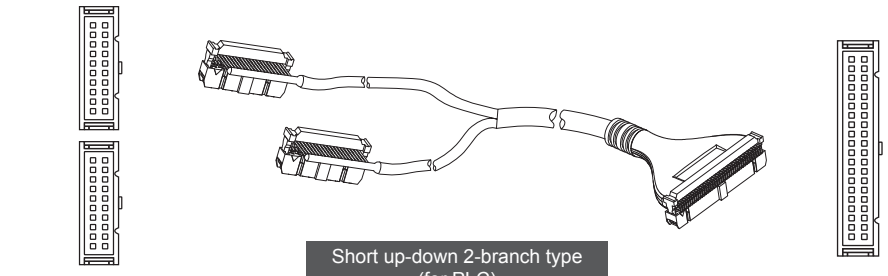
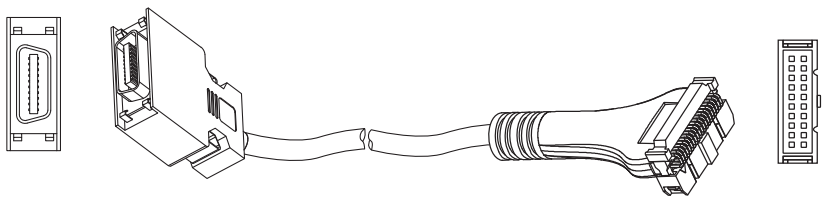
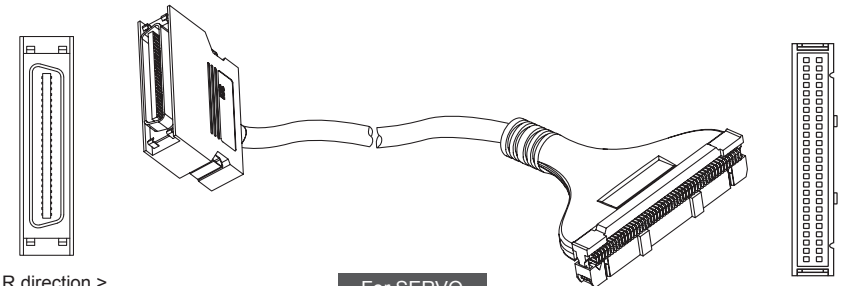
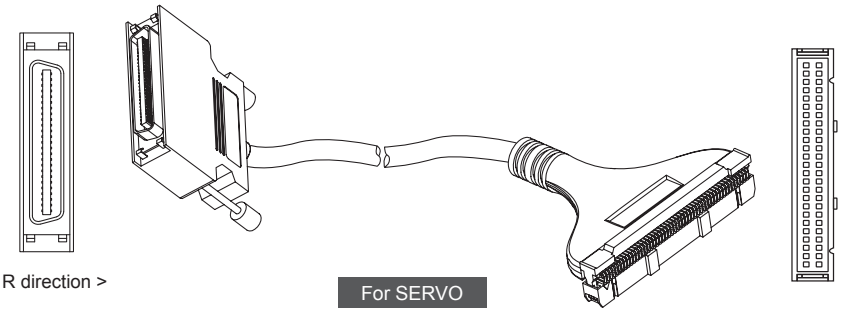
▣ Cable appearance

Cable model	Cable appearance
(6) CJ-HPDP37-V2S□-□□□R CJ-HPDP37-V2S□-□□□L	
(7) CJ-HPDP37-V2L□-□□□R CJ-HPDP37-V2L□-□□□L	
(8) CJ-HPDS37-V2S□-□□□R	
(9) CJ-HPDS37-V2L□-□□□R	
(10) CJ-HPFP40-V2S□-□□□R CJ-HPFP40-V2S□-□□□L	

▣ Cable appearance

Cable model	Cable appearance
(11) CJ-HPFP40-V2L□-□□□R CJ-HPFP40-V2L□-□□□L	 < L direction >< R direction > Long 2-branch type (for terminal block)
(12) CJ-HPHP40-V2S□-□□□L	 < L direction > Short 2-branch type (for terminal block)
(13) CJ-HPHP40-V2L□-□□□L	 < L direction > Long 2-branch type (for terminal block)
(14) CJ-HPHP40-VY2□-□□□R	 < R direction+R direction > Short right-left 2-branch type (for PLC)
(15) CJ-HPHP40-VY2□-□□□X	 < R direction+L direction > Short right-left 2-branch type (for PLC)

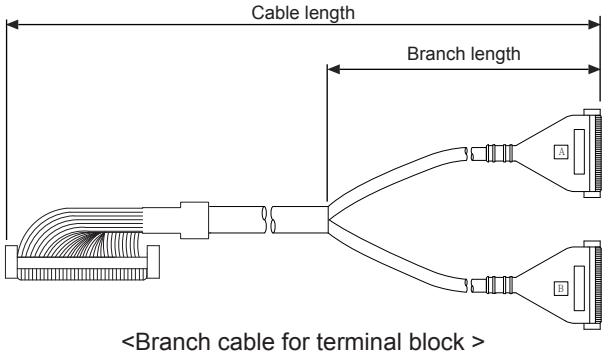
▣ Cable appearance

Cable model	Cable appearance
(16) CJ-HPHP40-VF2□-□□□R	 < R direction+R direction > Short up-down 2-branch type (for PLC)
(17) CJ-HPMP20-H1N□-□□□R	 < R direction > For SERVO
(18) CJ-HPMP50-H1N□-□□□R	 < R direction > For SERVO
(19) CJ-HPMQ50-H1N□-□□□R	 < R direction > For SERVO

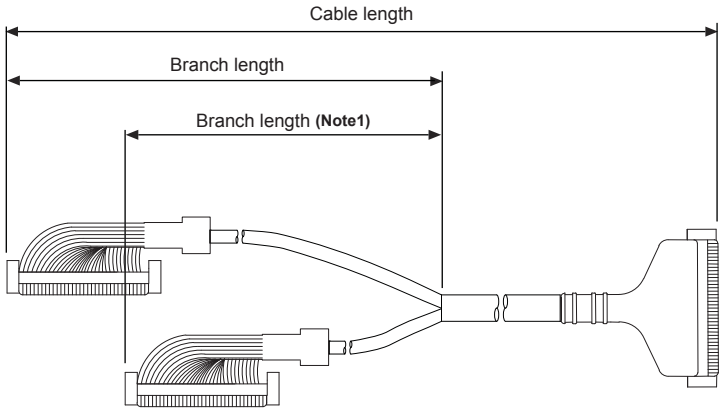
▣ Cable appearance

●Branch length of branch cable

Applied cable model	Branch type		Cable length	Branch length
CJ-□□□□□-□2S□-□□□□	Terminal block	Short 2-branch	0.5m	0.15m
			1m	0.15m
			1.5m	0.15m
			2m	0.15m
CJ- □□□□□-□2L□-□□□□		Long 2-branch	0.5m	0.3m
			1m	0.8m
			1.5m	1.3m
			2m	1.8m
CJ- HPHP40-□Y2□-□□□□	PLC	Short right-left 2-branch	0.5m	0.15m
			1m	0.15m
			1.5m	0.15m
			2m	0.15m
CJ-HPHP40-□F2□-□□□□		Short up-down 2-branch	0.5m	0.15m
				0.09m※1
			1m	0.15m
				0.09m※1
			1.5m	0.15m
				0.09m※1
			2m	0.15m
				0.09m※1



<Branch cable for terminal block >



<Branch cable for PLC>

※1. It is for short up-down 2-branch (for PLC).

Autonics
www.autonics.com

(D) Remote I/O terminal block

Product overview		D-2
ARD-D Series	(DeviceNet digital remote I/O, standard terminal block type)	D-4
ARD-D Series	(DeviceNet digital remote I/O, sensor connector type)	D-4
ARD-A Series	(DeviceNet analog remote I/O, standard terminal block type)	D-12
ARM Series	(Modbus digital remote I/O, sensor connector type)	D-23

DeviceNet digital remote I/O, standard terminal block type

Model										
	Basic unit	ARD-DI08A	ARD-DI16N	ARD-DI16P	ARD-DO08R	ARD-DO08S	ARD-DO16N	ARD-DO16P	ARD-DX16N	ARD-DX16P
	Expansion unit	ARD-DI08AE	ARD-DI16NE	ARD-DI16PE	ARD-DO08RE	ARD-DO08SE	ARD-DO16NE	ARD-DO16PE	ARD-DX16NE	ARD-DX16PE
Appearance		CE DeviceNet CONFORMANCE TESTED								
Power supply		24 VDC (allowable voltage range: 12-28 VDC)								
Power consumption		Max. 3 W								
Insulation type		Photocoupler isolated								
I/O points		AC input 8-point	NPN input 16-point	PNP input 16-point	Relay output 8-point	SSR output 8-point	NPN output 16-point	PNP output 16-point	NPN input 8-point + output 8-point	PNP input 8-point + output 8-point
Control I/O	Voltage	75-250 VAC	10-28 VDC		Normally open(N.O.) 250 VAC 2 A 1 a	30-250 VAC	10-28 VDC(voltage drop: max. 0.5 VDC)			
	Current	13 mA/point	10 mA/point			1 A/point	Output: 0.5 A/point (leakage current: max.0.5 mA)		Input: 10 mA, Output: 0.5 A/point (leakage current: max.0.5 mA)	
Common		8-point, common			1-point, 1COM	8-point, common				
Protection circuit		Surge protection circuit, Reverse polarity protection circuit ●Transistor output type ☞ Overcurrent protection circuit (NPN type : operated at min. 1.9 A → re-supply power in overcurrent status, PNP type : operated at min. 0.7 A), Overheating protection circuit(165 ℃ Typical), short-circuit protection								
Indicator		I/O status LED (Input: green, Output: red), Network status LED (green, red), Unit status LED (green, red)								
Material		Front case: PC, Body Case: PC, Rubber cap: NBR								
Mounting		DIN Rail or screw lock type								
Reference		**D-4 to 11**								

DeviceNet digital remote I/O, sensor connector type

Model					
	Basic unit	ARD-DI08N-4S	ARD-DI08P-4S	ARD-DO08N-4S	ARD-DO08P-4S
	Expansion unit	ARX-DI08N-4S	ARX-DI08P-4S	ARX-DO08N-4S	ARX-DO08P-4S
Appearance		CE DeviceNet CONFORMANCE TESTED			
Power supply		24 VDC (allowable voltage range: 12-28VDC)			
Power consumption		Max. 3 W			
Insulation type		Photocoupler isolated			
I/O points		NPN input 8-point	PNP input 8-point	NPN output 8-point	PNP output 8-point
Control I/O	Voltage	10-28 VDC input		10-28 VDC(voltage drop: max. 0.5VDC)	
	Current	Sensor current: 150 mA/point, Input current: 10 mA/point		Output: 0.3 A/point	
Common		8-point, common			
Protection circuit		Surge, Short-circuit, Overheating and ESD protection, Reverse polarity protection circuit			
		Over current protection circuit(operated at min. 0.17 A)		Over current protection circuit(operated at min. 0.7 A)	
Indicator		Network status LED (green, red), Unit status LED (green, red), I/O status LED (Input: green, Output: red)			
Material		Front case : PC, Body Case : PC			
Mounting		DIN Rail or screw lock type			
Reference		**D-4 to 11**			

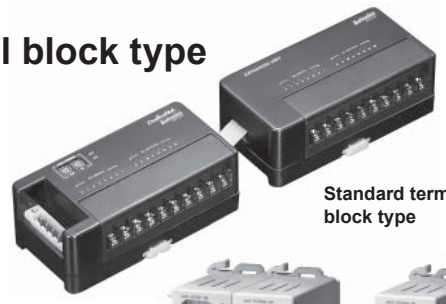
DeviceNet analog remote I/O, standard terminal block type

Model		ARD-AI04	ARD-AO04
Appearance		CE DeviceNet CONFORMANCE TESTED	
Power supply		Rated voltage: 24 VDC, Voltage range: 12-28 VDC	
Power consumption		Max. 3 W	
Insulation type		Photocoupler isolated	
I/O points		Input 4-point	Output 4-point
Control I/O	Voltage	0-10 VDC, -10-10 VDC, 0-5 VDC, 1-5 VDC, -5-5 VDC (input impedance: max. 1 MΩ)	0-10 VDC, -10-10 VDC, 0-5 VDC, 1-5 VDC, -5-5 VDC (load resistance: max. 1 KΩ)
	Current	DC4-20 mA, DC0-20 mA(input impedance: 250 Ω)	DC4-20 mA, DC0-20 mA(load resistance: max. 600 Ω)
Max. allowable I/O		±5% F.S. of rated I/O range	
Sampling cycle		1 ms/point	
Accuracy	25±5 ℃	±0.3% F.S.	
	-10±20 ℃ 30 to 50 ℃	±0.6% F.S.	
Resolution		1/16,000	
Protection circuit		Surge, ESD protection, Reverse polarity protection circuit	
Indicator		Network status(NS) LED(green, red), Unit status(MS) LED(green, red)	
Material		Front case, Body Case: PC	
Mounting		DIN Rail or screw lock type	
Reference		**D-12 to 22**	

Modbus digital remote I/O, sensor connector type

Model	Basic unit	ARM-DI08N-4S	ARM-DI08P-4S	ARM-DO08N-4S	ARM-DO08P-4S
	Expansion unit	ARX-DI08N-4S	ARX-DI08P-4S	ARX-DO08N-4S	ARX-DO08P-4S
Appearance		CE			
Power supply		24 VDC (allowable voltage range: 12-28VDC)			
Power consumption		Max. 3 W			
Insulation type		I/O and inner circuit: Photocoupler isolated Modbus to internal bus and inner circuit: Insulation Unit power: Non-insulation			
I/O points		NPN input 8-point	PNP input 8-point	NPN output 8-point	PNP output 8-point
Control I/O	Voltage	10-28 VDC		10-28 VDC(voltage drop: max. 0.5 VDC)	
	Current	10 mA/point(Sensor current: 150mA/point)		0.3 A/point(leakage current: max.0.5 mA)	
Common		8-point, common			
Protection circuit		Surge, Short-circuit, Overheating and ESD protection, Reverse polarity protection circuit			
		Over current protection circuit(operated at min. 0.17 A)		Over current protection circuit(operated at min. 0.7 A)	
Indicator		Network status LED (green, red), Unit status LED (green, red), I/O status LED (Input: green, Output: red)			
Material		Front case: PC, Body Case: PC			
Mounting		DIN Rail or screw lock type			
Reference		**D-23 to 27**			

DeviceNet digital remote I/O, standard terminal block type


Standard terminal block type

Sensor connector type

▣ Features

- ●Automatic communication speed recognition : Enables to recognize communication speed automatically when connecting with master
- ●Network Voltage monitoring : If PV is lower than SV, enables to receive error flag for network power monitoring as Explicit message.
- ●Additional expansion units
  - Standard terminal type: Connectable up to 3 expansion units
  - Sensor connector type: Connectable up to 7 expansion units
  - Expandable I/O points up to max. 64 points for Standard terminal type, Sensor connector type
- ●Reading the number of expansion units : Reads the number of connected expansion units
- ●Reading model name: Reads the connected model name of connected units (sensor connector type)
- ●Reading the unit specifications: Reads the specifications of connected units

▣ Ordering information

Please read "Caution for your safety" in operation manual before using this unit.

AR D – D I 08 A E – 4S

Terminal block (※2)	No-mark	Standard terminal block type
	4S	Sensor connector type (4-pin)
Structure	No-mark	Basic unit
	E (※4)	Expansion unit
I/O specification (※1)	A	AC Voltage
	N	NPN open collector
	P	PNP open collector
	R	Relay
	S	SSR
I/O points	08	8-point type
	16	16-point type
I/O type	I	Input type
	O	Output type
	X	I/O mixed type
Digital/Analog	D	Digital type
	A (※5)	Analog type
Network	D	Basic unit (DeviceNet type)
	X (※3)	Expansion unit (use in DeviceNet/Modbus)
Item	AR	Autonics Remote I/O

※1: Sensor connector type (ARD-□□-4S) model is only for NPN, PNP I/O specifications.
※2: Sensor connector(CNE-P04-□) is sold separately. It is compatible with e-CON connector.
※3: It is only for an expansion unit of sensor connector type.
※4: It is only for an expansion unit of standard terminal block type.
※5: For ARD-A Series as analog type, refer to D-12 page.

▣ Model

Type			Specifications
Terminal block	Basic unit	Expansion unit	
Standard terminal block type	ARD-DI08A	ARD-DI08AE	75-250VAC input 8-point(13mA/point)
	ARD-DI16N	ARD-DI16NE	10-28VDC NPN input 16-point(10mA/point)
	ARD-DI16P	ARD-DI16PE	10-28VDC PNP input 16-point(10mA/point)
	ARD-DO08R	ARD-DO08RE	Relay output 8-point(2A/point), Life cycle of contact : 100,000 times
	ARD-DO08S	ARD-DO08SE	SSR output 8-point(1A/point)
	ARD-DO16N	ARD-DO16NE	NPN output 16-point(0.5A/point)
	ARD-DO16P	ARD-DO16PE	PNP output 16-point(0.5A/point)
	ARD-DX16N	ARD-DX16NE	10-28VDC NPN input 8-point(10mA/point), NPN output 8-point(0.5A/point)
	ARD-DX16P	ARD-DX16PE	10-28VDC PNP input 8-point(10mA/point), PNP output 8-point(0.5A/point)
Sensor connector type	ARD-DI08N-4S	ARX-DI08N-4S	10-28VDC NPN input 8-point(10mA/point)
	ARD-DI08P-4S	ARX-DI08P-4S	10-28VDC PNP input 8-point(10mA/point)
	ARD-DO08N-4S	ARX-DO08N-4S	NPN output 8-point(0.3A/point)
	ARD-DO08P-4S	ARX-DO08P-4S	PNP output 8-point(0.3A/point)

▣ Specifications

Type		Standard terminal block type								
Model	Basic unit	**ARD-DI08A**	**ARD-DI16N**	**ARD-DI16P**	**ARD-DO08R**	**ARD-DO08S**	**ARD-DO16N**	**ARD-DO16P**	**ARD-DX16N**	**ARD-DX16P**
	Expansion unit	**ARD-DI08AE**	**ARD-DI16NE**	**ARD-DI16PE**	**ARD-DO08RE**	**ARD-DO08SE**	**ARD-DO16NE**	**ARD-DO16PE**	**ARD-DX16NE**	**ARD-DX16PE**
Power supply		Rated voltage: 24 VDC, Voltage range: 12-28 VDC								
Power consumption		Max. 3 W								
Insulation type		Photocoupler isolated								
I/O points		AC input 8-point	NPN input 16-point	PNP input 16-point	Relay output 8-point	SSR output 8-point	NPN output 16-point	PNP output 16-point	NPN input 8-point + output 8-point	PNP input 8-point + output 8-point
Control I/O	Voltage	75-250 VAC	10-28 VDC		Normally open(N.O.) 250 VAC 2 A 1 a	30-250 VAC	10-28 VDC(voltage drop: max. 0.5 VDC)			
	Current	13 mA/point	10 mA/point			1 A/point	0.5 A/point (leakage current: max. 0.5 mA)		Input: 10 mA, Output: 0.5 A/point (leakage current: max. 0.5 mA)	
Common		8-point, common			1-point, COM	8-point, common				
Insulationresistance		Min. 200 MΩ(at 500 VDC megger)								
Noise resistance		±240 V the square wave noise (pulse width: 1 μs) by the noise simulator								
Dielectric strength		1000 VAC 50/60 Hz for 1 min.								
Vibration		1.5 mm amplitude at frequency of 10 to 55 Hz (for 1 min.) in each of X, Y, Z directions for 2 hours								
Shock		500 m/s^2(approx. 50 G)in X, Y, Z directions for 3 times								
Environment	Ambient temperature	-10 to 50 ℃, Storage : -25 to 75 ℃								
	Ambient humidity	35 to 85%RH, Storage : 35 to 85%RH								
Protection		IP20(IEC standard)								
Protection circuit		Surge protection circuit, Reverse polarity protection circuit (common) ●Transistor output type ☞ Overcurrent protection circuit (NPN type : operated at min. 1.9 A → re-supply power in overcurrent status, PNP type : operated at min. 0.7 A), Overheating protection circuit(165℃ Typical), Short-circuit Protection circuit								
Indicator		Network status (NS) LED (green, red), Unit status (MS) LED (green, red), I/O status LED (Input: green, Output: red)								
Material		Front case, Body Case: PC, Rubber cap: NBR								
Mounting		DIN Rail or screw lock type								
Approval		DeviceNet	CE DeviceNet		DeviceNet		CE DeviceNet			
Unit weight		Approx. 150 g	Approx. 140 g		Approx. 160 g	Approx. 170 g	Approx. 140 g			

※Environment resistance is rated at no freezing or condensation.

Type		Sensor connector type			
Model	Basic unit	**ARD-DI08N-4S**	**ARD-DI08P-4S**	**ARD-DO08N-4S**	**ARD-DO08P-4S**
	Expansion unit	**ARX-DI08N-4S**	**ARX-DI08P-4S**	**ARX-DO08N-4S**	**ARX-DO08P-4S**
Power supply		Rated voltage: 24 VDC, Voltage range: 12-28 VDC)			
Power consumption		Max. 3 W			
Insulation type		Photocoupler isolated			
I/O points		NPN input 8-point	PNP input 8-point	NPN output 8-point	PNP output 8-point
Control I/O	Voltage	10-28 VDC		10-28 VDC(voltage drop: max. 0.5 VDC)	
	Current	10 mA/point(Sensor current: 150 mA/point)		0.3 A/point(leakage current: max.0.5 mA)	
Common		8-point, common			
Insulationresistance		Min. 200 MΩ(at 500 VDC megger)			
Noise resistance		±240 V the square wave noise (pulse width: 1 μs) by the noise simulator			
Dielectric strength		1,000 VAC 50/60 Hz for 1 min. (between external terminals and case)			
Vibration		1.5 mm amplitude at frequency of 10 to 55 Hz (for 1 min.) in each of X, Y, Z directions for 2 hours			
Shock		500 m/s^2(approx. 50 G) in X, Y, Z directions for 3 times			
Environment	Ambient temperature	-10 to 50 ℃, Storage : -25 to 75 ℃			
	Ambient humidity	35 to 85%RH, Storage : 35 to 85%RH			
Protection		IP20(IEC standard)			
Protection circuit		Surge, Short-circuit, Overheating (over 165 ℃) and ESD protection, Reverse polarity protection circuit			
		Overcurrent protection circuit(operated at min. 0.17 A)		Over current protection circuit(operated at min. 0.7 A)	
Indicator		Network status (NS) LED (green, red), Unit status (MS) LED (green, red), I/O status LED (Input: green, Output: red)			
Material		Front case, Body Case: PC			
Mounting		DIN Rail or screw lock type			
Approval		CE DeviceNet			
Unit weight	Basic unit	Approx. 64 g	Approx. 64 g	Approx. 65 g	Approx. 67 g
	Expansion unit	Approx. 56 g	Approx. 57 g	Approx. 58 g	Approx. 59 g

※Environment resistance is rated at no freezing or condensation.

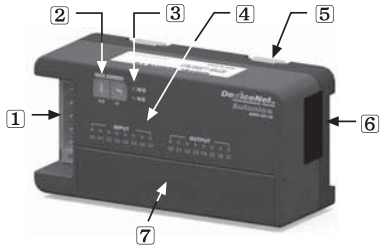
▣ DeviceNet communication

Item	Specifications
Communication	I/O Slave messaging(Group 2 Only slave) ·Poll command: Yes ·Bit_strobe command: Yes ·Cyclic command: Yes ·COS command: Yes
Communication distance	Max. 500m(125kbps), Max. 250m(250kbps), Max. 100m(500kbps)
NODE ADDRESS setting	Max. 64 nodes(set by the front rotary switch)
Communication speed	125, 250, 500kbps(automatically set when connecting with Master)
Insulation	I/O and inner circuit: Photocoupler isolated, DeviceNet and inner circuit: non-insulation, DeviceNet power: non-isolated
DeviceNet power	·Rated voltage: 24VDC ·Voltage range: 12-28VDC ·Power consumption: Max. 3W
Approval	ODVA Conformance tested

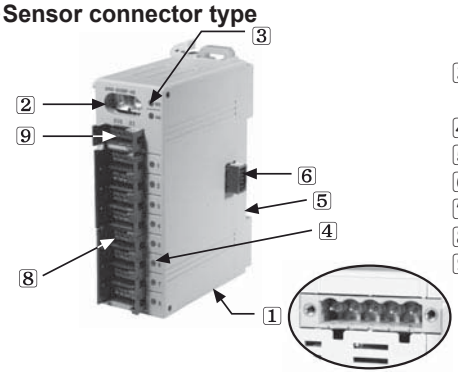
▣ Part descriptions

◎Basic unit

●**Standard terminal block type**



●**Sensor connector type**



1 DeviceNet connector

No.	Color	For	Organization
5	Red	24VDC(+)	V+
4	White	CAN_H	CAN_H
3	None	SHIELD	SHIELD
2	Blue	CAN_L	CAN_L
1	Black	24VDC(-)	V-

2 Rotary switch for node address
: Two rotary switches are used for setting node address.
X10 switch represents the 10's multiplier and X10 switch represents the 1's multiplier.

3 Status LED: It is LED for displaying Unit status(MS) and Network status(NS).

4 I/O status LED: It is LED for displaying I/O status.

5 Rail Lock: It is used for mounting DIN Rail or with screws.

6 Connnector output part: It is used for connecting an expansion unit.

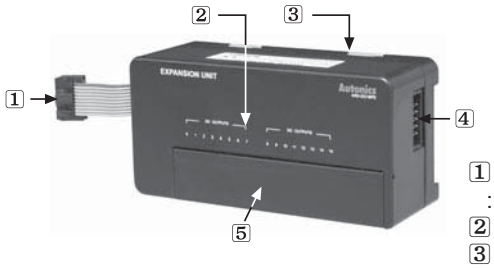
7 I/O terminal block: It is terminal block for connecting external device I/O.

8 Sensor connector: It is connector for connecting external device I/O.

9 External power connector: It is used for supplying external power.

◎Expansion unit

●**Standard terminal block type**



1 Connnector input part
: It connects an Expansion unit and is joined into the connnector output part.

2 I/O status LED: It is LED for displaying I/O status

3 Rail Lock: It is used for mounting DIN Rail or with screws.

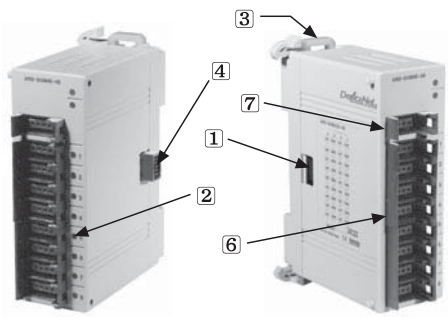
4 Connnector output part: It is used for connecting an expansion unit.

5 I/O terminal block
: It is terminal block for connecting external device I/O.

6 Sensor connector: It is connector for connecting external device I/O.

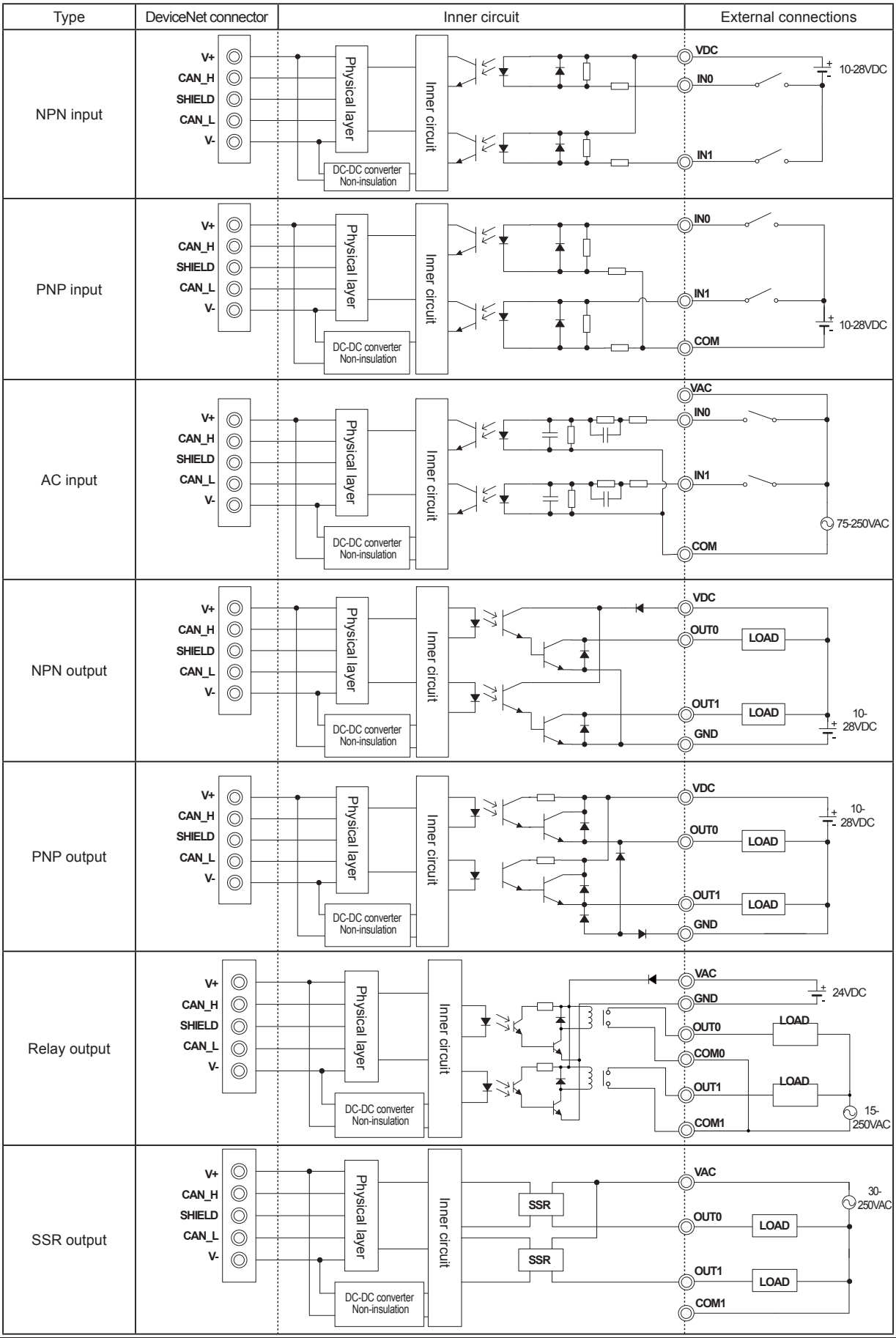
7 External power connector: It is used for supplying external power.

●**Sensor connector type**



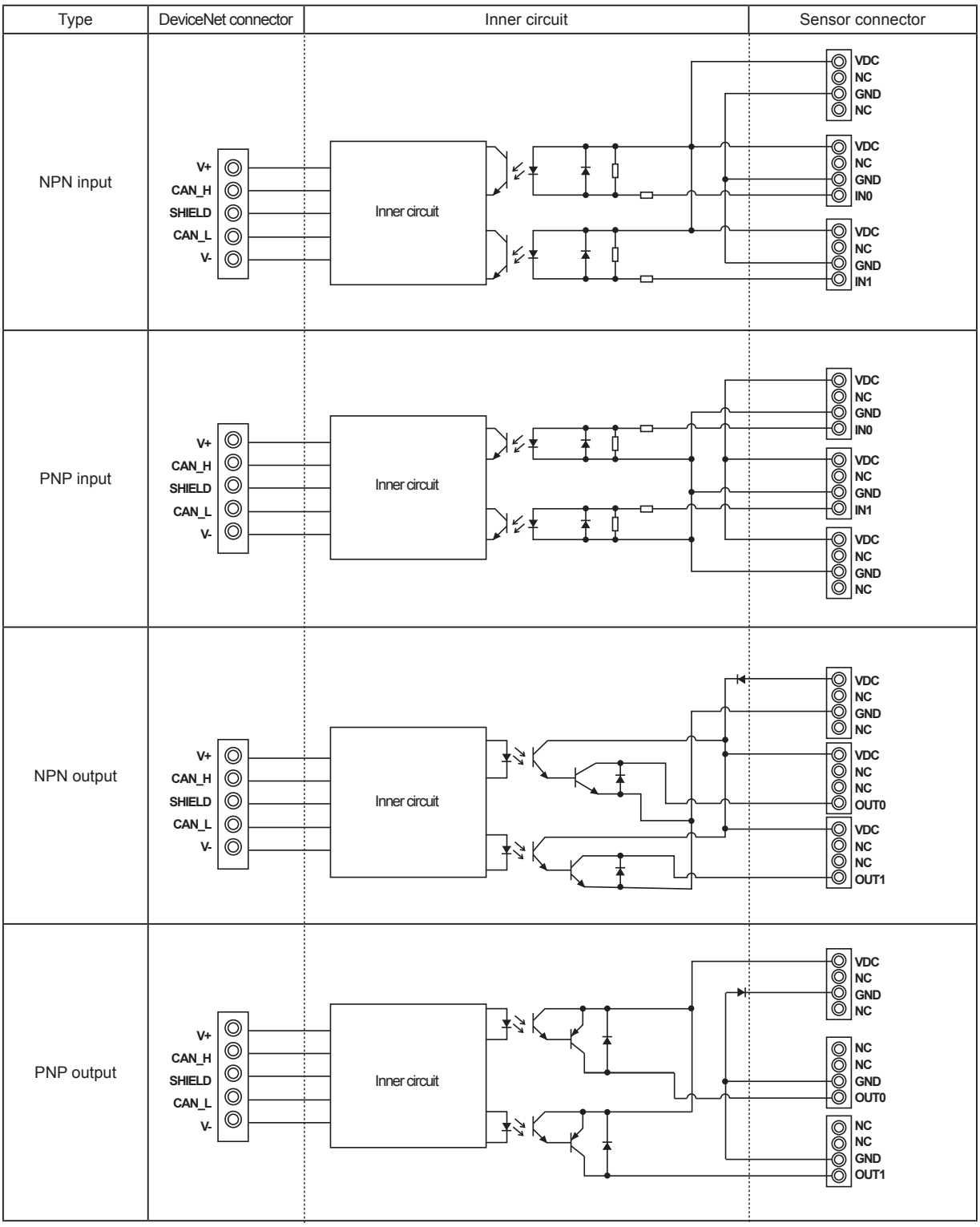
▣ I/O circuit diagram

◎Standard terminal block type



▣ I/O circuit diagram

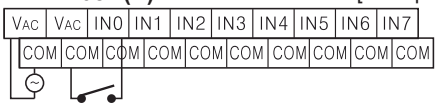
◎Sensor connector type



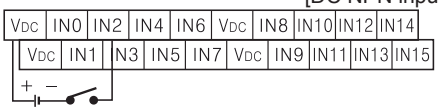
▣ Connections

◎Standard terminal block type

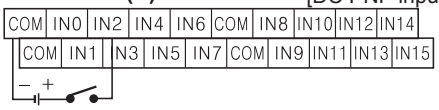
●ARD-DI08A(E) [AC input]



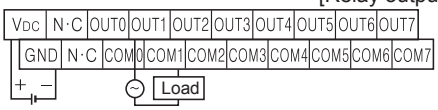
●ARD-DI16N(E) [DC NPN input]



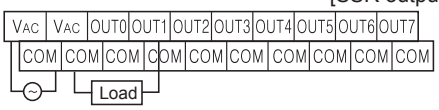
●ARD-DI16P(E) [DC PNP input]



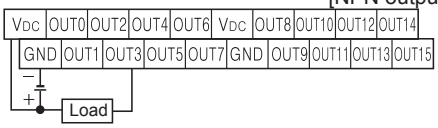
●ARD-DO08R(E) [Relay output]



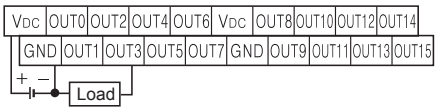
●ARD-DO08S(E) [SSR output]



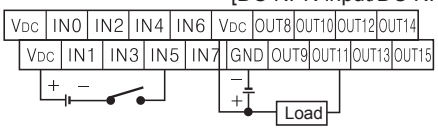
●ARD-DO16N(E) [NPN output]



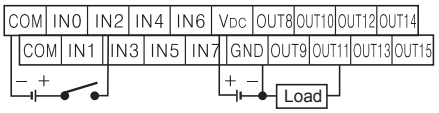
●ARD-DO16P(E) [PNP output]



●ARD-DX16N(E) [DC NPN input/DC NPN output]

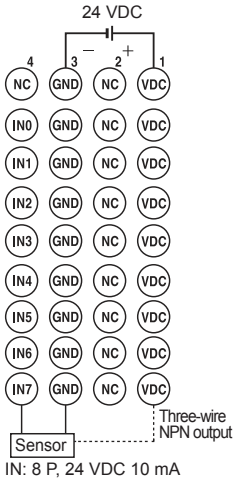


●ARD-DX16P(E) [DC PNP input/DC PNP output]



◎Sensor connector type

●AR□-DI08N-4S

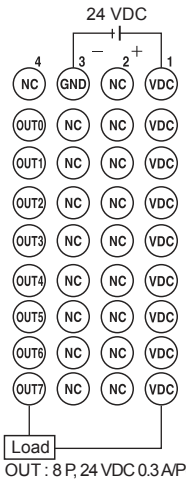


IN: 8 P, 24 VDC 10 mA

●AR□-DI08P-4S

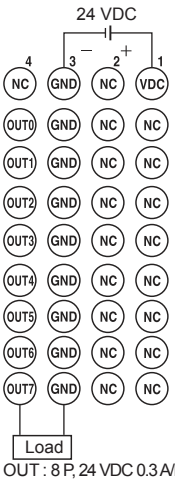
IN: 8 P, 24 VDC 10 mA

●AR□-DO08N-4S



OUT : 8 P, 24 VDC 0.3 A/Point

●AR□-DO08P-4S

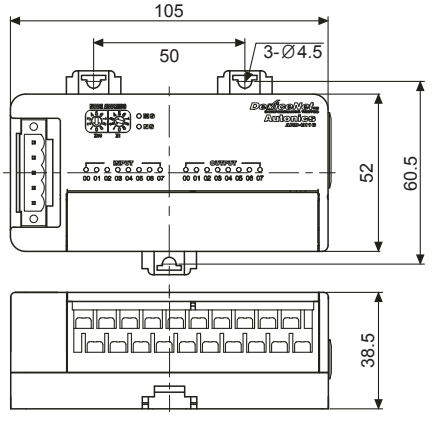


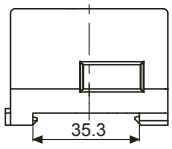
OUT : 8 P, 24 VDC 0.3 A/Point

▣ Dimensions

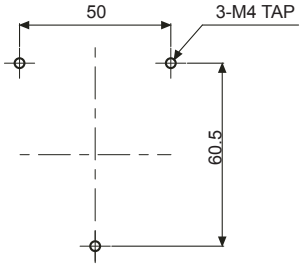
(unit: mm)

◎Standard terminal block type





●Panel cut-out



※Tightening torque: 1.8 to 2.5N·m

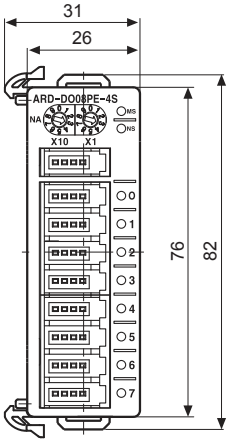
※Same dimensions are applied to both basic and expansion units.
※Expansion unit includes a connector.

▣ Dimensions

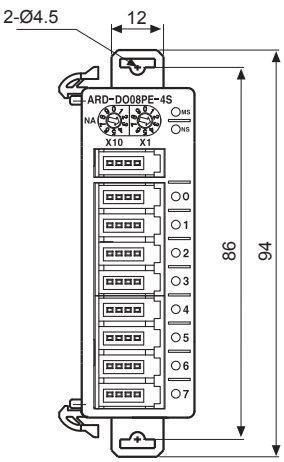
◎Sensor connector type

(unit: mm)

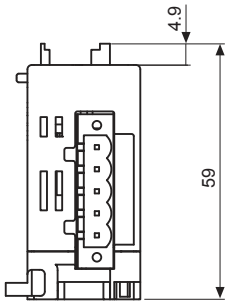
< Mounting on DIN Rail >

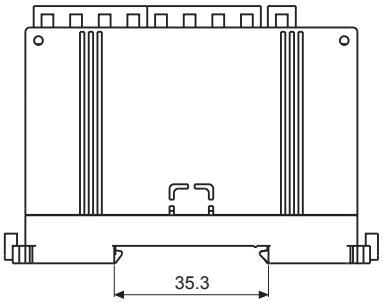


< Mounting with screws >



※Tightening torque: 1.8 to 2.5N·m





※Same dimensions are applied to both basic and expansion units.

▣ Status LED

(-☼-: ON, -◐-: Flahs, ●: OFF)

Item	Status LED		Descriptions
	Red	Green	
Unit status(MS) LED	-☼-	●	Unrecoverable error
	-◐-	●	Recoverable error & Communication error of expansion units
	●	-☼-	Normal operation
	●	●	Power is not supplied.
Network status(NS) LED	●	-◐-	Normal operation standby
	●	-☼-	Network On-Line
	-☼-	●	Dupl, MAC ID / Bus-Off
	-◐-	●	Time out
	●	●	Network Off-Line

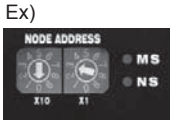
▣ Setup and installation

◎Node address setup

Two rotary switches are used for setting node address.
X10 switch represents the 10's multiplier and X10 switch represents the 1's multiplier.
Node address is settable from 0 to 63.

●Node address is changed when re-supplying the power to the unit.
After changing node address, must re-supply the power.

Ex)



◎Mounting on panel

①Pull Rail Locks(standard terminal block type: 3EA, sensor connector type: 2EA) on the rear part of a unit, there are fixing screw hole.
②Place the unit on a panel to be mounted.
③Make holes on fixing screw positions.
④Fasten the screw to fix the unit tightly.
Tightening torque should be below 0.5N.m.

▣ Setup and installation

◎Mounting on DIN Rail

①Pull Rail Locks(standard terminal block type: 3EA, sensor connector type: 2EA) on the rear part of unit.
②Place the unit on DIN Rail to be mounted.
③Press Rail Locks to fix the unit tightly.

◎Connection of Basic unit and Expansion units (standard terminal block type)

①Turn OFF the power of a Basic unit.
②Place an expansion unit to be installed next to the basic unit.
③Connect the cable of expansion unit to the connector of a basic unit.
④Install a connected expansion units as the right figures.
⑤Supply the power to a Basic unit.
(Re-supply the power of a basic unit and it recognizes expansion units.)

◎Connection of Basic unit and Expansion units (sensor connector type)

①Turn OFF the power of the Basic unit.
②Remove a cover of connector for extension with nippers, etc.
③Connect connector input part of an expansion unit and connector output part of a basic unit with a connector which is enclosed with an expansion unit box.
④Install a connected expansion units as the right figure.
⑤Supply the power to the Basic unit.
(Re-supply the power of a basic unit and it recognizes expansion units.)

▣ Communication distance

Baud Rate	Max. network length	Max. length of branch line	Allowable expansion length of branch line
125 kbps	500 m	6 m	156 m
250 kbps	250 m	6 m	78 m
500 kbps	100 m	6 m	39 m

▣ Terminating resistance

●120 Ω ●1%or metallic film ●1/2 W
※Do not install terminating resistance on the basic unit or it may cause network problem (impedance can be too high or low) or malfunction.
※Connect terminating resistance on the both ends of the trunk line.

▣ Caution for using

1. Turn OFF the power before connecting or disconnecting expansion units.
2. Node addresses of connected units should not be duplicated. If you change node address during operation, the Unit status(MS) flashes in red and it communicates with the previous node address. Re-supply the power and the changed node address is applied.
3. Communication speed which is set on Master is set automatically. If you change communication speed during operation, the Network status(NS) LED turns ON in red and it does not communicate. Re-supply the power and it operates normally.
4. Make sure to use the communication cables, and taps which are DeviceNet standards. It may cause communication error if non-standard products are used.
5. Make sure to examine disconnection or short-circuit before connecting cables.
6. Do not install the unit where severe dust exists or where corrosion may occur.
7. Installation environment
   ① It shall be used indoor. ② Altitude max. 2,000 m
   ③ Pollution degree 2 ④ Installation category II

DeviceNet analog remote I/O

▣ Features

- ●Adopts DeviceNet, standard open Network
  - : Communiates other DeviceNet devices without additional installations
  - : Configurable power and communication system only with communication cables
  - : Connectable max. 63 units per 1 master unit
- ●Strong against noise and high accuracy(0.3%) measurement with differential input method(measuring difference between +, - input signal)
- ●Various I/O range: 0-5VDC, 1-5VDC, 0-10VDC, -5-5VDC, -10-10VDC, DC4-20mA, DC0-20mA
- ●Scale function: Settable high/low limit scale value for analog I/O range (Set range: -28,000 to 28,000)
- ●Various functions
  Automatic communication speed recognition, Network voltage monitoring, Input digital filter, Peak/Bottom Hold, hysterisis, reading model name and number of units, I/O and status flag monitoring
- ●Built-in surge, ESD protection, Reverse polarity protection circuit
- ●Mounting DIN Rail method and screw lock method

CE DeviceNet™ CONFORMANCE TESTED

▣ Ordering information

⚠ **Please read "Caution for your safety" in operation manual before using this unit.**

AR D – A I 04

※**1**:For ARD-D Series, refer to D-4 page.

I/O points	04	4-point type
I/O type	I	Input type
	O	Output type
Digital/Analog	A	Analog type
	D (※**1**)	Digital type
Network	D	DeviceNet type
Item	AR	Autonics Remote I/O

▣ Specifications

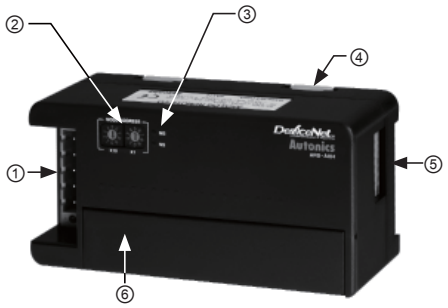
Model		**ARD-AI04**	**ARD-AO04**
Power supply		Rated voltage: 24 VDC, Voltage range: 12-28 VDC	
Power consumption		Max. 3 W	
Insulation type		Photocoupler isolated	
I/O points		Input 4-point (switchable voltage/current)	Output 4-point (voltage 2CH, current 2CH)
Control I/O	Voltage	0-10 VDC, -10-10 VDC, 0-5 VDC, 1-5 VDC, -5-5 VDC (input impedance: max. 1 MΩ)	0-10 VDC, -10-10 VDC, 0-5 VDC, 1-5 VDC, -5-5 VDC (load resistance: max. 1 KΩ)
	Current	DC4-20 mA, DC0-20mA (input impedance: 250Ω)	DC4-20 mA, DC0-20 mA (load resistance: max. 600 Ω)
Max. allowable I/O		±5% F.S of rated I/O range	
Sampling cycle		1 ms/point	
Accuracy	25±5 ℃	±0.3% F.S	
	-10±20 ℃ 30 to 50 ℃	±0.6% F.S.	
Resolution		1/16,000	
Insulation resistance		Min. 200 MΩ(at 500 VDC megger)	
Noise resistance		±240 V the square wave noise (pulse width: 1 μs) by the noise simulator	
Dielectric strength		500 VAC 50/60Hz for 1 min. (between external terminals and case, between i/o and power terminals)	
Vibration		1.5 mm amplitude at frequency of 10 to 55 Hz (for 1 min.) in each of X, Y, Z directions for 2 hours	
Shock		500 ㎨ (approx. 50 G)in X, Y, Z directions for 3 times	
Environment	Ambient temperature	-10 to 50 ℃, Storage: -25 to 75 ℃	
	Ambient humidity	35 to 85%RH, Storage: 35 to 85%RH	
Protection		IP20(IEC standard)	
Protection circuit		Surge, ESD protection, Reverse polarity protection circuit	
Indicator		Network status(NS) LED(green, red), Unit status(MS) LED(green, red)	
Material		Front case, Body Case: PC	
Mounting		DIN Rail or screw lock type	
Approval		CE DeviceNet	
Unit weight ※**1**		Approx. 210 g (approx. 145 g)	

※1. The weight in parentheses is only unit weight.
※Environment resistance is rated at no freezing or condensation.

▣ DeviceNet communication

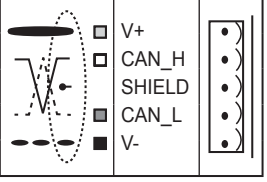
Item	Specifications
Communication	I/O Slave messaging(Group 2 Only slave) ●Poll command: Yes ●Bit_strobe command: Yes ●Cyclic command: Yes ●COS command: Yes
Communication distance	Max. 500 m(125kbps), Max. 250 m(250kbps), Max. 100 m(500kbps)
NODE ADDRESS setting	Max. 64 nodes(set by the front rotary switch)
Communication speed	·125 kbps ·250 kbps ·500 kbps(automatically set when connecting with Master)
Insulation	I/O and inner circuit: Non-insulation, DeviceNetand inner circuit: Insulation, DeviceNet power: Insulation
Approval	ODVA Conformance tested

▣ Part descriptions

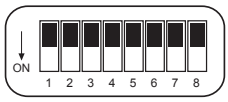


①DeviceNet connector

No.	Color	For	Organization
5	Red	24VDC(+)	V+
4	White	CAN_H	CAN_H
3	None	SHIELD	SHIELD
2	Blue	CAN_L	CAN_L
1	Black	24VDC(-)	V-



②**Rotary switch for node address** : Two rotary switches are used for setting node address.
X10 switch represents the 10's multiplier and X10 switch represents the 1's multiplier.
③**Status LED** : It is LED for displaying Unit status(MS) and Network status(NS).
④**Rail Lock** : It is used for mounting DIN Rail or with screws.
⑤**DIP switch** : It is used for set I/O range. (factory default: all switches are OFF)



(●: ON, -: OFF)

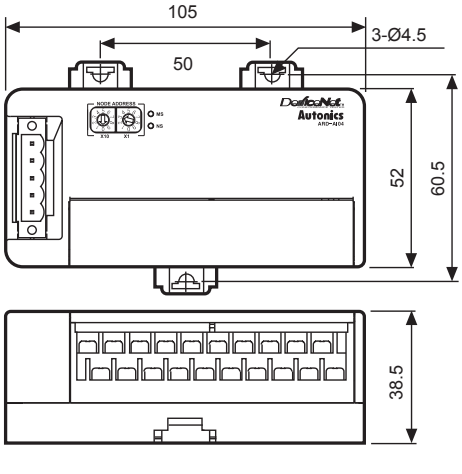
	ARD-AI04(Input model)						ARD-AO04(output model)							
	CH0, CH1			CH2, CH3			CH0, CH1			CH2, CH3				
I/O range	SW1	SW2	SW3	SW4	SW5	SW6	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8※1
0-5 VDC	-	-	-	-	-	-	-	-	-	Not supported			Not supported (Off Setting)	**ON** Using DIP switch **OFF** Not using DIP switch
1-5 VDC	●	-	-	●	-	-	●	-	-					
0-10 VDC	-	●	-	-	●	-	-	●	-					
-5-5 VDC	●	●	-	●	●	-	●	●	-					
-10-10 VDC	-	-	●	-	-	●	-	-	●					
DC 4-20 mA	●	-	●	●	-	●	Not supported			-	-	-		
DC 0-20 mA	-	●	●	-	●	●				●	-	-		

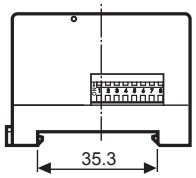
※1: By turning ON SW8, I/O range is set by DIP switches (SW1 to SW6).
By turning OFF SW8, I/O range is set by communication.
When setting I/O range by DIP switches, CH0 and CH1(CH2 and CH3) cannot be set individually.
When setting it by communication, each channel is set individually.

⑥**I/O Terminal block:** It is terminal block for connecting external device I/O.

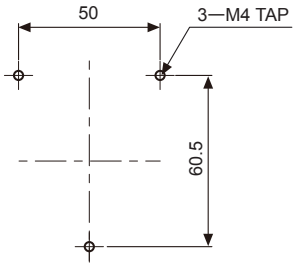
▣ Dimensions

(unit: mm)





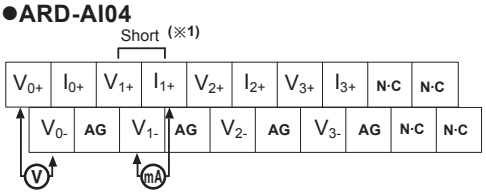
●**Panel cut-out**



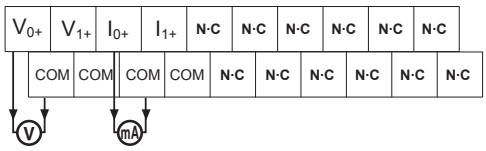
※Tightening torque: 1.8 to 2.5 N·m

▣ Connections

●ARD-AI04



●ARD-AO04



Voltage	0-5 VDC
	1 to 5 VDC
	-5-5 VDC
	0-10 VDC
	-10-10 VDC
Current	DC 0-20 mA
	DC 4-20 mA

(※1) For current input, short between $V_{□+}$ and $I_{□+}$.

▣ I/O circuit

Type	DeviceNet connector	Inner circuit	External connections
Analog input	V+ CAN_H SHIELD CAN_L V-	Inner circuit / Power circuit / Input circuit / Power circuit	V_{0+} I_{0+} V_{0-} V_{1+} I_{1+} V_{1-} AG; Analog GND; V; mA
Analog output	V+ CAN_H SHIELD CAN_L V-	Inner circuit / Power circuit / Output circuit / Power circuit	V.OUT COM I.OUT COM; LOAD max. 1KΩ; LOAD max.600Ω; Analog GND

▣ Status LED

※Status of MS LED, NS LED

(☼: ON, ◑: Flash, ●: OFF)

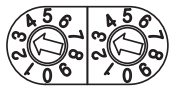
No.	Type	LED status	Color	Descriptions	Troubleshooting
1	MS	☼	Green	**Normal operation** I/O communication or message communication is working.	-
	NS	☼	Green		
2	MS	☼	Green	**Standby of duplicated address** The status of standby for receving message of duplicated address check from master unit.	-
	NS	●	-		
3	MS	☼	Green	**Standby of normal operation** The status of standby for establish connection from master unit.	-
	NS	◑	Green		
4	MS	☼	Red	**Watchdog timer error** The status of occuring watchdog timer error	-
	NS	●	-		
5	MS	◑	Red	**Switch setting error** The status that DIP switch or another switch setting is invalid.	Change the switch setting to valid value and re-supply the power.
	NS	●	-		
6	MS	◑	Red	**Changed address during normal operation** The status that address is changed during normal operation.	Change the initial address at the power applied at first.
	NS	☼	Green		
7	MS	☼	Green	**Invalid address** The status of setting invalid address	Change the valid address and re-supply the power.
	NS	☼	Red		
8	MS	☼	Red	**Duplicated address** There is duplicated address in the network. **Occuring Bus-Off error** Communication is stopped with Bus-Off.	Change not-duplicated address. Re-supply the power to slave units and and check master, communication cable, terminating resistance, and noise of network.
	NS	☼	Red		
9	MS	☼	Green	**I/O Connection time out**	
	NS	◑	Red		

▣ Setup and installation

◎Node address setup

①Two rotary switches are used for setting node address.
X10 switch represents the 10's multiplier and X10 switch represents the 1's multiplier.
Node address is settable from 0 to 63.

Ex)



The X10 and X1 switches point "3",
the address is "33".

②Node address is changed when re-supplying the power to the unit.
After changing node address, must re-supply the power.

◎Installation

●Mounting on panel

①Pull Rail Locks(standard terminal block type: 3EA, sensor connector type: 2EA) on the rear part of a unit, there are fixing screw hole.
②Place the unit on a panel to be mounted.
③Make a hole on a fixing screw position.
④Fasten the screw to fix the unit tightly.
Tightening torque should be below 0.5N.m.

●Mounting on DIN Rail

①Pull two Rail Locks on the rear part of unit.
②Place the unit on DIN Rail to be mounted.
③Press Rail Locks to fix the unit tightly. .

◎I/O cable connection

Refer to the I/O circuit diagram and connections.
Connect a sensor or the signal cable of external I/O device to the terminal block. (Tightening torque: 0.5N·m)

◎DeviceNet cable connection

①For stable system, it is recommended to use the DeviceNet dedicated cable.
②Connect the DeviceNet cable to the DeviceNet connector and tighten the fixed screw of the connector by a driver. (Tightening torque: 0.5N·m)
③ Connect the DeviceNet connector to ARD unit and supply the power to Network.

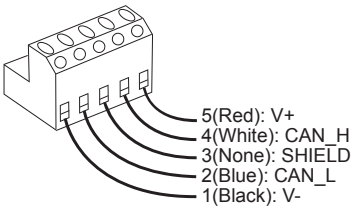
Master unit

PIN No.	Signal
5	V+
4	CAN_H
3	SHIELD
2	CAN_L
1	V-

Red
White
None
Blue
Black

ARD unit

PIN No.	Signal
5	V+
4	CAN_H
3	SHIELD
2	CAN_L
1	V-



◎Setting of Master unit

①Check the LED status of ARD unit when power is supplied. Normal operation is as below.

Type	Status LED	Status descriptions
Unit status(MS) LED	Green LED is ON	When master unit status is communication standby: NS LED flashes When master unit setting is completed: NS LED is ON.
Network status(NS) LED	Green LED is ON/flashes	

②Install the software from master unit manufacturing company.
③Setting communication speed and address in the software.
●Baud rate: 125/250/500kbps
●Address of master unit: Usually it is set 00 address.
④Register connected unit on Network to the master unit.
●There are two ways to register units; automatically register in on-line or manually register in off-line. (Refer to the manual of master unit.)
●I/O assignment of ARD Series: Usually it is automatically assigned by the setting software.
●Setting of operation mode: Select among Poll, COS, Cyclic, Bit Strobe.(Usually set Poll mode.)

◎Check operating stauts

When installation and setting are completed, unit status (MS) LED and Network status (NS) LED turns ON in green. (Refer to ▣ Status LED.)

▣ Communication distance

Baud Rate	Max. network length	Max. length of branch line	Allowable expansion length of branch line
125kbps	500m	6m	156m
250kbps	250m	6m	78m
500kbps	100m	6m	39m

▣ Terminating resistance

●120Ω ●1%or metallic film ●1/2W

※Do not install terminating resistance on ARD unit or it may cause network problem (impedance can be too high or low) or malfunction.

※Connect terminating resistance on the both ends of the trunk line.

▣ Functions

Model		ARD-AI04	ARD-AO04
Basic	Communication speed auto-recognition	●	
	Network power voltage monitoring	●	
	Unit power on total time monitoring	●	
	Unit comment	●	
	Last maintenace data stored	●	
Analog	Input conversion points setting	●	
	Display scale	●	
	Adjustment gradient	●	
	I/O comment	●	
	Offset correction	●	
	Input digital filter	●	-
	Peak/Bottom hold	●	-
	Disconnected cable detection	●	-
	Input comparision	●	-
	Hysteresis	●	-
	Output setting for error	-	●

◎Communication speed auto-recognition

It recognizes communication speed when connecting master. Communication speed is able to change only from master unit. After changing communication speed, re-supply the network power to apply the changed communication speed.

◎Network power voltage monitoring

●Network power voltage is lower than the set value, the network power voltage drop flag bit of Status bit is ON. It is able to read by Configurator or Explicit message.

●Set monitoring voltage by Explicit message at Network Power voltage (Set Value) of Application Object.

●Set range: 0 to 255 (factory default: 12 V, Allowable range: ±1 V)

※Min. supplied power is 12 V for ARD unit. If network voltage is lower than 12 V, the contents of Explicit message reading is not guaranteed.

◎Unit power on total time monitoring

●When total time for supplying power to the unit becomes the SV, Threshold Run Hours Flag bit of Status Bit turns ON. It is able to read by Configurator or Explicit message.

●Set the time by Explicit message at Threshold Run Hour of Application Object.

●Set range: 0 to 429,496,729 hours (factory default: 876,000 hours), Measured unit: 0.1 hours(6 minutes)

◎Unit comment

●You can set the comments for the unit (product description) on network. It is able to read by Configurator or Explicit message.

●Set comment by Explicit message at Unit Comment of Application Object.

●Set range: max. 32 characters

◎Last maintenance date

●It saves the last date of maintenance. It is able to read/write by Configurator or Explicit message.

●Set maintenance date by Explicit message at I/O Last Maintenance Data Setting of Analog Input Point Object.

Ex)Data: 0x07DB020E→07DB(2011), 02(Februray), 0E(14th)

◎Input conversion points setting

●Conversion cycle is changed by the number of points. (conversion cycle: 1ms/point, when using 4 points, it is 4 ms). It is able to read/write by Configurator or Explicit message. After changing the number of conversion points, re-supply the network power.

●Set the number of conversion points by Explicit message at Number of AD Conversion Points Setting of Analog Input Point Object. .

●Set range: 1 to 4-point(factory default: 4-point), conversion cycle: 1 ms/1-point

◎Display scale

●Set high/low-limit scale value of analog input or output. It is able to read by Configurator or Explicit message.

Default Scaling	Function Choice : Scaling Flag bit ON Scaling Type : Default Scaling (factory default)	It is set as 1,000 by 1 V(mA). In case of 1-5 V, 4-20 mA, it is applied from over min. allowable range 0.8 V(800), 3.2(3,200). The below input value is break detection. It outputs as min. allowable range.
None Scaling	Function Choice : Scaling Flag bit OFF Scaling Type : Default Scaling	It is set as default value 0 to 16000(-8000 to 8000). (0 - 5 V, 1 - 5 V, 0 - 10 V, 4 - 20 mA, 0 - 20 mA : 0 to 16000, -5 - 5 V, -10 - 10 V : -8,000 to 8,000)
User Scaling	Function Choice : Scaling Flag bit ON Scaling Type : User Scaling	Set high/low-limit value to apply at 'Scaling Point 0%' and 'Scaling Point 100%'. Set range: -28,000 to 28,000

◎I/O comment

●You can set the comment for I/O. It is able to read/write by Configurator or Explicit message.

●Set I/O comment by Explicit message at I/O Comment of Analog Input Point Object, Analog Output Point Object.

●Set range: max. 32 characters

◎Gradient adjustment

●It adjusts the gradient of input/output value or scale value. It is able to read/write by Configurator or Explicit message.

●It is applied when Adjust Gradient Flag bit is set as ON at Function Choice of Analog Input Point Object. Set the range at Adjustment Gradient value.

●Adjustment range: -5 to 5%, Set range: -500 to 500(factory default: 0)

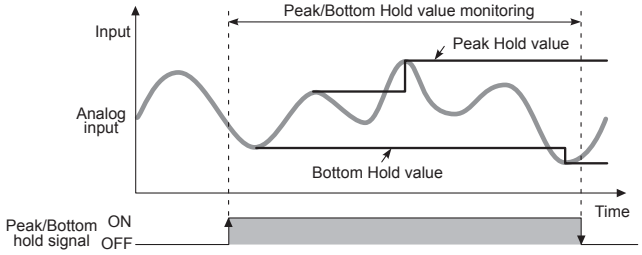
Ex)When input value is 1000, Adjustment Gradient is 500(+5%) X'=aX, a=1+Adjustment Gradient(0.05), X=1000, X'=1.05×1000=1050

◎Offset adjustment
- ●This function is to adjust the error occurring from external analog sensor, etc, not from the unit itself. It is also applied to analog output. It is able to read/write by Configurator or Explicit message.
- ●It is applied when Adjustment Offset Flag bit is set as ON at Function Choice of Analog Input Point Object. Set the value at Adjustment Offset Value.
- ●Adjustment range: -5 to 5%,
  Set range: -500 to 500 (factory default: 0)

Ex)When input range is 0 to 10V, Full Scale 0 to 16000, input value is 1600(1V) and Adjustment Gradient 500(+5%), X'=X+b, X=1600, b=16000×0.05
(added input value and percentage of Full Scale)
X'=1600+800=2400(1.5V)

◎Input digital filter
- ●This function is used when input value vibrates or repeatedly shake by included noise at input signal. Accurate control is available by stable input with this function. It adopts moving average filter method not to affect sampling cycle. It is able to read/write by Configurator or Explicit message.
- ●It is applied when Moving Average is set as ON at Function Choice of Analog Input Point. Set the number of digital filters at Moving Average Filter of Number.
- ●Set range: 0 to 8(factory default: 3[Moving Average No_8])

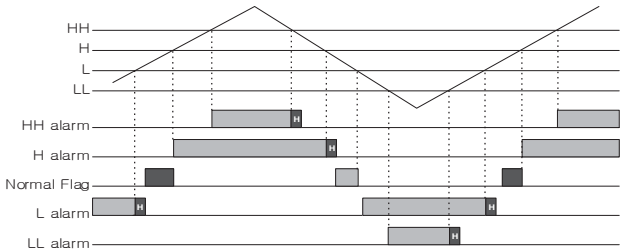
◎Peak/Bottom hold
- ●It memorizes and saves the max./min. value of analog input. It memorizes the max./min. value while Peak/Bottom signal is ON. When Peak/Bottom signal is OFF, they are saved. It is able to read by Configurator or Explicit message.
- ●It is applied when Peak/Bottom is set as ON at Function Choice of Analog Input Point Object. You can check the value of Peak/Bottom at Peak Value and Bottom Value.



◎Disconnection detection
- ●When operating analog input cable (voltage/current input) is disconnected, Broken Wire Flag Bit turns ON at Analog Status Flag Read of Analog Input Point Object. (It operates only for 1-5 V, 4-20 mA input range.) It is able to read by Configurator or Explicit message.
- ●If this value is below -5%, it recognizes disconnection and displays '32767' as data value.

◎Analog data allotment
- ●This function is to allot analog data. Select the desired data to transmit it to the master unit. It is able to read by Configurator or Explicit message.
- ●Set the allotment at Analog Data 1/2 Allocation selection of Analog Output Point.
- ●Set range: 0 to 2(factory default: 0)
  0: Analog Input Value
  1: Peak Value
  2: Bottom Value

◎Input comparison
- ●It compares analog input value or the operation value and alarm set value (HH, H, L, LL) and Analog Status Bit flag turns ON at Function Choice of Analog Input Point Object. It is able to read by Configurator or Explicit message.
- ●If the value is within the set range between 'H' and 'L', it is available to apply by turning ON Pass Signal Flag bit at Analog Status Flag Read of Analog Input Point Object and turning ON/OFF Comparator Flag bit at Function Choice.



◎Hysteresis
- ●In case of comparison output, this function is to increase stability of comparison output against vibration of input signal or chattering.
  It is able to read by Configurator or Explicit message.
- ●It is applied when Compare Bit flag turns ON at Function Choice of Analog Input Point Object. Set the value at Hysteresis Value.
- ●Set range: 0 to 16,383(factory default: 0)

◎Output value setting for communication error
- ●When communication error occurs, this function is to set output value of output unit by each channel. It is able to read by Configurator or Explicit message.
- ●Set Fault state at Fault Action of Analog Output Point.
- ●Set range: 0 to 3(factory default: 1)
  0: Hold Last State-maintains the last status
  2: High Limit-outputs max. value
  1: Low Limit-outputs min. value
  3: Zero Count-outputs 0%

◎Status flag monitoring
- ●When the network power voltage is lower than the set value or unit operation time is over the set value, monitoring is available by Status Bit of Application Object.
  It is able to read by Configurator or Explicit message.

※Flag Bit
Bit 0: Reserved
Bit 1: Network Power Voltage Drops (below the set level)
Bit 2: Life State(Unit)
Bit 3: Reserved
Bit 4: Reserved
Bit 5: Reserved
Bit 6: Reserved
Bit 7: Reserved

◎Input max./min. value save
- ●It saves max./min. input value. (When network power turns OFF, the saved max./min. value is cleared.) It is able to read by Configurator or Explicit message.
- ●When Clear Max, Clear Min Flag bit turns ON at Function Choice of Analog Output Point Object, the saved values are cleared and it saves the max./min. value of the current input value.

▣ I/O range

Analog I/O specifications (ARD-AI04, ARD-AO04)

No.	I/O range	Max. allowable I/O range
0	0-5 VDC	-0.25-5.25 VDC
1	1-5 VDC	0.8-5.2 VDC
2	0-10 VDC	-0.5-10.5 VDC
3	-5-5 VDC	-5.5-5.5 VDC
4	-10-10 VDC	-11-11 VDC
5	DC 4-20 mA	DC 3.2-20.8 mA
6	DC 0-20 mA	DC 0-21 mA

▣ Assembly Instance ID assignment

◎Produced I/O assignment(Input)

It is available to assign I/O data by the selected data at master. When changing Produced I/O data assignment, re-supply the network power of ARD unit to apply the changed assignment.

1)Analog Data1(Default I/O Data)

Analog Data 1 is assigned as Produced I/O data by Configurator or Explicit message. By property setting, assignment is available as Analog Input Value, Peak Value, Bottom Value.

●Assembly Instance ID: 103, ●Default: 0
●Set range: 0 to 2 (Analog Input Value: 0, Peak Value: 1, Bottom Value: 2)
●Data type: Word, Data size: 4Word

15 0	15
Assigned value to Analog Data 1 of Input point 0	Assigned value to Analog Data 1 of Input point 2
Assigned value to Analog Data 1 of Input point 1	Assigned value to Analog Data 1 of Input point 3

2)Analog Data2

Analog Data 2 is assigned as Produced I/O data by Configurator or Explicit message. By property setting, assignment is available as Analog Input Value, Peak Value, Bottom Value.

●Assembly Instance ID: 104 ●Default: 0
●Set range: 0 to 2(Analog Input Value: 0, Peak Value: 1, Bottom Value: 2)
●Data type: Word, Data size: 4Word

15 0	15 0
Assigned value to Analog Data 2 of Input point 0	Assigned value to Analog Data 2 of Input point 2
Assigned value to Analog Data 2 of Input point 1	Assigned value to Analog Data 2 of Input point 3

3)Generic Status

Generic Status is assigned as Produced I/O data by Configurator or Explicit message.

●Assembly Instance ID: 100 ●Data type: Byte, Data size: 1Byte
●Generic Status

Bit 0: Reserved.
Bit 1: Network Power Voltage Drops.
Bit 2: Life State(Unit)
Bit 3: Reserved.
Bit 4: Reserved.
Bit 5: Reserved.
Bit 6: Reserved.
Bit 7: Reserved.

15 0	
-	Generic Status

4)Analog Status

Analog Status is assigned as Produced I/O data by Configurator or Explicit message.

●Assembly Instance ID: 105 ●Data type: Byte, Data size: 4Byte
●Analog Status

Bit 0: Low Alarm(LL)
Bit 1: Low Warning(L)
Bit 2: Pass Signal(Nomal)
Bit 3: High Warning(H)
Bit 4: High Alarm(HH)
Bit 5: Broken Wire
Bit 6: Under Range
Bit 7: Over Range

15 0	
Analog Status of Input point 1	Analog Status of Input point 0
Analog Status of Input point 3	Analog Status of Input point 2

5)Analog Data1+Analog Data2

Analog Data 1 + Analog Data 2 is assigned as Produced I/O data by Configurator or Explicit message. By property setting, assignment is available as Analog Input Value, Peak Value, Bottom Value.

●Assembly Instance ID: 106 ●Default: 0
●Set range: 0 to 2(Analog Input Value: 0, Peak Value: 1, Bottom Value: 2)
●Data type: Word, Data size: 8Word

15 0	15 0
Assigned value to Analog Data 1 of Input point 0	Assigned value to Analog Data 1 of Input point 2
Assigned value to Analog Data 2 of Input point 0	Assigned value to Analog Data 2 of Input point 2
Assigned value to Analog Data 1 of Input point 1	Assigned value to Analog Data 1 of Input point 3
Assigned value to Analog Data 2 of Input point 1	Assigned value to Analog Data 2 of Input point 3

6)Analog Status+Generic Status

Analog Status + Generic Status is assigned as Produced I/O data by Configurator or Explicit message.

●Assembly Instance ID: 107 ●Data type: Byte, Data size: 5Byte

15 0

Analog Status of Input point 1	Analog Status of Input point 0
Analog Status of Input point 3	Analog Status of Input point 2
-	Generic Status

7)Analog Data+Analog Status

Analog Data 1 + Analog Status is assigned as Produced I/O data by Configurator or Explicit message. By property setting, assignment is available as Analog Input Value, Peak Value, Bottom Value.

●Assembly Instance ID: 108 ●Default: 0

●Set range: 0 to 2(Analog Input Value: 0, Peak Value: 1, Bottom Value: 2

●Data type: Byte, Data size: 12Byte

15 0

Assigned value to Analog Data 1 of Input point 0	
Assigned Low Byte at Analog Data 1 of Input point 1	Analog Status of Input point 0
Analog Status of Input point 1	Assigned High Byte at Analog Data 1 of Input point 1
Assigned value to Analog Data 1 of Input point 2	
Assigned Low Byte at Analog Data 1 of Input point 3	Analog Status of Input point 2
Analog Status of Input point 3	Assigned High Byte at Analog Data 1 of Input point 3

▣ DeviceNet Explicit Message

◎Explicit message format

1)Request(Master→Slave)

●CAN ID Field

Bit11	Bit10	Bit9	Bit8	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
1	0	0	0	0	0	0	1	1	1	0	0
Group2		Destination MAC ID							Message ID		

●Data Field

0x40	0x0E	0x01	0x01	0x01	xx	xx	xx
Source Mac ID	Service Code	Class ID	Instance ID	Attribute ID	Data		
					Low	High	Low

2)Response(Slave→Master)

●CAN ID Field

Bit11	Bit10	Bit9	Bit8	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
1	0	0	0	0	0	0	1	1	0	1	1
Group2		Source MAC ID							Message ID		

●Data Field

0x40	0x8E	0x21	0x03	xx	xx	xx	xx
Destination MAC ID	Service Code	Data					
		Low	High	Low	High	Low	High

●Error

0x40	0x94	0x14	0xFF	xx	xx	xx	xx
Destination MAC ID	Service Code	Data					
		Low	High	Low	High	Low	High

3)Class ID

Class ID	Object Name
0x01	Identity Object
0x02	Message Router
0x03	DeviceNet Object
0x04	Assembly Object
0x05	DeviceNet Connection Object
0x0A	Analog Input Object
0x0B	Analog Output Object
0x64	Application Object

4)Message ID

Message ID	Message Name
0	Slave's I/O Bit-Strobe Command Message
1	Reserved for Master's Use-Use is TBD
2	Master's change of state or Cyclic Acknowledge Message
3	Slave's Explicit Request Message
4	Master's Explicit Request Message
5	Master's I/O Poll Command/Change of State/Cyclic Message
6	Group2 only unconnected Explicit Request Message
7	Duplicate MAC ID Check Message

5)Error Code

Error Code	Error Name	Descriptions
0x08	Service not support	Invalid service code
0x09	Invalid Attribute value	Not support the specified attribute value
0x16	Object does not exist	Not support the specified instant ID
0x15	Too much data	Bigger data than the specified size
0x13	Not enough data	Smaller data than the specified size
0x0C	Object state conflict	Not execute the specified instruction when inner error occurs
0x20	Invalid parameter	Not support the specified operation instruction data
0x0E	Attribute not settable	Not support the write about Attribute ID
0x10	Device state conflict	Not execute the specified instruction when inner error occurs
0x14	Attribute not supported	Not support the specified attribute
0x19	Store operation failure	Not save the data in memory
0x2A	Group 2 only server general failure	Not support the specified instruction or attribute or not set attribute

◎Application Object(0x64)

Ex plicit message	Function	Command			Range	Default
		Service code	Instance ID	Attribute ID		
Status Bit	Flag Bit Bit0:Reserved Bit1:Network Power Voltage Drops Bit2:Threshold Run Hours Bit3:Reserved Bit4:Reserved Bit5:Reserved Bit6:Reserved Bit7:Reserved	Get	1	0x65	-	-
Network Power Voltage (Present Value)	Network power voltage PV	Get	1	0x66	-	-
Network Power Voltage (Top Value)	Network power voltage max. value	Get	1	0x67	-	
Network Power Voltage (Bottom Value)	Network power voltage min. value	Get	1	0x68	-	
Network Power Voltage (Set Value)	Network power voltage SV	Get/Set	1	0x69	0 to 255	12
Unit Power ON Total time (Present Value)	Unit operation time	Get	1	0x6A	0 to 429,496,729	-
Threshold Run Hour	Unit operation time SV	Get/Set	1	0x6B	0 to 429,496,729	876,000
Last Maintenance Data Setting	Last maintenance date of unit	Get/Set	1	0x70	-	-
Unit Comment	Unit comment	Get/Set	1	0x6E	-	-
Dip Switch Status	Read Dip Switch status	Get	1	0x72	-	-
Produced I/O	Set input assembly instance 0: Disable 1: Analog Data1 2: Analog Data2 3: Generic Status 4: Analog Status 5: Analog Data1+Analog Data2 6: Analog Status+Generic Status 7: Analog Data1+Analog Status	Get/Set	1	0x73	0 to 7	Input: 1

◎Analog Input Point Object(0x0A)

Attribute Name	Function	Command			Range	Default
		Service code	Instance ID	Attribute ID		
Analog Data1 Value	Analog1 input value read	Get	1 to 4	0x03	-	-
Input Range Setting	Input range setting 0: -10 to 10V 1: 0 to 5V 2: 0 to 10V 3: 4 to 20mA 4: Reserved 5: Reserved 6: -5 to 5V 7: 1 to 5V 8: 0 to 20mA	Get/Set	1 to 4	0x07	0 to 8	2
Number of AD Conversion Points Setting	Number of A/D conversion points read	Get/Set	1	0x64	1 to 4	4
Analog Data2 Value	Analog2 input value read	Get	1 to 4	0x65	-	-
Analog Status Flag Read	Analog Status Flag Bit 0: Low Alarm(LL) Bit 1: Low Warning(L) Bit 2: Pass Signal Bit 3: High Warning(H) Bit 4: High Alarm(HH) Bit 5: Broken Wire Bit 6: Under Range Bit 7: Over Range	Get	1 to 4	0x66	0 to 255	-
Analog Data1 Allocation Selection	Analog Data1 assignment 0: Analog Input Value 1: Peak Value 2: Bottom Value	Get/Set	1 to 4	0x67	0 to 2	0
Analog Data2 Allocation Selection	Analog Data2 assignment 0: Analog Input Value 1: Peak Value 2: Bottom Value	Get/Set	1 to 4	0x68	0 to 2	0
Function Choice	Function setting Bit 0: Moving Average Bit 1: Scaling Bit 2: Peak/Bottom Bit 3: Comparator Bit 4: Adjustment Offset Bit 5: Adjustment Gradient Bit 6: Clear Max Bit 7: Clear Min	Get/Set	1 to 4	0x69	-	Bit0 Bit1
Scaling Type Setting	0: Default Scaling 1: User Scaling	Get/Set	1 to 4	0x6A	0 to 1	0
Scaling Point 0% Setting	Low-limit scale value setting	Get/Set	1 to 4	0x6B	-28,000 to 28,000	0
Scaling Point 100% Setting	High-limit scale value setting	Get/Set	1 to 4	0x6C	-28,000 to 28,000	16,000
Adjustment Offset Value	Offset adjustment value setting	Get/Set	1 to 4	0x6D	-500 to 500	0
Max Value	Max. input value	Get	1 to 4	0x6E	-32,768 to 32,767	0
Min Value	Min. input value	Get	1 to 4	0x6F	-32,768 to 32,767	0
Peak Value	Input peak value	Get	1 to 4	0x70	-32,768 to 32,767	0
Bottom Value	Input bottom value	Get	1 to 4	0x71	-32,768 to 32,767	0
Hysteresis Value	Hysteresis SV for comparison	Get/Set	1 to 4	0x72	0 to 16,383	0
Alarm Trip Point High(HH)	HH Alarm SV	Get/Set	1 to 4	0x73	-32,768 to 32,767	0
Warning Trip Point High(H)	H warning SV	Get/Set	1 to 4	0x74	-32,768 to 32,767	0
Warning Trip Point(L)	L warning SV	Get/Set	1 to 4	0x75	-32,768 to 32,767	0
Alarm Trip Point Low(LL)	LL Alarm SV	Get/Set	1 to 4	0x76	-32,768 to 32,767	0
Adjustment Gradient Value	Fixed gradient value setting	Get/Set	1 to 4	0x78	-500 to 500	0
Moving Average Filter of Number	Number of digital filter setting 0: Disable 1: No_2 2: No_4 3: No_8 4: No_16 5: No_32 6: No_64 7: No_128 8: No_256	Get/Set	1 to 4	0x79	0 to 8	3
I/O Last Maintenance Data Setting	Last maintenance date of I/O	Get/Set	1 to 4	0x7A	-	-
I/O Comment	I/O input comment	Get/Set	1 to 4	0x7B	-	-

◎Analog Output Point Object(0x0B)

Explicit message	Function	Command			Range	Default
		Service code	Instance ID	Attribute ID		
Analog Output Value	Analog output value	Get	1 to 2	0x03	-	-
Output Range Setting	Output range setting 0: -10 to 10V 1: 0 to 5V 2: 0 to 10V 3: 4 to 20mA 6: -5 to 5V 7: 1 to 5V 8: 0 to 20mA	Get/Set	1 to 2	0x07	0 to 8	2
Fault Action	Fault State 0: Hold Last State 1: Low Limit 2: High Limit 3: Zero Count	Get/Set	1 to 2	0x09	0 to 3	1
Function Choice	Function setting Bit0: Reserved Bit1: Scaling Bit2: Reserved Bit3: Reserved Bit4: Adjustment Offset Bit5: Adjustment Gradient Bit6: Reserved Bit7: Reserved	Get	1 to 2	0x69	-	Bit1
Scaling Type Setting	0: Default Scaling 1: User Scaling	Get	1 to 2	0x6A	0 to 1	0
Scaling Point 0% Setting	Low-limit scale value setting	Get/Set	1 to 2	0x6B	-28,000 to 28,000	0
Scaling Point 100% Setting	High-limit scale value setting	Get/Set	1 to 2	0x6C	-28,000 to 28,000	16,000
Adjustment Offset Value	Offset adjustment value setting	Get/Set	1 to 2	0x6D	-500 to 500	0
Adjustment Gradient Value	Fixed gradient value setting	Get/Set	1 to 2	0x78	-500 to 500	0
I/O Last Maintenance Data Setting	Last maintenance date of I/O	Get/Set	1 to 2	0x7A	-	-
I/O Comment	I/O output comment	Get/Set	1 to 2	0x7B	-	-

▣ Caution for using

1. Node addresses of connected units should not be duplicated. If you change node address during operation, the Unit status(MS) flashes in red and it communicates with the previous node address. Re-supply the power and the changed node address is applied.
2. Communication speed which is set on Master is set automatically. If you change communication speed during operation, the Network status(NS) LED turns ON in red and it does not communicate. Re-supply the power and it operates normally.
3. Make sure to use the communication cables, and taps which are DeviceNet standards. It may cause communication error if non-standard products are used.
4. Make sure to examine disconnection or short-circuit before connecting cables.
5. Do not install the unit where severe dust exists or where corrosion may occur.
6. Installation environment
   ① It shall be used indoor. ② Altitude max. 2,000m
   ③ Pollution degree 2 ④ Installation category II

Modbus digital remote I/O PC, PLC, LP(logic panel) I/O expandation

▣ Features

- ●Automatic communication speed recognition: Enables to recognize communication speed of upper system (PC, PLC) automatically
- ●Network voltage monitoring: If PV is lower than SV, error parameter of low voltage is ON.
- ●Easy I/O extension by RS 485 communication of PC, PLC, LP, etc.
- ●Small size and easy to install closely nearby sensor of the device
- ●Easy wiring and replacement with sensor connectors
- ●Additional expansion units: Available to connect expansion units up to 7. I/O points are available to expand up to 64-point.
- ●Reading model name: Reads the model name of connected units
- ●Reading the unit specifications: Reads the specifications of connected units
- ●Inner EEPROM address setting: For setting the address, user can set directly in the inner EEPROM MAC ID parameter besides the external switch.

(A) Sensor connector
(B) I/O terminal block
(C) I/O cable
(D) Remote I/O terminal block

▣ User manual for communication

- ●Visit our website (www.autonics.com) to download the user manual for communication for Modbus communication.
- ●The user manual for communication describes for Modbus RTU protocol, Modbus Mapping Table.

▣ Ordering information

Please read "Caution for your safety" in operation manual before using this unit.

AR M – D I 08 N 4S

Terminal block	4S	Sensor connector type 4-pin socket
I/O specification	N	NPN open collector
	P	PNP open collector
I/O points	08	8-point type
I/O type	I	Input type
	O	Output type
Digital/Analog	D	Digital type
Network	M	Basic unit(Modbus type)
	X	Expansion unit(use in DeviceNet/Modbus)
Item	AR	Autonics Remote I/O

ARD-D (DeviceNet) (digital)
ARD-A (DeviceNet) (analog)
ARM (Modbus) (digital sensor connector type)

▣ Model

Type		Specifications
Basic unit	Expansion unit	
ARM-DI08N-4S	ARX-DI08N-4S	10-28VDC NPN input 8-point(10mA/point)
ARM-DI08P-4S	ARX-DI08P-4S	10-28VDC PNP input 8-point(10mA/point)
ARM-DO08N-4S	ARX-DO08N-4S	10-28VDC NPN output 8-point(0.3mA/point)
ARM-DO08P-4S	ARX-DO08P-4S	10-28VDC PNP output 8-point(0.3mA/point)

▣ Specifications

Model		**ARM-DI08N-4S**	**ARM-DI08P-4S**	**ARM-DO08N-4S**	**ARM-DO08P-4S**
	Expansion unit	**ARX-DI08N-4S**	**ARX-DI08P-4S**	**ARX-DO08N-4S**	**ARX-DO08P-4S**
Power supply		24VDC (allowable voltage range: 12-28VDC)			
Power consumption		Max. 3W			
I/O points		NPN input 8-point	PNP input 8-point	NPN output 8-point	PNP output 8-point
Control I/O	Voltage	10-28VDC		10-28VDC(voltage drop: max.0.5VDC)	
	Current	10mA/point(sensor current: 150mA/point)		0.3A/point(leakage current: max.0.5mA)	
Common		8-point, common			
Communication speed		2400, 4800, 9600, 19200, 38400, 57600, 115200bps(Default 9600bps)			
Communication method		2-wire half duplex			
Communication distance		Within max. 800m			
Multi-drop		Max. 32 Multi-drop			
Medium Access		POLL			
Application standard		Compliance with EIA RS485			
Protocol		Modbus RTU			
Data bit		8 bits			
Stop bit		1 or 2 bits(default: 2)			
Parity bit		None/Odd/Even (default: None)			
Insulation type		I/O and inner circuit: Photocoupler isolated, Modbus to internal bus and inner circuit: isolated, Unit power: non-isolated			
Insulation resistance		Min. 200MΩ (at 500VDC megger)			
Noise resistance		±240V the square wave noise (pulse width: 1μs) by the noise simulator			
Dielectric strength		1,000VAC 50/60Hz for 1 min.			
Vibration		1.5mm amplitude at frequency of 10 to 55Hz in each of X, Y, Z directions for 2 hours			
Shock		500m/s^2(approx. 50G) In X, Y, Z directions for 3 times			

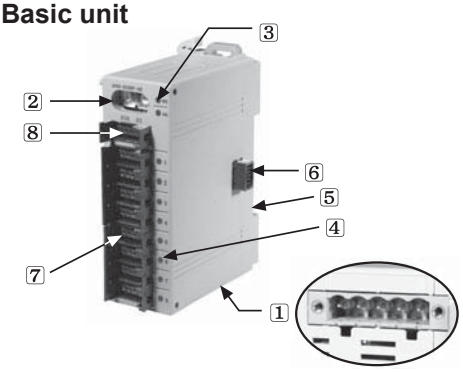
▣ Specifications

Model		ARM-DI08N-4S	ARM-DI08P-4S	ARM-DO08N-4S	ARM-DO08P-4S
	Expansion unit	ARX-DI08N-4S	ARX-DI08P-4S	ARX-DO08N-4S	ARX-DO08P-4S
Environment	Ambient temperature	-10 to 55 ℃, Storage : -25 to 75 ℃			
	Ambient humidity	35 to 85%RH, Storage : 35 to 85%RH			
Protection		IP20(IEC standard)			
Protection circuit		Surge, Short-circuit, Overheating and ESD protection, Reverse polarity protection circuit			
		Over current protection circuit(operated at min. 0.17A)		Over current protection circuit(operated at min. 0.7A)	
Indicator		Network status (NS) LED (green, red), Unit status (MS) LED (green, red), I/O status LED (Input: green, Output: red)			
Material		Front case, Body Case : PC			
Mounting		DIN Rail or screw lock type			
Approval		CE			
Unit weight	Basic unit	Approx. 65g	Approx. 65g	Approx. 65g	Approx. 66g
	Expansion unit	Approx. 55g	Approx. 55g	Approx. 55g	Approx. 56g

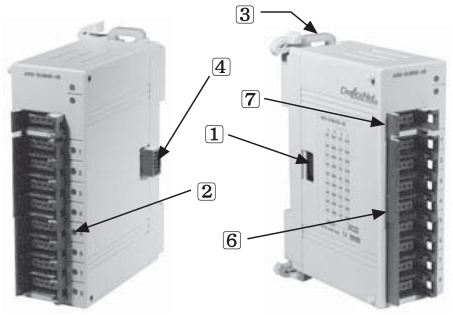
※ Environment resistance is rated at no freezing or condensation.

▣ Part descriptions

◎Basic unit



◎Expansion unit



1 Network connector

No.	For	Organization
5	24VDC	5: 24VDC
4	GND	4: GND
3	N·C	3: N·C
2	B	2: B
1	A	1: A

2 Rotary switch for node address
: Two rotary switches are used for setting address.
X10 switch represents the 10's multiplier and X10 switch represents the 1's multiplier.

3 Status LED: It is LED for displaying Unit status(MS) and Network status(NS).

4 I/O status LED: It is LED for displaying I/O status.

5 Rail Lock: It is used for mounting DIN Rail or with screws.

6 Connnector output part: It is used for connecting an expansion unit.

7 Sensor connector: It is connector for connecting external device I/O.

8 External power connector: It is used for supplying external power.

1 Connnector input part
:It connects an Expansion unit and is joined into the connnector output part.

2 I/O status LED: It is LED for displaying I/O status.

3 Rail Lock
: It is used for mounting DIN Rail or with screws.

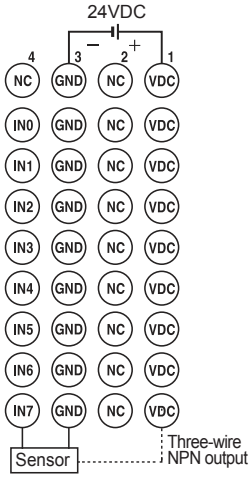
4 Connnector output part: It is used for connecting an expansion unit.

5 Sensor connector: It is connector for connecting external device I/O.

6 External power connector: It is used for supplying external power.

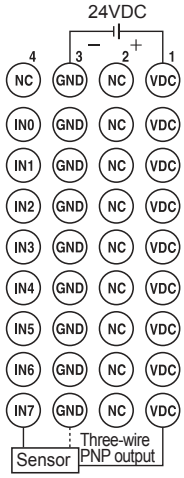
▣ Connections

●ARM-DI08N-4S
●ARX-DI08N-4S



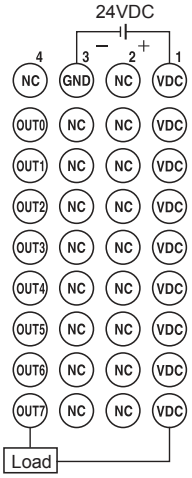
IN: 8P, 24VDC 10mA

●ARM-DI08P-4S
●ARX-DI08P-4S



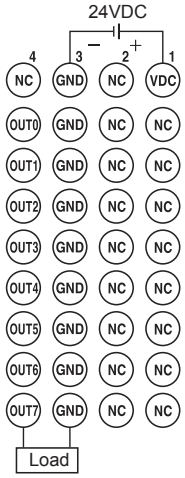
IN: 8P, 24VDC 10mA

●ARM-DO08N-4S
●ARX-DO08N-4S



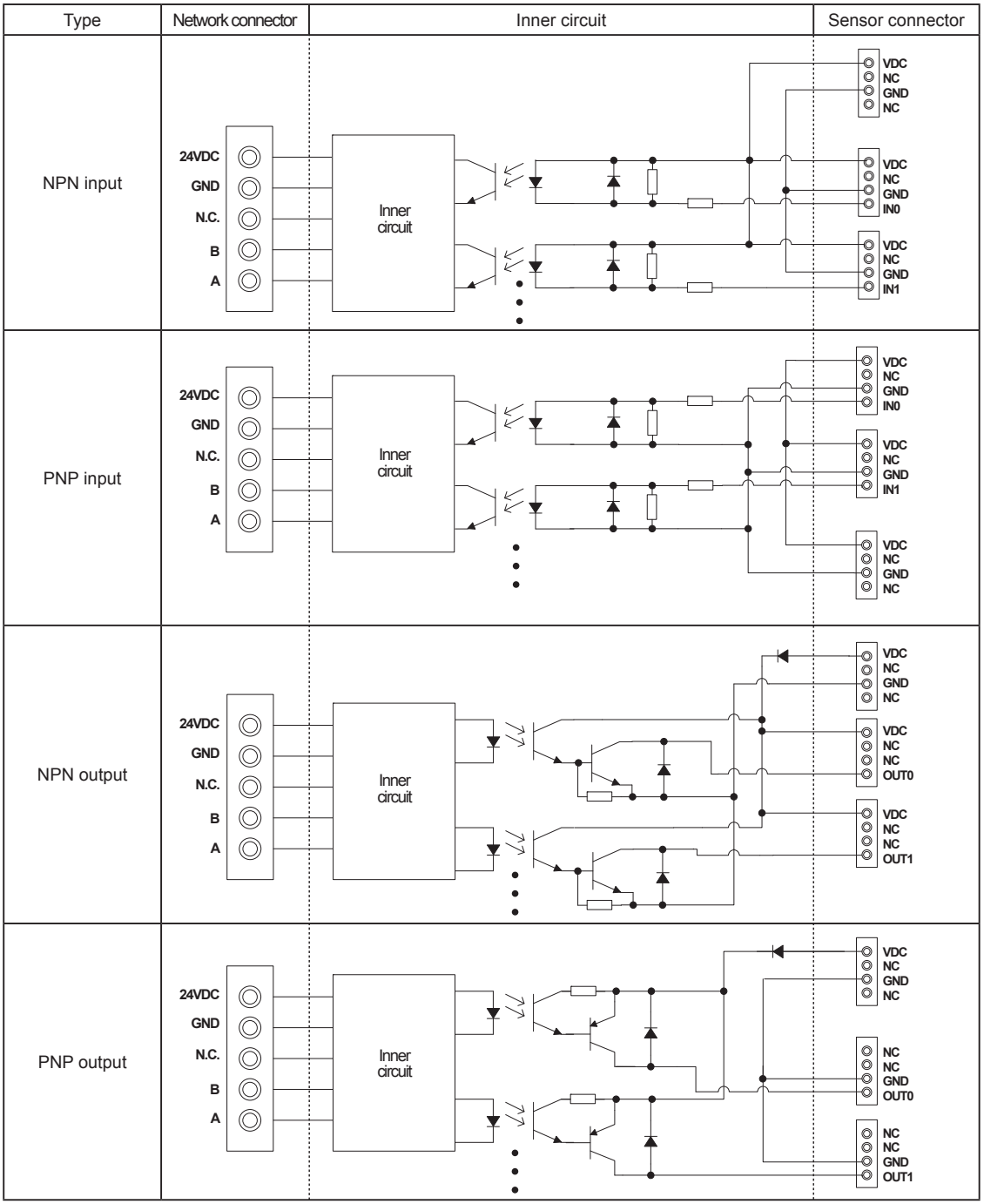
OUT : 8P, 24VDC 0.3A/Point

●ARM-DO08P-4S
●ARX-DO08P-4S



OUT : 8P, 24VDC 0.3A/Point

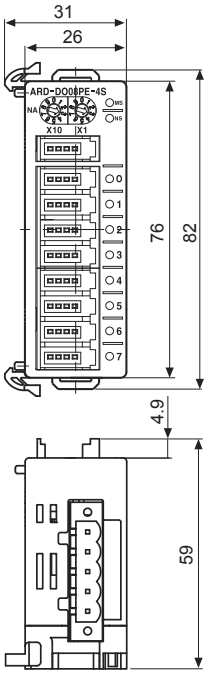
▣ I/O circuit diagram



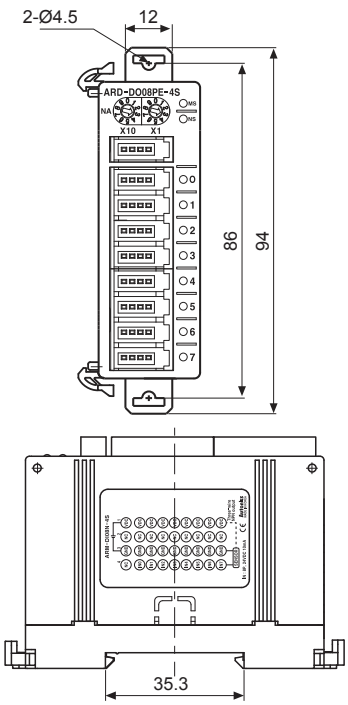
▣ Dimensions

(unit: mm)

< Mounting on DIN Rail >



< Mounting with screws >



※Same dimensions are applied to both basic and expansion units.

▣ Setup and installation

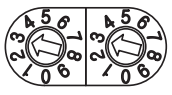
◎Setup address

- Setup address is by rotary switches or by inner EEPROM.
- If the rotary swithces are “00”, the address is set by inner EEPROM. The others, the desired number of rotary switches is that address.

●By rotary switches for address setup

①Two rotary switches are used for setting address.
X10 switch represents the 10’s multiplier and X10 switch represents the 1’s multiplier.
Address is settable from 0 to 63.

Ex)



The X10 and X1 switches point "3",
the address is "33".

②The set address is changed after unit power is supplied. Re-supply the unit power for applying the changed address.

●By inner EEPROM for address setup

①During communicate with upper system (PLC or PC), set the desired address on the 41029 EEPROM MAC ID parameter.
②The set address is changed after unit power is supplied. Re-supply the unit power for applying the changed address.

◎Unit installation

●Mounting on panel

①Pull 2 Rail Locks on the rear part of a unit, there is a fixing screw holes.
②Place the unit on a panel to be mounted.
③Make holes on fixing screw positions.
④Fasten the screw to fix the unit tightly. Tightening torque should be below 0.5N.m.

●Mounting on DIN Rail

①Pull two Rail Locks on the rear part of a unit.
②Place the unit on DIN rail to be mounted.
③Press Rail Locks to fix the unit tightly.

●Connection of expansion unit

①Turn OFF the power of the Basic unit.
②Remove a cover of connector for extension with nippers, etc.
③Connect connector input part of an expansion unit and connector output part of a basic unit with a connector which is enclosed with an expansion unit box.
④Install a connected expansion units as the right figure.
⑤Supply the power to the Basic unit.
(Re-supply the power of a basic unit and it recognizes expansion units.)

▣ Terminating resistance

●120 Ω ●1%or metallic film ●1/2 W

※Connect terminating resistance on the both ends of the trunk line. If not connecting terminal resistance, it may cause network problem (impedance can be too high or low) or malfunction.

▣ Status LED

(☼: ON, ◐: Flash, ●: OFF)

Item	Status LED		Descriptions
	Red	Green	
Unit status(MS) LED	☼	●	Error of expansion unit
	◐	●	Error of MAC ID
	●	☼	Normal operation
	●	●	Power is not supplied.
Network status(NS) LED	☼	●	Not supported communication speed(at auto baud rate)
	◐	●	Error of packet
	●	☼	Normal communication
	●	◐	Communication standby

▣ Caution for using

1. Turn OFF the power before connecting or disconnecting expansion units.
2. Address of connected units on Network should not be duplicated. If you change address during operation by the rotary switch or EEPROM, the Unit status(MS) LED flashes in red and it communicates with the previous address.
   Re-supply the power and the changed node address is applied.
3. Communication speed which is set on upper system(PC, PLC, etc.) is set automatically.
   If you change communication speed during operation, Network status(NS) LED turns ON in read and it does not communicate.
   Re-supply the power and it operates normally.
4. Make sure to use the communication cables which are standard. It may cause communication error if non-standard products are used.
5. Make sure to examine disconnection or short-circuit before connecting cables.
6. Do not install the unit where severe dust exists or where corrosion may occur.
7. Installation environment
   ① It shall be used indoor. ② Altitude max. 2,000 m
   ③ Pollution degree 2 ④ Installation category II

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Autonics Corp.

Established in 1977, Autonics is a leading company of sensors & controllers in Korea and the No.1 exporting company as well, its world class products over 6,000 items are marketed in more than 100 countries worldwide to satisfy customer needs in various fields of Industrial Automation.

Dreaming *ORANGE* World, Autonics

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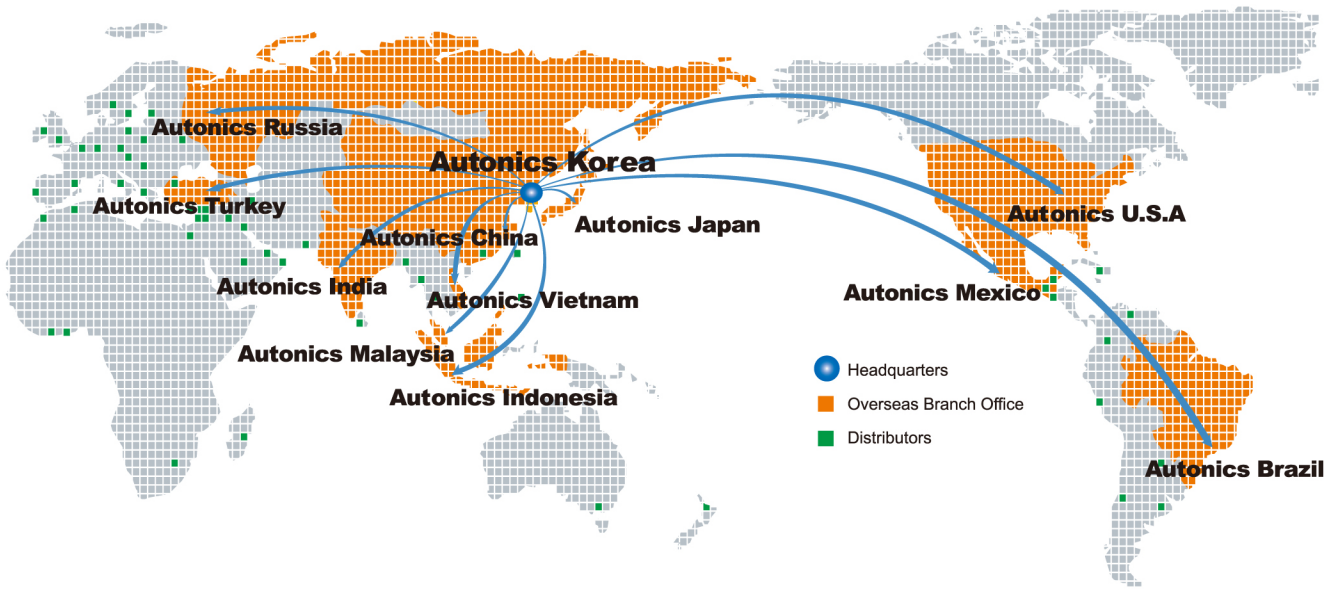

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