

User's manual

for HCA8 Series Programmable Controller

Safety Precautions

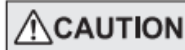
(Read these precautions before use)

1). Startup and maintenance precautions



- Do not touch any terminals while the PLC's power is ON.
Doing so may cause electric shock or malfunction.
- Before cleaning or retightening terminal externally cut off all phases of power supply.
Failure to do so may cause electric shock.
- Make sure to connect the battery for memory backup correctly.
Do not charge, disassemble, heat, short-circuit, or expose the battery to fire.
Doing so may rupture or ignite it.
- Before modifying or disrupting the program in operation or running the PLC, carefully read through this manual and the associated manuals and ensure the safety of the operation.
An operation error may damage the machinery or cause accidents

2). Startup and maintenance precautions



- Turn off the power to PLC before attaching or detaching the memory cassette. If the memory cassette is attached or detached while the PLC's power is ON, the data in the memory cassette may be destroyed, and the memory cassette may be damaged.
- Do not disassemble or modify the PLC.
Doing so may cause fire, equipment failures or malfunctions.
For repair, contact HCFA distributor.
- Turn off the power to the PLC before connecting or disconnecting any extension cables.
Failure to do so may cause equipment failures or malfunctions.
- Turn off the power to the PLC before attaching or detaching the following device.
Failure to do so may cause equipment failures or malfunction.
 - Display module, peripheral devices, expansion boards, and special adapters
 - Connector conversion adapter, extension blocks, and HC Series terminal blocks
 - Battery and memory cassette

3). Disposal precaution



- Please contact a certified electronic waste disposal company for the environmentally safe recycling and disposal of your device.

4). Transport and storage precautions



• Before transporting the PLC, turn on the power to the PLC and check that the BATT LED is off. If the PLC is transported with the BATT LED on or the battery exhausted, the battery-backed data may be unstable during transportation.

• The PLC is a precision instrument. During transportation, avoid impacts larger than those specified in Section 2.1. Failure to do so may cause failures in the PLC.

After transportation, verify the operations of the PLC.

● Caution for compliance with EC directive

Installation in Enclosure

Programmable logic controllers are open-type devices that must be installed and used within conductive control boxes. Please use the HCA8 Series programmable logic controllers while installed in conductive shielded control boxes. Please secure the control box lid to the control box (for conduction). Installation within a control box greatly affects the safety of the system and aids in shielding noise from the programmable logic controller.

● Caution for analog products in use

The analog special adapters have been found to be compliant to the European standards in the aforesaid manual and directive. However, for the very best performance from what are in fact delicate measuring and controlled output device HCFA would like to make the following points:

As analog devices are sensitive by nature, their use should be considered carefully. For users of proprietary cables (integral with sensors or actuators), these users should follow those manufacturers installation requirements.

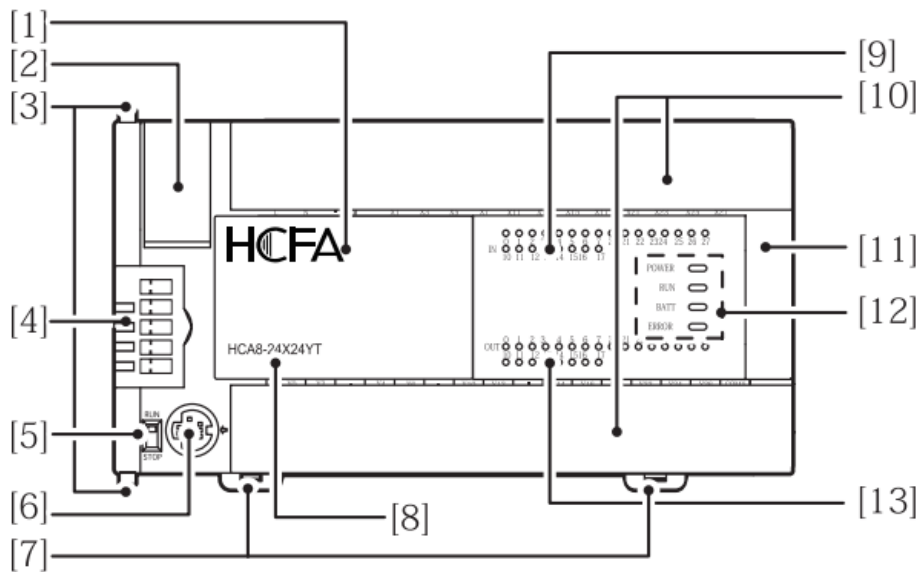
HCFA recommend that the shielded cables should be used. If NO other EMC protection is provided, then users may experience temporary induced errors not exceeding +10%/-10% in very heavy industrial areas.

However, HCFA suggest that if adequate EMC precautions are followed with general good EMC practice for the users complete control system, users should expect normal errors as specified in this manual.

- Sensitive analog cable should not be laid in the same trunking or cable conduit as high voltage cabling. Where possible users should run analog cables separately.
- Good cable shielding should be used. When terminating the shield at Earth - ensure that no earth loops are accidentally created.
- When reading analog values, EMC induced errors can be smoothed out by averaging the readings. This can be achieved either through functions on the analog special adapter/block or through a user's program in the HCA8 Series PLC main unit.

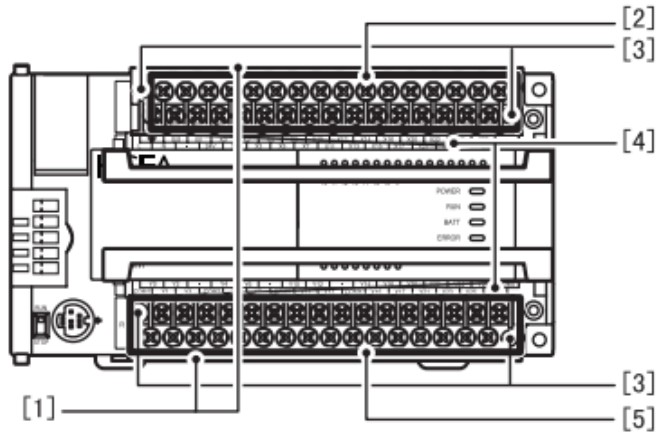
1. Product overview

1.1 Part names



NO.	Name		
[1]	Top cover		
[2]	Battery cover		
[3]	Special adapter connecting hooks(2 places)		
[4]	Expansion board dummy cover		
[5]	RUN/STOP switch		
[6]	Peripheral device connecting connector		
[7]	DIN rail mounting hooks		
[8]	Model name (abbreviation)		
[9]	Input display LEDs (Red)		
[10]	Terminal block cover		
[11]	Extension device connecting connector cover		
[12]	Operation status display LEDs		
	POWER	Green	On while power is on the PLC.
	RUN	Green	On while the PLC is running.
	BATT	Red	Lights when the battery voltage drops
	ERROR	Red	Flash when a program error occurs
Red		Lights when a CPU error occurs.	
[13]	Output display LEDs (Red)		

With terminal cover open



NO.	Name
[1]	Protective terminal covers
[2]	Power supply, Input (X) terminals
[3]	Terminal block mounting screws (HCA8-8X8YT□ terminals block cannot be installed/ removed.)
[4]	Terminal names
[5]	Output (Y) terminals

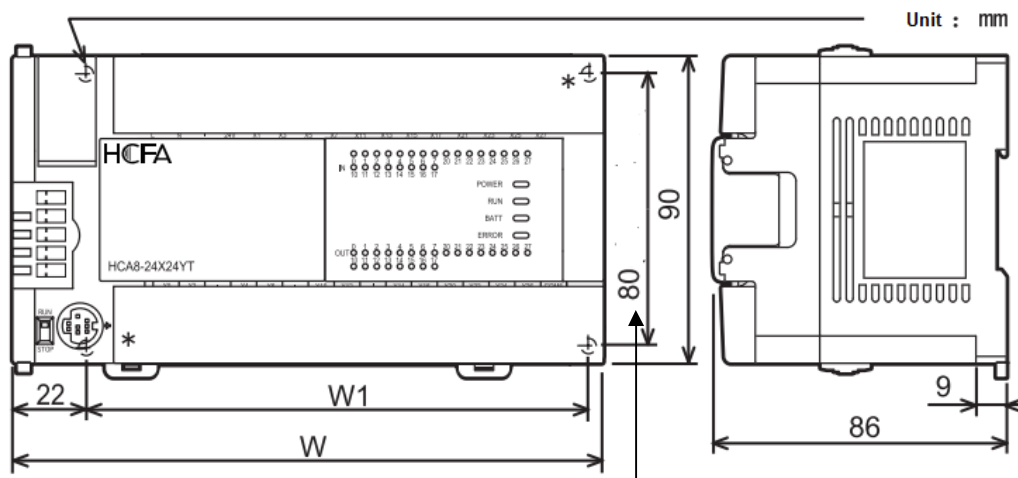
The products model name with '-A' have no protective terminal covers.

1.2 External dimension and weight

2- ϕ 4.5-diam mounting holes (HCA8-8X8YT□, HCA8-16X16YT□)^{*1}

4- ϕ 4.5-diam mounting holes (HCA8-24X24YT□, HCA8-32X32YT□, HCA8-64X64YT□)

HCA8-8X8YT□, HCA8-16X16YT□^{*2} do not have the (*)-marked mounting holes.



Mounting hole pitches

*1 Mounting holes for HCA8-16X16YT/UA1 are 4- ϕ 4.5.

*2 HCA8-16X16YT/UA1 is excluded.

Model name	W(mm)	W1(mm) Direct mounting hole pitches	Weight(kg)
HCA8-8X8YT□	130	103	0.6
HCA8-16X16YT□ ^{*3}	150	123	0.65
HCA8-24X24YT□	182	155	0.85
HCA8-32X32YT□ ^{*4}	220	193	1.00
HCA8-40X40YT□	285	258	1.20
HCA8-64X64YT□	350	323	1.80

*3 HCA8-16X16YT/UA1 is the same as HCA8-24X24YT□

*4 HCA8-32X32YT/UA1 is the same as HCA8-40X40YT□.

1) Installation

- 35-mm-wide DIN rail or Direct (screw) mounting (M4).

2. Installation (general specification)

2.1 Generic specification

Items	Specification				
Ambient temperature	0 to 55°C (32 to 131°F) when operating and -25 to 75°C (-13 to 167°F) when stored				
Ambient humidity	5 to 95%RH (no condensation) when operating				
Vibration resistance ^{*1}		Frequency (Hz)	Acceleration (m/s ²)	Half amplitude (mm)	Sweep Count for X, Y, Z: 10 times (80 min in each direction)
	When installed on DIN rail	10 to 57	--	0.035	
		57 to 150	4.9	--	
	When installed directly	10 to 57	--	0.075	
57 to 150		9.8	--		
Shock resistance ^{*1}	147 m/s ² acceleration; Action time: 11ms; 3 times by half-sine pulse in each direction X, Y and Z.				
Noise resistance	By noise simulator at noise voltage of 1,000 Vp-p, noise width of 1 μs, rise time of 1 ns and period of 30 to 100 Hz				
Dielectric withstand voltage ^{*2}	1.5kV AC for one minute		Between each terminal and ground terminal		
	500V AC for one minute				
Insulation resistance ^{*2}	5MΩ or more by 500V DC megger				
Grounding	Class D grounding(grounding resistance: 100 Ω or less) <Common grounding with a heavy electrical system is not allowed.> ^{*3}				
Working atmosphere	Free from corrosive gas, flammable gas or excessive conductive dusts				
Working altitude	<2000m ^{*4}				

*1 Base on IEC61131-2.

*2 Dielectric strength and insulation resistance are shown below.

Terminal	Dielectric strength	Insulation resistance
Terminals of main unit, I/O extension units/ blocks		
Between power supply terminal(AC power) and ground terminal	1.5 kV AC for one minute	5M Ωor more on 500V DC Megger
Between power supply terminal(DC power) and ground terminal	500V AC for one minute	
Between 24VDC service power supply connected to input terminal 24VDC and ground terminal	500V AC for one minute	
Between input terminal (100VAC) and ground terminal	1.5 kV AC for one minute	
Between output terminal(relay) and ground terminal	1.5kV AC for one minute	
Between output terminal(transistor) and ground terminal	500 V AC for one minute	
Between output terminal(triac) and ground terminal	1.5kV AC for one minute	
Terminals of expansion board, special adapters, and special function unit/ block		
Between terminals of expansion board and ground terminal	Not allowed	Not allowed
Between terminals of special adapters and ground terminal	500 VAC for one minute	5M Ωor more on 500V DC Megger
Special function unit/ block	Refer to the manual for each special function unit/ block.	

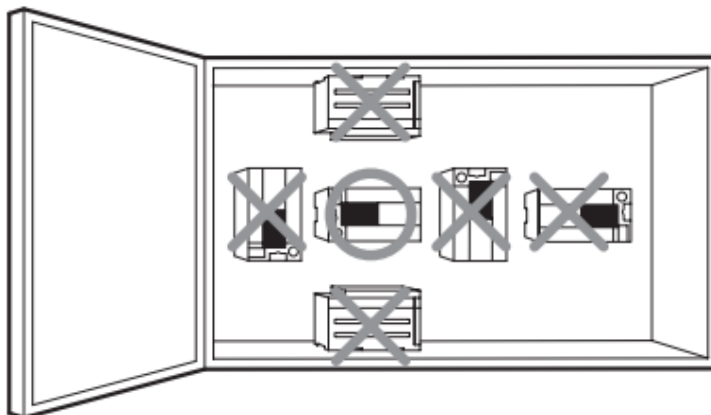
*3 For common grounding, refer to section 3.3.

*4 The PLC cannot be used at a pressure higher than atmospheric pressure to avoid damage.

2.2 Installation location

Install the PLC in an environment conforming to the generic specification(section 2.1), installation precautions and notes.

Installation location in enclosure

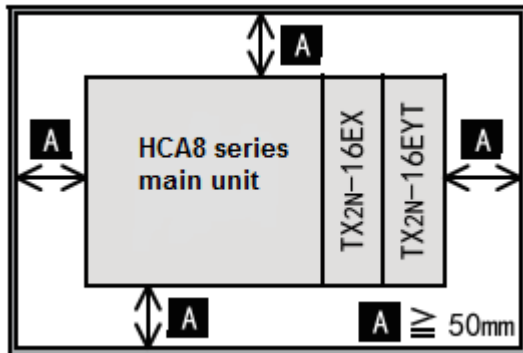


Space in enclosure

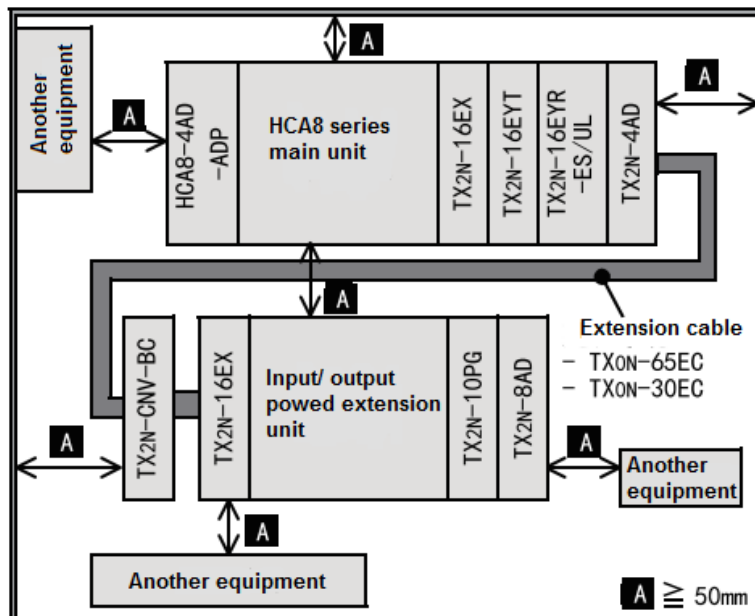
Extension devices can be connected on the left and right sides of the main unit of PLC.

If you intend to add extension devices in the future, deep necessary space on the left and right sides.

Configuration without extension cable



Configuration in 2 stages with extension cable



2.2.1 Affixing the dust proof sheet

The dust proof sheet should be affixed to the ventilation port before beginning the installation and wiring work.

For the affixing procedure, refer to the instructions in the dust proof sheet.

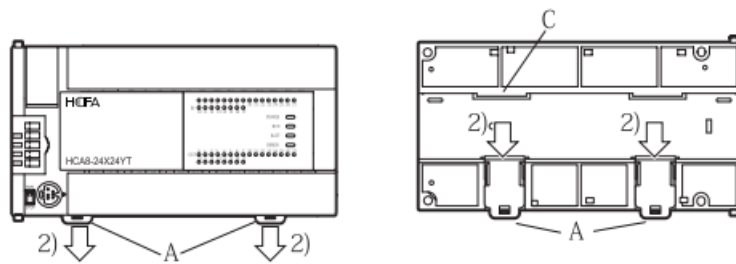
Be sure to remove the dust proof sheet when the installation and wiring is completed.

2.3 Procedure for installing to or detaching from DIN rail

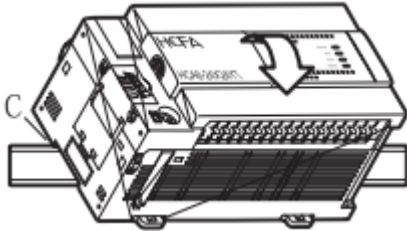
The main unit can be installed on a DIN46277 rail [35 mm (1.38") wide].

2.3.1 Installation

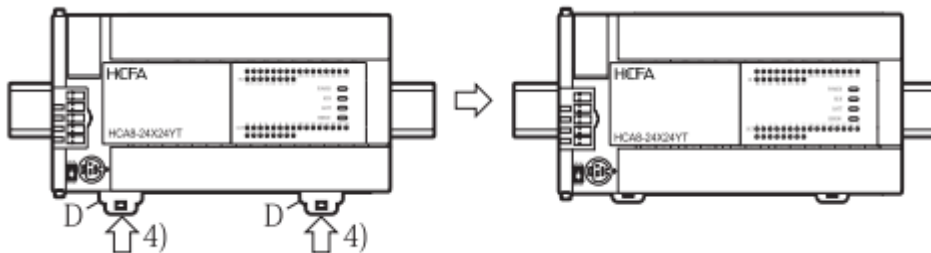
- 1) Connect the expansion boards and special adapters to the main unit
- 2) Push out all DIN rail mounting hooks (below fig.A)



3) Fit the upper edge of DIN rail mounting groove (below fig.C) onto the DIN rail



4) Lock the DIN rail mounting hooks (below fig.D) while pressing the PLC against the DIN rail.



2.4 Procedure for installing directly (With M4 screw)

This product can be installed directly on the panel (with screws)

2.4.1 Mounting hole pitches

Refer to external dimensions (section 1.2) for the product's mounting hole pitches information.

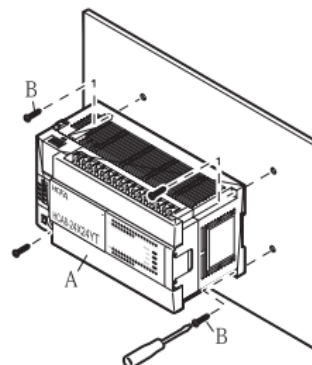
As for the details of the mounting hole pitches for extension unit/ block and special adapters, refer to this manual.

2.4.2 Installation


1) Making the mounting holes in the mounting surface referring to the external dimensions diagram.


2) Fit the main unit (A in the right figure) based on the holes, and secure it with M4 screws (B in the right figure)

The mounting hole pitches and the number of screws depend on product, Refer to the external dimensions diagram.



3. Power supply/ input/output specifications and examples of external wiring

Design precaution	
<p>•Make sure to have the following safety circuits outside of the PLC to ensure safe system operation even during external power supply problems or PLC failure. Otherwise, malfunction may cause series accidents.</p> <p>1) Most importantly, have the following: an emergency stop circuit, a protection circuit, an interlock circuit for opposite movement(such as normal vs. reverse rotation), and an interlock circuit (to prevent damage to the equipment at the upper or lower positioning limits)</p> <p>2) Note that when the PLC CPU detects an error, such as a watchdog timer error, during self-diagnosis, all outputs are turned off. Also, when an error that cannot be detected by the PLC CPU occurs in an input/output control block, output control may be disabled. External circuits and mechanisms should be designed to ensure safe machinery operation in such a case.</p> <p>3) Note that when an error occurs in a relay, triac or transistor output devices, the output could be held either on or off. For output signals that may lead to series accidents, external circuits and mechanisms should be designed to ensure safe machinery operation in such a case.</p>	

Design precaution	
<p>•Do not bundle the control line together with or lay it close to the main circuit or power line. As a guideline, lay the control line at least 100mm or more away from the main circuit or power line. Noise may cause malfunction.</p> <p>•Install module so that excessive force will be applied to the built-in programming connectors, power connectors or I/O connectors. Failure to do so may result in wire damage/ breakage or PLC failure.</p>	

Note
<p>•Simultaneously turn on or off the power supplies of main unit and extension devices.</p> <p>•Even if the power supply causes an instantaneous power failure for less than 10 ms, the PLC can continue to operate.</p> <p>•If a long-time power failure or an abnormal voltage drop occurs, the PLC stop and output is turned off. When the power supply is restored, it will automatically restart (when the RUN input is on)</p>

Wiring precaution



•Cut off all phases of power supply externally before installation or wiring work in order to avoid damage to the product or electric shock.

Wiring precaution



•Connect the AC power supply to the dedicated terminals specified in this manual.
If an AC power supply is connected to a DC input/ output terminal or DC power supply terminal, the PLC will burn out.

•Do not wire vacant terminal externally.
Doing so may damage the product.

•Use class D grounding (grounding resistance of 100Ω or less) with a wire of 2mm² or thicker on the grounding terminal of the main unit.
However, do not connect the ground terminal at the same point as a heavy electrical system.

•When drilling screw holes or wiring, make sure cutting or wire debris does not enter the ventilation slits.
Failure to do so may cause fire, equipment failures or malfunction.

Note

•Input/ output wiring 50 to 100m long will cause almost no problems of noise, but generally, the wiring length should be less than 20m to ensure the safety.

•Extension cables are easily affected by noise. Lay the cables at a distance of at least 30 to 50 mm away from the PLC output and other power lines.

3.1 Wiring

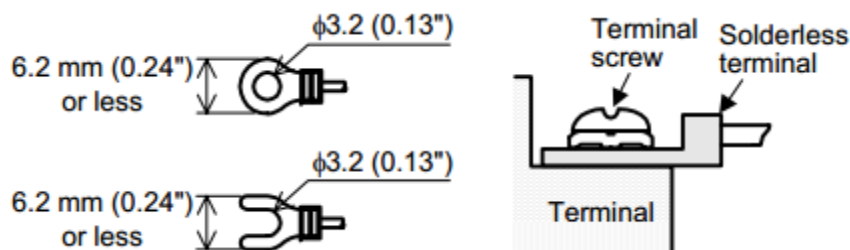
3.1.1 Cable end treatment and tightening torque

For the terminals of HCA8 series PLC, M3 screws are used.

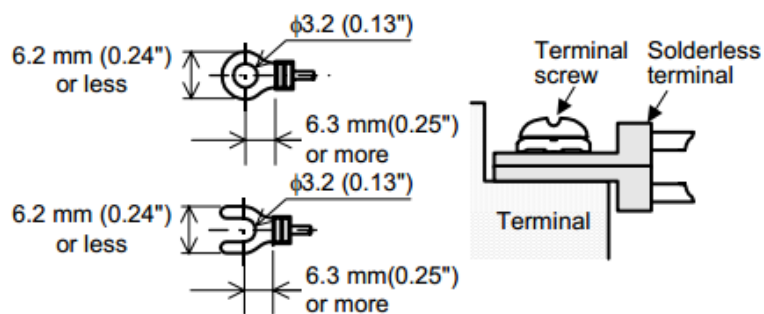
The electric wire ends are treated as shown below.

Tighten the screws to a torque of 0.5 N•m to 0.8 N•m.

•When one wire is connected to a terminal



•When two wires are connected to a terminal



3.1.2 Removal and installation of quick-release terminal block

Removal: Unscrew terminal block mounting screws [both left and right screws] evenly, and remove the terminal block

Installation: Place the terminal block in the specified position, and tighten the terminal block mounting screw evenly [both left and right screw].

Tightening torque 0.4 to 0.5 N•m

Loose connections may cause malfunctions.

*Pay attention so that the center of the terminal block is not lifted.

3.2 Power supply specification and example of external wiring

3.2.1 Power supply specification [Main unit/ I/O extension units]

Items		Specification	
		AC Power type	DC Power type ^{*6}
Supply voltage		100 - 240V AC	24 V DC
Allowable supply voltage range	Main unit	85 - 264V AC	16.8-28.8V DC ^{*5}
	TX2N-32E□, TX2N-48E□		24 V DC +20%, -30%
Rated frequency		50/60Hz	--
Allowable momentary power failure period		Operation can be continued upon occurrence of momentary power failure for 10 ms or less. ^{*4}	Operation can be continued upon occurrence of momentary power failure for 5 ms or less.
Power fuse	HCA8-8X8YT□ ~16X16YT□ ^{*7}	250V 3.15A	
	HCA8-24X24YT□ ~64X64YT□	250V 5A	
	TX2N-32E□	250V 3.15A	--
	TX2N-48E□	250V 5A	250V 5A
Inrush current	Main unit	30 A max. 5 ms or less/100 V AC 65 A max. 5 ms or less/200 V AC	35 A max.0.5 ms or less/24V DC
	TX2N-32E□ TX2N-48E□	40 A max. 5 ms or less/100 V AC 60 A max. 5 ms or less/200 V AC	--

Power consumption ^{*1}	HCA8-8X8YT□	30W	25W
	HCA8-16X16YT□	35W	30W
	HCA8-24X24YT□	40W	35W
	HCA8-32X32YT□	45W	40W
	HCA8-40X40YT□	50W	45W
	HCA8-64X64YT□	65W	--
	TX2N-32E□	30W(35VA)	--
	TX2N-48E□	35W(45VA)	30W
24V DC service power supply ^{*2}	HCA8-8X8YT□ ~16X16YT□	400 mA or less	--
	HCA8-24X24YT□ ~64X64YT□	600 mA or less	--
	TX2N-32E□	250mA	--
	TX2N-48E□	460mA	--
5VDC built-in power supply ^{*3}	Main unit	500 mA or less	
	TX2N-32E□	690 mA or less	
	TX2N-48E□		

*1 Does not include the power consumption of extension units/ special extension units, and of the extension blocks/ special extension blocks connected to these units.

For the power(current) consumed by the extension units/ blocks for input/ output, refer to HCA8 series user's manual-hardware edition.

For the power consumed by special extension units/ blocks, refer to the appropriate manual.

*2 When the input/ output extension blocks are connected, the 24V DC service power supply will be consumed by the blocks, and the current value to be used by the main unit will be reduced.

AC power type(AC input) and DC power type do not have 24V DC power supply.

*3 Cannot be used to power supply to an external destination.

The power is supplied to input/ output extension blocks, special extension blocks, special adapters and expansion boards.

*4 When the power supply voltage is 200 V AC, the time can be changed to 10 to 100 ms by editing the user program.

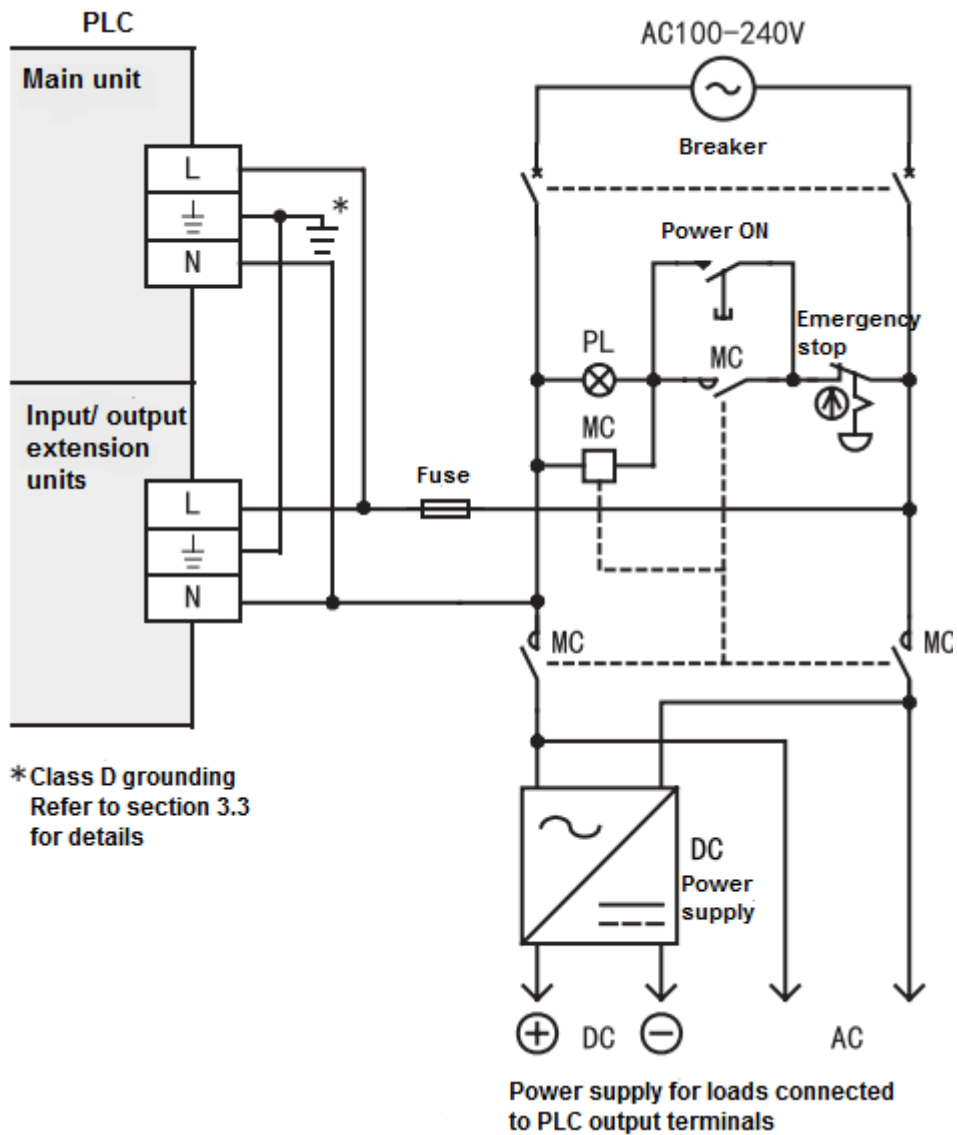
*5 When the power supply voltage is DC 16.8-19.2V, the connectable extension equipment decreases.

*6 When attaching high-speed input/ output special adapter(HCA8-4HSX-ADP, HCA8-2HSY-ADP) and special function blocks(TX0N-3A, TX2N-2AD, TX2N-2DA), the number of connectable modules to the main unit is limited, due to the current consumption(internal 24V DC) at startup.

*7 The power fuse of HCA8-16X16YT-UA1 is 250V, 5A.

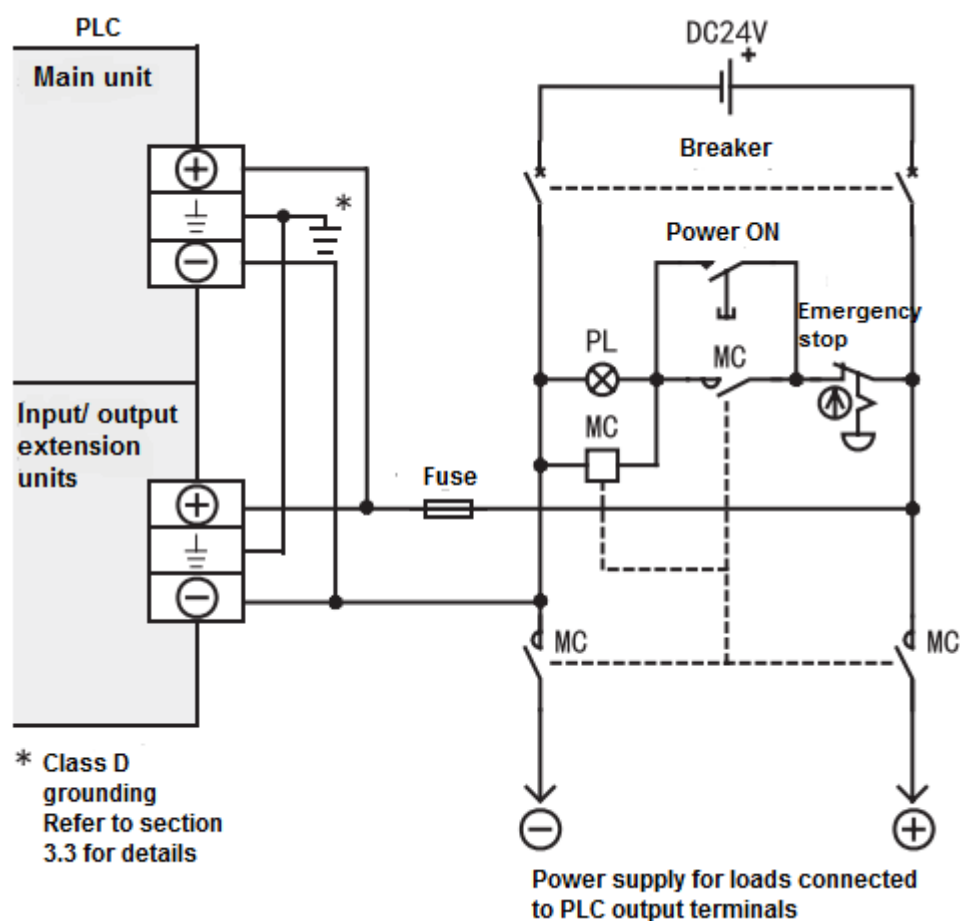
3.2.2 Example of external wiring (AC power type)

100~240V AC power is supplied to the main unit. For the details of wiring work, refer to section 3.1.



3.2.3 Example of external wiring (DC power type)

24V DC power is supplied to the main unit. For the details of wiring work, refer to section 3.1.

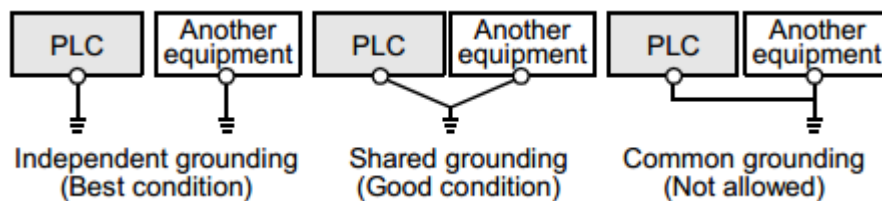


3.3 Grounding

Ground the PLC as stated below.

- Perform class D grounding (Grounding resistance: 100 Ω or less)
- Ground the PLC independently if possible.

If it cannot be grounded independently, ground it jointly as shown below.



- Use ground wire thicker than AWG14 (2 mm²)
- Position the ground point as close to the PLC as possible to decrease the length of the ground wire.

3.4 Input specification and external wiring

3.4.1 Input specification [24V DC input type]

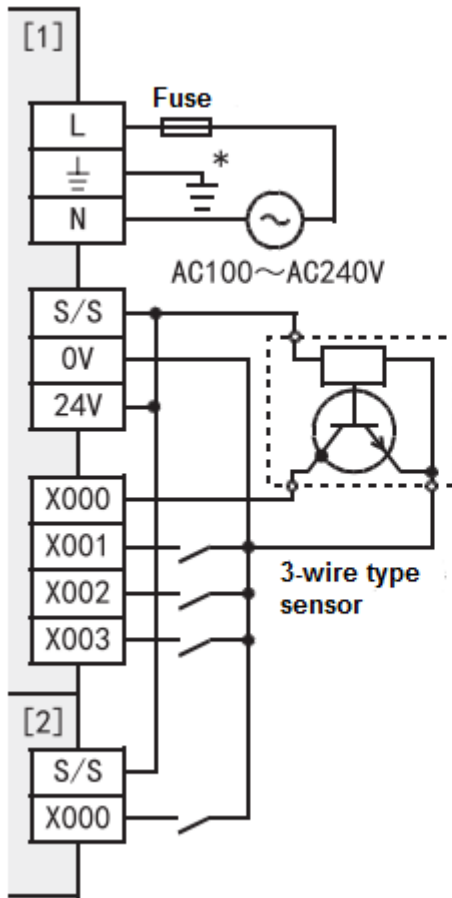
Items		Specification
Number of input points	TX2N-8ER□	4 points (8 points) ¹
	HCA8-8X8YT□	8 points

	TX2N-8EX□		
	HCA8-16X16YT□ TX2N-16EX□ TX2N-32E□		16 points
	HCA8-24X24YT□ TX2N-48E□		24 points
	HCA8-32X32YT□		32 points
	HCA8-40X40YT□		40 points
	HCA8-64X64YT□		64 points
Input connecting type			Removable terminal block
Input form			Sink/ source
Input signal voltage	Main unit	AC power type	24V DC ±10%
		DC power type	24V DC +20%, -30%
	I/O extension units	AC power type	24V DC ±10%
		DC power type	24V DC +20%, -30%
Input impedance	Main unit	X000~X005	3.9kΩ
		X006, X007	3.3kΩ
		X010 and more	4.3kΩ (Does not apply to TX3U-16M) .
	I/O extension units/ blocks		4.3kΩ
Input signal current	Main unit	X000~X005	6mA/24V DC
		X006, X007	7mA/24V DC
		X010 and more	5mA/24V DC Does not apply to TX3U-16M)
	I/O extension units/ blocks		5mA/24V DC
ON input sensitivity current	Main unit	X000~X005	3.5 mA or more
		X006, X007	4.5 mA or more
		X010 and more	3.5 mA or more(Does not apply to TX3U-16M)
	I/O extension units/ blocks		3.5 mA or more/ 24V DC
OFF input sensitivity current			1.5 mA or less
Input response time			Approx. 10ms
Input signal form			<ul style="list-style-type: none"> • Sink input: No-voltage contact input NPN open collector transistor • Source input: No-voltage contact input PNP open collector transistor
Input circuit insulation			Photocoupler insulation
Input operation display			LED on panel lights when photocoupler is driven.

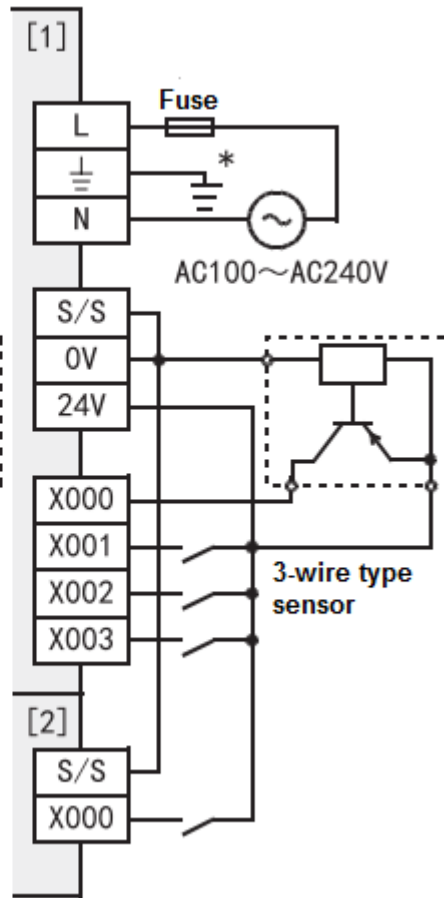
*1 The number in parentheses() indicates occupied points.

3.4.2 Examples of input wiring[AC power type]

1. Sink input



2. Source input



* Class D grounding

Refer to section 3.3 for details.

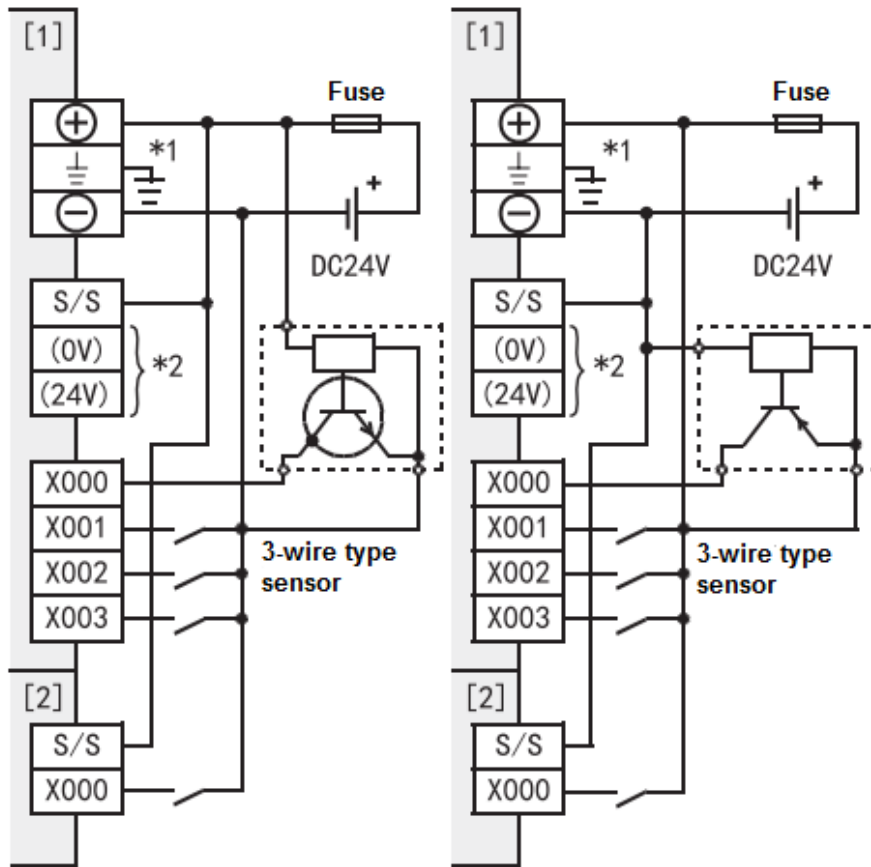
[1]: Main unit/ Input/ output extension units(Sink/ source input type)

[2]: Input/ output extension blocks(Sink/ source input type)

3.4.3 Examples of input wiring[DC power type]

1. Sink input

2. Source input



*1 Class D grounding

Refer to section 3.3 for details.

*2 Do not connect the (0V) and (24V) terminal with others, since they are not available.

[1]: Main unit/ Input/ output extension units(Sink/ source input type)

[2]: Input/ output extension blocks(Sink/ source input type)

3.5 Relay output specification and example of external wiring

3.5.1 Relay output specification

	Items	Specification
The number of output points	TX2N-8ER□	4 points (8 points) ^{*1}
	HCA8-8X8YT□	8 points
	TX2N-8EYR□	16 points
	HCA8-16X16YT□	
	TX2N-32ER□	
	TX2N-16EYR□	24 points
	HCA8-24X24YT□	
	TX2N-48ER□	32 points
HCA8-32X32YT□		
	HCA8-40X40YT□	40 points

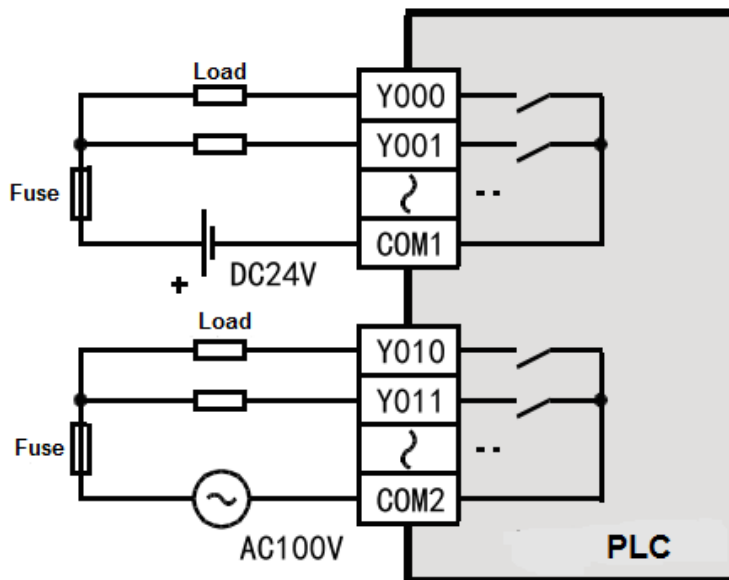
HCA8-64X64YT□		64 points
Output connecting type		Removable terminal block
Output form		Relay
External power supply		30V DC or less 240V AC or less (250V AC or less if not a CE, UL, cUL compliant item)
Max. load	Resistance load	2A/ 1 point ^{*2}
	Inductive load	80VA
Min. load		5V DC, 2 mA (Reference value)
Open circuit leakage current		--
Response time	OFF→ON	Approx. 10ms
	ON→OFF	Approx. 10ms
Circuit insulation		Mechanical insulation
Display of output operation		LED lights when the power is applied to relay coil.

*1 The number in parentheses() indicates occupied points.

*2 The total load current of resistance load per common terminal should be the following value or less.

- 1 output point/ common terminal: 2A
- 4 output point/ common terminal: 8A
- 8 output point/ common terminal: 8A

3.5.2 Example of relay output wiring



3.6 Transistor output specification and example of external wiring

3.6.1 Transistor output specification

Items			Specification	
Number of output points	HCA8-8X8YT□ TX2N-8EYT□		8 points	
	HCA8-16X16YT□ TX2N-32ET□ TX2N-16EYT□		16 points	
	HCA8-24X24YT□ TX2N-48ET□		24 points	
	HCA8-32X32YT□		32 points	
	HCA8-40X40YT□		40 points	
	HCA8-64X64YT□		64 points	
	Output connecting type			Removable terminal block
Output form	HCA8-□□YT/□S, TX2N-□ET, TX2N-48ET-D, TX2N-□EYT, TX2N-8EYT-H		Transistor (Sink)	
	HCA8-□□YT/□SS, TX2N-□ET-ESS/UL, TX2N-48ET-DSS, TX2N-□EYT-ESS/UL		Transistor (Source)	
External power supply			5~30V DC	
Max. load	Resistance load	HCA8-□□YT/□, TX2N-□ET, TX2N-□ET-□, TX2N-□EYT, TX2N-□EYT-ESS/UL	0.5 A/ 1 point ^{*1}	
		TX2N-8EYT-H	1A/ 1 point ^{*2}	
		TX2N-16EYT-C	0.3 A/ 1 point ^{*3}	
	Inductive load	HCA8-□□YT/□, TX2N-□ET, TX2N-□ET-□, TX2N-□EYT, TX2N-□EYT-ESS/UL	12W/ 24V DC ^{*4}	
		TX2N-8EYT-H	24W/ 24V DC ^{*5}	
		TX2N-16EYT-C	7.2W/ 24V DC ^{*6}	
Min. load			--	
Open circuit leakage current			0.1 mA or less/30V DC	
ON voltage			1.5 V or less	
Response time	OFF → ON	Main unit	Y000~Y002	5 μs or less/10 mA or more (5 to 24V DC)
			Y003 or more	0.2 ms or less/200 mA or more (at 24V DC)
		I/O extension units/ blocks ^{*7}		0.2 ms or less/200 mA or more (at 24V DC)

	ON	Main unit	Y000~Y002	5 μ s or less/10 mA or more (5 to 24V DC)
	→OFF		Y003 or more	0.2 ms or less/200 mA or more (at 24V DC)
			I/O extension units/ blocks ^{*7}	0.2 ms or less/200 mA or more (at 24V DC)
Circuit insulation				Photocoupler insulation
Display of output operation				LED on panel lights when photocoupler is driven.

*1 The total current load of resistance load per common terminal should be the following value or less.

-1 output point/ common terminal: 0.5 A

-4 output point/ common terminal: 0.8 A

-8 output point/ common terminal: 1.6 A

*2 The total current load of resistance load per common terminal should be the following value or less

-4 output point/ common terminal: 2 A

*3 The total current load of resistance load per common terminal should be the following value or less

-16 output point/ common terminal: 1.6 A

*4 The total current load of inductive load per common terminal should be the following value or less.

-1 output point/ common terminal: 12W/ 24V DC

-4 output point/ common terminal: 19.2W/ 24V DC

-8 output point/ common terminal: 38.4W 24V DC

*5 The total current load of inductive load per common terminal should be the following value or less.

-4 output point/ common terminal: 48W/ 24V DC

*6 The total current load of inductive load per common terminal should be the following value or less.

-16 output point/ common terminal: 38.4W 24V DC

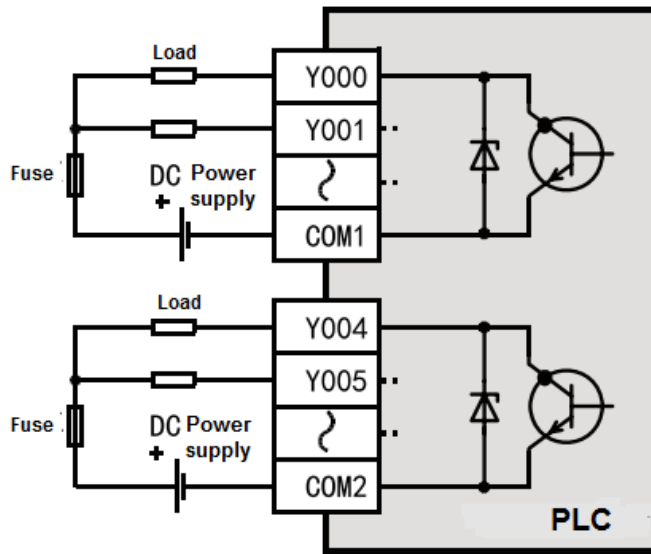
*7 The response time of TX2N-8EYT-H is shown below.

- OFF→ON: 0.2ms or less/1A

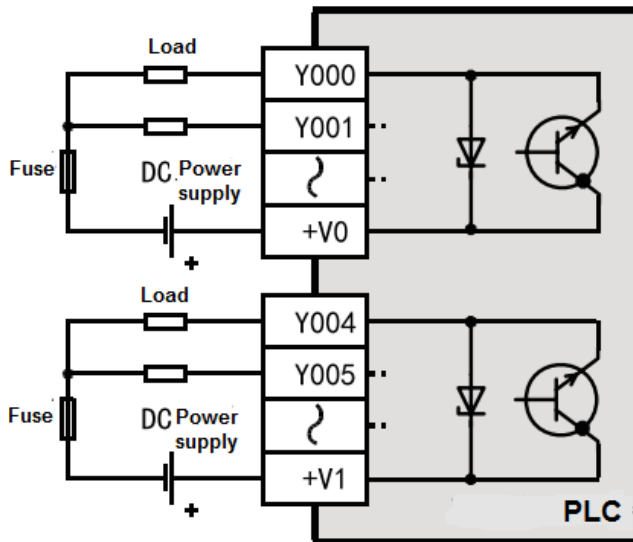
- ON→OFF: 0.4ms or less/1A

3.6.2 External wiring of transistor output

1. External wiring of sink output type



2. External wiring of source output type



4. Terminal block layouts

The output numbers connected to a common terminal are enclosed with heavy partition lines.

Example: HCA8-24X24YT

