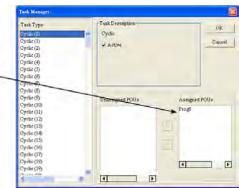
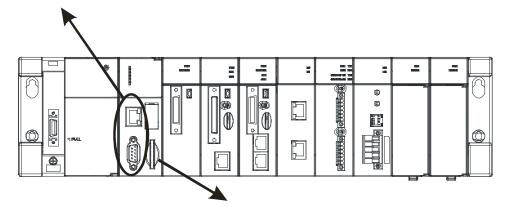
1.2 Overview

An AH500 series CPU module is a medium type of advanced controller with built-in communication ports. It provides a strong network function for users, and users can create connection among devices on the network through software. An AH500 series CPU module also provides structured programming. Users can assign programs to different tasks, and write a program which is frequently executed in a function block. Besides, users can choose different programming languages (instruction lists (IL), structured texts (ST), ladder diagrams (LD), sequential function charts (SFC), and function block diagrams (FBD)) dealt with by IEC 61131-3 according to their needs when writing programs. They can create the AH500 hardware configuration by means of hardware configuration software. They can also restore or back up a system rapidly through the built-in SD interface in an AH500 series CPU module. This manual introduces the basic operation of an AH500 system, and help users familiarize themselves with the AH500 system.

An AH500 series CPU module also provides structured programming. Users can assign programs to different tasks, and write a program which is frequently executed in a function block.

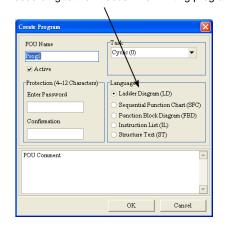


An AH500 series CPU module is a medium type of advanced controller with built-in communication ports. It provides a strong network function for users, and users can create connection among devices in the network through software.



Users can restore or back up a system rapidly through the built-in SD interface in an AH500 series CPU module.

With ISPSoft, users can choose different programming languages (instruction lists (IL), structured texts (ST), ladder diagrams (LD), sequential function charts (SFC), and function block diagrams (FBD) dealt with by IEC 61131-3 according to their needs when writing program.



Users can create an AH500 hardware configuration by means of the hardware configuration software.

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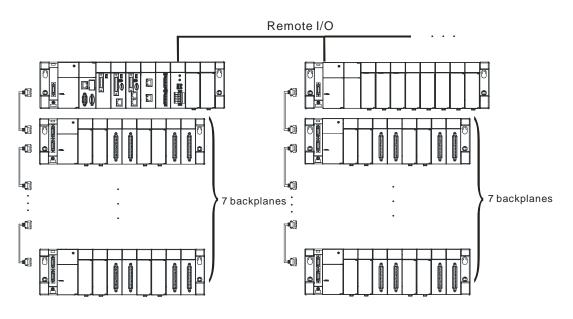
1.3 Characteristics

1. High efficiency

- AH500 basic series CPU module: A 32-bit high-speed processor is used. The instructions are executed at a speed of 3K steps/ms. (Fifty percent of the instructions are basic instructions, and fifty percent of the instructions are applied instructions.)
- AH500 advance series CPU module: A 32-bit high-speed processor is used. The instructions are executed at a speed of 12K steps/ms. (Fifty percent of the instructions are basic instructions, and fifty percent of the instructions are applied instructions.)

2. Supporting more inputs and outputs

- The AH500 series CPU module supports up to 4,352 local digital I/O or 544 analog I/O.
- A complete AH500 system consists of eight backplanes at most, including a main backplane. Twelve I/O modules at most can be installed on a main backplane, and eight I/O modules at most can be installed on an extension backplane. Therefore, for the AH500 series CPU, sixty-eight digital input/output modules at most or sixty-eight analog input/output modules at most can be installed.
- Eight RTU modules at most can be installed on the main backplane.



3. Multiple I/O modules

• The I/O modules supported by the AH500 series CPU module are digital input/output modules, analog input/output modules, temperature measurement modules, network modules, motion control modules, and RTU modules.

Module	Description	
Digital input/output module	Digital input/output AH16AM10N-5A, AH32AM10N-5A, AH32AM10N-5B, AH32AM10N-5C, AH64AM10N-5C, AH16AM30N-5A, AH16AN01R-5A, AH16AN01T-5A, AH16AN01P-5A, AH32AN02T-5A, AH32AN02T-5B, AH32AN02T-5C, AH32AN02P-5A, AH32AN02P-5B, AH32AN02P-5C, AH64AN02T-5C, AH64AN02P-5C, AH16AN01S-5A, AH16AP11R-5A, AH16AP11T-5A,	
	AH16AP11P-5A. and AH16AR10N-5A	
Analog input/output module	Analog input/output AH04AD-5A, AH08AD-5A, AH08AD-5B, AH08AD-5C, AH04DA-5A, AH08DA-5A AH08DA-5B, AH08DA-5C, and AH06XA-5A	
Temperature measurement module	Measuring the temperature AH04PT-5A, AH08PTG-5A, AH04TC-5A, and AH08TC-5A	
Motion control module	Controlling the motion AH02HC-5A, AH04HC-5A, AH05PM-5A, AH10PM-5A, AH15PM-5A, and AH20MC-5A	
Network module	Extending the communication interface (*There are multiple interfaces. All network modules can be installed on the main backplane except AH10SCM-5A and AH15SCM-5A.) AH10EN-5A, AH10SCM-5A, AH15SCM-5A, AH10DNET-5A, AH10PFBS-5A, AH10PFBM-5A, and AH10COPM-5A	
Remote I/O module	It is installed on the main backplane as a remote terminal unit. (*It supports multiple communication interfaces.) AHRTU-DNET-5A, AHRTU-PFBS-5A, and AHRTU-ETHN-5A.	

4. Larger program capacity and memory

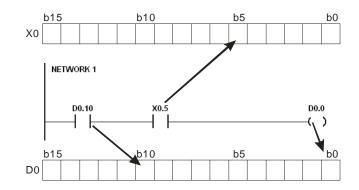
• Program capacity

AH500 basic series CPU module (AHCPU500/510/520/530): 32/64/128/256K steps. AH500 advanced series CPU module (AHCPU511/521/531): 96/192/384K steps. Providing with a wider module selection for users to select a suitable CPU module according to their program capacity needs.

 Memory AH500 basic series CPU module (AHCPU500/510/520/530): 16/32/64K words of memory and 64/256/512/1024 function blocks to be declared.
 AH500 advanced series CPU module (AHCPU511/521/531): 48/96/128K words of memory and 1024/2048/4096 function blocks to be declared.

5. Devices which can be used conveniently in a program

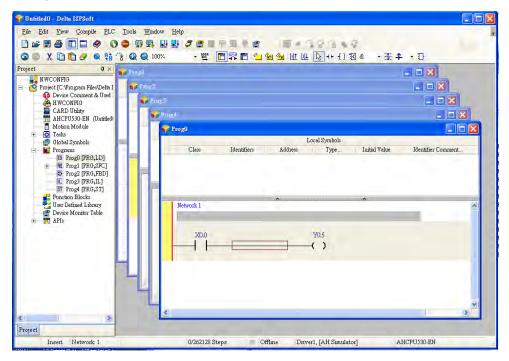
• An AH500 series CPU module is equipped with devices which can be used conveniently in a program. Users can flexibly specify a bit in a word device, e.g. D0.0, X0.0, and Y0.0. Owing to that bits in a word device can be specified, these bits can function as contacts and coils.



 Users can access the state of DX0.0 and that of DY0.0 in a program. The state of DX0.0 and that of DY0.0 are not limited by scan time. They are refreshed immediately in a program.



6. Supporting IEC 61131-3



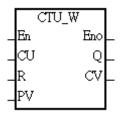
- The AH500 series CPU module supports IEC 61131-3.
- The programming languages which are supported are instruction lists (IL), structured texts (ST), ladder diagrams (LD), sequential function charts (SFC), and function block diagrams (FBD).

Create Program	×
POU Name Proses Protection (4~12 Characters)	Task Cyclic (0)
Enter Password Confirmation	Language • Ladder Diagram (LD) Sequential Function Chart (SFC) Function Block Diagram (FBD) Instruction List (IL) Structure Text (ST)
POU Comment	×
	OK Cancel

 Users can select a programming language according to their preference and the convenience. The programming languages support one another so that the programs written by different users are related.

7. Strong function block

- Not only the standard IEC61131-3 function blocks are supported, but also the convenient function blocks provided by Delta Electronics, Inc. are supported. Users can write the program frequently executed in a function block so that the program becomes more structured and can be executed more conveniently.
- The symbol for a function block in a ladder diagram is like an Integrated circuit (IC) in a circuit diagram. Owing to the fact that the ladder diagram is based on the traditional circuit diagram, the operation of a function block is quite similar to the function of an integrated circuit. Users only need to send the signal to the corresponding input of the function block, and they can receive the signal or state which is required. During the whole process, users do not need to consider the processing procedure inside the function block.

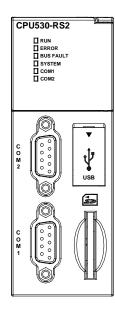


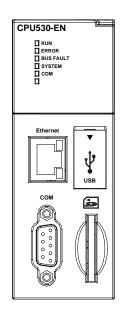
- A function block is a program element equipped with the operation function. It is similar to a subroutine, and is a type of POU (Program Organization Unit). It can not operate by itself, and has to be called through the program POU. After the related parameters are transmitted, the function defined by a function block is executed. Besides, the final operation result can be sent to the device or variable used in the superior POU after the execution of the function block is complete.
- The setting of passwords by means of ISPSoft provides the secrecy of function blocks for special businesses. The program inside a function block can not be learned, and the patent of a business will not be infringed.
- 8. Task

Task Type		Task Description		OK
Cyclic (0)	~	Cyclic		- On
Cyclic (1)		and the second sec		Cancel
Cyclic (2)	-	Active		
Cyclic (3)				
Cyclic (4)				
Cyclic (5)				
Cyclic (6)				
Cyclic (7)				
Cyclic (8)				
Cyclic (9)		Unassigned POUs	Assigne	d POIIs
Cyclic (10)		Sumpling to co		4.000
Cyclic (11)			Prog0 Prog1	
Cyclic (12)			Prog2	
Cyclic (13)			Prog3	
Cyclic (14)			Prog4	
Cyclic (15)			-	
Cyclic (16)				
Cyclic (17)				
Cyclic (18)			141	
Cyclic (19)	-		121	
C	20			

- The programs can be assigned to 283 tasks at most. Among the 288 tasks, 32 tasks are cyclic tasks, 32 tasks are I/O interrupts, 4 tasks are timer interrupts, 2 tasks are communication interrupts, 1 task is an external 24 V low-voltage interrupt, and 212 tasks are user-defined tasks.
- Users can enable and disable a task during the execution of a program by means of TKON and TKOFF.

- 9. Increasing the efficiency of configuring the hardware through an USB cable and ISPSoft
 - The AH500 series CPU module provides a standard USB 2.0 interface. USB 2.0 increases the data transfer rate, and decreases the time it takes to download the program, monitor the program and configure the hardware. Besides, users do not need to buy a communication cable for the CPU module. They can use a general USB cable to connect to the AH500 series CPU module.
- 10. Serial control interface with multiple functions





- AHCPU500/510/511/520/530-RS2 provides two DB9 serial control interfaces, i.e. COM1 and COM2.
- AHCPU500/510/511/520/521/530/531-EN provides one DB9 serial control interface, i.e. COM.
- Users can set the DB9 serial control interface to RS-232, RS-485, or RS-422 according to the application environment. The data transfer rate can be increased from 9600 bps to 1 Mbps.
- AH500 basic series CPU module (AHCPU500/510/520/530): After users set the PLC Link in NWCONIFG in ISPSoft, they can exchange the data with a device through the RS-485 serial control interface, and do not need to write any program.
- AH500 advanced series CPU module (AHCPU511/521/531): After users set the PLC Link in HWCONIFG in ISPSoft, they can exchange the data with a device through the RS-485 serial control interface, and do not need to write any program.

11. High-speed Ethernet communication interface

- AHCPU500/510/511/520/521/530/531-EN is equipped with a 10/100 M Ethernet communication interface, and supports emails, webs, and socket services.
- AH500 basic series CPU module (AHCPU500/510/520/530): After users set the PLC Link in NWCONIFG in ISPSoft, they can exchange the data with a device network through the Ethernet communication interface, and do not need to write any program.
- AH500 advanced series CPU module (AHCPU511/521/531): After users set the PLC Link in HWCONIFG in ISPSoft, they can exchange the data with a device through the Ethernet communication interface, and do not need to write any program.
- The status or the error message related to the system is sent to users' email boxes immediately. Users do not need to be on the spot to understand the problem.

12. Memory card

- The memory card has the following functions.
 - System backup: The user program, the CPU parameters, the module table, the setting value in the device
 - System recovery: The user program, the CPU parameters, the module table, and the setting value in the device

Parameter storage: The value in the device

Log storage: The system error log and the system status log

13. Hot swap

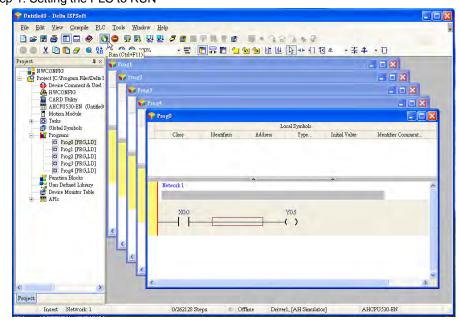
• The AH500 series I/O modules support the on-line uninterruptible hot swap. When the system runs, users can replace the module which breaks down without disconnecting the module. After the module is replaced, the new module runs normally. Users do not need to set the module manually or switch the state.



14. Supporting the on-line debugging mode

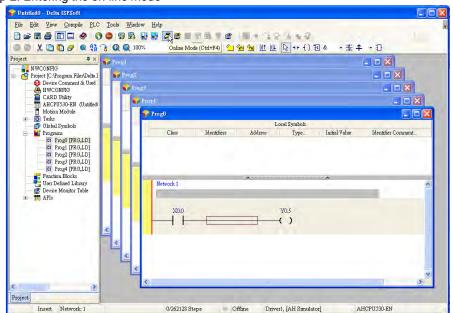
- After a single instruction step has been complete, or after a breakpoint is specified, users can easily find the bug in the program by means of the on-line debugging mode supported by the AH500 series CPU module.
- If users want to enter the debugging mode, the CPU module must run. After users enable the on-line

monitoring function, they have to click . The debugging screen varies from programming language to programming language, but the same operation applies to these programming languages. For the AH500 series PLC, structured texts do not support the debugging mode, and sequential function charts support the debugging mode during the action and the transition. Step 1: Setting the PLC to RUN

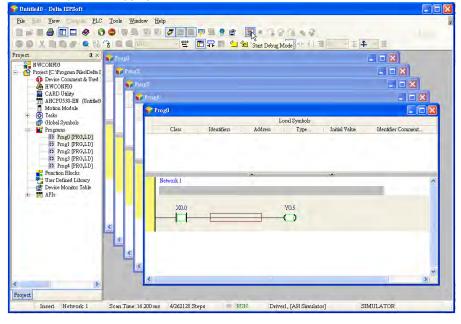




Step 2: Entering the on-line mode



Step 3: Entering the debugging mode

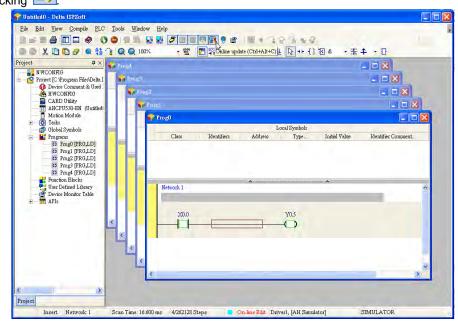


15. Supporting the on-line editing mode

- When the system runs, users can make use of the on-line editing mode to update the program without affecting the operation of the system.
- When the system is in the on-line monitoring mode, users can enter the on-line editing mode by clicking

Untitled0 - Delta ISPSoft		
File for Yiew Counts PLC Tools Window		
	🗳 🕼 Online Edit Mode (Ctrl+Alt+E)	
oject. 🗛 🗙 🏹 Proge		
Project [C:\Program Files\Delta I		
🚯 Device Comment & Used :	,	
CARD Utility		
Motion Module		
+ 🖸 Tasks	Prog0	
Global Symbols Programs	Class Identifiers Address Type Initial V	alue Identifier Comment
© Prog0 [PRG,LD] © Prog1 [PRG,LD]		
🛤 Prog2 [PRG,LD]		
C3 Prog3 [PRG,LD] C3 Prog4 [PRG,LD]		
Function Blocks	×.	
🖉 Device Monitor Table	Network 1	^
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	X0.0 Y0.5	
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<u>x</u>		
	<	(X)
roject		
Insert Network 1 Scan Time: 156	00 ms 4/262128 Steps RUN Driver1, [AH Simulator]	SIMULATOR

After the program is modified and compiled, users can update the program in the CPU module by clicking



2.1 General Specifications

Item	Specifications
Operating temperature	-20~60°C
Storage temperature	-40~70°C
Operating humidity	5~95%
Operating humidity	No condensation
Storago humidity	5~95%
Storage humidity	No condensation
Vibration/Shock International standards IEC 61131-2, IEC 68-2-6 (TEST Fc)/	
resistance	IEC 61131-2 & IEC 68-2-27 (TEST Ea)
Work environment No corrosive gas exists.	
Installation location In a control box	
Pollution degree	2

2.2 Specifications for CPU Modules

2.2.1 Performance Specifications of AH500 basic series

Item		AHCPU500/510/520/530	Remark
	-RS2	-EN	
Execution	The program is executed	cyclically.	
Input/Output control	Regenerated inputs/outputs Direct inputs/outputs		The inputs and outputs can be controlled through the direct inputs and direct outputs.
	IEC 61131-3		
Programming language	Ladder diagrams, functio instruction lists, structure function charts		
Instruction execution speed	3K Steps/ms		
Number of instructions	Approximately 666 instru	ctions	
Constant scan cycle (ms)	1-32000 (The scan cycle can be increased by one millisecond.)		Setting the parameter
Program capacity (step)	32K steps (AHCPU500) 64K steps (AHCPU510) 128K steps (AHCPU520) 256K steps (AHCPU530)		
Installation	DIN rails or screws		
Installation of a module	A module is installed directly on a backplane.		
Connection between two backplanes	An extension cable connects two backplanes.		
Maximum number of modules which can be installed	12 (AHCPU500) 20 (AHCPU510) 36 (AHCPU520) 68 (AHCPU530)		
Maximum number of backplanes which can be connected	AHCPU500: 1 backplane (1 main backplane) AHCPU510: 2 backplanes (1 main backplane+1 extension backplane) AHCPU520: 4 backplanes (1 main backplane+3 extension backplanes) AHCPU530: 8 backplanes (1 main backplane+7 extension backplanes)		
Number of tasks	283 tasks (32 cyclic tasks timed interrupts; 2 comm	· · · ·	



Item	AHCPU500/510/520/530 -RS2	AHCPU500/510/520/530 -EN	Remark
	external 24 V low-voltage interrupts)	interrupt; 212 external	
Number of inputs/outputs	AHCPU500: 768 AHCPU510: 1280 AHCPU520: 2304 AHCPU530: 4352		Number of inputs/outputs accessible to an actual input/output module
Input relays [X]	AHCPU500: 1024 (X0.0~ AHCPU510: 2048 (X0.0~ AHCPU520: 4096 (X0.0~ AHCPU530: 8192 (X0.0~	X127.15) X255.15) X511.15)	
Output relays [Y]	AHCPU500: 1024 (Y0.0~ AHCPU510: 2048 (Y0.0~ AHCPU520: 4096 (Y0.0~ AHCPU530: 8192 (Y0.0~	Y127.15) Y255.15)	
Internal relays [M]	8192 (M0~M8191)		
Link registers [L]	AHCPU500: 16384 (L0~L AHCPU510: 32768 (L0~L AHCPU520: 65536 (L0~L AHCPU530: 65536 (L0~L	_32767) _65535)	
Timers [T]	2048 (T0~T2047)		
Counters [C]	2048 (C0~C2047)		
32-bit counter [HC]	64 (HC0~HC63)		
Data register [D]	AHCPU500:16384 (D0~D16383) AHCPU510: 32768 (D0~D32767) AHCPU520: 65536 (D0~D65535) AHCPU530: 65536 (D0~D65535)		
Stepping relay [S]	2048 (S0~S2047)	·	
Index register [E]	32 (E0~E31)		
Special auxiliary relay [SM]	2048 (SM0~SM2047)		
Special data register [SR]	2048 (SR0~SR2047)		
Serial communication port	TwoOneRS-232/RS-485/RS-422RS-232/RS-485/RS-422communication portscommunication port		
Ethernet port	-	10/100 M	
USB port	Mini USB		
Storage interface	SD Card (SD 1.0)		
Remote RUN/STOP	The setting range is X0.0	~X511.15.	
Real-time clock	Years, months, days, hours, minutes, seconds, and weeks		

2.2.2 Performance Specifications of AH500 advanced series

ltem	AHCPU511-RS2	AHCPU511/521/531 -EN	Remark
Execution	The program is executed	l cyclically.	
Input/Output control	Regenerated inputs/outputs Direct inputs/outputs		The inputs and outputs can be controlled through the direct inputs and direct outputs.
Programming language	IEC 61131-3 Ladder diagrams, function block diagrams, instruction lists, structured texts, and sequential function charts		



ltem	AHCPU511-RS2 AHCPU511/521/531 -EN	Remark
Instruction execution speed	12K Steps/ms	
Number of instructions	Approximately 666 instructions	
	1-32000	
Constant scan cycle (ms)	(The scan cycle can be increased by one	Setting the parameter
	millisecond.)	
	96K Steps (AHCPU511)	
Program capacity (step)	192K Steps (AHCPU521)	
	384K Steps (AHCPU531)	
Installation	DIN rails or screws	
Installation of a module	A module is installed directly on a backplane.	
Connection between two	An extension cable connects two backplanes.	
backplanes		
Maximum number of	20 (AHCPU511) 36 (AHCPU521)	
modules which can be installed	68 (AHCPU531)	
Installed	AHCPU511: 2 backplanes (1 main backplane+1	
	extension backplane)	
Maximum number of	AHCPU521: 4 backplanes (1 main backplane+3	
backplanes which can be	extension backplanes)	
connected	AHCPU531: 8 backplanes (1 main backplane+7	
	extension backplanes)	
	283 tasks (32 cyclic tasks; 32 I/O interrupts; 4	
	timed interrupts; 2 communication interrupts; 1	
Number of tasks	external 24 V low-voltage interrupt; 212 external	
	interrupts)	
		Number of
	AHCPU511: 1280	inputs/outputs
Number of inputs/outputs	AHCPU521: 2304	accessible to an
	AHCPU531: 4352	actual input/output
		module
	AHCPU511: 4096 (X0.0~X255.15)	
Input relays [X]	AHCPU521: 8192 (X0.0~X511.15)	
	AHCPU531: 8192 (X0.0~X1023.15)	
	AHCPU511: 4096 (Y0.0~Y255.15)	
Output relays [Y]	AHCPU521: 8192 (Y0.0~Y511.15)	
Intornal raisus [M]	AHCPU531: 8192 (Y0.0~Y1023.15)	
Internal relays [M]	8192 (M0~M8191) AHCPU511: 49152 (L0~L49151)	
Link registers [L]	AHCPU521: 98304 (L0~L98303)	
	AHCPU531: 131072 (L0~L131071)	
Timers [T]	2048 (T0~T2047)	
Counters [C]	2048 (C0~C2047)	
32-bit counter [HC]	64 (HC0~HC63)	
	AHCPU500:16384 (D0~D16383)	
Dete register (D)	AHCPU510: 32768 (D0~D32767)	
Data register [D]	AHCPU520: 65536 (D0~D65535)	
	AHCPU530: 65536 (D0~D65535)	
Stepping relay [S]	2048 (S0~S2047)	
Index register [E]	32 (E0~E31)	
Special auxiliary relay [SM]	AHCPU511/521/531-EN : 2048 (SM0~SM2047)	
opecial auxiliary feldy [SW]	AHCPU511-RS2: 4096 (SM0~SM4095)	
Special data register [SR]	AHCPU511/521/531-EN: 2048 (SR0~SR2047)	
opecial data register [or]	AHCPU511-RS2: 4096 (SR0~SR4095)	
Serial communication port	Two One	
contai communication port	RS-232/RS-485/RS-422 RS-232/RS-485/RS-422	

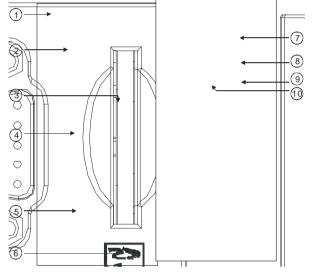


Item	AHCPU511-RS2	AHCPU511/521/531 -EN	Remark
	communication ports	communication port	
Ethernet port	-	10/100 M	
USB port	Mini USB		
Storage interface	SD Card (SD 2.0)		
Remote RUN/STOP	The setting range is X0.0~X511.15.		
Real-time clock	Years, months, days, hours, minutes, seconds, and		
Real-time clock	weeks		

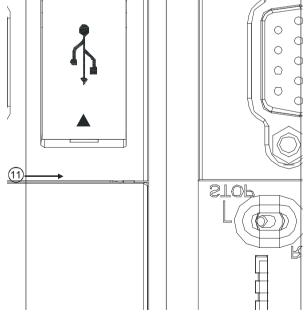
2.2.3 Profiles

An AH500 system can be configured by setting the following communication ports.

Three built-in communication ports in AHCPU500-EN/AHCPU510-EN/AHCPU511-EN/AHCPU520-EN/AHCPU521-EN /AHCPU530-EN/AHCPU531-EN: An USB port, an <u>RS-232C/RS-422A/RS</u>-485 port, and an Ethernet port



Two built-in communication ports in AHCPU500-RS2/AHCPU510-RS2/ AHCPU511-RS2/AHCPU520-RS2/AHCPU530-RS2: An RS-232C port and an RS-422A/RS-485 port



1. Model name	2. LED indicator	3. USB port
4. Ethernet port (for AHCPU5xx-EN)	5. COM	6. SD slot

|--|

8. RST button

9. CLR button

10. RUN	/STOP switch	11. COM2 (for AHCPU5xx-RS2)					
Number	Nome	Description					
Number 1	Name Model name	Description Model name of the CPU module					
1		Operating status of the CPU module					
	RUN LED	ON: The user program is being executed.					
	indicator	OFF: The execution of the user program stops.					
	indicator	Blinking: The user program is in a debugging mode.					
		Error status of the CPU module					
	ERROR LED	ON: A serious error occurs in the system.					
	indicator	OFF: The system is normal.					
		Blinking: A slight error occurs in the system.					
		Error status of the I/O bus					
	BUS FAULT	ON: A serious error occurs in the I/O bus.					
	LED indicator	OFF: The I/O bus is normal.					
2		Blinking: A slight error occurs in the I/O bus.					
		System status of the CPU module					
	SYSTEM LED	ON: The external input/output is forced ON/OFF.					
	indicator	OFF: The system is in a default status.					
		Blinking: The CPU module is being reset./The value in the device is being cleared.					
	COM LED indicator COM1 LED indicator COM2 LED						
		Communication status of the communication port					
		OFF: There is no communication through the communication port.					
		Blinking: There is communication through the communication port.					
	indicator						
3	USB port	Providing the mini USB communication interface					
4	Ethernet port	Providing the Ethernet communication interface (for AHCPU5xx-EN)					
5	СОМ	Providing the RS-232/RS-485/RS-422 communication interface					
6	SD slot	Providing the SD interface					
		Function which the system executes					
		SW1 OFF: No action (default)					
		ON: Write protection					
		OFF: No action (default)					
		ON: The system is restored when the CPU module is supplied with					
		SW2 powered. (The user program, the CPU paramter, the module table,					
		and the setting values in the devices are restored from the memory card to the CPU module.)					
		OFF: No action (default)					
7	DIP switch	ON: It is used with the CLR button to backup the system. (The user					
		SW3 program, the CPU paramter, the module table, and the setting					
		values in the devices are backupped from the memory card to the					
		CPU module.)					
		It is used with SW3.					
		OFF: When the system is backed up, the values in the devices are					
		SW4 backed up.					
		ON: When the system is backed up, the values in the devices are not					
		backed up.					
		Resetting the CPU module, and restoring it to the default factory value					
8	RST button	P.S. After the CPU module is reset, the ERROR LED indicator is ON, and the					
		error code 16#1402 is shown. To make the PLC operate normally, users need to execute ISPSOFT.exe to set the module table in HWCONFIG.					
9	CLR button	Clearing the value in the latched device					
		סוסמווויץ גווס אמועב ווו גווב ומנטובע עבאוטב					



Number	Name	Description						
10	RUN/STOP	RUN: The user program is executed.						
10	switch	STOP: The execution of the user program stops.						
11	COM1/COM2	Providing the RS-232/RS-485/RS-422 communication interface						
11		(for AHCPU5xx-RS2)						

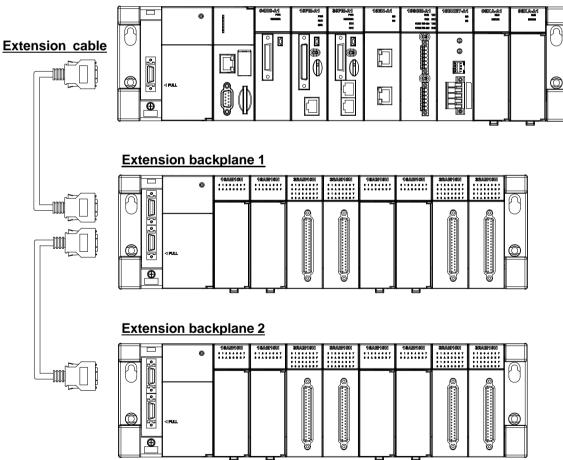
2.3 Basic System Configuration

2.3.1 Introduction

The AH500 system configuration is composed of a CPU module, power supply modules, digital input/output modules, analog input/output modules, temperature measurement modules, network modules, motion control modules, a main backplane, extension cables, and extension backplanes. Besides, an SD card is optionally used.

A main backplane can be connected to an extension backplane through the interface on the left side of the main backplane, the interface on the left side of the extension backplane, and a Delta extension cable. For a CPU module or a RTU, a main backplane can be connected to seven extension backplanes at most through the interfaces on the backplanes. Therefore, if there is a CPU module and there are several RTUs, not only the CPU module can be connected to seven extension backplanes, but also every RTU can connect to seven extension backplanes.

There are two ports on an extension backplane. The upper port is used to connect to a superior backplane, and the lower port is used to connect to an inferior backplane.

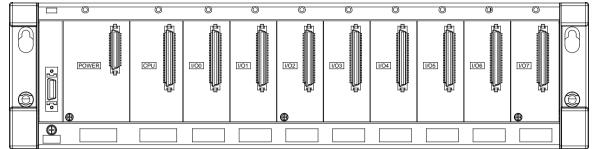


Main backplane



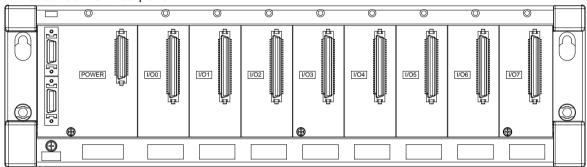
2.3.2 Configuring a Main Backplane

A CPU module, a power supply module, and I/O modules are installed on a main backplane. Twelve I/O modules at most can be installed on a main backplane.



2.3.3 Configuring an Extension Backplane

An extension backplane can be connected to a main backplane to increase the number of I/O modules. Eight I/O modules at most can be installed on an extension cable, and seven extension backplanes at most can be connected to a main backplane.



2.3.4 Maximum Extension

Twelve I/O modules at most can be installed on a main backplane. (There are four types of main backplanes. These four types are four-slot main backplanes, six-slot main backplanes, eight-slot main backplanes, and twelve-slot main backplanes.) Eight I/O modules at most can be installed on an extension backplane, and seven extension backplanes at most can be connected to a main backplane. (There are two types of extension backplanes.) These two types are six-slot extension backplanes, and eight-slot extension backplanes.) Sixty-eight I/O modules at most can be installed on backplanes. Eight AH10EN-5A modules at most can be installed on a main backplane. (There are two types are six-slot extension backplanes. Eight AH10EN-5A modules at most can be installed on a main backplane. The other I/O modules can be installed on a main backplane unlimitedly. Besides, digital input/output modules, analog input/output modules, temperature measurement modules, and AH10SCM-5A modules can be installed on an extension backplane.

Extension	Maximum Extension	Description
A main backplane is	One main backplane and seven extension	Sixty-eight I/O modules at most
connected to extension	backplanes (There are four types of main	can be installed on backplanes.
backplanes	backplanes. These four types are	
	four-slot main backplanes, six-slot main	
	backplanes, eight-slot main backplanes,	
	and twelve-slot main backplanes. There	
	are two types of extension backplanes.	
	These two types are six-slot extension	
	backplanes, and eight-slot extension	
	backplanes.)	

•	AH500 system	configuration
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Configuration	Description					
	There is one main backplane in an AH500 system.					
	Four-slot main backplane: AHBP04M1-5A					
Main backplane	Six-slot main backplane: AHBP06M1-5A					
	Eight-slot main backplane: AHBP08M1-5A					
	Twelve-slot main backplane: AHBP12M1-5A					
	There are seven extension backplanes at most in an AH500 system.					
Extension backplane	Six-slot extension backplanes: AHBP06E1-5A					
	Eight-slot extension backplanes: AHBP08E1-5A					
	There are four types of lengths.					
	AHACAB06-5: 60 cm					
Extension cable	AHACAB10-5A: 1 m					
	AHACAB15-5A: 1.5 m					
	AHACAB30-5A: 3 m					
	Every backplane needs a power supply module. (The voltages of the					
	alternating currents which can flow into AHPS05-5A range from 85 V to 264 V,					
Power supply module	and the direct currents which can flow from AHPS05-5A are 5 A. AHPS05-5A is					
	used with a backplane. The voltages of the direct currents which can flow into					
	AHPS15-5A are 24 V, and the direct currents which can flow form AHPS15-5A					
	are 1.5 A.)					
CPU module	There is one CPU module in an AH500 system. AHCPU530-RS2 and					
	AHCPU530-EN CPU modules.					
Digital I/O module						
Analog I/O module	Digital I/O modules, analog I/O modules, and temperature measurement					
Temperature	modules can be installed in an AH500 system unlimitedly.					
measurement module						
Motion control module	Motion control modules can only be installed on a main backplane.					
	Network modules can only be installed on a main backplanes. Eight					
	AH10EN-5A modules at most can be installed on a main backplane, and eight					
Network module	AH10DNET-5A modules at most can be installed on a main backplane.					
	However, AHSCM-5A modules can be installed on a main backplane					
	unlimitedly.					

2.4 Specifications for Digital Input/Output Modules

2.4.1 General Specifications

• Electrical specifications for the inputs on digital input/output modules (The signals passing through the inputs are 24 V DC signals.)

	Model	AH16AM10N	AH32AM10N	AH32AM10N	AH32AM10N	AH64AM10N	AH16AP11R	AH16AP11T	AH16AP11P	
Item		-5A	-5A	-5B	-5C	-5C	-5A	-5A	-5A	
Number of	inputs	16	32	32	32	64	8	8	8	
Connector type			ole terminal DB37 ock connector Latch		Latch co	nnector Removable terminal block		al block		
Input type		Digital inp	out							
Input form		Direct cu	Direct current (sinking or sourcing)							
Input current				/ DC mA		24 V DC 3.2 mA				
Action	OFF→ON	>15 V DC	>							
level	ON→OFF	<5 V DC								
Response OFF→ON		10 ms±10%								
time	ON→OFF									
Maximum input frequency		50 Hz								

Model	AH16AM10N	AH32AM10N	AH32AM10N	AH32AM10N	AH64AM10N	AH16AP11R	AH16AP11T	AH16AP11P
Item	-5A	-5A	-5B	-5C	-5C	-5A	-5A	-5A
Input impedance	4.7 kΩ 7.5 kΩ 4.7 kΩ							
Input signal	Voltage input Sinking: The inputs are NPN transistors whose collectors are open collectors. Sourcing: The inputs are PNP transistors whose collectors are open collectors.							
Electrical isolation	Optocoupler							
Input display	When the optocoupler is driven, the input LED indicator is ON.							

• Electrical specifications for the inputs on a digital input/output module (The signals passing through the inputs are alternating current signals ranging in voltage from 120 V to 240 V.)

	Model	AH16AM30N-5A			
Item		AH IOAMIJON-JA			
Number of	inputs	16			
Connector	type	Removable terminal block			
Input type		Digital input			
Input form		Alternating current			
Input curre	ent	120 V AC and 4.5 mA; 240 V AC and 9 mA			
Action	OFF→ON	>79 V AC			
level	$ON \rightarrow OFF$	<40 V AC			
Response	OFF→ON	15 ms			
time ON→OFF		30 ms			
Electrical isolation		Optocoupler			
Input displ	ay	When the optocoupler is driven, the input LED indicator is ON.			

• Electrical specifications for the inputs on a digital input/output module which supports I/O interrupts (The signals passing through the inputs are 24 V DC signals.)

	Model			AH16AR10N-5A					
Item									
Number of	inputs	16							
Input powe	er form	Direct current							
Connector	type	Removable terr	ninal block						
Input type		Digital input							
Input form		Direct current (s	sinking or sourcir	ng)					
Input curre	ent	24 V DC, 5 mA							
Action	OFF→ON	>15 V DC							
level	ON→OFF	<5 V DC							
	Filtering cycle	0.1 ms	0.5 ms	3 ms	15 ms	20 ms			
	OFF→ON (Typical)	0.11 ms	0.51 ms	3.01 ms	15.01 ms	20.01 ms			
Response time	OFF→ON (Maximum)	0.12 ms	0.52 ms	3.02 ms	15.02 ms	20.02 ms			
	ON→OFF (Typical)	0.11 ms	0.51 ms	3.01 ms	15.01 ms	20.01 ms			
	ON→OFF (Maximum)	0.15 ms	0.55 ms	3.05 ms	15.05 ms	20.05 ms			
Input impe	dance	ON→OFF							
Input signal		Voltage input Sinking: The inputs are NPN transistors whose collectors are open collectors. Sourcing: The inputs are PNP transistors whose collectors are open collectors.							
Electrical i	solation	Optocoupler							
Input displ	ay	When the optoo	coupler is driven,	the input LED inc	dicator is ON.				
Trigger for	an interrupt		riggered when th n low to high or fr		in a signal from I	ow to high/from			



Model	AH16AR10N-5A
Interrupt service routine	The interrupt service routine numbers which can be set are in the range of 0 to 31.
Filtering cycle which can be set for an input channel	0.1 ms, 0.5 ms, 3 ms (default), 15 ms, or 20 ms



• Electrical specifications for the outputs on digital input/output modules

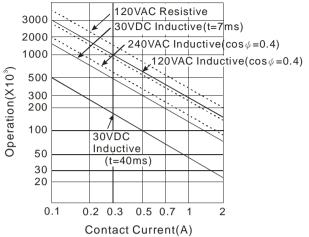
	Model	AH16AN01R	AH16AP11R	AH16AN01T	AH16AP11T	AH16AN01P	AH16AP11P	AH16AN01S		
Item		-5A	-5A	-5A	-5A	-5A	-5A	-5A		
Number of outputs		16	8	16	8	16	8	16		
Connector type			Removable terminal block							
Output type		Rela	ay-R	Transistor-	T (sinking)	Transistor-F	o (sourcing)	TRIAC-S		
Voltage spec	cifications	250 V AC, and below 30 V DC		12~30 V DC ^{*2}		12~30 V DC ^{*2}		120/240 V AC		
	Resistance	2 A/o		0.5 A/output		0.5 A/output		0.5 A/output		
		(5 A/COM)		(4 A/COM)		(4 A/COM)		(2 A/COM)		
Maximum load	Inductance	Life cycle curve ^{*3}		12 W (24 V DC)		12 W (24 V DC)		Not applicable		
	Bulb	20 W (24 V DC) 100 W (230 V AC)		2 W (24 V DC)		2 W (24	V DC)	60 W AC		
Maximum	Resistance	1 Hz		100 Hz		100	Hz	10 Hz		
output	Inductance	0.5 Hz		0.5 Hz		0.5 Hz		-		
frequency*1	Bulb	1 Hz		10 Hz		10 Hz		10 Hz		
Maximum	OFF→ON	10	10 ms		25		0.5			
Response time	ON→OFF	10		0.5 ms		0.5 ms		AC cycles		

	Model	AH32AN02T	AH32AN02P	AH32AN02T	AH32AN02P	AH32AN02T	AH32AN02P	AH64AN02T	AH64AN02P
Item		-5A	-5A	-5B	-5B	-5C	- 5C	-5C	-5C
Number of o	outputs	32	32	32	32	32	32	64	64
Connector t	уре	-	ovable al block	DB37 c	onnector		Latch c	onnector	
Output type					Transistor– Transistor-F				
Voltage specifications			12~30 V DC*2						
Maximum	Resistance		0.1 A/output (1 A/COM)						
Maximum load	Inductance	Not applicable							
Ioau	Bulb	Not applicable							
Maximum	Resistance				100	Hz			
output	tput Inductance			-					
frequency ^{*1} Bulb			-						
Maximum Response					0.5	ms			
time ON→OFF					0.0				

*1: The scan cycle affects the frequency.

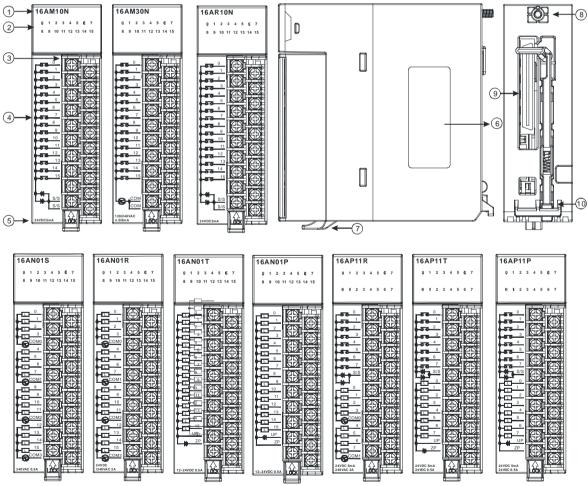
*2: The terminals UP and ZP needs to be connected to the 24 V DC auxiliary power supply (-15%~+20%), and the rated current consumption is 1 mA/output.

*3: The life cycle curve is shown below.



2.4.2 Profiles

 AH16AM10N-5A/AH16AM30N-5A/AH16AR10N-5A/AH16AN01S-5A/AH16AN01R-5A/AH16AN01T-5A/ AH16AN01P-5A/AH16AP11R-5A/AH16AP11T-5A/AH16AP11P-5A

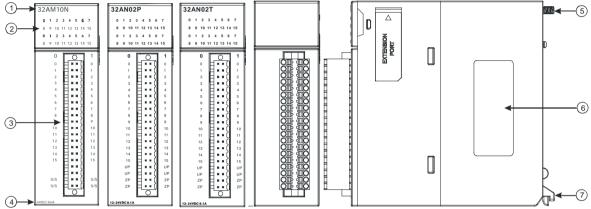


Number	Name	Description
1	Model name	Model name of the module
2	Input/Output LED	If there is an input signal, the input LED indicator is ON.
2	indicator	If there is an output signal, the output LED indicator is ON.
3	Removable	The inputs are connected to a switch or a sensor.

2

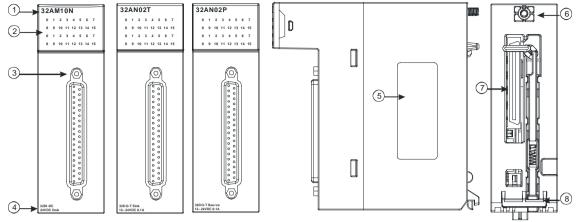
Number	Name	Description
	terminal block	The outputs are connected to a load which will be driven, e.g. a contact, or a solenoid valve.
4	Arrangement of the input/output	Arrangement of the terminals
4	terminals	Anangement of the terminals
5	Description of the	Number of inputs/outputs and specifications
	inputs/outputs	
6	Label	Nameplate
7	Clip	Fixing the removable terminal block
8	Set screw	Fixing the module
9	Connector	Connecting the module and a backplane
10	Projection	Fixing the module

• AH32AM10N-5A/AH32AN02T-5A/AH32AN02P-5A



Number	Name	Description
1	Model name	Model name of the module
2	Input/Output LED indicator	If there is an input signal, the input LED indicator is ON. If there is an output signal, the output LED indicator is ON.
3	Removable terminal block	The inputs are connected to a switch or a sensor. The outputs are connected to a load which will be driven, e.g. a contact, or a solenoid valve.
4	Description of the inputs/outputs	Number of inputs/outputs and specifications
5	Set screw	Fixing the module
6	Label	Nameplate
7	Projection	Fixing the module

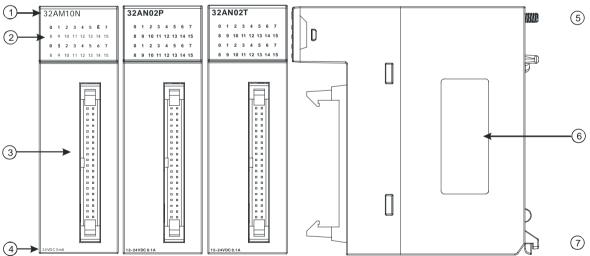




• AH32AM10N-5B/AH32AN02T-5B/AH32AN02P-5B

Number	Name	Description
1	Model name	Model name of the module
2	Input/Output LED indicator	If there is an input signal, the input LED indicator is ON. If there is an output signal, the output LED indicator is ON.
3	DB37 connector	It is connected to the I/O extension cable UC-ET010-33B.
4	Description of the inputs/outputs	Number of inputs/outputs and specifications
5	Label	Nameplate
6	Set screw	Fixing the module
7	Connector	Connecting the module and a backplane
8	Projection	Fixing the module

• AH32AM10N-5C/AH32AN02T-5C/AH32AN02P-5C



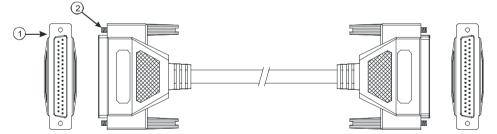
Number	Name	Description
1	Model name	Model name of the module
2	Input/Output LED indicator	If there is an input signal, the input LED indicator is ON. If there is an output signal, the output LED indicator is ON.
3	Latch connector	It is connected to the I/O extension cable UC-ET010-24A/UC-ET010-24C.
4	Description of the inputs/outputs	Number of inputs/outputs and specifications
5	Set screw	Fixing the module
6	Label	Nameplate
7	Projection	Fixing the module



AH64AM10N-5C/AH64AN02T-5C/AH64AN02P-5C 1 64AM10N 64AN02T 64AN02P **6**07 ← -18 \bigtriangleup 234 234 2 3 4 D 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 8 9 10 11 12 13 14 15 9 10 11 12 13 14 15 1 2 3 4 5 6 7 9 10 11 12 13 14 15 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 2 6 EXTENSION PORT Г **→**0-3 () 3 (4) 0 - 3 0-3 F J. 9 . . (7) (4)◀ 厅 b (10) T 5 Ĭ

Number	Name	Description	
1	Model name	Model name of the module	
2	Input/Output LED	If there is an input signal, the input LED indicator is ON.	
2	indicator	If there is an output signal, the output LED indicator is ON.	
3	LED indicator	Left: High 32 bits	
3	switch	Right: Low 32 bits	
4	4 Latch connector	It is connected to the I/O extension cable	
4	Laten connector	UC-ET010-24A/UC-ET010-24C.	
5	_ Description of the	Number of insute/outputs and encodingtions	
5	inputs/outputs	Number of inputs/outputs and specifications	
6	Extension port	Updating the firmware	
7	Label	Nameplate	
8	Set screw	Fixing the module	
9	Connector	It connects the module and a backplane.	
10	Projection	Fixing the module	

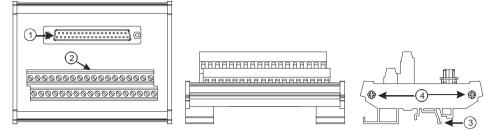
- DB37 connector, I/O extension cable, and external terminal module
 - 1. I/O extension cable UC-ET010-33B



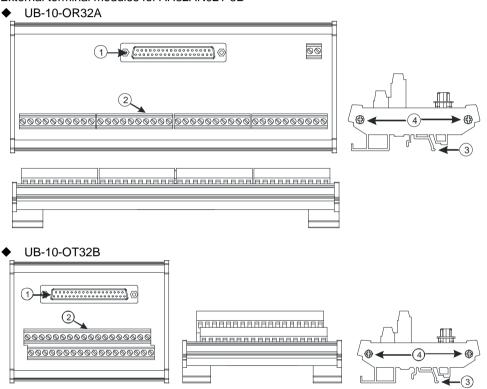
Number	Name	Description
1	DB37 connector	Connecting a digital input/output module and an external terminal module.
2	Set screw	Fixing the connector



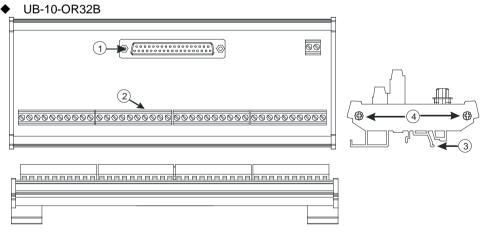
2. External terminal module for AH32AM10N-5B: UB-10-ID32B



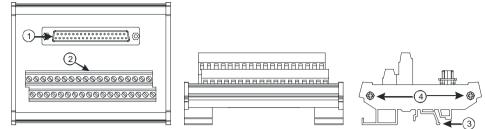
3. External terminal modules for AH32AN02T-5B



4. External terminal modules for AH32AN02P-5B



♦ UB-10-OT32B

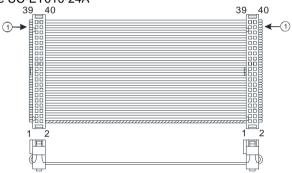




Number	Name	Description
1	DB37 connector	Connecting the external terminal module and a digital
1	DD37 COnnector	input/output module
2	Terminals	Input/Output terminals for wiring
3	Clip	Hanging the external terminal module on a DIN rail
4	Set screw	Fixing the base

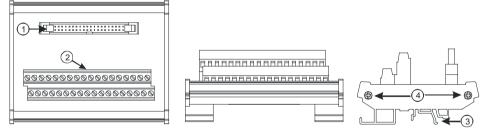
• Latch connector, I/O extension cable, and external terminal module

1. I/O extension cable UC-ET010-24A



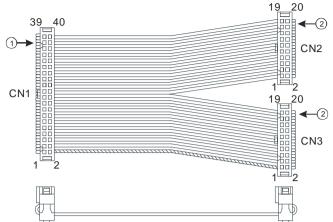
Number	Name	Description
1	1 40-pin IDC connector	Connecting a digital input/output module and the external
1		terminal module UB-10-ID32A

2. External terminal module for AH32AM10N-5C/AH64AM10N-5C: UB-10-ID32A



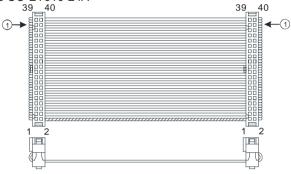
Number	Name	Description
1	10 nin latch connector	Connecting the external terminal module and a digital
1	40-pin latch connector	input/output module
2	Terminals	Input/Output terminals for wiring
3	Clip 🗆	Hanging the external terminal module on a DIN rail
4	Set screw	Fixing the base

3. I/O extension cable UC-ET010-24C



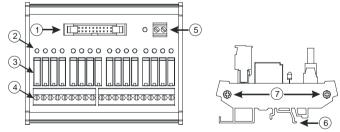
Number	Name	Description
1	40-pin IDC connector	Connecting a digital input/output module and an external terminal module.
2	20-pin IDC connector	Connecting a digital input/output module and the external terminal module UB-10-OR16A or UB-10-OR16B

4. I/O extension cable UC-ET010-24A



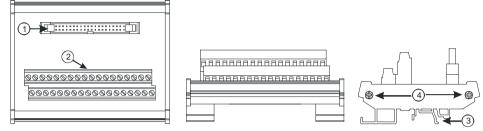
Number	Name	Description	
1	40-pin IDC connector	Connecting a digital input/output module and the external terminal module UB-10-OT32A	

- 5. External terminal modules for AH32AN02T-5C/AH64AN02T-5C
 - ♦ UB-10-OR16A



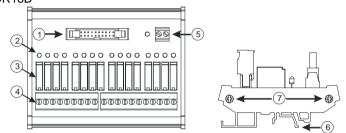
2

◆ UB-10-OT32A

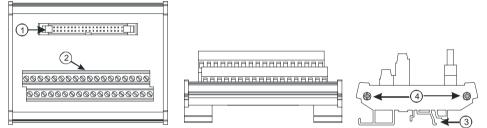




- 6. External terminal module for AH32AN02P-5C/AH64AN02P-5C
 - UB-10-OR16B



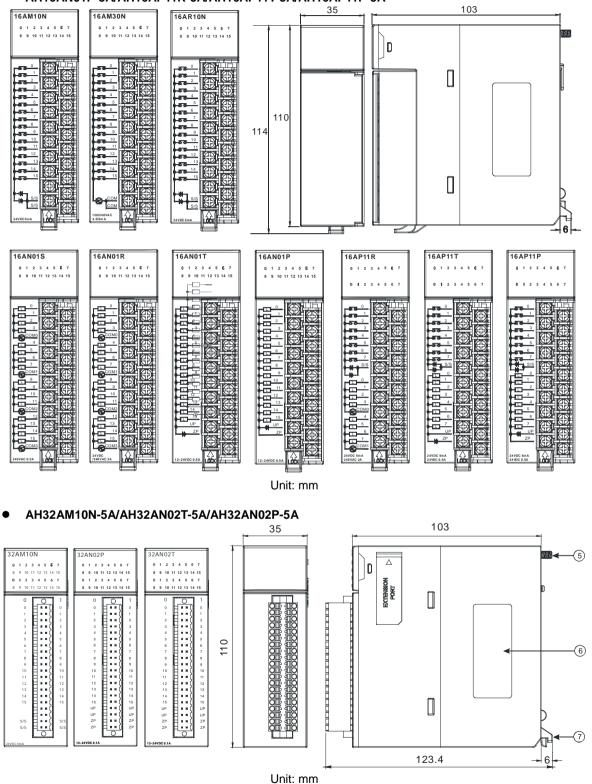
UB-10-OT32A

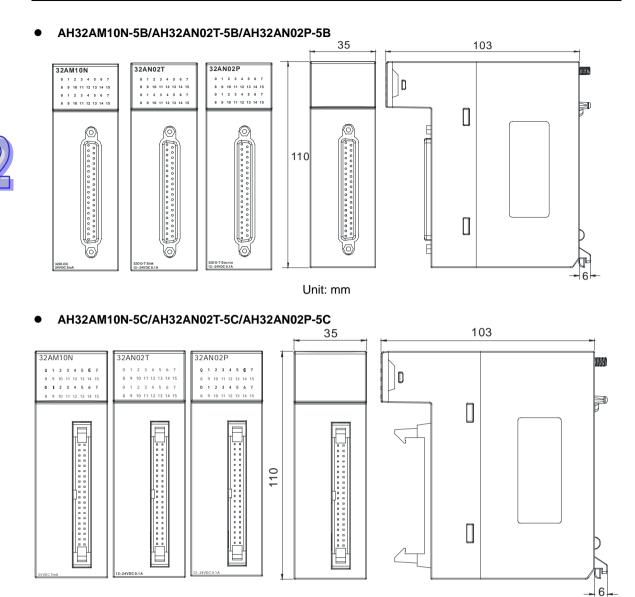


Number	Name	Description	
1	20-pin latch	Connecting the external terminal module and a digital input/output	
1	connector	module	
2	Output LED	If there is an output signal, the output LED indicator is ON.	
2	indicator		
3	Output relay	Output relay	
4	Output terminal	Output terminal for wiring	
~	Power input	Power input terminal for wiring	
5	terminal		
6	Clip 🗆	Hanging the external terminal module on a DIN rail	
7	Set screw	Fixing the base	

2.4.3 Dimensions

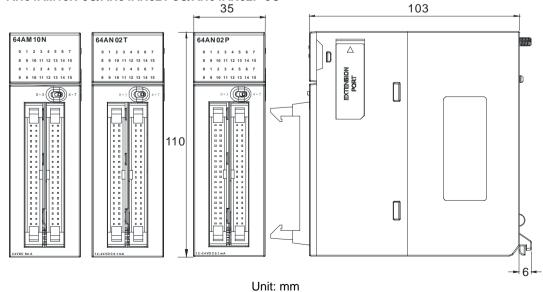
• AH16AM10N-5A/AH16AM30N-5A/AH16AR10N-5A/AH16AN01S-5A/AH16AN01R-5A/AH16AN01T-5A/ AH16AN01P-5A/AH16AP11R-5A/AH16AP11T-5A/AH16AP11P-5A



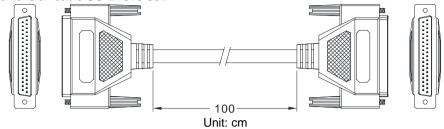




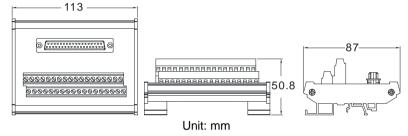
• AH64AM10N-5C/AH64AN02T-5C/AH64AN02P-5C



- DB37 connector, I/O extension cable, and external terminal module
 - 1. I/O extension cable UC-ET010-33B

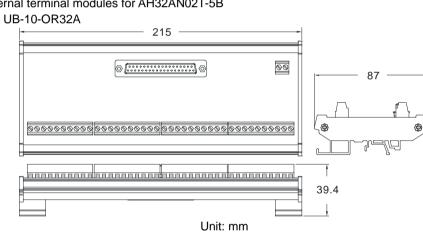


2. External terminal module for AH32AM10N-5B: UB-10-ID32B



3. External terminal modules for AH32AN02T-5B

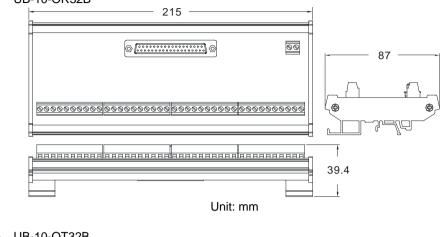
٠

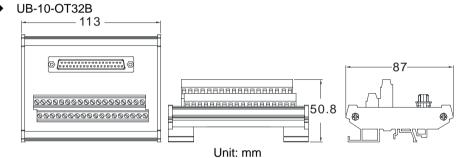


UB-10-OT32B

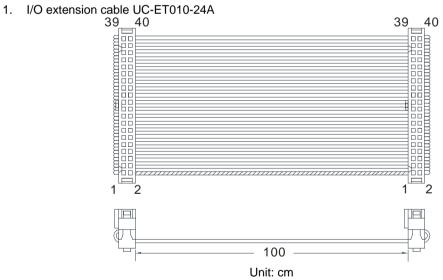


- 4. External terminal modules for AH32AN02P-5B
 - ♦ UB-10-OR32B

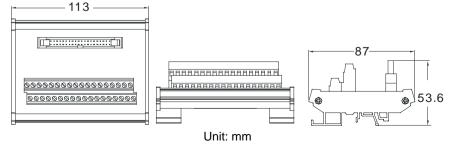




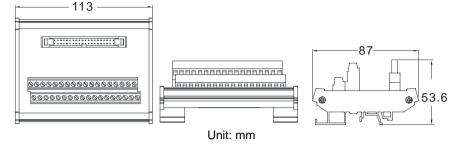
• Latch connector, I/O extension cable, and external terminal module



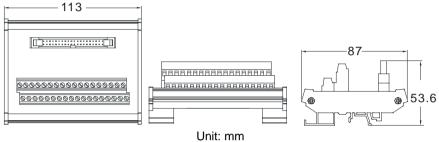
2. External terminal module for AH32AM10N-5C/AH64AM10N-5C: UB-10-ID32A



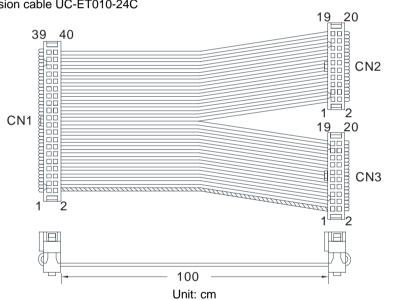
3. External terminal module for AH32AN02T-5C/AH64AN02T-5C: UB-10-OT32A



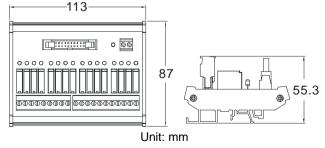
4. External terminal module for AH32AN02P-5C/AH64AN02P-5C: UB-10-OT32A



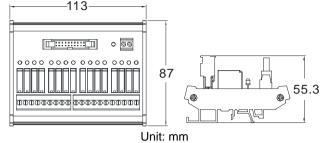
5. I/O extension cable UC-ET010-24C



External terminal module for AH32AN02T-5C/AH64AN02T-5C: UB-10-OR16A



External terminal module for AH32AN02P-5C/AH64AN02P-5C: UB-10-OR16B





2.4.4 Arrangement of Input/Output Terminals

AH16AM10N-5A	AH16AM30N-5A	AH16AR10N-5A	AH16AN01S-5A
16AM10N	16AM30N	16AR10N	16AN01S
0 1 2 3 4 5 6 7	0 1 2 3 4 5 6 7	0 1 2 3 4 5 6 7	0 1 2 3 4 5 6 7
8 9 10 11 12 13 14 15	8 9 10 11 12 13 14 15	8 9 10 11 12 13 14 15	8 9 10 11 12 13 14 15
	сом		
		S/S SIZ	
	120/240 VA C 4.5/9mA	24VDC5mA	

AH16AN01R-5A	AH16AN01T-5A	AH16AN01P-5A
16AN01R	16AN01T	16AN01P
0 1 2 3 4 5 6 7	0 1 2 3 4 5 6 7	0 1 2 3 4 5 6 7
8 9 10 11 12 13 14 15	8 9 10 11 12 13 14 15	8 9 10 11 12 13 14 15
	12-24VDC 0.5A	12-24VDC 0.5A
AH16AP11R-5A	AH16AP11T-5A	AH16AP11P-5A
AH16AP11R-5A	AH16AP11T-5A	AH16AP11P-5A
()	r	· · · · · · · · · · · · · · · · · · ·
16AP11R	16AP11T	16AP11P
16AP11R 0 1 2 3 4 5 6 7	16AP11T 0 1 2 3 4 5 6 7	16AP11P 0 1 2 3 4 5 6 7
16AP11R 0 1 2 3 4 5 6 7	16AP11T 0 1 2 3 4 5 6 7	16AP11P 0 1 2 3 4 5 6 7
16AP11R 0 1 2 3 4 5 6 7	16AP11T 0 1 2 3 4 5 6 7	16AP11P 0 1 2 3 4 5 6 7
16AP11R 0 1 2 3 4 5 6 7	16AP11T 0 1 2 3 4 5 6 7	16AP11P 0 1 2 3 4 5 6 7
16AP11R 0 1 2 3 4 5 6 7	16AP11T 0 1 2 3 4 5 6 7	16AP11P 0 1 2 3 4 5 6 7
16AP11R 0 1 2 3 4 5 6 7	16AP11T 0 1 2 3 4 5 6 7	16AP11P 0 1 2 3 4 5 6 7
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	16AP11T 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	16AP11T 0 1 2 3 4 5 6 7	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	16AP11T 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 6 7 6 7 0 1 5/5 7 6 7 6 7 0 1 2 3 6 7 6 7 0 1 2 3 6 7 6 7 0 1 2 6 7 6 7 7 0 1 2 3 4 5 6 7	16AP11P 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 5 2 5 3 5 3 5 3 5 3 5 3 5 3 5 3 5 3 5 3 5 3 5 3 5 3 5 3 5 3 6 3 1 2
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	16AP11T 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 7 3 7 6 7 0 7 3 5 5 6 7	16AP11P 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 1 2 3 4 5 6 7 1 1 2 3 4 5 6 7 1
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	16AP11T 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 6 7 6 7 0 5 5 6 6 7 7 7 7 0 1 2 3 7 6 7 7 7 0 1 2 3 7 6 7 7 7 7 1 5 5 7	16AP11P 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 6 7 6 7 0 1 5 5 6 7 6 7 0 1 1 1 1 1 1 1 1 0 1 1 1 1 1 1 1 1 0 1 1 1 1 1 1 1 1 1
16AP11R 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 6 7 6 7 0 1 2 3 6 7 6 7 0 1 2 3 6 7 6 7 0 1 2 3 6 7 6 7 0 1 2 3 6 7 6 7 0 1 2 3 6 7 6 7 0 1 1 1 1 1 1 1 1 0 1 1 1 1 1	16AP11T 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 6 7 6 7 0 1 2 3 6 7 7 7 7 0 1 2 3 6 7 7 7 7 7 0 1 2 3 6 7 <td>16AP11P 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 5 5 6 5 6 7 7 7</td>	16AP11P 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 5 5 6 5 6 7 7 7
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	16AP11T 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 6 7 6 7 0 1 2 3 6 7 6 7 0 1 2 3 6 7 6 7 1 2 3 6 7 6 7 7 7 1 2 3 6 7	16AP11P 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 6 7 6 7 0 1 2 3 6 7 6 7 1 3 5 6 7 7 7 7 7 1 3 6 7 7 7 7 7 7 1 2 7 7 7 7 7 7 7 7 1 2 7
16AP11R 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 5 5 5 6 7 6 7 0 1 2 3 6 7 6 7 0 1 2 3 6 7 6 7 0 1 2 3 6 7 6 7 0 1 2 3 6 7 6 7 0 1 1 1 1 1 1 1 1 1 2 3 6 7 6 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 <t< td=""><td>16AP11T 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 5 6 1 5 1 5 1 5 1 5 1 1 1 1 1 1 1 1</td><td>16AP11P 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 6 7 6 7 7 1 5 6 7 6 7 7 6 7</td></t<>	16AP11T 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 5 6 1 5 1 5 1 5 1 5 1 1 1 1 1 1 1 1	16AP11P 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 6 7 6 7 7 1 5 6 7 6 7 7 6 7



AH32AM10N-5A			AH32AN02T-5A		
nn	0.0	1.0	рр	0.0	1.0
32AM10N	0.0	1.1	32AN02T	0.0	1.1
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	0.2	1.2	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	0.2	1.2
0 1 2 3 4 5 6 7	0.3	1.3	0 1 2 3 4 5 6 7	0.3	1.3
8 9 10 11 12 13 14 15	0.0	1.4	8 9 10 11 12 13 14 15	0.4	1.4
0 0 1	0.5	1.5	0 1	0.5	1.5
	0.6	1.6		0.6	1.6
	0.7	1.7		0.7	1.7
3 = = = { 3 4 = = = 4	0.8	1.8	3 нн (3 4 нн 4	0.8	1.8
5 = = = 2 5	0.9	1.9	5 = = = 2 5	0.9	1.9
	0.10	1.10		0.10	1.10
8 = = = 8	0.11	1.11	8 = = = = 8 9 = = = = 9	0.11	1.11
	0.12	1.12		0.12	1.12
	0.13	1.13		0.13	1.13
	0.14	1.14	13 🗆 🗷 🛤 🎽 13	0.14	1.14
	0.15	1.15	14 = # # [14 15 = # # [15	0.15	1.15
	-	-		UP	UP
S/S = = = { S/S	-	-	ZP = = = (ZP	UP	UP
S/S	S/S	S/S		ZP	ZP
24VDC 5mA	S/S	S/S	12-24VDC 0.1A	ZP	ZP
				1	
AH32AN0	2P-5A		AH32AM ²	10N-5B	1
AH32AN02	2 P-5A 0.0	1.0	AH32AM1 32AM10N	10N-5B 0.0	0.1
f	T	1.0 1.1	R	1	0.1 0.3
32AN02P	0.0	-	32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	0.0	-
32AN02P 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7	0.0	1.1	32AM10N 0 1 2 3 4 5 6 7	0.0	0.3
32AN02P 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	0.0 0.1 0.2	1.1 1.2	32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7	0.0 0.2 0.4	0.3 0.5
32AN02P 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 1 12 13 14 15 0 1 1 12 13 14 15 0 1 1 1 12 13 14 15	0.0 0.1 0.2 0.3	1.1 1.2 1.3	32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7	0.0 0.2 0.4 0.6	0.3 0.5 0.7
32AN02P 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 12 13 14 15 0 1 11 12 13 14 15 0 1 11 12 13 14 15	0.0 0.1 0.2 0.3 0.4	1.1 1.2 1.3 1.4	32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7	0.0 0.2 0.4 0.6 0.8	0.3 0.5 0.7 0.9
32AN02P 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 0 11 12 13 14 15 0 0 10 11 12 13 14 15 0 0 10 11 12 13 14 15	0.0 0.1 0.2 0.3 0.4 0.5	1.1 1.2 1.3 1.4 1.5	32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 1 12 13 14 15	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14	0.3 0.5 0.7 0.9 0.11 0.13 0.15
32AN02P 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 12 13 14 15 0 1 12 13 14 15 0 1 12 13 14 15 1 2 1 2 3 4 1 2 3 4 1 1 2 3 4 4	0.0 0.1 0.2 0.3 0.4 0.5 0.6	1.1 1.2 1.3 1.4 1.5 1.6	32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 1 2 13 14 15 0 1 1 12 13 14 15	0.0 0.2 0.4 0.6 0.8 0.10 0.12	0.3 0.5 0.7 0.9 0.11 0.13
32AN02P 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 O Image: Colspan="2">Image: Colspan="2">Image: Colspan="2">O 0 Image: Colspan="2">Image: Colspan="2">O 1 Image: Colspan="2">Image: Colspan="2" 0 Image: Colspan="2">Image: Colspan="2" Image: Colspan="2">Image: Colspan="2" Image: Colspan="2" Image: Colspan="2" Image: Colspan="2" </th <th>0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7</th> <th>1.1 1.2 1.3 1.4 1.5 1.6 1.7</th> <th>32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 12 13 14 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</th> <th>0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14</th> <th>0.3 0.5 0.7 0.9 0.11 0.13 0.15</th>	0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7	1.1 1.2 1.3 1.4 1.5 1.6 1.7	32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 12 13 14 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14	0.3 0.5 0.7 0.9 0.11 0.13 0.15
32AN02P 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 O 1 0 11 12 13 14 15 O 1 1 2 14 1 2 3 11 2 3 4 14 5 5 6 7 14 5 6 7	0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8	1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8	32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 9 10 11 12 13 14 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14 S/S	0.3 0.5 0.7 0.9 0.11 0.13 0.15 S/S
32AN02P 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 12 13 14 15 0 11 12 13 14 15 0 11 12 13 14 15 3 4 14 2 3 4 4 5 14 4 5 6 7 14 4 5 6 7 14 7 8 9 14 9	0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9	1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9	32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14 S/S NC	0.3 0.5 0.7 0.9 0.11 0.13 0.15 S/S 1.0
32AN02P 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 O 1 0 1 12 13 14 15 0 1 12 13 14 15 0 1 11 12 13 14 15 0 1 11 12 13 14 15 1 1 12 14 1 12 3 11 11 12 13 14 5 11 11 12 13 14 5 11 13 14 15 14 5 13 14 15 14 15 1 14 15 15 15 16	0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 0.10	1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 1.10	32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 12 13 14 15 0 1 1 12 13 14 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14 S/S NC 1.1	0.3 0.5 0.7 0.9 0.11 0.13 0.15 S/S 1.0 1.2
32AN02P 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 0 1 12 13 14 15 0 1 1 2 3 14 15 0 1 1 2 3 14 1 2 3 11 2 3 3 4 14 5 14 4 5 6 14 14 5 10 11 10 11 12 14 12	0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 0.10 0.11	1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 1.10 1.11	32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 12 13 14 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14 S/S NC 1.1 1.3	0.3 0.5 0.7 0.9 0.11 0.13 0.15 S/S 1.0 1.2 1.4
32AN02P 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 O 1 0 11 12 13 14 15 O 11 12 14 15 6 11 14 5 6 7 8 14 5 6 7 8 14 7 8 9 10 11 10 11	0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 0.10 0.11 0.12	1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 1.10 1.11 1.12	32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14 S/S NC 1.1 1.3 1.5	0.3 0.5 0.7 0.9 0.11 0.13 0.15 S/S 1.0 1.2 1.4 1.6
32AN02P 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 12 13 14 15 0 1 11 12 13 14 2 3 11 2 3 4 3 4 11 2 3 4 4 11 5 6 11 12 3 4 11 5 6 14 15 0 11 11 11 11 12 13 13 14 15 14 14 15 14 14	0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 0.10 0.11 0.12 0.13	1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 1.10 1.11 1.12 1.13	32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 12 13 14 15 0 1 11 12 13 14 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14 S/S NC 1.1 1.3 1.5 1.7	0.3 0.5 0.7 0.9 0.11 0.13 0.15 S/S 1.0 1.2 1.4 1.6 1.8
32AN02P 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 0 1 12 13 14 15 0 1 1 2 3 14 15 0 1 12 13 14 15 1 2 3 14 15 10 1 1 10 11 12 13 14 12 13 14 15 12 13 14 15 10 11 12 13 14 15 10 11 15 13 14 15 15 10 15 10 15 14 15 14 15	0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 0.10 0.11 0.12 0.13 0.14	1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 1.10 1.11 1.12 1.13 1.14	32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 12 13 14 15 0 1 11 12 13 14 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14 S/S NC 1.1 1.3 1.5 1.7 1.9	0.3 0.5 0.7 0.9 0.11 0.13 0.15 S/S 1.0 1.2 1.4 1.6 1.8 1.10
32AN02P 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 12 13 14 15 0 1 11 12 13 14 1 2 3 11 2 3 4 11 2 3 14 4 5 1 11 11 11 2 3 11 4 5 6 11 11 11 12 14 15 10 11 11 12 13 14 12 13 14 15 14 15 15	0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 0.10 0.11 0.12 0.13 0.14 0.15	1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 1.10 1.11 1.12 1.13 1.14 1.15	32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 12 13 14 15 0 1 11 12 13 14 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14 S/S NC 1.1 1.3 1.5 1.7 1.9 1.11	0.3 0.5 0.7 0.9 0.11 0.13 0.15 S/S 1.0 1.2 1.4 1.6 1.8 1.10 1.12
32AN02P 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 12 13 14 15 0 1 11 12 13 14 1 2 3 4 5 7 3 4 4 5 6 6 7 8 4 4 5 6 7 4 4 5 6 7 4 4 10 11 12 4 10 11 12 4 4 12 13 14 15 11 12 13 14 15 14 15 14 15 19 19 10 11	0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 0.10 0.11 0.12 0.13 0.14 0.15 UP	1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 1.10 1.11 1.12 1.13 1.14 1.15 UP	32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 12 13 14 15 0 1 11 12 13 14 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14 S/S NC 1.1 1.3 1.5 1.7 1.9 1.11 1.13	0.3 0.5 0.7 0.9 0.11 0.13 0.15 S/S 1.0 1.2 1.4 1.6 1.8 1.10 1.12 1.14



AH32AN	02T-5B		AH32AN	02P-5B	
32AN02T	0.0	0.1	32AN02P	0.0	0.1
0 1 2 3 4 5 6 7	0.2	0.3	0 1 2 3 4 5 6 7	0.2	0.3
8 9 10 11 12 13 14 15	0.4	0.5	8 9 10 11 12 13 14 15	0.4	0.5
0 1 2 3 4 5 6 7	0.6	0.7	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	0.6	0.7
8 9 10 11 12 13 14 15	0.8	0.9	8 9 10 11 12 13 14 15	0.8	0.9
	0.10	0.11		0.10	0.11
	0.12	0.13		0.12	0.13
	0.14	0.15	(Feither	0.14	0.15
	ZP	ZP		ZP	UP
8 °	UP	1.0		UP	1.0
	1.1	1.2		1.1	1.2
	1.3	1.4		1.3	1.4
	1.5	1.6		1.5	1.6
	1.7	1.8		1.7	1.8
000	1.9	1.10		1.9	1.10
	1.11	1.12		1.11	1.12
	1.13	1.14		1.13	1.14
	1.15	ZP		1.15	ZP
	UP			UP	
12~24VDC 0.1A			12~24VDC 0.1A		
AH32AM1		2.4	AH32AN		2.1
AH32AM1 32AM10N	0.0	0.1	AH32AN 32AN02T	0.0	0.1
32AM10N 0 1 2 3 4 5 6 7	0.0	0.3	32AN02T 0 1 2 3 4 5 6 7	0.0	0.3
32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	0.0 0.2 0.4	0.3 0.5	32AN02T 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	0.0 0.2 0.4	0.3 0.5
32AM10N 0 1 2 3 4 5 6 7	0.0 0.2 0.4 0.6	0.3 0.5 0.7	32AN02T 0 1 2 3 4 5 6 7	0.0 0.2 0.4 0.6	0.3 0.5 0.7
32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7	0.0 0.2 0.4 0.6 0.8	0.3 0.5 0.7 0.9	32AN02T 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7	0.0 0.2 0.4 0.6 0.8	0.3 0.5 0.7 0.9
32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7	0.0 0.2 0.4 0.6 0.8 0.10	0.3 0.5 0.7 0.9 0.11	32AN02T 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7	0.0 0.2 0.4 0.6 0.8 0.10	0.3 0.5 0.7 0.9 0.11
32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7	0.0 0.2 0.4 0.6 0.8 0.10 0.12	0.3 0.5 0.7 0.9 0.11 0.13	32AN02T 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7	0.0 0.2 0.4 0.6 0.8 0.10 0.12	0.3 0.5 0.7 0.9 0.11 0.13
32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14	0.3 0.5 0.7 0.9 0.11 0.13 0.15	32AN02T 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14	0.3 0.5 0.7 0.9 0.11 0.13 0.15
32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 10 11 12 13 14 15	0.0 0.2 0.4 0.6 0.8 0.10 0.12	0.3 0.5 0.7 0.9 0.11 0.13	32AN02T 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14 ZP	0.3 0.5 0.7 0.9 0.11 0.13 0.15 ZP
32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 8 9 10 11 12 13 14 15	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14 S/S	0.3 0.5 0.7 0.9 0.11 0.13 0.15 S/S	32AN02T 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14 ZP UP	0.3 0.5 0.7 0.9 0.11 0.13 0.15 ZP UP
32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14 S/S 1.0	0.3 0.5 0.7 0.9 0.11 0.13 0.15 S/S 1.1	32AN02T 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14 ZP UP 1.0	0.3 0.5 0.7 0.9 0.11 0.13 0.15 ZP UP 1.1
32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14 S/S 1.0 1.2	0.3 0.5 0.7 0.9 0.11 0.13 0.15 S/S 1.1 1.3	32AN02T 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14 ZP UP 1.0 1.2	0.3 0.5 0.7 0.9 0.11 0.13 0.15 ZP UP 1.1 1.3
32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 1 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14 S/S 1.0 1.2 1.4	0.3 0.5 0.7 0.9 0.11 0.13 0.15 S/S 1.1 1.3 1.5	32AN02T 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14 ZP UP 1.0 1.2 1.4	0.3 0.5 0.7 0.9 0.11 0.13 0.15 ZP UP 1.1 1.3 1.5
32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 8 9 10 11 12 13 14 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14 S/S 1.0 1.2 1.4 1.6	0.3 0.5 0.7 0.9 0.11 0.13 0.15 S/S 1.1 1.3 1.5 1.7	32AN02T 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14 ZP UP 1.0 1.2 1.4 1.6	0.3 0.5 0.7 0.9 0.11 0.13 0.15 ZP UP 1.1 1.3 1.5 1.7
32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14 S/S 1.0 1.2 1.4 1.6 1.8	0.3 0.5 0.7 0.9 0.11 0.13 0.15 S/S 1.1 1.3 1.5 1.7 1.9	32AN02T 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14 ZP UP 1.0 1.2 1.4 1.6 1.8	0.3 0.5 0.7 0.9 0.11 0.13 0.15 ZP UP 1.1 1.3 1.5 1.7 1.9
32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14 S/S 1.0 1.2 1.4 1.6 1.8 1.10	0.3 0.5 0.7 0.9 0.11 0.13 0.15 S/S 1.1 1.3 1.5 1.7 1.9 1.11	32AN02T 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14 ZP UP 1.0 1.2 1.4 1.6 1.8 1.10	0.3 0.5 0.7 0.9 0.11 0.13 0.15 ZP UP 1.1 1.3 1.5 1.7 1.9 1.11
32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 1 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14 S/S 1.0 1.2 1.4 1.6 1.8 1.10 1.12	0.3 0.5 0.7 0.9 0.11 0.13 0.15 S/S 1.1 1.3 1.5 1.7 1.9 1.11 1.13	32AN02T 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14 ZP UP 1.0 1.2 1.4 1.6 1.8 1.10 1.12	0.3 0.5 0.7 0.9 0.11 0.13 0.15 ZP UP 1.1 1.3 1.5 1.7 1.9 1.11 1.13
32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14 S/S 1.0 1.2 1.4 1.6 1.8 1.10 1.12 1.14	0.3 0.5 0.7 0.9 0.11 0.13 0.15 S/S 1.1 1.3 1.5 1.7 1.9 1.11 1.13 1.15	32AN02T 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14 ZP UP 1.0 1.2 1.4 1.6 1.8 1.10 1.12 1.14	0.3 0.5 0.7 0.9 0.11 0.13 0.15 ZP UP 1.1 1.3 1.5 1.7 1.9 1.11 1.13 1.15
32AM10N 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14 S/S 1.0 1.2 1.4 1.6 1.8 1.10 1.12	0.3 0.5 0.7 0.9 0.11 0.13 0.15 S/S 1.1 1.3 1.5 1.7 1.9 1.11 1.13	32AN02T 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0 0.2 0.4 0.6 0.8 0.10 0.12 0.14 ZP UP 1.0 1.2 1.4 1.6 1.8 1.10 1.12	0.3 0.5 0.7 0.9 0.11 0.13 0.15 ZP UP 1.1 1.3 1.5 1.7 1.9 1.11 1.13

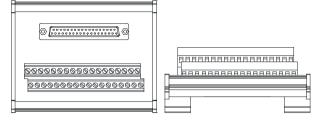


AH32	AN02P-	5C			AH	64A	M10N-	-5C		
32AN02P		0.0	0).1	64AM10N	1	NC	NC	NC	NC
		0.2	().3	0 1 2 3 4 5 6 7		S/S	S/S	2.0	2.1
8 9 10 11 12 13 14 15		0.4	().5	8 9 10 11 12 13 14 15	Í	1.15	1.14	2.2	2.3
0 1 2 3 4 5 6 7		0.6	().7	0 1 2 3 4 5 6 7		1.13	1.12	2.4	2.5
8 9 10 11 12 13 14 15		0.8	0).9	8 9 10 11 12 13 14 15		1.11	1.10	2.6	2.7
		0.10	0	.11	0-3 4-7		1.9	1.8	2.8	2.9
		0.12	0	.13			1.7	1.6	2.10	2.11
		0.14	0	.15			1.5	1.4	2.12	2.13
		ZP	Z	ZP			1.3	1.2	2.14	2.15
		UP	ι	JP			1.1	1.0	S/S	S/S
		1.0	1	1.1			NC	NC	NC	NC
		1.2	1	1.3			S/S	S/S	3.0	3.1
		1.4	1	l.5			0.15	0.14	3.2	3.3
		1.6	1	1.7			0.13	0.12	3.4	3.5
		1.8	1	1.9			0.11	0.10	3.6	3.7
		1.10	1	.11			0.9	0.8	3.8	3.9
		1.12	1	.13			0.7	0.6	3.10	3.11
		1.14	1	.15			0.5	0.4	3.12	3.13
		ZP	2	ZP			0.3	0.2	3.14	3.15
12~24VDC 0.1A		UP	ι	JP	2 4V DC 5m A	ļ	0.1	0.0	S/S	S/S
ΔH64	AN02T-	50			ΔΗ	644	N02P-	50		
64AN 02T	UP	UP	2.0	2.1	64AN 02P	1	UP	UP	2.0	2.1
0 1 2 3 4 5 6 7	ZP	ZP	2.2	2.3	0 1 2 3 4 5 6 7		ZP	ZP	2.2	2.3
8 9 10 11 12 13 14 15	1.15	1.14	2.4	2.5	8 9 10 11 12 13 14 15		1.15	1.14	2.4	2.5
0 1 2 3 4 5 6 7	1.13	1.12	2.6	2.7	0 1 2 3 4 5 6 7		1.13	1.12	2.6	2.7
8 9 10 11 12 13 14 15	1.11	4 4 0								
		1.10	2.8	2.9	8 9 10 11 12 13 14 15		1.11	1.10	2.8	2.9
0 - 3 (4 - 7	1.9	1.10	2.8 2.10	2.9 2.11	8 9 10 11 12 13 14 15 0 - 3 (4 - 7		1.11 1.9	1.10 1.8	2.8 2.10	2.9 2.11
0 - 3			-	-		2		-	-	-
0-3	1.9	1.8	2.10	2.11		2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1.9	1.8	2.10	2.11
	1.9 1.7	1.8 1.6	2.10 2.12	2.11 2.13			1.9 1.7	1.8 1.6	2.10 2.12	2.11 2.13
	1.9 1.7 1.5	1.8 1.6 1.4	2.10 2.12 2.14	2.11 2.13 2.15			1.9 1.7 1.5	1.8 1.6 1.4	2.10 2.12 2.14	2.11 2.13 2.15
	1.9 1.7 1.5 1.3	1.8 1.6 1.4 1.2	2.10 2.12 2.14 ZP	2.11 2.13 2.15 ZP			1.9 1.7 1.5 1.3	1.8 1.6 1.4 1.2	2.10 2.12 2.14 ZP	2.11 2.13 2.15 ZP
	1.9 1.7 1.5 1.3 1.1	1.8 1.6 1.4 1.2 1.0	2.10 2.12 2.14 ZP UP	2.11 2.13 2.15 ZP UP			1.9 1.7 1.5 1.3 1.1	1.8 1.6 1.4 1.2 1.0	2.10 2.12 2.14 ZP UP	2.11 2.13 2.15 ZP UP
	1.9 1.7 1.5 1.3 1.1 UP	1.8 1.6 1.4 1.2 1.0 UP	2.10 2.12 2.14 ZP UP 3.0	2.11 2.13 2.15 ZP UP 3.1			1.9 1.7 1.5 1.3 1.1 UP	1.8 1.6 1.4 1.2 1.0 UP	2.10 2.12 2.14 ZP UP 3.0	2.11 2.13 2.15 ZP UP 3.1
	1.9 1.7 1.5 1.3 1.1 UP ZP	1.8 1.6 1.4 1.2 1.0 UP ZP	2.10 2.12 2.14 ZP UP 3.0 3.2	2.11 2.13 2.15 ZP UP 3.1 3.3			1.9 1.7 1.5 1.3 1.1 UP ZP	1.8 1.6 1.4 1.2 1.0 UP ZP	2.10 2.12 2.14 ZP UP 3.0 3.2	2.11 2.13 2.15 ZP UP 3.1 3.3
	1.9 1.7 1.5 1.3 1.1 UP ZP 0.15	1.8 1.6 1.4 1.2 1.0 UP ZP 0.14	2.10 2.12 2.14 ZP UP 3.0 3.2 3.4	2.11 2.13 2.15 ZP UP 3.1 3.3 3.5			1.9 1.7 1.5 1.3 1.1 UP ZP 0.15	1.8 1.6 1.4 1.2 1.0 UP ZP 0.14	2.10 2.12 2.14 ZP UP 3.0 3.2 3.4 3.6 3.8	2.11 2.13 2.15 ZP UP 3.1 3.3 3.5 3.7 3.9
	1.9 1.7 1.5 1.3 1.1 UP ZP 0.15 0.13	1.8 1.6 1.4 1.2 1.0 UP ZP 0.14 0.12	2.10 2.12 2.14 ZP UP 3.0 3.2 3.4 3.6 3.8 3.10	2.11 2.13 2.15 ZP UP 3.1 3.3 3.5 3.7 3.9 3.11			1.9 1.7 1.5 1.3 1.1 UP ZP 0.15 0.13	1.8 1.6 1.4 1.2 1.0 UP ZP 0.14 0.12	2.10 2.12 2.14 ZP UP 3.0 3.2 3.4 3.6	2.11 2.13 2.15 ZP UP 3.1 3.3 3.5 3.7
	1.9 1.7 1.5 1.3 1.1 UP ZP 0.15 0.13 0.11	1.8 1.6 1.4 1.2 1.0 UP ZP 0.14 0.12 0.10	2.10 2.12 2.14 ZP UP 3.0 3.2 3.4 3.6 3.8	2.11 2.13 2.15 ZP UP 3.1 3.3 3.5 3.7 3.9			1.9 1.7 1.5 1.3 1.1 UP ZP 0.15 0.13 0.11	1.8 1.6 1.4 1.2 1.0 UP ZP 0.14 0.12 0.10	2.10 2.12 2.14 ZP UP 3.0 3.2 3.4 3.6 3.8	2.11 2.13 2.15 ZP UP 3.1 3.3 3.5 3.7 3.9
	1.9 1.7 1.5 1.3 1.1 UP ZP 0.15 0.13 0.11 0.9 0.7 0.5	1.8 1.6 1.4 1.2 1.0 UP ZP 0.14 0.12 0.10 0.8 0.6 0.4	2.10 2.12 2.14 ZP UP 3.0 3.2 3.4 3.6 3.8 3.10 3.12 3.14	2.11 2.13 2.15 ZP UP 3.1 3.3 3.5 3.7 3.9 3.11 3.13 3.15			1.9 1.7 1.5 1.3 1.1 UP ZP 0.15 0.13 0.11 0.9 0.7 0.5	1.8 1.6 1.4 1.2 1.0 UP ZP 0.14 0.12 0.10 0.8 0.6 0.4	2.10 2.12 2.14 ZP UP 3.0 3.2 3.4 3.6 3.8 3.10 3.12 3.14	2.11 2.13 2.15 ZP UP 3.1 3.3 3.5 3.7 3.9 3.11 3.13 3.15
	1.9 1.7 1.5 1.3 1.1 UP ZP 0.15 0.13 0.11 0.9 0.7	1.8 1.6 1.4 1.2 1.0 UP ZP 0.14 0.12 0.10 0.8 0.6	2.10 2.12 2.14 ZP UP 3.0 3.2 3.4 3.6 3.8 3.10 3.12	2.11 2.13 2.15 ZP UP 3.1 3.3 3.5 3.7 3.9 3.11 3.13			1.9 1.7 1.5 1.3 1.1 UP ZP 0.15 0.13 0.11 0.9 0.7	1.8 1.6 1.4 1.2 1.0 UP ZP 0.14 0.12 0.10 0.8 0.6	2.10 2.12 2.14 ZP UP 3.0 3.2 3.4 3.6 3.8 3.10 3.12	2.11 2.13 2.15 ZP UP 3.1 3.3 3.5 3.7 3.9 3.11 3.13



• DB37 connector and the external terminal module

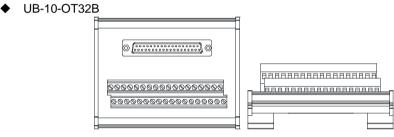
1. External terminal module for AH32AM10N-5B: UB-10-ID32B



AH series terminals: (only applicable for AH series)

Upper row	X0.0	X0.2	X0.4	X0.6	X0.8	X0.10	X0.12	X0.14	X1.0	X1.2	X1.4	X1.6	X1.8	X1.10	X1.12	X1.14	S/S	S/S
Lower row	X0.1	X0.3	X0.5	X0.7	X0.9	X0.11	X0.13	X0.15	X1.1	X1.3	X1.5	X1.7	X1.9	X1.11	X1.13	X1.15	S/S	S/S

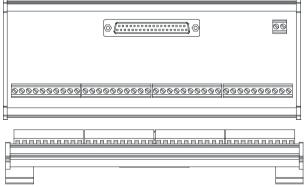
2. External terminal modules for AH32AN02T-5B



AH series terminals: (only applicable for AH series)

Upper row	Y0.0	Y0.2	Y0.4	Y0.6	Y0.8	Y0.10	Y0.12	Y0.14	Y1.0	Y1.2	Y1.4	Y1.6	Y1.8	Y1.10	Y1.12	Y1.14	UP	UP
Lower row	Y0.1	Y0.3	Y0.5	Y0.7	Y0.9	Y0.11	Y0.13	Y0.15	Y1.1	Y1.3	Y1.5	Y1.7	Y1.9	Y1.11	Y1.13	Y1.15	ZP	ZP

UB-10-OR32A

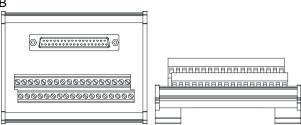


AH series terminals: (only applicable for AH series)

																			GND	+24V
1 st from	00					~				V0 7	00					00		V0.40		10.45
the left	CO	Y0.0	Y0.1	Y0.2	Y0.3	C1	Y0.4	Y0.5	Y0.6	YU.7	C2	Y0.8	Y0.9	Y0.10	Y0.11	03	Y0.12	YU.13	Y0.14	Y0.15
21 st from	04	V4 0		V4 0	V4 0	05			¥4.0	V/4 7	00	V4 0	X4 0	V4.40		07	V4.40	V4.40		V4.45
the left	C4	¥1.0	¥1.1	11.2	11.3	65	¥1.4	¥1.5	¥1.6	¥1.7	60	11.8	¥1.9	¥1.10	¥1.11	07	11.12	11.13	¥1.14	Y1.15



- 3. External terminal modules for AH32AN02P-5B
 - ♦ UB-10-OT32B

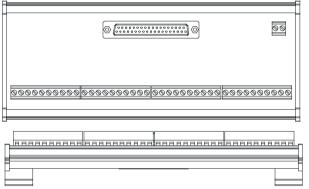




AH series terminals: (only applicable for AH series)

Upper row	Y0.0	Y0.2	Y0.4	Y0.6	Y0.8	Y0.10	Y0.12	Y0.14	Y1.0	Y1.2	Y1.4	Y1.6	Y1.8	Y1.10	Y1.12	Y1.14	UP	UP
Lower row	Y0.1	Y0.3	Y0.5	Y0.7	Y0.9	Y0.11	Y0.13	Y0.15	Y1.1	Y1.3	Y1.5	Y1.7	Y1.9	Y1.11	Y1.13	Y1.15	ZP	ZP

♦ UB-10-OR32B



AH series terminals: (only applicable for AH series)

																			GND	+24V
1 st from	<u></u>	VOO	V0 4	VO O	VOD	01	V0 4		VOC	V0 7	00	V0 0	V0 0	V0 40	VO 44	00	VO 40	V0 40	V0 4 4	V0 45
the left	C0	10.0	10.1	10.2	Y0.3	CI	10.4	10.5	10.6	10.7	62	10.8	10.9	10.10	10.11	63	10.12	10.13	10.14	Y0.15
21 st from	~	V4 0		V4 0	V4 0	05			V4 0	V4 7	00	V4 0	V4 0	V4 40		07	V4.40	V4 40		V4.45
the left	C4	11.0	¥1.1	11.2	11.3	05	Y1.4	11.5	11.6	¥1.7	C6	11.8	11.9	11.10	¥1.11	07	11.12	¥1.13	¥1.14	Y1.15

• Latch connector and external terminal module

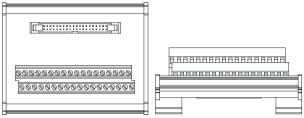
1. External terminal module for AH32AM10N-5C/AH64AM10N-5C: UB-10-ID32A

<u>0000000000000000000000000000000000000</u>	

AH series terminals: (only applicable for AH series)

Upper row	X0.0	X0.2	X0.4	X0.6	X0.8	X0.10	X0.12	X0.14	X1.0	X1.2	X1.4	X1.6	X1.8	X1.10	X1.12	X1.14	S/S	S/S
Lower row	X0.1	X0.3	X0.5	X0.7	X0.9	X0.11	X0.13	X0.15	X1.1	X1.3	X1.5	X1.7	X1.9	X1.11	X1.13	X1.15	S/S	S/S

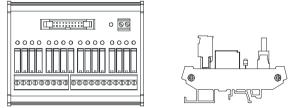
- 2. External terminal modules for AH32AN02T-5C/AH64AN02T-5C:
 - UB-10-OT32A



AH series terminals: (only applicable for AH series)

Upper	Y0.0	Y0.2	Y0.4	Y0.6	Y0.8	Y0.10	Y0.12	Y0.14	Y1.0	Y1.2	Y1.4	Y1.6	Y1.8	Y1.10	Y1.12	Y1.14	+24V	+24V	
row																			
Lower	Y0 1	Y0.3	Y0.5	Y0 7	Y0.9	Y0 11	Y0 13	Y0 15	Y1 1	Y1.3	Y1.5	Y1 7	Y1 9	Y1 11	Y1 13	Y1 15	GND	GND	
row	10.1	10.0	10.0	10.7	10.0	10.11	10.10	10.10		1.1.0	11.0		11.0				0.10		

♦ UB-10-OR16A

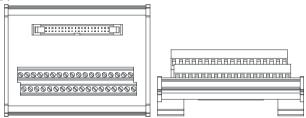


AH series terminals: (only applicable for AH series)

 GND
 +24V

 C0
 Y0.1
 Y0.2
 Y0.3
 C1
 Y0.4
 Y0.5
 Y0.6
 Y0.7
 C2
 Y0.8
 Y0.9
 Y0.10
 Y0.11
 C3
 Y0.12
 Y0.13
 Y0.14
 Y0.15

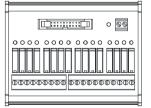
- 3. External terminal module for AH32AN02P-5C/AH64AN02P-5C:
 - UB-10-OT32A



AH series terminals: (only applicable for AH series)

Upper row	Y0.0	Y0.2	Y0.4	Y0.6	Y0.8	Y0.10	Y0.12	Y0.14	Y1.0	Y1.2	Y1.4	Y1.6	Y1.8	Y1.10	Y1.12	Y1.14	+24V	+24V
Lower row	Y0.1	Y0.3	Y0.5	Y0.7	Y0.9	Y0.11	Y0.13	Y0.15	Y1.1	Y1.3	Y1.5	Y1.7	Y1.9	Y1.11	Y1.13	Y1.15	GND	GND

♦ UB-10-OR16B





AH series terminals: (only applicable for AH series)

GND +24V

C0	Y0.0 Y0.1	Y0.2	Y0.3	C1	Y0.4	Y0.5	Y0.6	Y0.7	C2	Y0.8	Y0.9	Y0.10	Y0.11	C3	Y0.12	Y0.13	Y0.14	Y0.15
----	-----------	------	------	----	------	------	------	------	----	------	------	-------	-------	----	-------	-------	-------	-------



2.5 Specifications for Analog Input/Output Modules

2.5.1 General Specifications

• AH04AD-5A/ AH08AD-5A/AH08AD-5B/AH08AD-5C

Electrical specifications

Module name	AH04AD-5A AH08AD-5B		AH08AD-5B	AH08AD-5C		
Number of inputs	4	8 8		8		
Analog-to-digital	Voltage	Voltage	Voltago ipput	Current in put		
conversion	input/Current input	input/Current input	Voltage input	Current input		
Supply voltage	24 V DC (20.4 V D	C~28.8 V DC) (-15%	~+20%)			
Connector type	Removable termina	Removable terminal block				
Conversion time	150 µs/channel					
Isolation	An analog circuit is isolated from a digital circuit by a digital integrated circuit/an optocoupler, but the analog channels are not isolated from one another. Isolation between a digital circuit and a ground: 500 V DC Isolation between an analog circuit and a ground: 500 V DC Isolation between an analog circuit and a digital circuit: 500 V DC Isolation between the 24 V DC and a ground: 500 V DC					
Weight	200g					

Functional specifications

Analog-to-digital conversion	Voltage input				
Rated input range	-10 V~10 V 0 V~10 V ±5 V 0 V~5 V 1 V~5 V				
Hardware input range	-10.1 V~10.1 V	-0.1 V~10.1 V	-5.05 V~5.05 V	-0.05 V~5.05 V	0.95 V~5.05 V
Fiducial error (Room temperature) (The					
umber of input voltages which are averaged is 100.)		±0.1%			
Fiducial error (Full temperature range) (The number of input voltages which are averaged is 100.)	±0.45%				
Linearity error (Room temperature)	±0.07%				
Linearity error (Full temperature range)	±0.12%				
Hardware resolution	16 bits				
Input impedance	>200 kΩ				
Absolute input range	±15 V				

Analog-to-digital conversion	Current input			
Rated input range	±20 mA	0 mA~20 mA	4 mA~20 mA	
Hardware input	-20.2 mA~20.2 mA	-0.2 mA~20.2 mA	3.8 mA~20.2 mA	



Analog-to-digital conversion	Current input
range	
Fiducial error	
(Room	
temperature) (The	
number of input	±0.1%
currents which	
are averaged is	
100.)	
Fiducial error	
(Full temperature	
range) (The	
number of input	±0.2%
currents which	
are averaged is	
100.)	
Linearity error	
(Room	
temperature) (Full	±0.05%
temperature	
range)	.0.000/
Linearity error	±0.23%
Hardware	16 bits
resolution	252.0
Input impedance	250 Ω
Absolute input	±32 mA
range	

• AH04DA-5A/ AH08DA-5A /AH08DA-5B/AH08DA-5C

	Electrical specifications

Module name	AH04DA-5A AH08DA-5A		AH08DA-5B	AH08DA-5C			
Number of outputs	4	8	8	8			
Analog-to-digital conversion	Voltage output/Current output	Voltage output/Current	Voltage output	Current output			
Supply voltage	24 V DC (20.4 V D	24 V DC (20.4 V DC~28.8 V DC) (-15%~+20%)					
Connector type	Removable termina	Removable terminal block					
Conversion time	150 µs/channel						
Isolation	An analog circuit is isolated from a digital circuit by a digital integrated circuit/an optocoupler, but the analog channels are not isolated from one another. Isolation between a digital circuit and a ground: 500 V DC Isolation between an analog circuit and a ground: 500 V DC Isolation between an analog circuit and a digital circuit: 500 V DC Isolation between the 24 V DC and a ground: 500 V DC						
Weight	210g						

Functional specifications

Analog-to-digital conversion	Voltage output				
Rated output range	±10 V	±10 V 0 V~10 V ±5 V 0 V~5 V 1 V~5 V			
Hardware output	-10.1 V~10.1 V	-0.1 V~10.1 V	-5.05 V~5.05 V	-0.05 V~5.05 V	0.95 V~5.05 V
Fiducial error (Room	±0.02%				



Analog-to-digital conversion	Voltage output
temperature) (The	
number of output	
voltages which are	
averaged is 100.)	
Fiducial error (Full	
temperature	
range) (The	±0.04%
number of output	±0.0478
voltages which are	
averaged is 100.)	
Linearity error	
(Room	±0.004%
temperature)	
Linearity error	
(Full temperature	±0.004%
range)	

Hardware resolution	16 bits
Permissible load	1 kΩ~2 MΩ: ±10 V and 0 V~10 V
impedance	≧500 Ω: 1 V~5 V

Analog-to-digital conversion	Curre	Current output			
Rated output range	0 mA~20 mA	4 mA~20 mA			
Hardware output range	-0.2 mA~20.2 mA	3.8 mA~20.2 mA			
Fiducial error (Room temperature) (The number of output currents which are averaged is 100.)	±C	±0.06%			
Fiducial error (Full temperature range) (The number of output currents which are averaged is 100.)	±C	±0.07%			
Linearity error (Room temperature)	±C	±0.01%			
Linearity error (Full temperature range)	±C	±0.01%			
Hardware resolution	1	16 bits			
Permissible load impedance	≦550 Ω				



• AH06XA-5A

Electrical specifications

Module name	AH06XA-5A
Number of analog inputs	4 inputs
Number of analog outputs	2 outputs
Analog-to-digital conversion	Voltage input/Current input/Voltage output/Current output
Supply voltage	24 V DC (20.4 V DC~28.8 V DC) (-15%~+20%)
Connector type	Removable terminal block
Conversion time	150 us/channel
Isolation	An analog circuit is isolated from a digital circuit by a digital integrated circuit/an optocoupler, but the analog channels are not isolated from one another. Isolation between a digital circuit and a ground: 500 V DC Isolation between an analog circuit and a ground: 500 V DC Isolation between an analog circuit and a digital circuit: 500 V DC Isolation between the 24 V DC and a ground: 500 V DC
Weight	210g

Functional specifications for the analog-to-digital conversion

Analog-to-digital conversion	Voltage input				
Rated input range	-10 V~10 V 0 V~10 V ±5 V 0 V~5 V 1 V~5 V				
Hardware input range	-10.1 V~10.1 V	-0.1 V~10.1 V	-5.05 V~5.05 V	-0.05 V~5.05 V	0.95 V~5.05 V
Fiducial error (Room					
temperature) (The number of input voltages which are			±0.1%		
averaged is 100.)					
Fiducial error (Full temperature range) (The number of input voltages which are		±0.45%			
averaged is 100.) Linearity error (Room temperature)	±0.07%				
Linearity error (Full temperature range)	±0.12%				
Hardware resolution	16 bits				
Input impedance	>200 kΩ				
Absolute input range	±15 V				

Analog-to-digital conversion	Current input							
Rated input range	±20 mA	±20 mA 0 mA~20 mA 4 mA~20 mA						
Hardware input range	-20.2 mA~20.2 mA	-0.2 mA~20.2 mA	3.8 mA~20.2 mA					



4	9
/	4

Analog-to-digital conversion	Current input
Fiducial error	
(Room	
temperature) (The	±0.1%
number of input	10.170
currents which are	
averaged is 100.)	
Fiducial error (Full	
temperature	
range) (The	±0.2%
number of input	10.270
currents which are	
averaged is 100.)	
Linearity error	
(Room	±0.05%
temperature)	
Linearity error	
(Full temperature	±0.23%
range)	
Hardware	16 bits
resolution	
Input impedance	250 Ω
Absolute input	±32 mA
range	

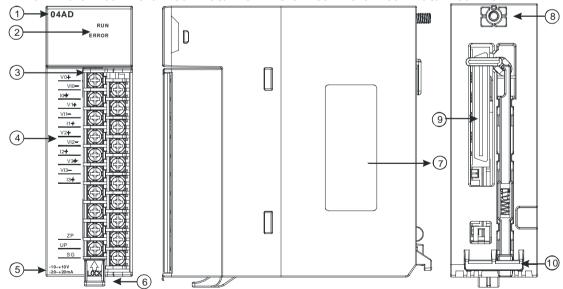
Functional specifications for the digital-to-analog conversion

Digital-to-analog									
conversion		Voltage output							
Rated output	±10 V 0 V~10 V ±5 V 0 V~5 V 1 V~5 V								
range									
Hardware output range	-10.1 V~10.1 V	-0.1 V~10.1 V	-5.05 V~5.05 V	-0.05 V~5.05 V	0.95 V~5.05 V				
Fiducial error									
(Room									
temperature) (The			0.000/						
number of output			±0.02%						
voltages which are									
averaged is 100.)									
Fiducial error (Full									
temperature									
range) (The	±0.04%								
number of output	±0.0470								
voltages which are									
averaged is 100.)									
Linearity error									
(Room	±0.004%								
temperature)									
Linearity error									
(Full temperature	±0.004%								
range)									
Hardware	16 bits								
resolution									
Permissible load	1 k Ω ~2 M Ω : ±10 V and 0 V~10 V								
impedance		≧500 Ω: 1 V~5 V							

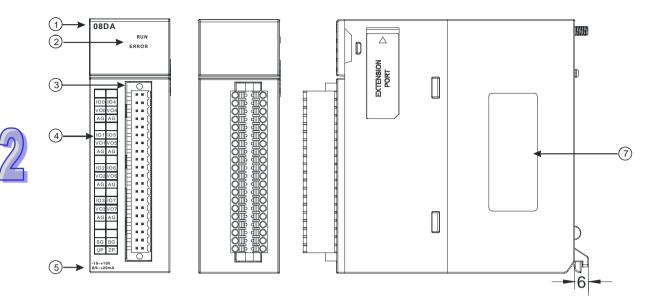
Digital-to-analog conversion	Current output						
Rated output range	0 mA~20 mA	4 mA~20 mA					
Hardware output range	-0.2 mA~20.2 mA	3.8 mA~20.2 mA					
Fiducial error (Room temperature) (The number of output currents which are	±0.0	±0.06%					
averaged is 100.) Fiducial error (Full temperature range) (The number of output currents which are averaged is 100.)	±0.0	±0.07%					
Linearity error (Room temperature)	±0.0	±0.01%					
Linearity error (Full temperature range)	±0.01%						
Hardware resolution	16 bits						
Permissible load impedance	≦5	≦550 Ω					

2.5.2 Profiles

• AH04AD-5A/AH08AD-5B/AH08AD-5C/AH04DA-5A/AH08DA-5B/AH08DA-5C/AH06XA-5A



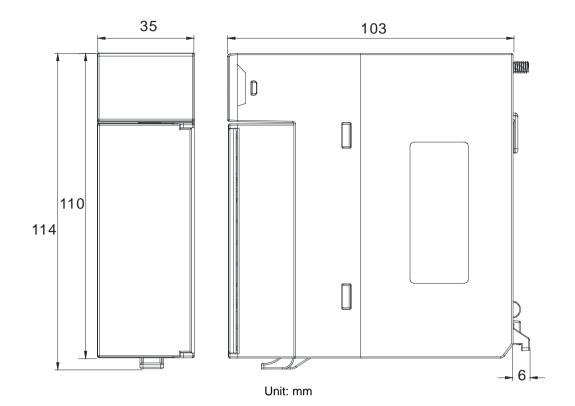
• AH08AD-5A/AH08DA-5A



Number	Name	Description
1	Model name	Model name of the module
		Operating status of the module
	RUN LED indicator	ON: The module is running.
		OFF: The module stops running.
2		Error status of the module
	ERROR LED	ON: A serious error occurs in the module.
	indicator	OFF: The module is normal.
		Blinking: A slight error occurs in the module.
3	Removable terminal	The inputs are connected to a sensor.
	block	The outputs are connected to a load which will be driven.
	Arrangement of the	
4	input/output	Arrangement of the terminals
	terminals	
5	Description of the	Simple specifications for the module
	inputs/outputs	
6	Clip	Removing the terminal block
7	Label	Nameplate
8	Set screw	Fixing the module
9	Connector	Connecting the module and a backplane
10	Projection	Fixing the module

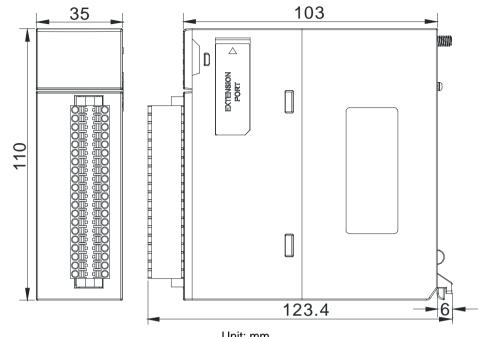
2.5.3 Dimensions

• AH04AD-5A/AH08AD-5B/AH08AD-5C/AH04DA-5A/AH08DA-5B/AH08DA-5C/AH06XA-5A





AH08AD-5A/AH08DA-5A



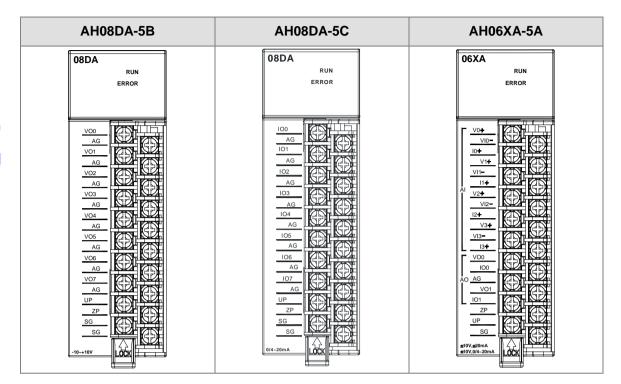




AH04AD-5A	AH08AD-5A	AH08AD-5B		
04AD RUN ERROR	08AD RUN ERROR	08AD RUN ERROR		
V0+ V0- V0+ V0+ <	I0+ I4+ I0+ I4+ V10+ V4+ IIII V10+ V1+ IIIII V1+ V1+ IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	V0+ V1+ V1- V2+ V2- V3+ V3+ V3+ V3+ V3+ V3+ V5+ V5+ V5+ V5+ V5- V5+ V5- V6- V7- SLD SLD 10-		
AH08AD-5C	AH04DA-5A	AH08DA-5A		
AH08AD-5C	AH04DA-5A 04DA RUN ERROR	AH08DA-5A 08DA RUN ERROR		

2.5.4 Arrangement of Input/Output Terminals





2.5.5 Setting Parameters

(1) AH04AD-5A

Parameter Setting				
 → AHOtAD-5A → CHO-CH3 Mode setting → CHO-CH3 Average Time → CHO-CH3 Calibration → Cha-CH3 Calibration → Cha-CH3	AH04AD-5A MDS Information Normal Ex Module Name MDS Version MDS Build Date	change Area Area Area Area Area Area Area Are		Import File Export File
Default			OK	Cancel

(2) AH08AD-5A

Par	ameter	Setti	ng					



(3) AH08AD-5B

Parameter Setting	
AH0&AD-5B -CH0-CH7 Mode Setting -CH0-CH7 Average Time -CH0-CH7 Calibration -CH0-CH7 Calibration -Ch0-CH7 Calibration -Ch0-CH7 Calibration -Interrupt Eable Interrupt Eable Interrupt number -Warning LED -Conversion Flags(Read only)	AH08AD-5B MDS Information Normal Exchange Area Module Name AH08AD-5B MDS Version 100.00 MDS Build Date 2012/07/14 Import File Export File
Default	OK Cancel

(4) AH08AD-5C

CHO-CH7 Mode Setting CHO-CH7 Atteage Time CHO-CH7 Calibration MDS Information Normal Exchange Area CHO-CH7 Calibration Module Name AH08AD-5C Channel Alamn Interrupt Table MDS Version 100.00 Interrupt number MDS Build Date 2012/07/14 Import File	Parameter Setting	AH08AD-5C		
	CHO-CH7 Mode Setting CHO-CH7 Average Time CHO-CH7 Calibration CHO-CH7 Scale Range Channel Alarm Interrupt Enable Interrupt number Warming LED	MDS Information Normal E Module Name MDS Version	AH08AD-5C 1.00.00	Import File Export File

(5) AH04DA-5A

Parameter Setting				
AH04DA-5A -CH0-CH3 Chloration -CH0-CH3 Chloration -CH0-CH3 Chloration -CH0-CH3 Scale Range -OutPut Hold -Conversion Flags (Read only)	AH04DA-5A MDS Information Normal Ex Module Name MDS Version MDS Build Date	2hange Area AH04DA-5A 1.00.00 2012/07/14		Import File Export File
Default			OK	Cancel



(6) AH08DA-5A

Paramet	er Setting			

(7) AH08DA-5B

Parameter Setting				
Parameter Setting AH08DA-5B CH0-CH7 Mode setting - CH0-CH7 Scale Range - OutO-CH7 Scale Range - OutO-H7 Scale Range - OutPut Hold - Conversion Flags(Read only)	AH08DA-5B MDS Information Normal Exchang Module Name MDS Version MDS Build Date	e Area AH08DA-5B 1.00.00 2012/07/14	•	
Default			N	Import File Export File Cancel

(8) AH08DA-5C

Parameter Setting			
AHORDA-SC CHO-CH7 Mole setting CHO-CH7 Calibration CH0-CH7 Scale Range OutPut Hold Conversion Flags(Read only)	AH08DA-5C MDS Information Normal Exc Module Name MDS Version MDS Build Date	hange Area AH08DA-5C	Import File Export File
Default			OK Cancel

(9) AH06XA-5A

Parameter Setting			
AHO6XA-5A Channel Mode setting Channel Mode setting Channel Calibration Channel Calibration Channel Scale Pange OutPut Hold Channel Alam Interrupt Enable Interrupt Enable Marming LED Conversion Flags(Read only)	AH06XA-5A MDS Information Normal Exchant Module Name MDS Version MDS Build Date	ge Area AH06XA-SA 1.00.00 2012/07/14	Import File Export File
Default			OK Cancel

Please refer to AH500 Module Manual for more information about setting parameters.

2.6 Specifications for Temperature Measurement Modules

2.6.1 General Specifications

• AH04PT-5A

Electrical specifications

Electrical specifications	
Number of analog inputs	4
	Three-wire configuration: Pt100/Ni100/Pt1000/Ni1000 sensor, and 0~300 Ω
	input impedance
	Two-wire/Four-wire configuration: Pt100/Ni100/Pt1000/Ni1000 sensor, and
Applicable sensor	$0\sim300 \Omega$ input impedance
	Pt100: DIN 43760-1980 JIS C1604-1989; 100 Ω 3850 PPM/°C
	Pt1000: DIN EN60751; 1 kΩ 3850 PPM/°C
	Ni100/Ni1000: DIN 43760
Supply voltage	24 V DC (20.4 V DC~28.8 V DC) (-15%~+20%)
Connector type	Removable terminal block
	25°C/77°F: The error is ±0.5% of the input within the range.
Overall accuracy	-20~60°C/-4~140°F: The error is ±1% of the input within the range.
Conversion time	Two-wire/Four-wire Four-wire configuration: 150 ms/channel
	Three-wire configuration: 300 ms/channel
	An analog circuit is isolated from a digital circuit by a digital integrated circuit/an
	optocoupler, and the analog channels are isolated from one another by
	optocouplers.
Isolation	Isolation between a digital circuit and a ground: 500 V DC
	Isolation between an analog circuit and a ground: 500 V DC
	Isolation between an analog circuit and a digital circuit: 500 V DC
	Isolation between the 24 V DC and a ground: 500 V DC
Weight	195g

Functional specifications

Analog-to-digital conversion	Centigrade (°C)	Fahrenheit(°F)	Input impedance
Rated input range	Pt100: -180°C~800°C Ni100: -80°C~170°C Pt1000: -180°C~800°C Ni1000: -80°C~170°C	Pt100: -292°F~1,472°F Ni100: -112°F~338°F Pt1000: -292°F~1,472°F Ni1000: -112°F~338°F	0~300 Ω
Average function	Range: 1~100		
Self-diagnosis	Disconnection detection		

• AH08PTG-5A

Electrical specifications

Number of analog	
inputs	8
Applicable sensor	Three-wire configuration: Pt100/Ni100/Pt1000/Ni1000 sensor, and 0~300 Ω input impedance Two-wire/Four-wire configuration: Pt100/Ni100/Pt1000/Ni1000 sensor, and 0~300 Ω input impedance Pt100: DIN 43760-1980 JIS C1604-1989; 100 Ω 3850 PPM/°C Pt1000: DIN EN60751; 1 kΩ 3850 PPM/°C Ni100/Ni1000: DIN 43760
Supply voltage	24 V DC (20.4 V DC~28.8 V DC) (-15%~+20%)
Connector type	Removable terminal block
Overall accuracy	The error is $\pm 1^{\circ}$ C of a Pt100/Pt1000/Ni100/Ni1000 sensor's temperature. The error is $\pm 0.1\%$ of a resistance in the range of 0 Ω to 300 Ω .
Conversion time	 Quick mode: Four-wire/Two-wire configuration: 20 ms/channel Three-wire configuration: 200 ms/channel General mode: A conversion time will be gotten after the conversion time of the two channels in a group is added up. Four-wire/Two-wire configuration: 200 ms/channel Three-wire configuration: 400 ms/channel
Isolation	An analog circuit is isolated from a digital circuit by a digital integrated circuit, and the analog channels are isolated from one another by optocouplers. Isolation between a digital circuit and a ground: 500 V DC Isolation between an analog circuit and a ground: 500 V DC Isolation between an analog circuit and a digital circuit: 500 V DC Isolation between two group circuits: 500 V DC Isolation between two group circuits: 500 V DC Isolation between the 24 V DC and a ground: 500 V DC
Weight	255g

Functional specifications

Analog-to-digital conversion	Centigrade (°C)	Fahrenheit (°F)	Input impedance
Rated input range	Pt100: -180°C~800°C Ni100: -80°C~170°C Pt1000: -180°C~800°C Ni1000: -80°C~170°C	Pt100: -292°F~1,472°F Ni100: -112°F~338°F Pt1000: -292°F~1,472°F Ni1000: -112°F~338°F	0~300 Ω
Average function	Range: 1~100		
Self-diagnosis	Disconnection detection		

• AH04TC-5A/AH08TC-5A

Electrical specifications			
Module name	AH04TC-5A	AH08TC-5A	
Number of analog inputs	4	8	
Applicable sensor	Type J, type K, type R, type S, type T, ty ±150 mV voltage inputs	pe E, and type N thermocouples	
Supply voltage	24 V DC (20.4 V DC~28.8 V DC) (-15%~+20%)		
Connector type	Removable terminal block		
Overall accuracy	25° C/77°F: The error is ±0.5% of the input within the range. -20~60°C/-4~140°F: The error is ±1% of the input within the range.		
Conversion time	200 ms/channel		
Isolation	An analog circuit is isolated from a digital circuit by a digital integrated circuit/an optocoupler, and the analog channels are isolated from one another by optocouplers.		



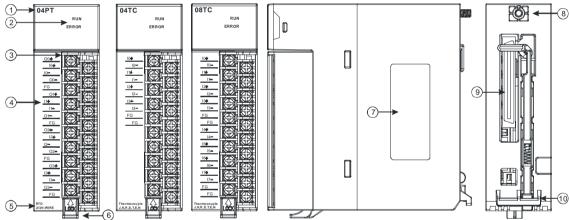
Module name	AH04TC-5A	AH08TC-5A		
	Isolation between a digital circuit and a	ground: 500 V DC		
	Isolation between an analog circuit and a ground: 500 V DC			
	Isolation between an analog circuit and a digital circuit: 500 V DC			
	Isolation between the 24 V DC and a ground: 500 V DC			
	Isolation between analog channels: 120 V AC			
Weight	190g			

Functional specifications

Analog-to-digital conversion	Centigrade (°C)	Fahrenheit(°F)	Voltage input
Rated input range	Type J: -100°C~1,150°C Type K: -100°C~1,350°C Type R: 0°C~1,750°C Type S: 0°C~1,750°C Type T: -150°C~390°C Type E: -150°C~980°C Type N: -150°C~1,280°C	Type J: -148°F~2,102°F Type K: -148°F~2,462°F Type R: 32°F~3,182°F Type S: 32°F~3,182°F Type S: -238°F~734°F Type E: -238°F~1,796°F Type N: -238°F~2,336°F	±150 mV
Average function	Range: 1~100		
Self-diagnosis	Disconnection detection		

2.6.2 Profiles

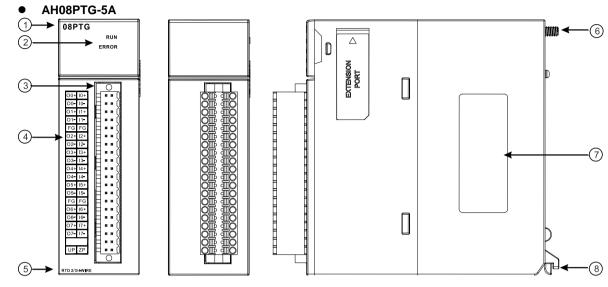
• AH04PT-5A/AH04TC-5A/AH08TC-5A



Number	Name	Description	
1	Model name	Model name of the module	
	RUN LED indicator	Operating status of the module ON: The module is running. OFF: The module stops running.	
2	ERROR LED indicator	Error status of the module ON: A serious error occurs in the module. OFF: The module is normal. Blinking: A slight error occurs in the module.	
3	Removable terminal block	The inputs are connected to a sensor.	
4	Arrangement of the input/output terminals	Arrangement of the terminals	
5	Description of the inputs/outputs	Simple specifications for the module	
6	Clip	Removing the terminal block	
7	Label	Nameplate	



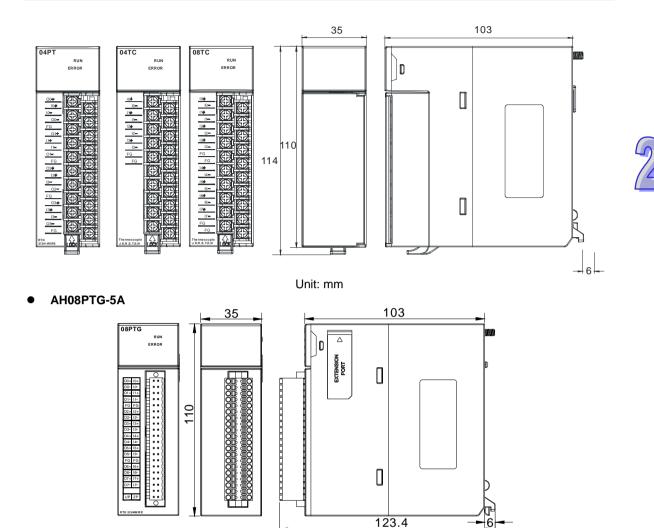
Number	Name	Description
8	Set screw	Fixing the module
9	Connector	Connecting the module and a backplane
10	Projection	Fixing the module



Number	Name	Description
1	Model name	Model name of the module
		Operating status of the module
2	RUN LED indicator	ON: The module is running.
		OFF: The module stops running.
		Error status of the module
2	ERROR LED	ON: A serious error occurs in the module.
2	indicator	OFF: The module is normal.
		Blinking: A slight error occurs in the module.
3	Removable	The inputs are connected to a sensor.
	terminal block	
4	Arrangement of the	Arrangement of the terminals
	input terminals	
5	Description of the	Simple specifications for the module
	inputs	
6	Set screw	Fixing the module
7	Label	Nameplate
8	Projection	Fixing the module

2.6.3 Dimensions

• AH04PT-5A/AH04TC-5A/AH08TC-5A



2.6.4 Arrangement of Input/Output Terminals

AH04PT-5A	AH04TC-5A
04PT	
RUN	RUN
ERROR	ERROR
O1- FG	FG FG
02+	
FG FG	

Unit: mm

AH08TC-5A	AH08PTG-5A
08TC RUN ERROR	08PTG RUN ERROR
10+ 11+ 11+ 12+ 12- 13+ 13- FG FG 14+ 14- 15+ 15- 15+ 15- 15+ 15- 15- 15+ 15- 15- 15- 15- 15- 15- 15- 15-	O0+10+ O0-10- O1+11+ O1-11- FG FG G2-12- O2-12- O3-13- O3-13- O5-16- FG FG O5-16- FG FG O5-16- FG FG O5-16- FG FG O6-16- O7-17- UP ZP RTD 2/3/4WIRE

2.6.5 Setting Parameters

(1) AH04PT-5A

Parameter Setting	1 percentaria		
CH0-CH3 Mode setting	AH04PT-5A	and the second	
Temperatur unit	MDS Information Normal E	xchange Area	
CHO-CH3 Average Time CHO-CH3 Calibration Channel Alarn Interrupt Enable	Module Name MDS Version	AH04PT-5A 1.00.00	
Interrupt Enable Interrupt number Warming LED Conversion Flags(Read only PID RunStop PID AutoTune PID Mout Setting PID heater/cooler PID SV PID Cycle PID Kp PID Ki	MDS Build Date	2012/07/14	Import File Export File
Default			OK Cancel

(2) AH08PTG-5A

AH500 Operation Manual

AH08PTG-5A	AH08PTG-5A		
Mode setting Temperatur unit	MDS Information Normal Exch	nange Area	
Low Voltage Display Average Time Calibration	Module Name	AH08PTG-5A	
Channel Alarm Interrupt Enable	MDS Latest Version	0.30.0	
Interrupt number Warming LED Conversion Flags(Read only PID Run/Stop PID AutoTune	MDS Build Date	2013/08/13	
PID Mout Setting PID heater/cooler PID SV PID Cycle			Import Fil

(3) AH04TC-5A

Module Name MDS Latest Version	AH04TC-5A	
MDS Build Date	2012/10/22	Import Fil Export Fil
	MDS Latest Version	MDS Latest Version 1.01.0

(4) AH08TC-5A

AH08TC-5A	AH08TC-5A		
CHO-CH7 Mode setting Temperature unit Average Time	MDS Information Normal Excl	ange Area	
CH0~CH7 Calibration Channel Alarm	Module Name	AH08TC-5A	
Interrupt Enable Interrupt number	MDS Latest Version	1.00.0	
Warming LED	MDS Build Date	2012/06/29	
Conversion Flags PID Run/Stop			
PID AutoTune			
PID Mout Setting			
PID heaten/cooler PID SV			
PID Cycle			
PID Kp			Import F
PID Ki			
PID Kd 🐭			Export F

Please refer to AH500 Module Manual for more information about setting parameters.

2.7 Specifications for Network Modules

2.7.1 General Specifications

• AH10SCM-5A

Functional specifications

■ RS-485/RS-422 communication interface

Item	Specifications		
Connector type	European-style terminal block		
Transmission speed	1,200, 2,400, 4,800, 9,600, 19,200, 38,400, 57,600, 76,800, 115,200, 230,400, and 460,800 bps (bit/seconds)		
Communication formatStop bit: 1 stop bit or 2 stop bits Parity bit: none, an odd parity bit, or an even parity bit Data bit: 7 data bits or 8 data bits			
Communication protocol	Modbus ASCII/RTU UD Link BACnet MS/TP slave stations		

Electrical specifications

Item	Specifications
Supply voltage	5 V DC
Electric energy consumption	1.5 W
Insulation voltage	2,500 V DC
Weight	131 g

• AH15SCM-5A

RS-232 communication interface

Item	Specifications		
Connector type	DB9 connector		
Transmission speed	1200, 2400, 4800, 9600, 19200, 38400, 57600, 76800 and 115200 bps		
Communication	Stop bit: 1 stop bit or 2 stop bits		
	Parity bit: none, an odd parity bit, or an even parity bit		
format	Data bit: 7 data bits or 8 data bits		
Communication	Modbus ASCII/RTU		
	UD Link		
protocol	BACnet MS/TP slave stations		

Electrical specifications

Item	Specifications
Supply voltage	5 VDC
Electric energy	1.5 W
consumption	1.5 W
Insulation	2,500 VDC
voltage	2,500 VDC
Weight	150g

• AH10EN-5A

Network interface

Item	Specifications
Connector type	RJ-45 with auto-MDI/MDIX
Transmission interface	802.3 and 802.3u
Transmission cable	Category 5e cable The maximum length is 100 meters.
Transmission speed	10/100 Mbps auto-detection



Electrical specifications

Item	Specifications
Supply voltage	5 V DC
Electric energy	1.5 W
consumption	1.5 W
Insulation voltage	2,500 V DC
Weight	139 g

• AH10DNET-5A

■ AH500 series CPU modules which are supported

ltem	Specifications
Model name	AH500 series PLCs

DeviceNet interface

ltem	Specifications
Transmission method	CAN
Electrical isolation	500 V DC
Connector	Removable connector (5.08 mm)
Communication cable	The Delta standard cables UC-DN01Z-01A and UC-DN01Z-02A are recommended. The communication cable should be away from the power cable and the shielded cable should be connected to the ground.
Voltage	DeviceNet network provides 11~25 V direct current. e.g. 28 mA (Typical value), 125 mA impulse current (24 V DC).

DeviceNet Communication

Item	Specifications
	Master mode: Supporting explicit messages, and all kinds of I/O
	connections with the slave such as I/O polled connections,
Message type	bit-strobed connections, state changing connections, and
	cyclic connections
	Slave mode: Supporting explicit messages and a group 2 only server
	Standard: 125 kbps, 250 kbps and 500 kbps
Transmission speed	Extension: 10 kbps, 20 kbps, 50 kbps, 125 kbps, 250 kbps, 500 kbps, 800
	kbps and 1M bps
Weight	135g

• AH10PFBM-5A

■ AH500 series CPU module supported

ltem	Specifications
Model name	AH500 series PLCs

PROFIBUS-DP interface

ltem	Specifications
Interface	DB9 connector
Transmission method	High-speed RS-485
Transmission cable	Two-wire twisted shielded cable
Electrical isolation	500 V DC

■ PROFIBUS-DP communication

Item	Specifications
Message type	Cyclic data exchange

Module name	AH10PFBM-5A
modulo numo	
Product ID	0B49
Serial transmission	0.0 libre: 40.0 libre: 24.05 libre: 45.45 libre: 02.75 libre: 407.5 libre: 500
speed supported	9.6 kbps; 19.2 kbps; 31.25 kpbs; 45.45 kbps; 93.75 kbps; 187.5 kbps; 500
(auto-detection)	kbps; 1.5 Mbps; 3 Mbps; 6 Mbps; 12 Mbps

Electrical specification

Item	Specifications
Power supply voltage	5 V DC
Insulation voltage	500 V DC
Power consumption	2 W
Weight	190 g

• AH10PFBS-5A

PROFIBUS-DP port

Interface	DB9 connector
Transmission method	High-speed RS-485
Transmission cable	Shielded twisted pair cable
Electrical isolation	500 V DC

Communication

Message type	Cyclic data exchange	
Module name	AH10PFBS-5A	
GSD file	DELA0AFE.GSD	
Product ID	0AFE	
Serial transmission	0.6 khoo: 10.2 khoo: 45.45 (21.25) khoo: 02.75 khoo: 107.5 khoo: 500 khoo:	
speed supported (auto-detection)	9.6 kbps; 19.2 kbps; 45.45 (31.25) kbps; 93.75 kbps; 187.5 kbps; 500 kbps; 1.5 Mbps; 3 Mbps; 6 Mbps; 12 Mbps	

Electrical specification

Power supply voltage	5 V DC
Insulation voltage	500 V DC
Power consumption	2 W
Weight	115 g

• AH10COPM-5A

CANopen interface

ltem	Specifications	
Transmission method	CAN	
Electrical isolation	500 V DC	
Connector	Removable connector (5.08 mm)	
	It is suggested that users should use the Delta standard cables	
Communication cable	UC-DN01Z-01A and UC-DN01Z-02A.	
Communication cable	The communication cable used should be away from the power cable	
	used, and the shielded cables used should be connected to the ground.	

CANopen communication

Item	Specifications	
Message type PDO, SDO, SYNC, EMCY, NMT		
Transmission	10 kbps, 20 kbps, 50 kbps, 125 kbps, 250 kbps, 500 kbps, 800 kbps, 1 Mbps	
speed	10 kbps, 20 kbps, 30 kbps, 123 kbps, 230 kbps, 300 kbps, 800 kbps, 1 Mb	

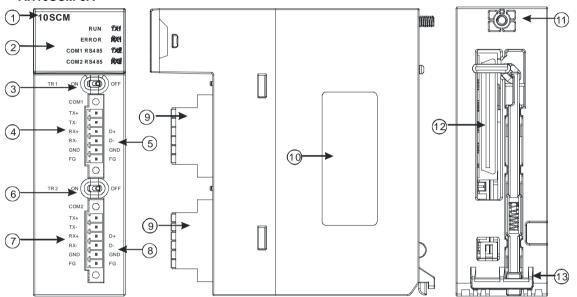


Electrical specifications

Item	Specifications	
Supply voltage	A CPU module supplies 24 V DC (-15%~20%) power through an internal but	
Electric energy	1.7 W 500 V	
consumption		
Insulation voltage		
Weight	150g	

2.7.2 Profiles

• AH10SCM-5A



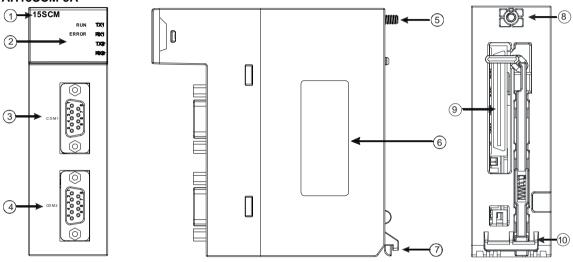
Number	Name	Description	
1	Model name	Model name of the module	
		Operating status of the module	
	RUN LED indicator (green)	ON: The module is running.	
		OFF: The module stops running.	
		Error status of the module	
		ON: There is a hardware error.	
	ERROR LED indicator (red)	OFF: The module is normal.	
		Blinking: 1. The setting of the module is incorrect, or there is	
		a communication error.	
		Restoring the module to the default factory value	
	COM1 (RS-485) LED indicator	ON: RS-485 mode	
2	(green)	OFF: RS-422 mode	
	COM2 (RS-485) LED indicator	ON: RS-485 mode	
	(green)	OFF: RS-422 mode	
		Blinking: The data is being transmitted through the	
	TX1/TX2 LED indicator	RS-485/RS422 port.	
	(orange)	OFF: The data is not being transmitted through the	
		RS-485/RS422 port.	
		Blinking: The data is being reveived through the	
	RX1/RX2 LED indicator	RS-485/RS422 port.	
	(orange)	OFF: The data is not being reveived through the	
		RS-485/RS422 port.	
3	Switch of terminal resistor 1	Switching terminal resistor 1 ON/OFF	
4	Terminals	Terminals for COM1 (RS-422)	



Number	Name	Description
5	Terminals	Terminals for COM1 (RS-485)
6	Switch of terminal resistor 2	Switching terminal resistor 2 ON/OFF
7	Terminals	Terminals for COM2 (RS-422)
8	Terminals	Terminals for COM2 (RS-485)
9	European-style terminal block	Terminals for wiring
10	Label	Nameplate
11	Set screw	Fixing the module
12	Connector	Connecting the module and a backplane
13 Projection F		Fixing the module

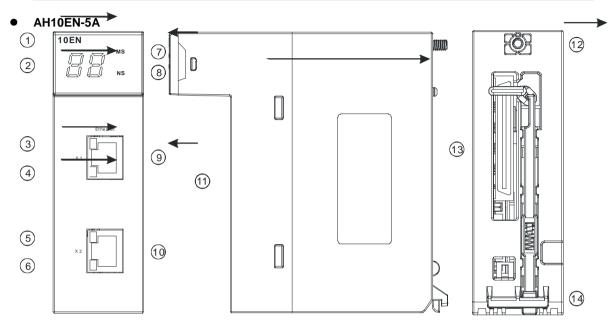


• AH15SCM-5A



Number	Name	Description	
1	Model name	Model name of the module	
		Operating status of the module	
	RUN LED indicator (green)	ON: The module is running.	
		OFF: The module stops running.	
		Error status of the module	
		ON: There is a hardware error.	
	ERROR LED indicator (red)	OFF: The module is normal.	
		Blinking: 1. The setting of the module is incorrect, or there is	
		a communication error.	
		Restoring the module to the default factory value	
	COM1 (RS-485) LED indicator	ON: RS-485 mode	
2	(green)	OFF: RS-422 mode	
	COM2 (RS-485) LED indicator	ON: RS-485 mode	
	(green)	OFF: RS-422 mode	
		Blinking: The data is being transmitted through the RS-232	
	TX1/TX2 LED indicator	port.	
	(orange)	OFF: The data is not being transmitted through the RS-232	
		port.	
		Blinking: The data is being reveived through the RS-232	
	RX1/RX2 LED indicator	port.	
	(orange)	OFF: The data is not being reveived through the RS-232	
		port.	
3	Terminals	Terminals for COM1 (RS-232)	
4	Terminals	Terminals for COM2 (RS-232)	

Number	Name	Description	
5	Set screw	Fixing the module	
6	Label	Nameplate	
7	Projection	Fixing the module	
8	Set screw Fixing the module		
9	Connector Connecting the module and a backplane		
10	Projection	jection Fixing the module	



Number	Name	Description
1	Model name	Model name of the module
2	Seven-segment display	Display
3	LINK LED indicator	LINK LED indicator for RJ45 port 1
4	ACK LED indicator	ACK LED indicator for RJ45 port 1
5	LINK LED indicator	LINK LED indicator for RJ45 port 2
6	ACK LED indicator	ACK LED indicator for RJ45 port 2
7	NS LED indicator	LED indicator
8	MS LED indicator	LED indicator
9	RJ45 port 1	RJ45 port 1
10	RJ45 port 2	RJ45 port 2
11	Label	Nameplate
12	Set screw	Fixing the module
13	Connector	Connecting the module and a backplane
14	Projection	Fixing the module

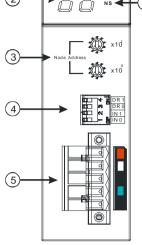


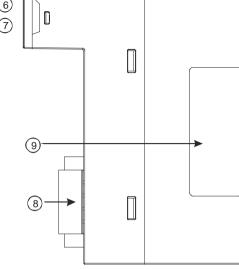
• AH10DNET-5A

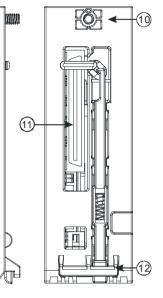
(1)

► 10DNET









Number	Name	Description	
1	Model name	Model name of the module	
2	Seven-segment	Display	
	display	-1 -7	
3	Address knob	Setting the address	
4	Function switch	Setting the functions	
5	DeviceNet connector	DeviceNet is used to interconnect control devices for data exchange.	
6	MS LED indicator	Indicating the status of the module	
7	NS LED indicator	Indicating the status of the network	
8	Removable terminal block	Terminals for wiring	
9	Label	Nameplate	
10	Set screw	Fixing the module	
11	Connector	Connecting the module and a backplane.	
12	Projection	Fixing the module	

1. Address knobs

It is used to set the node address of AH10DNET-5A on a DeviceNet network. (Node addresses range from 0 to 63.)

Setting	Description	5
063	Available nodes on a DeviceNet network	Node Address
6499	Unavailable nodes on a DeviceNet network	

Example: If users want to set the communication address of AH10DNET-5A to 26, they can turn the knob corresponding to $x10^{1}$ to 2, and turn the knob corresponding to $x10^{0}$ to 6.

Points for attention:

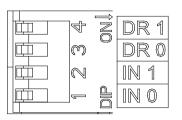
- After the station address of AH10DNET-5A is changed, users have to power AH10DNET-5A again, otherwise the change will not take effect.
- Please use a slotted screwdriver to turn the knobs with care, and do not scrape them.

2. Function switch

The function switch provides the following functions:

- Setting the working mode (IN 0)
- Setting the transmission speed of a DeviceNet network (DR 0~DR 1)

DR 1	DR 0	Transmission speed
OFF	OFF	125 kbps
OFF	ON	250 kbps
ON	OFF	500 kbps
ON	ON	Entering the extendable serial
ON	ON	transmission speed mode
IN 1	Reser	ved
	ON	If the slave is disconnected, the previous
IN 0		I/O data is retained.
	OFF	If the slave is disconnected, the previous
		I/O data is cleared.



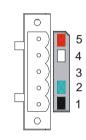


Points for attention:

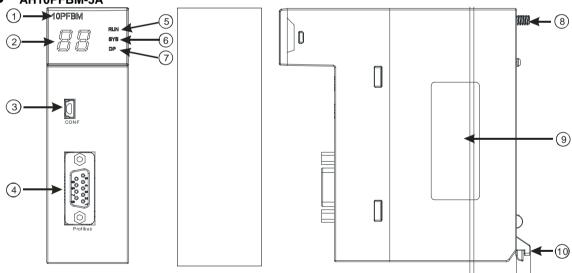
- After the setting of the function switch of AH10DNET-5A is changed, users have to power AH10DNET-5A again, otherwise the change will not take effect.
- Please use a slotted screwdriver to adjust the DIP switch with care, and do not scrape them.

3. DeviceNet connector

Pin	Signal	Color	Description
5	V+	Red	24 V DC
4	CAN_H	White	Signal (positive pole)
3	SHIELD	-	It is connected to a shielded cable.
2	CAN_L	Blue	Signal (negative pole)
1	V-	Black	0 V DC



• AH10PFBM-5A



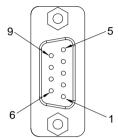
Number	Name	Description
1	Model name	Model name of the module
2	Seven-segment display	Display
3	CONF interface	The interface where the hardware configuration is downloaded
4	PROFIBUS-DP interface	PROFIBUS-DP connection
5	RUN LED indicator	LED indicator
6	SYS LED indicator	LED indicator
7	DP LED indicator	LED indicator

Number	Name	Description
8	Set screw	Fixing the module
9	Label	Nameplate
10	Projection	Fixing the module

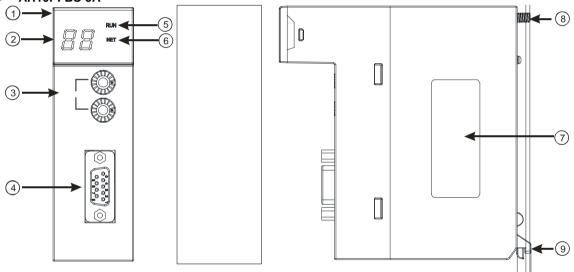
1. PROFIBUS-DP port

A PROFIBUS-DP port is used to connect a module to a PROFIBUS-DP network. Users can wire AH10PFBM-5A by using the connector attached to AH10PFBM-5A.

Pin	PIN name	Description
1		N/C
2		N/C
3	RxD/TxD-P	Receiving/Sending data (P (B))
4		N/C
5	DGND	Data reference potential (C)
6	VP	Supplying positive voltage
7		N/C
8	RxD/TxD-N	Receiving/Sending data (N (A))
9		N/C



AH10PFBS-5A



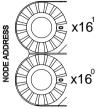
Number	Name	Description
1	Model name	Model name of the module
2	Seven-segment display	Display
3	Address knobs	Setting the address
4	PROFIBUS-DP interface	PROFIBUS-DP connection
5	RUN LED indicator	Operating status of the module
6	NET LED indicator	Status of a network
7	Label	Nameplate
8	Set screw	Fixing the module
9	Projection	Fixing the module

1. Setting a PROFIBUS node address

The address knobs of AH10PFBS-5A are used for setting the node address of AH10PFBS-5A on a PROFIBUS-DP network. There are two address knobs. They are a knob corresponding to x16⁰, and a knob corresponding to $x16^1$. The range for one address knob is 0-F. The range for setting the node address is described below.



Address	Definition
H'1~H'7D	Valid PROFIBUS address
H'0 or H'7E~H'FF	Invalid PROFIBUS address



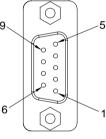
Example: If users need to set the node address of AH10PFBS-5A to 26 (decimal value), they have to turn the knob corresponding to x16¹ to "1", and the knob corresponding to x16⁰ to "A". 26 (decimal value)=1A (hexadecimal value)=1x16¹+Ax16⁰.

Points for attention:

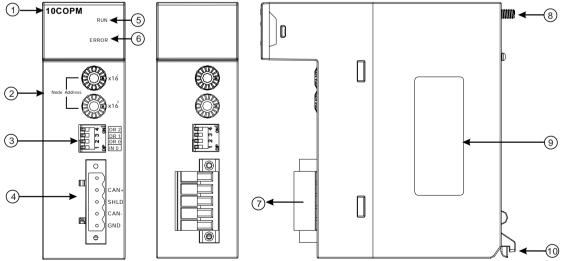
- If users set the node address of AH10PFBS-5A when AH10PFBS-5A is not supplied with power, they have to power AH10PFBS-5A after the node address of AH10PFBS-5A is set.
- If users change the node address of AH10PFBS-5A when AH10PFBS-5A is powered, the change will not take effect immediately after the node address of AH10PFBS-5A is changed, and it will take effect after the users cut off the power supplied to AH10PFBS-5A and then power AH10PFBS-5A again.
- To prevent the address knobs on AH10PFBS-5A from being scratched, please carefully use a slotted screwdriver to rotate the address knobs on AH10PFBS-5A.

2. Definitions of the pins in the PROFIBUS-DP port

Pin	PIN name	Description		
1		N/C		
2		N/C	9.	
3	RxD/TxD-P	Sending/receiving data (P (B))]	
4		N/C]	
5	DGND	Data reference potential (C)]	
6	VP	Supplying positive voltage]	
7		N/C	6	
8	RxD/TxD-N	Sending/receiving data (N (A))]	
9		N/C]	



AH10COPM-5A



Number	Name	Description
1	Model name	Model name of the module
2	Address knobs	For setting an address
3	Function switch	For setting a function
4	CANopen connector	For a CANopen connection
5	RUN LED indicator	Operating status of the module

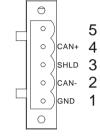


Number	Name	Description
6	ERROR LED indicator	Error status of the module
7	Removable terminal block	Terminals
8	Set screw	Fixing the module
9	Label	Nameplate
10	Projection	Fixing the module

1. CANopen communication connector

A CANopen connector is connected to a CANopen network. Please wire AH10COPM-5A by using the connector attached to AH10COPM-5A.

Pin	Signal	Description
5	-	Reserved
4	CAN+	CAN_H
3	SHLD	Shielded cable
2	CAN-	CAN_L
1	GND	0 V DC



2. Address knobs

The address knobs on AH10COPM-5A are used to set the node address of AH10COPM-5A on a CANopen network. Setting range: 1~7F (0 and 80~FF can not be used.)

Setting	Description	s ද ද ද x16
1~7F	Valid CANopen node address	E ADDR
0, 80~FF	Invalid CANopen node address	₽ € x16

Example: If the station address of AH10COPM-5A is 16#26, users have to turn the knob

corresponding to $x16^1$ to position 2, and turn the knob corresponding to $x16^0$ to position 6. **Points for attention:**

- After the station address of AH10COPM-5A is changed, users have to power AH10COPM-5A again, otherwise the change will not take effect.
- To prevent the address knobs on AH10COPM-5A from being scratched, please carefully use a slotted screwdriver to rotate the address knobs on AH10COPM-5A.

3. Function switch

The function switch on AH10COPM-5A is used to set the communication speed at which AH10COPM-5A is connected to a CANopen network. There is a limit on the maximum communication distance to which a communication speed corresponds.

DR 2	DR 1	DR 0	Communication speed	Maximum communication distance
OFF	OFF	OFF	10 kbps	5000 m
OFF	OFF	ON	20 kbps	2500 m
OFF	ON	OFF	50 kbps	1000 m
OFF	ON	ON	125 kbps	500 m
ON	OFF	OFF	250 kbps	250 m
ON	OFF	ON	500 kbps	100 m
ON	ON	OFF	800 kbps	50 m
ON	ON	ON	1 Mbps	25 m
		Reserved		

		Î	
		6	DR 2
ЩП	ന		DR 1
Щ	\sim		DR 0
щ	_	0b	I N 0

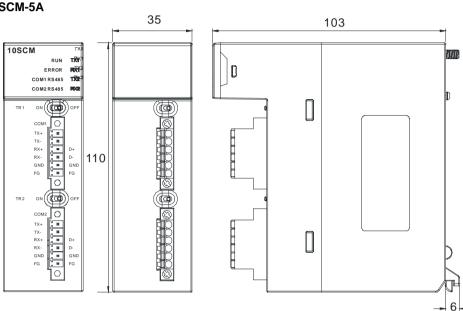


Points for attention:

- After users change the communication speed at which AH10COPM-5A is connected to a CANopen network, they have to power AH10COPM-5A again, otherwise the change will not take effect.
- To prevent the DIP switch on AH10COPM-5A from being scratched, please carefully use a slotted screwdriver to rotate the DIP switch on AH10COPM-5A.

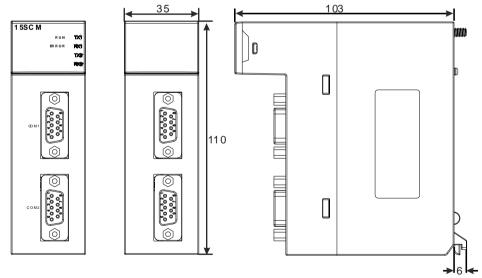
2.7.3 Dimensions

• AH10SCM-5A





• AH15SCM-5A

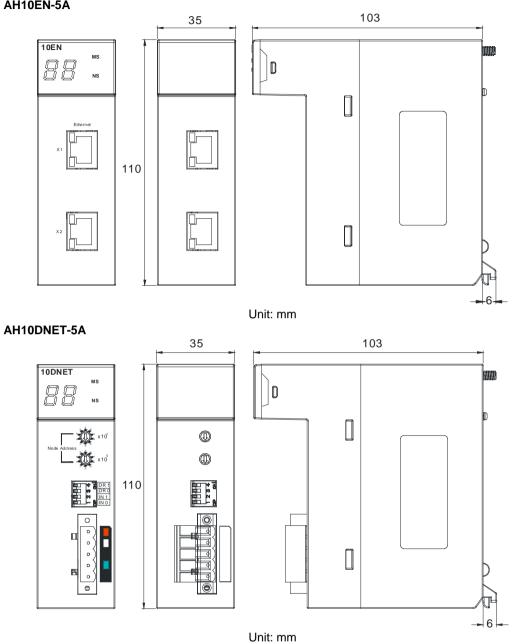


Unit: mm

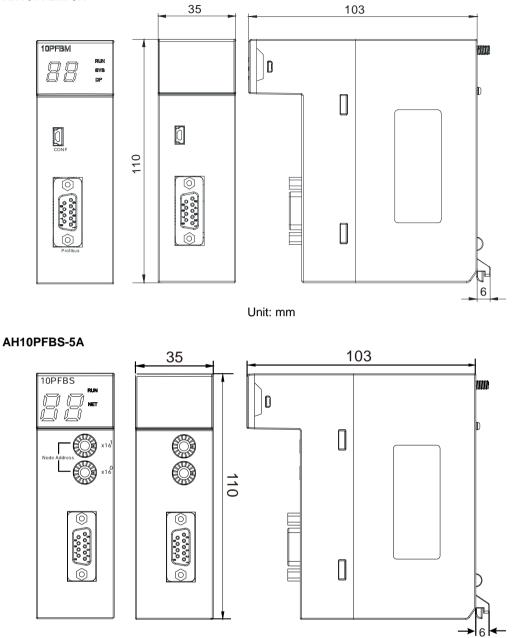
AH10EN-5A •



•

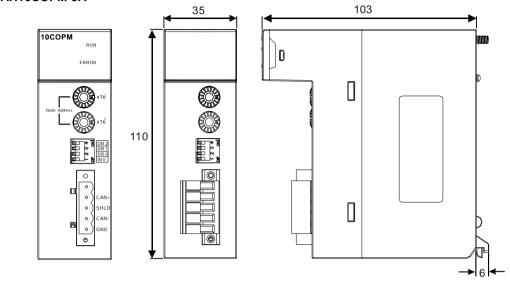


• AH10PFBM-5A



Unit: mm

• AH10COPM-5A



Unit: mm



AH10SCM-5A	AH10DNET-5A
10SCM RUN TX1 ERROR RX1 COM1 RS485 TX2 COM2 RS485 RX2	10DNET MS I NS
TR 1 ON COM COM1 OFF TX+ TX+ RX+ RX+ RX+ TX- TX- TX- TX- TX- TX- TX- TX-	Node Address X10 X10 X10 X10 X10 X10
FG TR 2 ON COM2 OFF COM2 O TX+ U U U TX+ U U U TX+ U U U TX+ U U	
RX+ RX+ RX- GND FG FG FG	

AH10COPM-5A			
	10COPM		
	RUN		
	ERROR		
	Node Address		
	+ + - <th></th>		
	CAN+ CAN+ SHLD CAN-		



2.7.5 Setting Parameters

(1) AH10EN-5A

,				
Parameter Setting				
AH10EN-5A Network Parameters Function List P Filter Parameters IO Mapping Parameters	AH10EN-5A MDS Information. Normal Excha Module Name MDS Version MDS Build Date	ange Area AH10EN-5A		Import File Export File
Default			OK	Cancel

(2) AH10SCM-5A

Parameter Setting		
AHIOSCM-5A OMI Setting OM2 Setting BACnet Setting	AH10SCM-5A [MDS Information] Normal Ex Module Name MDS Version MDS Build Date	Shange Area AH10SCM-5A 1.00.01 2012/08/06
Default		Import F Export F OK Cance

(3) AH15SCM-5A

Parameter Setting			
E-AH15SCM-5A	AH15SCM-5A	and the second se	
COM1 Setting COM2 Setting	MDS Information Normal E	xchange Area	
BACnet Setting	Module Name	AH15SCM-5A	
	MDS Version	0.35.00	
	MDS Build Date	2016/09/22	
			Import File
			Export File
Default			OK Cancel

(4) AH10DNET-5A

Parameter Setting		
AH10DNET-5A Parameters of IO mapping	AH10DNET-5A MDS Information Normal Exc	nange Area
	Module Name MDS Version MDS Build Date	AH10DNET-5A 1.01.00 2013/01/22
Default		Import File Export File OK Cancel

(5) AH10PFBS-5A

Parameter Setting			
AH10PFBS-5A Conversion Flags (Read only)	AH10PFBS-5A MDS Information Normal Exchange A	irea	
	Module Name MDS Version MDS Build Date	AH10PFBS-5A 1.00.01 2013/05/02	
Default			 Import File Export File DK Cancel

(6) AH10PFBM-5A

Parameter Setting			
AH10PFBM-5A IO Mapping Paramenters	AH10PFBM-5A MDS Information Normal Exchange A	Area	
	Module Name MDS Version	AH10PFBM-5A	
	MDS Build Date	2013/05/21	
			Import File
 Default			 OK Cancel

(7) AH10COPM-5A

Parameter Setting			
AH10COPM-5A Mode setting and I/O mapping Master Setting	AH10COPM-5A MDS Information Normal Exchange	Area	
	Module Name MDS Latest Version MDS Build Date	AH10COPM-5A 1.00.0 2013/12/20	Import File Export File
Default			OK Cancel

Please refer to AH500 Module Manual for more information about setting parameters.

2.8 Specifications for Motion Control Modules

2.8.1 General Specifications

• AH02HC-5A

Item		Specifications
Number of chann	nels	2 channels
	Input (differential input)	CH0: X0.8+, X0.8-, X0.9+, and X0.9- CH1: X0.10+, X0.10-, X0.11+, and X0.11-
Input signal	Pulse format	Pulse/Direction (one phase and one input) Counting up/Counting down (one phase and two inputs) One time the frequency of A/B-phase inputs (two phases and two inputs) Four times the frequency of A/B-phase inputs (two phases and two inputs)
	Signal level	5~24 V DC
	Maximum frequency of counting	The maximum frequency is 200 kHz.
Specifications	Range	The number of sampled pulses is in the range of -200000 to 200000. The number of accumulated pulses is in the range of -999999999 to 9999999999. The number of input pulses is in the range of -2147483648 to 2147483648.
	Туре	General count Circular count
	Input (differential input)	CH0: X0.0+ and X0.0- CH1: X0.1+ and X0.1-
RESET input	Signal level	5~24 V DC
	Maximum current	15 mA
Comparison	Output type	Channel 0: The high-speed pulse output Y0.8 is a transistor whose collector is an open collector.Channel 1: The high-speed pulse output Y0.9 is a transistor whose collector is an open collector.
output	Signal level	24 V DC
	Maximum current	15 mA
Weight		200g



• AH04HC-5A

lte	m	Specifications
Connector		A connector made with great precision is used. It has to be connected to an external terminal module.
Number of chan	nels	4 channels
	Input (differential signal)	Channel 0: X0.8+, X0.8-, X0.9+, and X0.9- Channel 1: X0.10+, X0.10-, X0.11+, and X0.11- Channel 2: X0.12+, X0.12-, X0.13+, and X0.13- Channel 3: X0.14+, X0.14-, X0.15+, and X0.15-
Input signal	Pulse format	Pulse/Direction (one phase and one input) Counting up/Counting up (one phase and two inputs) One time the frequency of A/B-phase inputs (two phases and two inputs) Four times the frequency of A/B-phase inputs (two phases and two inputs)
	Signal level	5~24 V DC
	Maximum frequency of counting	The maximum frequency is 200 kHz.
Specifications	Range	The number of sampled pulses is in the range of -200000 to 200000. The number of accumulated pulses is in the range of -999999999 to 9999999999. The number of input pulses is in the range of -2147483648 to 2147483648.
	Туре	Linear count Circular count
RESET input	Input (differential signal)	Channel 0: X0.0+ and X0.0- Channel 1: X0.1+ and X0.1- Channel 2: X0.2+ and X0.2- Channel 3: X0.3+ and X0.3-
	Signal level	5~24 V DC
	Maximum current	15 mA
Comparison output		 Channel 0: The high-speed pulse output Y0.8 is a transistor whose collector is an open collector. Channel 1: The high-speed pulse output Y0.9 is a transistor whose collector is an open collector. Channel 2: The high-speed pulse output Y0.10 is a transistor whose collector is an open collector. Channel 3: The high-speed pulse output Y0.11 is a transistor whose collector is an open collector.
	Signal level	24 V DC
	Maximum current	15 mA
Weight		200g



• AH05PM-5A

l t a m		Specifications			
	Item	AH05PM-5A			
Number of	axes	2 axes			
Storage		The capacity of the built-in storage is 64K steps.			
Unit		Motor unit Compound unit Mechanical unit			
Connection module	n with a CPU	Users can set the initial register involved in the data exchange in a CPU module, and the number of registers involved in the data exchange in the CPU module. Four hundred data registers at most can be involved in the dat exchange.			
Motor cont	rol	differential output. 1. Pulse/Direction 2. Counting up/Counti 3. A/B-phase output	pulse output modes. Thes	se modes adopt the	
Maximum s	speed	Single axis: 1M PPS Multi-axis interpolation:	1M PPS		
Input signal	Detector	X0.0, X0.1, X0.8, X0.9, X0.12, and X0.13			
Output signal	Servo output signal	Y0.0+, Y0.0-, Y0.2+, Y0.2-, Y0.1+, Y0.1-, Y0.3+, Y0.3-, Y0.8, and Y0.9			
External co port	ommunication	Mini USB port			
Number of instruction		27			
Number of instruction		130			
 OX0~99 (motion subroutine/positioning pro the program stops. (END)) M00~M01, M03~M101, and M103~M65535 The execution of the program pauses. (WA Users can use them freely. 		END)) 01, and M103~M65535: program pauses. (WAIT)	n): M02 (The execution of		
G-code G0 (rapid positioning), G1 (linear interpolation), G2 (circular interpolation), G2 (circular interpolation, counterclockwise), G4 (dwell), plane selection), G90 (absolute programming), and G91 (incrementar programming)		wise), G4 (dwell), G17 (XY			
Weight		200g			



Description of the terminals

Terminal	Description	Response	Maximum input	
Terminal	Description	characteristic	Current	Voltage
X0.0, X0.1, X0.8, X0.9, X0.12, and X0.13	 They are single/A/B-phase input terminals. The functions of the terminals: Motion control: X0.0 is the PG input for axis 1, and X0.1 is the PG input for axis 2. X0.12 is the DOG input for axis 1, and X0.13 is the DOG input for axis 2. X0.8 and X0.9 are for a manual pulse generator. High-speed count: X0.0 is the RESET input for counter 0. X0.8 is the A-phase input for counter 0. X0.8 is the B-phase input for counter 0. High-speed comparison and catch: The terminals can function as trigger signals for high-speed catches. Interrupt input terminals: X0.8, X0.9, X0.12, X0.13 	100 kHz (*1)	15 mA	24 V
Y0.8 and Y0.9	 The high-speed pulse output terminals are transistors whose collectors are open collectors. The functions of the terminals: Motion control: Y0.8 is the CLEAR output for axis 1, and Y0.9 is the CLEAR output for axis 2. High-speed comparison and catch: The high-speed comparison output terminals provide the PWM function. 	200 kHz	15 mA	24 V
Y0.0+, Y0.0-, Y0.1+, Y0.1-, Y0.2+, Y0.2-, Y0.3+, and Y0.3-	 They are differential output terminals. The function of the terminals: Motion control: Y0.0+ and Y0.0- are the A-phase output terminals for axis 1. Y0.2+ and Y0.2- are the A-phase output terminals for axis 2. Y0.1+ and Y0.1- are the B-phase output terminals for axis 1. Y0.3+ and Y0.3- are the B-phase output terminals for axis 2. 	1 MHz	5 mA	5 V

*1. If the frequency of input signals received by an input terminal must be 200 kHz, the input terminal must be connected to a 1 k Ω (2 W) resistor in parallel.



• AH10PM-5A

2

Item		Specifications
		AH10PM-5A
Number of axes		6 axes
Storage		The capacity of the built-in storage is 64K steps.
Unit		Motor unit Compound unit Mechanical unit
Connection with a CPU module		Users can set the initial register involved in the data exchange in a CPU module, and the number of registers involved in the data exchange in the CPU module. Four hundred data registers at most can be involved in the data exchange.
Motor control		 There are three types of pulse output modes. These modes adopt the differential output. 1. Pulse/Direction 2. Counting up/Counting down 3. A/B-phase output
Maximum speed	d	Single axis: 1M PPS Multi-axis interpolation: 1M PPS
Input signal	Operating switch	STOP/RUN (automatic/manual switch)
input signai	Detector	X0.8, X0.9, X0.10, X0.11, X0.12, X0.13, X0.14, X0.15, X0.0+, X0.0-, X0.1+, X0.1-, X0.2+, X0.2-, X0.3+, and X0.3-
Output signal	Servo output signal	Y0.0+, Y0.0-, Y0.2+, Y0.2-, Y0.4+, Y0.4-, Y0.6+, Y0.6-, Y0.1+, Y0.1-, Y0.3+, Y0.3-, Y0.5+, Y0.5-, Y0.7+, Y0.7-, Y0.8, Y0.9, Y0.10, and Y0.11
External comm	unication	Mini USB port
port		Ethernet port
Expansion stor	age device	Mini SD card The maximum capacity is 32 GB.
Number of basi instructions	C	27
Number of appl instructions	ied	130
M-code		 OX0~99 (motion subroutine/positioning program): M02 (The execution of the program stops. (END)) M00~M01, M03~M101, and M103~M65535: The execution of the program pauses. (WAIT) Users can use them freely.
G-code		G0 (rapid positioning), G1 (linear interpolation), G2 (circular interpolation, clockwise), G3 (circular interpolation, counterclockwise), G4 (dwell), G17 (XY plane selection), G18 (ZX plane selection), G19 (YZ plane selection), G90 (absolute programming), and G91 (incremental programming)
Weight		220g

Terminal	Description	Response		ım input
		characteristic	Current	Voltage
X0.0+, X0.0-, X0.1+, X0.1-, X0.2+, X0.2-, X0.3+, and X0.3-	 They are differential input terminals. The functions of the terminals: Motion control: They are the PG input terminals for axis 1~axis 4. High-speed counter: X0.0+ and X0.0- are the RESET input terminals for counter 0. X0.1+ and X0.1- are the RESET input terminals for counter 1. X0.2+ and X0.2- are the RESET input terminals for counter 1. X0.2+ and X0.2- are the RESET input terminals for counter 4. X0.3+ and X0.3- are the RESET input terminals for counter 5. High-speed comparison and catch: The terminals can function as trigger signals for high-speed catches. 	200 kHz	15 mA	5~24 V
X0.8 and X0.9	 They are single/A/B-phase input terminals. The functions of the terminals: Motion control: The terminals are for a manual pulse generator. High-speed count: The terminals are for counter 0. X0.8 is the A-phase input for counter 0, and X0.9 is the B-phase input for counter 0. High-speed comparison and catch: The terminals can function as trigger signals for high-speed catches. Interrupt input terminals 	100 kHz (*1)	15 mA	24 V
X0.10, X0.11, X0.12, X0.13, X0.14, and X0.15	 They are single/A/B-phase input terminals. The functions of the terminals: Motion control: They are the DOG input terminals for axis 1~axis 6. High-speed counter: The terminals are for counter 1~counter 5. X0.10 is the A-phase input for counter 1, X0.12 is the A-phase input for counter 2 and counter 4, and X0.14 is the A-phase input for counter 5. X0.11 is the B-phase input for counter 1, X0.13 is the B-phase input for counter 2 and counter 4, and X0.15 is the B-phase input for counter 2. M0.13 is the B-phase input for counter 2. M0.15 is the B-phase input for counter 5. High-speed comparison and catch: The terminals can function as trigger signals for high-speed catches.	100 kHz (*1)	15 mA	24 V
Y0.8, Y0.9, Y0.10, and Y0.11	 The high-speed pulse output terminals are transistors whose collectors are open collectors. The functions of the terminals: Motion control: The terminals are the CLEAR output terminals for axis 1~axis 4, and provide the PWM function. 	200 kHz	15 mA	24 V

2

Toursinal	Description	Response	Maximum input	
Terminal	Description	characteristic	Current	Voltage
	 Y0.8 and Y0.9 are for axis 5. Y0.10 and Y0.11 are for axis 6. Y0.8 is the A-phase output for axis 5, and Y0.10 is the A-phase output for axis 6. Y0.9 is the B-phase output for axis 5, and Y0.11 is the B-phase output for axis 6. High-speed comparison and catch: The terminals can function as high-speed 			
Y0.0+, Y0.0-, Y0.1+, Y0.1-, Y0.2+, Y0.2-, Y0.3+, Y0.3-, Y0.4+, Y0.4-, Y0.5+, Y0.5-, Y0.6+, Y0.6-, Y0.7+, and Y0.7-	 comparison output terminals. 1. They are differential output terminals. 2. The function of the terminals: Motion control: The terminals are for axis 1~axis 4. Y0.0+ and Y0.0- are the A-phase output terminals for axis 1. Y0.2+ and Y0.2- are the A-phase output terminals for axis 2. Y0.4+ and Y0.4- are the A-phase output terminals for axis 3. Y0.6+ and Y0.6- are the A-phase output terminals for axis 3. Y0.6+ and Y0.6- are the A-phase output terminals for axis 4. Y0.1+ and Y0.1- are the B-phase output terminals for axis 1. Y0.3+ and Y0.3- are the B-phase output terminals for axis 3. Y0.7+ and Y0.7- are the B-phase output terminals for axis 4. Y0.0+ and Y0.0- are the CLEAR output terminals for axis 5. Y0.1+ and Y0.1- are the CLEAR output terminals for axis 6. 	1 MHz	5 mA	5 V

*1. If the frequency of input signals received by an input terminal must be 200 kHz, the input terminal must be connected to a 1 k Ω (2 W) resistor in parallel.

• AH15PM-5A

Item		AH15PM-5A			
Number of actual axes		4 axes			
Storage		The capacity of the built-in storage is 64K steps.			
Unit		Motor unit	Compound unit	Mechanical unit	
		Users can set the initial	register involved in the d	ata exchange in a CPU	
Connection with	n a CPU	module, and the numbe	er of registers involved in t	he data exchange in the	
module		CPU module. Four hund	dred data registers at mos	st can be involved in the	
		data exchange.			
Motor control		differential output. 1. Pulse/Direction		These modes adopt the	
		 Counting up/Coun A/B-phase output 	ung down		
Maximum speed	I	Single axis: 1M PPS Multi-axis interpolation:	1M PPS		
	Operating switch	STOP/RUN (automatic/manual switch)			
Input signal	Detector).1-, X0.2+, X0.2-, X0.3+, 12, X0.13, X0.14, X0.15,		
Servo output		Y0.0+, Y0.0-, Y0.2+, Y0).2-, Y0.4+, Y0.4-, Y0.6+,	Y0.6-, Y0.1+, Y0.1-,	
Output signal	signal	Y0.3+, Y0.3-, Y0.5+, Y0).5-, Y0.7+, Y0.7-, Y0.8, Y	0.9, Y0.10, and Y0.11	



Item	AH15PM-5A		
External communication port	Mini USB port Ethernet port		
Expansion storage device	Mini SD card The maximum capacity is 32 GB.		
Number of basic instructions	27		
Number of applied instructions	130		
M-code	 OX0~OX99 (motion subroutine/positioning program): M02 (The execution of the program stops. (END)) M00~M01, M03~M101, and M103~M65535: The execution of the program pauses. (WAIT) Users can use them freely. 		
G-code	G0 (rapid positioning), G1 (linear interpolation), G2 (circular interpolation, clockwise), G3 (circular interpolation, counterclockwise), G4 (dwell), G17 (XY plane selection), G18 (ZX plane selection), G19 (YZ plane selection), G90 (absolute programming), and G91 (incremental programming)		
Weight	220g		

Description of the terminals

Terminal	Description	Response	Maximum input	
	Description	characteristic	Current	Voltage
X0.0+, X0.0-, X0.1+, X0.1-, X0.2+, X0.2-, X0.3+, and X0.3-	 They are differential input terminals. The functions of the terminals: Motion control: They are the PG input terminals for axis 1~axis 4. High-speed counter: X0.0+ and X0.0- are the RESET input terminals for counter 0. X0.1+ and X0.1- are the RESET input terminals for counter 1. X0.2+ and X0.2- are the RESET input terminals for counter 2 and counter 4. X0.3+ and X0.3- are the RESET input terminals for counter 3 and counter 5. High-speed comparison and catch: The terminals can function as trigger signals for high-speed catches. Interrupt input terminals 	200 kHz	15 mA	5~24 V
X0.4, X0.5, X0.6, and X0.7	 They are single/A/B-phase input terminals. The functions of the terminals: Motion control: They are the DOG input terminals for axis 1~axis 4. 	100 kHz (*1)	15 mA	24 V
X0.8+, X0.8-, X0.9+, and X0.9-	 They are differential input terminals. The functions of the terminals: Motion control: The terminals are for a manual pulse generator. High-speed count: The terminals are for counter 0. X0.8+ and X0.8- are the A-phase input terminals for counter 0, and X0.9+ and X0.9- are the B-phase input terminals for counter 0. High-speed comparison and catch: The terminals can function as trigger signals for high-speed catches.	200 kHz	15 mA	5~24 V



Terminal	Description	Response	Maximum input	
reminal	Description	characteristic	Current	Voltage
X0.10, X0.11, X0.12, X0.13, X0.14, X0.15, X1.0, and X1.1	 They are differential input terminals. The functions of the terminals: Motion control: X0.10 is LSP0, X0.11 is LSN0, X0.12 is LSP1, X0.13 is LSN1, X0.14 is LSP2, X0.15 is LSN2, X1.0 is LSP3, and X1.1 is LSN3. High-speed count: The terminals are for counter 1~counter 5. X0.10 is the A-phase input for counter 1. X0.12 is the A-phase input for counter 4. X0.14 is the A-phase input for counter 5.	100 kHz (*1)	15 mA	24 V
X1.2, X1.3, X1.4, and X1.5	1. They are single/A/B-phase input terminals.	100 kHz (*1)	15 mA	24 V
Y0.8, Y0.9, Y0.10, and Y0.11	 The high-speed pulse output terminals are transistors whose collectors are open collector. The function of the terminals: Motion control: The terminals are the CLEAR output terminals for axis 1~axis 4. High-speed comparison and catch: The terminals can function as high-speed comparison output terminals. 	200 kHz	15 mA	24 V
Y0.0+, Y0.0-, Y0.1+, Y0.1-, Y0.2+, Y0.2-, Y0.3+, Y0.3-, Y0.4+, Y0.4-, Y0.5+, Y0.5-, Y0.6+, Y0.6-, Y0.7+, and Y0.7-	 They are differential output terminals. The function of the terminals: Motion control: The terminals are for axis 1~axis 4. Y0.0+ and Y0.0- are the A-phase output terminals for axis 1. Y0.2+ and Y0.2- are the A-phase the output terminals for axis 2. Y0.4+ and Y0.4- are the A-phase output terminals for axis 3. Y0.6+ and Y0.6- are the A-phase output terminals for axis 4. Y0.1+ and Y0.1- are the B-phase output terminals for axis 1. Y0.3+ and Y0.3- are the B-phase output terminals for axis 2. Y0.5+ and Y0.5- are the B-phase output terminals for axis 3. Y0.7+ and Y0.7- are the B-phase output terminals for axis 4. Y0.0+ and Y0.0- are the CLEAR output terminals for axis 5. Y0.1+ and Y0.1- are the CLEAR output terminals 	1 MHz	5 mA	5 V



Terminal	Description	Response	Maximu	
		characteristic	Current	Voltage
	for axis 6.			

*1. If the frequency of input signals received by an input terminal must be 200 kHz, the input terminal must be connected to a 1 k Ω (2 W) resistor in parallel.

• AH20MC-5A

AHZUMC-SA		Specifications		
Item		AH20MC-5A		
Number of axes		12 axes		
Storage		The capacity of the built-in storage is 64K steps.		
Unit		Motor unit Compound unit Mechanical unit		
Connection with a CPU module		Users can set the initial register involved in the data exchange in a CPU module, and the number of registers involved in the data exchange in the CPU module. Four hundred data registers at most can be involved in the data exchange.		
Motor control		Delta high-speed motion control system DMCNET (Delta Motion Control Network) The response time is one millisecond.		
Maximum spee	d	Single axis: 1M PPS Two-axis interpolation: 1M PPS		
	Operating switch	STOP/RUN (automatic/manual switch)		
Input signal	Detector	X0.10+, X0.10-, X0.11+, X0.11-, X0.12+, X0.12-, X0.13+, X0.13-, X0.14+, X0.14-, X0.15+, X0.15-, X0.0+, X0.0-, X0.1+, X0.1-, X0.2+, X0.2-, X0.3+, and X0.3-, X0.8+, X0.8-, X0.9+, X0.9-		
Output signal	Servo output signal	Y0.8, Y0.9, Y0.10, Y0.11		
External communication port		Mini USB port Ethernet port DMCNET port		
Expansion stor	age device	Mini SD card The maximum capacity is 32 GB.		
Number of basi instructions	С	27		
Number of appl instructions	ied	130		
M-code		 OX0~99 (motion subroutine/positioning program): M02 (The execution of the program stops. (END)) M00~M01, M03~M101, and M103~M65535: The execution of the program pauses. (WAIT) Users can use them freely. 		
G-code		G0 (rapid positioning), G1 (linear interpolation), G2 (circular interpolation, clockwise), G3 (circular interpolation, counterclockwise), G4 (dwell), G17 (XY plane selection), G18 (ZX plane selection), G19 (YZ plane selection), G90 (absolute programming), and G91 (incremental programming)		
Weight		220g		

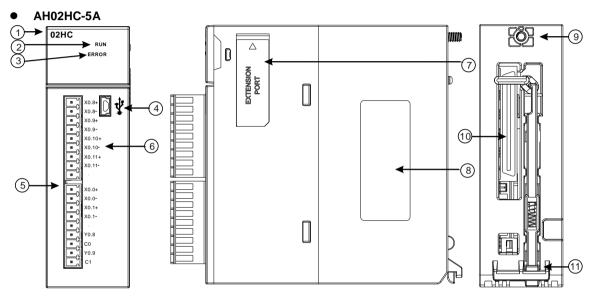


Description of the		Response	Maximu	num input	
Terminal	Description	characteristic		Voltage	
X0.0+, X0.0-, X0.1+, X0.1-, X0.2+, X0.2-, X0.3+, and X0.3-	 They are differential input terminals. The functions of the terminals: High-speed count: The terminals are the RESET input terminals for counter 0~counter 5. X0.0+ and X0.0- are for counter 0. X0.1+ and X0.1- are for counter 1. X0.2+ and X0.2- are for counter 2 and counter 4. X0.3+ and X0.3- are for counter 3 and counter 5. High-speed comparison and catch: The terminals can function as trigger signals for high-speed catches. 	200 kHz	15 mA	5~24 V	
X0.8+, X0.8-, X0.9+, and X0.9-	 They are differential input terminals. The functions of the terminals: Motion control: The terminals are for a manual pulse generator. High-speed count: The terminals are for counter 0. X0.8+ and X0.8- are the A-phase input terminals for counter 0. X0.9+ and X0.9- are the B-phase input terminals for counter 0. High-speed comparison and catch: The terminals can function as trigger signals for high-speed catches.	200 kHz	15 mA	5~24 V	
X0.10+, X0.10-, X0.11+, X0.11-, X0.12+, X0.12-, X0.13+, X0.13, X0.14+, X0.14-, X0.15+, and X0.15-	 They are differential input terminals. The functions of the terminals: Motion control: Dog inputs are for Axis1~Axis 6 and for the motion of the single-axis inputting. High-speed count: The terminals are for counter 1~counter 5. X0.10+ and X0.10- are the A-phase input terminals for counter 1. X0.12+ and X0.12- are the A-phase input terminals for counter 2 and counter 4. X0.14+ and X0.14- are the A-phase input terminals for counter 3 and counter 5.	200 kHz	15 mA	5~24 V	



Terminal	Description	Response	Maximum input	
Terminal	Description	characteristic	Current	Voltage
Y0.8, Y0.9, Y0.10, and Y0.11	 The high-speed pulse output terminals are transistors whose collectors are open collectors. The function of the terminals: High-speed comparison and catch: The terminals can function as high-speed comparison output terminals. 	200 kHz	15 mA	24 V

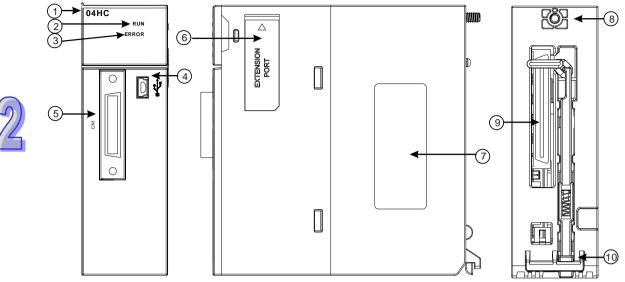
2.8.2 Profiles



Number	Name	Description	
1	Model name	Model name of the module	
2	RUN LED indicator (green)	Operating status of the module ON: The module is running. OFF: The module stops running.	
3	ERROR LED indicator (red)	Error status of the module Blinking: The module is abnormal.	
4	USB port	Providing the mini USB communication interface	
5	Terminals	Input/Output terminals	
6	Arrangement of the input/output terminals	Arrangement of the terminals	
7	Extension port	Updating the firmware	
8	Label	Nameplate	
9	Set screw	Fixing the module	
10	Connector	Connecting the module and a backplane	
11	Projection Fixing the module		

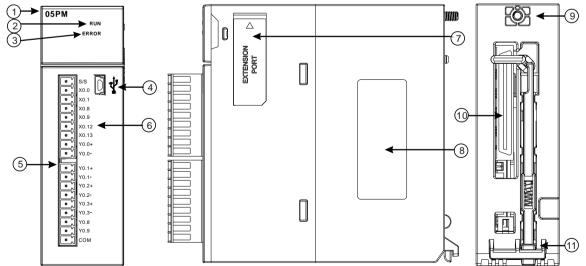


• AH04HC-5A

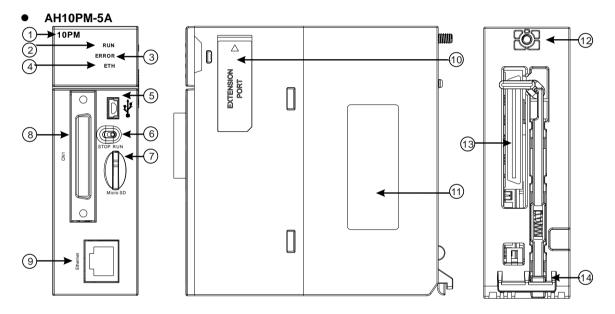


Number	Name	Description	
1	Model name	Model name of the module	
2	RUN LED indicator (green)	Operating status of the module ON: The module is running. OFF: The module stops running.	
3	ERROR LED indicator (red)	Error status of the module Blinking: The module is abnormal.	
4	USB port Providing the mini USB communication interface		
5	Connector Connecting the module and an I/O extension cable		
6	Extension port	Updating the firmware	
7	Label	Nameplate	
8	Set screw	Fixing the module	
9	Connector	Connecting the module and a backplane	
10	Projection	Fixing the module	

• AH05PM-5A



Number	Name	Description	
1	Model name	Model name of the module	
2	RUN LED indicator (green)	Operating status of the module ON: The module is running. OFF: The module stops running.	
3	ERROR LED indicator (red)	Error status of the module Blinking: The module is abnormal.	
4	USB port	Providing the mini USB communication interface	
5	Terminals	Input/Output terminals	
6	Arrangement of the input/output terminals	Arrangement of the terminals	
7	Extension port	Updating the firmware	
8	Label	Nameplate	
9	Set screw	Fixing the module	
10	Connector	Connecting the module and a backplane	
11	Projection	Fixing the module	



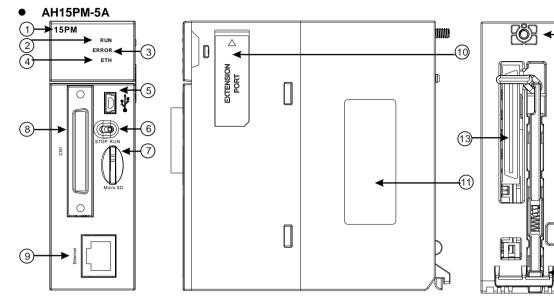
Number	Name	Description
1	Model name	Model name of the module
	RUN LED indicator	Operating status of the module
2	(green)	ON: The module is running.
	(green)	OFF: The module stops running.
3	ERROR LED indicator	Error status of the module
3	(red)	Blinking: The module is abnormal.
	Ethernet connection	Status of the Ethernet connection
4	LED indicator (green)	ON: The Ethernet connection is being connected.
		OFF: The Ethernet connection is disconnected.
5	USB port	Providing the mini USB communication interface
6	RUN/STOP switch	RUN: The user program is executed.
0	RUN/STOP SWIICH	STOP: The execution of the user program stops.
7	SD slot	Providing the SD interface
8	Connector	Connecting the module and an I/O extension cable
9	Ethernet port	Providing the Ethernet communication interface
10	Extension port	Updating the firmware
11	Label	Nameplate
12	Set screw	Fixing the module



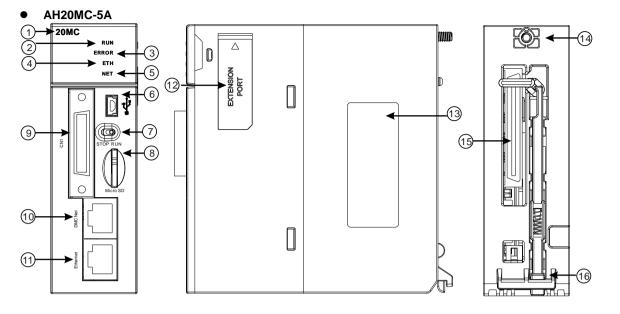
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14)

Number	Name	Description
13	Connector	Connecting the module and a backplane
14	Projection	Fixing the module



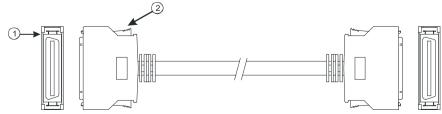
Number	Name	Description
1	Model name	Model name of the module
	RUN LED indicator	Operating status of the module
2	(green)	ON: The module is running.
	(green)	OFF: The module stops running.
3	ERROR LED indicator	Error status of the module
	(red)	Blinking: The module is abnormal.
	Ethernet connection	Status of the Ethernet connection
4	LED indicator (green)	ON: The Ethernet connection is being connected.
		OFF: The Ethernet connection is disconnected.
5	USB port	Providing the mini USB communication interface
6	RUN/STOP switch	RUN: The user program is executed.
		STOP: The execution of the user program stops.
7	SD slot	Providing the SD interface
8	Connector	Connecting the module and an I/O extension cable
9	Ethernet port	Providing the Ethernet communication interface
10	Extension port	Updating the firmware
11	Label	Nameplate
12	Set screw	Fixing the module
13	Connector	Connecting the module and a backplane
14	Projection	Fixing the module



Number	Name	Description
1	Model name	Model name of the module
2	RUN LED indicator (green)	Operating status of the module ON: The module is running. OFF: The module stops running.
3	ERROR LED indicator (red)	Error status of the module Blinking: The module is abnormal.
4	Ethernet connection LED indicator (green)	Status of the Ethernet connection ON: The Ethernet connection is being connected. OFF: The Ethernet connection is disconnected.
5	DMCNET connection LED indicator (green)	Status of the DMCNET connection ON: The DMCNET connection is being connected. OFF: The DMCNET connection is disconnected.
6	USB port	Providing the mini USB communication interface
7	RUN/STOP switch	RUN: The user program is executed. STOP: The execution of the user program stops.
8	SD slot	Providing the SD interface
9	Connector	Connecting the module and an I/O extension cable.
10	DMCNET port	Providing the DMCNET communication interface
11	Ethernet port	Providing the Ethernet communication interface
12	Extension port	For updating the firmware
13	Label	Nameplate
14	Set screw	Fixing the module
15	Connector	Connecting the module and a backplane
16	Projection	Fixing the module

• I/O extension cable, and external terminal module

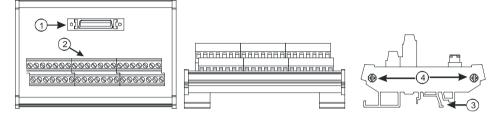
1. I/O extension cable UC-ET010-13B/UC-ET010-15B



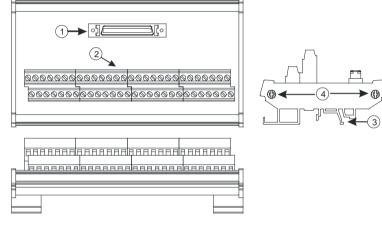
Number	Name	Description
1	Connector	Connecting a motion control module and an external terminal module UC-ET010-13B is a 36-pin I/O extension cable for AH04HC-5A and AH20MC-5A. UC-ET010-15B is a 50-pin I/O extension cable for AH10PM-5A and AH15PM-5A.
2	Clip	Fixing the connector



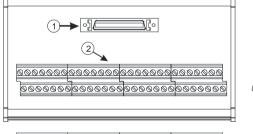
2. External terminal module for AH04HC-5A and AH20MC-5A: UB-10-IO16C

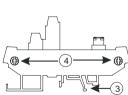


3. External terminal module for AH10PM-5A: UB-10-IO24CC



4. External terminal module for AH15PM-5A: UB-10-IO34CC



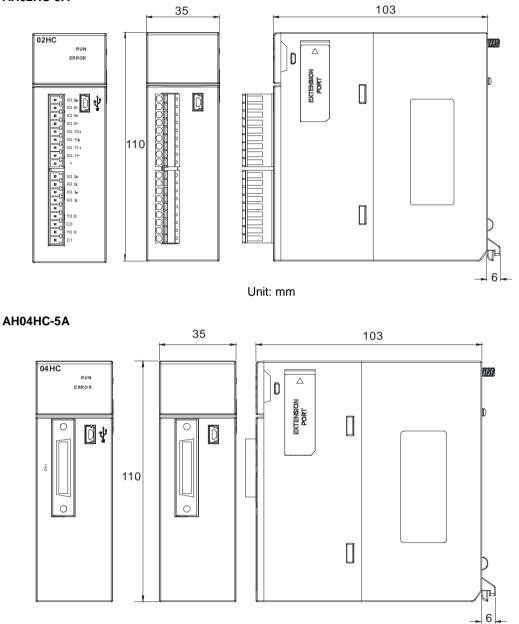


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E	BE			анны	ввва	вня	вава	

Number	Name	Description	
1	Connector	Connecting the external terminal module and a motion control module	
2	Terminals	Input/Output terminals for wiring	
3	Clip	Hanging the external terminal module on a DIN rail	
4	Set screw	Fixing the base	

2.8.3 Dimensions

• AH02HC-5A

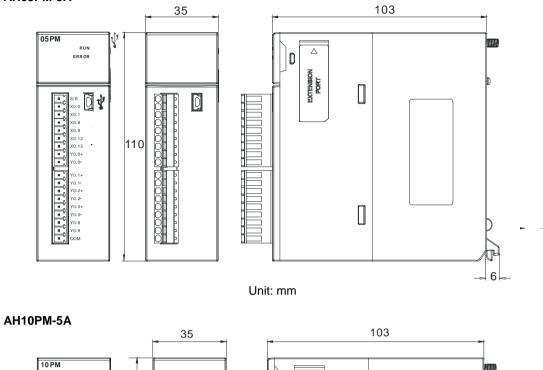


Unit: mm

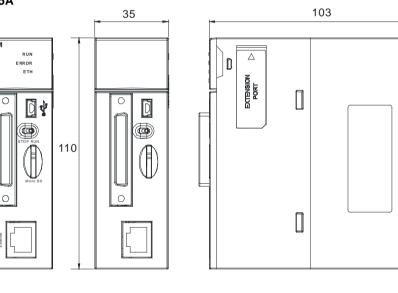
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AH05PM-5A

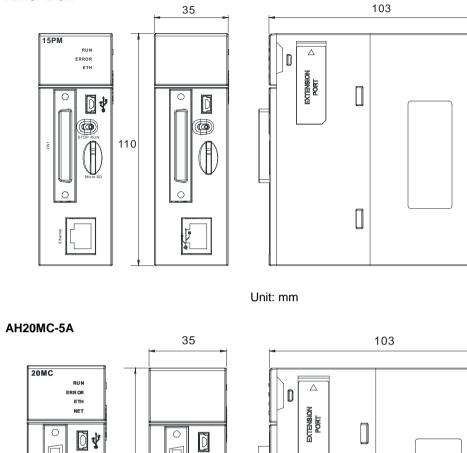






Unit: mm

• AH15PM-5A



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Unit: mm

• I/O extension cable, and external terminal module

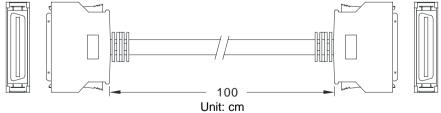
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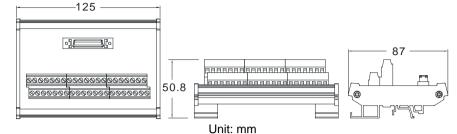
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1. 36-pin I/O extension cable for AH04HC-5A and AH20MC-5: UC-ET010-13B

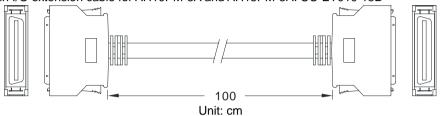
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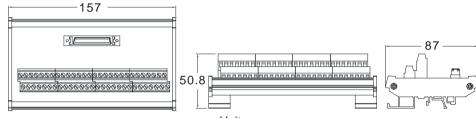
2. External terminal module for AH04HC-5A and AH20MC-5A: UB-10-IO16C





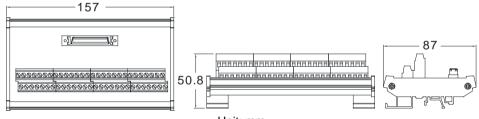


External terminal module for AH10PM-5A: UB-10-IO24CC 4.



Unit: mm

5. External terminal module for AH15PM-5A: UB-10-IO34CC



Unit: mm

2.8.4 Arrangement of Input/Output Terminals

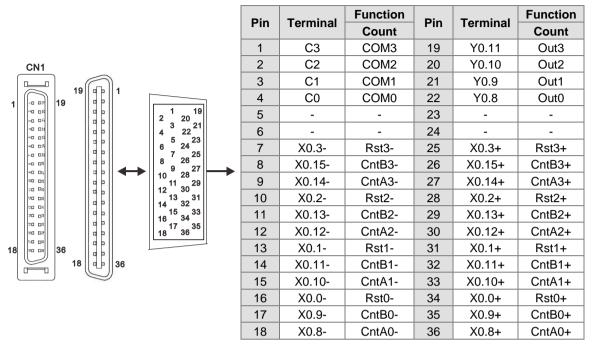
AH02HC-5A

X0.8+ X0.8-		Function		Function
X0.9+ X0.9-	Terminal	Count	Terminal	Count
X0.10+	X0.8+	CntA0+	X0.0+	Rst0+
X0.10- X0.11+	X0.8-	CntA0-	X0.0-	Rst0-
, X0.11-	X0.9+	CntB0+	X0.1+	Rst1+
X0.0+ X0.0-	X0.9-	CntB0-	X0.1-	Rst1-
X0.1+ X0.1-	X0.10+	CntA1+	Y0.8	Out0
н.	X0.10-	CntA1-	C0	COM0
Y0.8 C0	X0.11+	CntB1+	Y0.9	Out1
Y0.9 C1	X0.11-	CntB1-	C1	COM1



3.

• AH04HC-5A



• AH05PM-5A

Terminal	Fund	ction	Terminal	Fund	ction
Terminai	Pulse	Count	Terminal	Pulse	Count
S/S	S/S	S/S	Y0.1+	B0+	-
X0.0	PG0	Rst0	Y0.1-	B0-	-
X0.1	PG1	-	Y0.2+	A1+	-
X0.8	MPGA	CntA0	Y0.2-	A1-	-
X0.9	MPGB	CntB0	Y0.3+	B1+	-
X0.12	DOG0	-	Y0.3-	B1-	-
X0.13	DOG1	-	Y0.8	CLR0	-
Y0.0+	A0+	-	Y0.9	CLR1	-
Y0.0-	A0-	-	СОМ	-	-



AH10PM-5A •

			Dia	Terminel	Fur	nction	Dia	Tarrainal	Fun	ction
			Pin	Terminal	Pulse	Count	Pin	Terminal	Pulse	Count
			1	C3	COM3	-	26	Y0.11	CLR3/B5	-
			2	C2	COM2	-	27	Y0.10	CLR2/A5	-
			3	C1	COM1	-	28	Y0.9	CLR1/B4	-
			4	C0	COM0	-	29	Y0.8	CLR0/A4	-
ſ	CN1	٦	5	NC	-		30	NC	-	-
			6	Y0.7-	B3-	-	31	Y0.7+	B3+	-
1	80 D*	26	7	Y0.6-	A3-	-	32	Y0.6+	A3+	-
	~□ DR 30 DR 20 DR		8	Y0.5-	B2-	-	33	Y0.5+	B2+	-
			9	Y0.4-	A2-	-	34	Y0.4+	A2+	-
			10	Y0.3-	B1-	-	35	Y0.3+	B1+	-
	20 D2 80 D2		11	Y0.2-	A1-	-	36	Y0.2+	A1+	-
	20 D2		12	Y0.1-	B0-/CLR5-	-	37	Y0.1+	B0+/CLR5+	-
	20 D8		13	Y0.0-	A0-/CLR4-	-	38	Y0.0+	A0+/CLR4+	-
	20 D2		14	NC	-	-	39	NC	-	-
	20 D2 20 D3		15	NC	-	-	40	S/S	S/S	S/S
	80 D8 80 D8 80 D8		16	X0.15	DOG3	CntB3/CntB5	41	X0.14	DOG2	CntB3/CntA5
	20 DS		17	X0.13	DOG1	CntB2/CntB4	42	X0.12	DOG0	CntA2/CntA4
25	80 08	50	18	X0.11	DOG5	CntB1	43	X0.10	DOG4	CntA1
	F]	19	X0.9	MPGB	CntB0	44	X0.8	MPGA	CntA0
			20	NC	-	-	45	NC	-	-
			21	NC	-	-	46	NC	-	-
			22	X0.3-	Pg3-	Rst3-/Rst5-	47	X0.3+	Pg3+	Rst3+/Rst5+
			23	X0.2-	Pg2-	Rst2-/Rst4-	48	X0.2+	Pg2+	Rst2+/Rst4+
			24	X0.1-	Pg1-	Rst1-	49	X0.1+	Pg1+	Rst1+
			25	X0.0-	Pg0-	Rst0-	50	X0.0+	Pg0+	Rst0+
•	AH1	5PN	1-5A							

AH15PM-5A

		Dim	Tanninal	Fu	nction	Dire	Tamainal	Fur	nction
		Pin	Terminal	Pulse	Count	Pin	Terminal	Pulse	Count
		1	Y0.11	CLR3	-	26	Y0.10	CLR2	-
		2	Y0.9	CLR1	-	27	Y0.8	CLR0	
014		3	COM	COM	-	28	Y0.7+	B3+	-
CN1		4	Y0.7-	B3-	-	29	Y0.6+	A3+	-
		5	Y0.6-	A3-		30	Y0.5+	B2+	-
1 -= ¤%	26	6	Y0.5-	B2-	-	31	Y0.4+	A2+	-
*0 0% *0 0% *0 0%		7	Y0.4-	A2-	-	32	Y0.3+	B1+	-
		8	Y0.3-	B1-	-	33	Y0.2+	A1+	-
*D D8		9	Y0.2-	A1-	-	34	Y0.1+	B0+	-
20 D8		10	Y0.1-	B0-	-	35	Y0.0+	A0+	-
		11	Y0.0-	A0-	-	36	S/S	S/S	S/S
20 D8 20 D8		12	X1.5	CHG3	-	37	X1.4	CHG2	-
		13	X1.3	CHG1	-	38	X1.2	CHG0	-
50 D3 50 D3		14	X1.1	LSN3	-	39	X1.0	LSP3	-
20 03 20 08 20 09		15	X0.15	LSN2	CntB3/CntB5	40	X0.14	LSP2	CntB3/CntA5
		16	X0.13	LSN1	CntB2/CntB4	41	X0.12	LSP1	CntA2/CntA4
25	50	17	X0.11	LSN0	CntB1	42	X0.10	LSP0	CntA1
	ı	18	X0.9-	MPGB-	CntB0-	43	X0.9+	MPGB+	CntB0+
		19	X0.8-	MPGA-	CntA0-	44	X0.8+	MPGA+	CntA0+
		20	X0.7	DOG3	-	45	X0.6	DOG2	-
		21	X0.5	DOG1	-	46	X0.4	DOG0	-
		22	X0.3-	Pg3-	Rst3-/Rst5-	47	X0.3+	Pg3+	Rst3+/Rst5+
		23	X0.2-	Pg2-	Rst2-/ Rst4-	48	X0.2+	Pg2+	Rst2+/Rst4+



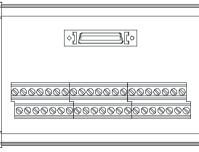
24	X0.1-	Pg1-	Rst1-	49	X0.1+	Pg1+	Rst1+
25	X0.0-	Pg0-	Rst0-	50	X0.0+	Pg0+	Rst0+

• AH20MC-5A

	Pin	Terminal	F	unction	Din	Terminal	F	Function
	PIN	Terminal	Pulse	Count	Pin	Terminal	Pulse	Count
	1	C3	-	COM3	19	Y0.11	-	Out3
	2	C2	-	COM2	20	Y0.10	-	Out2
	3	C1	-	COM1	21	Y0.9	-	Out1
CN1	4	C0	-	COM0	22	Y0.8	-	Out0
	5	NC	-	-	23	NC	-	-
1 🕞 🖻 19	6	NC	-	-	24	NC	-	-
	7	X0.3-	-	Rst3-/Rst5-	25	X0.3+	-	Rst3+/Rst5+
	8	X0.15-	DOG3-	CntB3-/ CntB5+	26	X0.15+	DOG3+	CntB3+/CntB5+
~0 D% ~0 D% ≈0 D% ≈0 D%	9	X0.14-	DOG2-	CntA3-/ CntA5+	27	X0.14+	DOG2+	CntA3+/CntA5+
	10	X0.2-	-	Rst2-/Rst4-	28	X0.2+	-	Rst2+/Rst4+
20 D8 20 D5 20 D8 20 D8 20 D8	11	X0.13-	DOG1-	CntB2-/ CntB4-	29	X0.13+	DOG1+	CntB2+/CntB4+
18 36	12	X0.12-	DOG0-	CntA2-/ CntA4-	30	X0.12+	DOG0+	CntA2+/CntA4+
	13	X0.1-	-	Rst1-	31	X0.1+	-	Rst1+
	14	X0.11-	DOG5-	CntB1-	32	X0.11+	DOG5+	CntB1+
	15	X0.10-	DOG4-	CntA1-	33	X0.10+	DOG4+	CntA1+
	16	X0.0-	-	Rst0-	34	X0.0+	-	Rst0+
	17	X0.9-	MPGB-	CntB0-	35	X0.9+	MPGB+	CntB0+
	18	X0.8-	MPGA-	CntA0-	36	X0.8+	MPGA+	CntA0+

• External terminal module

1. External terminal module for AH04HC-5A: UB-10-IO16C



00	00																			
C3	C2	C1	C0	N/C	N/C	X0.3-	X0.15-	X0.14-	X0.2-	X0.13-	X0.12-	X0.1-	X0.11-	X0.10-	X0.0-	X0.9-	X0.8-	24G	24G	FE
		1																		
Y0.11	Y0.10	Y0.9	Y0.8	N/C	N/C	X0.3+	X0.15+	X0.14+	X0.2+	X0.13+	X0.12+	X0.1+	X0.11+	X0.10+	X0.0+	X0.9+	X0.8+	N/C	24V	24V

2. External terminal module for AH10PM-5A: UB-10-IO24CC

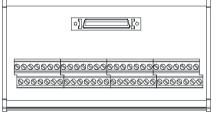
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1 st from the	СЗ	C2	C1	CO	N/C	VO 7	VOG	VOF	Y0.4-	V0.2	V0.2	V0 1	VOO	N/C
upper left	03	02		0	IN/C	10.7-	10.0-	10.5-	10.4-	10.3-	10.2-	10.1-	10.0-	N/C
15 th from the	N/C	X0.15	YO 13	X0 11	Y0 0	N/C	N/C	X0 3-	X0.2-	X0 1-	X0 0-	24G	24G	FE
upper left		70.15	70.15	70.11	70.5		N/C	70.5-	70.2-	70.1-	70.0-	240	240	
1 st from the	V0 11	Y0.10	Y0.9	Y0.8	N/C	V0 71	VOGI		V0 41	V0 21	V0 21	V0 1 .	Y0.0+	N/C
lower left	10.11	10.10	10.9	10.0	IN/C	10.7+	10.0+	10.5+	10.4+	10.5+	10.2+	10.1+	10.0+	IN/C
15 th from the	S/S	X0.14	V0 12	V0 10		N/C	N/C	V0.21	X0.2+	V0 1.	V0 01	N/C	24V	24V
lower left	3/3	70.14	AU. 12	AU. 10	70.0	IN/C	IN/C	×0.5+	AU.Z+	×0.1+	∧0.0+	IN/C	24 V	24 V



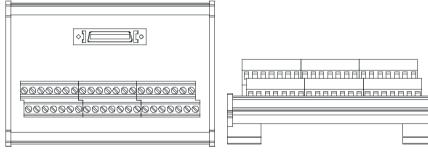
3. External terminal module for AH15PM-5A: UB-10-IO34CC





1 st from the upper left	Y0 11	Y0.9	сом	Y0 7-	Y0 6-	Y0 5-	Y0 4-	Y0.3-	Y0 2-	Y0 1-	Y0 0-	X1 5	X1.3	X1 1
														×1.1
15 th from the upper left	X0 15	X0 13	X0 11	X0 9-	X0 8-	X0 7	X0 5	X0.3-	X0 2-	X0 1-	X0 0-	24G	24G	FE
upper left	/10.10	//0.10	//0.11	/10.0	/.0.0	7.0.7	7.0.0	//0.0	7.0.2	////	10.0	210	210	
1 st from the	V0 10	V0.8	V0 7±	V0 6+	V0 5±	V0 1+	V0 3∓	V0 21	V0 1⊥	V0 0+	S/S	X1 /	X1 2	X1.0
lower left	10.10	10.0	10.71	10.01	10.01	10.41	10.01	10.21	10.11	10.01	0,0	71.4	71.2	71.0
15 th from the lower left	X0 14	X0 12	X0 10	XU QT	XU 81	X0.6	X0.4	XU 3T	X0 21	X0 1⊥	X0 0+	N/C	24V	24V
lower left	70.14	70.12	70.10	70.94	7.0.0+	7.0.0	70.4	70.54	70.27	70.14	7.0.0+	10/0	27V	27V

4. External terminal module for AH20MC-5A: UB-10-IO16C



СЗ	C2	C1	C0	N/C	N/C	X0.3-	X0.15-	X0.14-	X0.2-	X0.13-	X0.12-	X0.1-	X0.11-	X0.10-	X0.0-	X0.9-	X0.8-	24G	24G	FE
Y0.11	Y0.10	Y0.9	Y0.8	N/C	N/C	X0.3+	X0.15+	X0.14+	X0.2+	X0.13+	X0.12+	X0.1+	X0.11+	X0.10+	X0.0+	X0.9+	X0.8+	N/C	24V	24V

2.8.5 Setting Parameters

(1) AH02HC-5A

Parameter Setting		
 AH02HC-5A CH0-1 Input filter CH0-1 Count cycle times CH0-1 Parameter setting CH0-1 Parameter setting CH0-1 Pre-scale Unit magnific CH0-1 Pre-scale Setting value CH0-1 Number of Movernetin CH0-1 Upper/Upper limite val CH0-1 Lover/Upper limite val CH0-1 Lover/Upper limite val CH0-1 Comparison value settin CH0-1 Number of Intrupt setting 	MDS Version 1.00.00 MDS Build Date 2013/12/11	Import File Export File
Default	OK	Cancel

(2) AH04HC-5A

Parameter Setting		
AHOMHC-5A CHO-3 Input Pulse type CHO-3 Input filter CHO-3 Count cycle times CHO-3 Count cycle times CHO-3 Parameter setting CHO-3 Pre-scale setting value CHO-3 Pre-scale setting value CHO-3 Upper/Lower limite val CHO-3 Upper/Lower limite val CHO-3 Lower/Upper limite val CHO-3 Comparison value settin CHO-3 Number of Intropt sett	MDS Version 1.00.00 MDS Build Date 2013/12/11	ort File
Default	OK	'ancel

(3) AH05PM-5A

Parameter Setting				
☐ AH05PM-5A AHCPU and AH05PM D devic AHCPU and AH05PM M devi		nge Area		
	Module Name MDS Version MDS Build Date	AH05PM-5A 1.00.00 2012/07/14		
Default			OK	Import File Export File Cancel

(4) AH10PM-5A

Parameter Setting				
 AH10PM-5A AHCPU and AH10PM D devic AHCPU and AH10PM M devi 	AH10PM-5A MDS Information Normal Exchange	ge Area		1
	Module Name	AH10PM-5A		
	MDS Version	1.00.00		
	MDS Build Date	2012/07/14		
				Import File
				Export File
Default			OK	Cancel

(5) AH15PM-5A

Parameter Setting				
☐ AH15PM-5A — AHCPU and AH15PM D devic — AHCPU and AH15PM M devi	AH15PM-5A MDS Information Normal Exchange	Area		1
	Module Name MDS Latest Version MDS Build Date	AH15PM-5A 1.00.0 2013/01/16		
Cefault			OK	Import File Export File Cancel

(6) AH20MC-5A

Parameter Setting			
- AHCPU and AH20MC D device	AH20MC-5A	Area	
	Module Name MDS Version MDS Build Date	AH20MC-5A 1.00.00 2012/07/14	Import File
Default			OK Cancel

Please refer to AH500 Module Manual for more information about setting parameters.

2.9 Specifications for Remote Input/Output Modules

2.9.1 General Specifications

• AHRTU-DNET-5A

Item	Specifications	
Communication type	CAN	
Electrical isolation	500 V DC	
Connector type	Removable connector (5.08 mm)	
Data type	I/O polled, and explicit	
	Standard mode: 125 kbps, 250 kbps, and 500 kbps	
Communication speed	Extended mode: 10 kbps, 20 kbps, 50 kbps, 125 kbps, 250 kbps, 500 kbps,	
	800 kbps, and 1 Mbps	
O	Delta shielded twisted pair	
Communication cable	(Two communication cables, two power cables, and one shielded cable)	
Weight	150g	

• AHRTU-PFBS-5A

ltem	Specifications	
Communication type	High-speed RS-485	
Electrical isolation	500 V DC	
Connector type DB9 connector		
Data type	Cyclic data exchange	
Communication anad	9.6 kbps, 19.2 kbps, 45.45 kbps, 93.75 kbps, 187.5 kbps, 500 kbps, 1.5 Mbps,	
Communication speed	3 Mbps, 6 Mbps, and 12 Mbps are supported.	
Communication cable Shielded twisted pair cable		
Weight	200g	

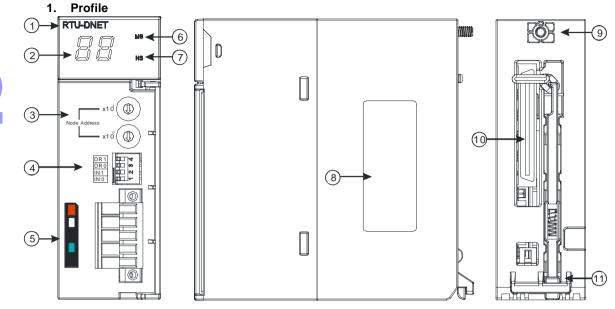
AHRTU-ETHN-5A

	I	
Item	Specifications	
Communication type	EtherNet/IP, MODBUS TCP	
Protocol	BOOTP, DHCP, NTP	
Communication	10/100 Mhrs Auto Datastian	
speed	10/100 Mbps Auto-Detection	
Communication		
Interface	RJ-45 with Auto MDI/MDIX	
Numbers of the		
Ethernet	2 (X1, X2)	
Communication Port		
Weight	177g	



2.9.2 Profiles



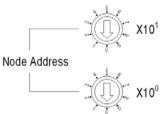


Number	Name	Description
1	Model name	Model name of the module
2	Seven-segment display	Display
3	Address knob	Setting the address
4	Function switch	Setting the functions
5	DeviceNet connector	DeviceNet is used to interconnect control devices for data exchange.
6	MS LED indicator	Indicating the status of the module
7	NS LED indicator	Indicating the status of the network
8	Label	Nameplate
9	Set screw	Fixing the module
10	Connector	Connecting the module and a backplane
11	Projection	Fixing the module

2. Address knobs

It is used to set the node address of AHRTU-DNET-5A on a DeviceNet network. (Node addresses range from 0 to 63.)

Setting	Description
063	Available nodes on a DeviceNet network
6499	Unavailable nodes on a DeviceNet network



Example: If users want to set the communication address of AHRTU-DNET-5A to 26, they can turn the knob corresponding to $x10^{1}$ to 2, and turn the knob corresponding to $x10^{0}$ to 6.

Points for attention:

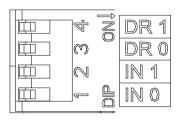
- When the power supply is cut off, the node address is set. After the setting of the node address is complete, AHRTU-DNET-5A can be supplied with power.
- If AHRTU-DNET-5A is running, changing the node address is unavailable.
- Please use a slotted screwdriver to turn the knobs with care, and do not scrape them.

3. Function switch

- The function switch provides the following functions:
- Setting the working mode (IN 0)
- Setting the transmission speed of a DeviceNet network (DR 0~DR 1)

DR 1	DR 0	Transmission speed
OFF	OFF	125 kbps
OFF	ON	250 kbps
ON	OFF	500 kbps
ON	ON	Extended transmission speed

IN 1	Reserved	
IN 0	ON	Clearing the data in the internal storage in AHRTU-DNET-5A
	OFF	No action



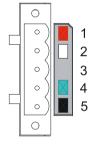


Points for attention:

- When the power supply is cut off, the functions are set. After the setting of the functions is complete, AHRTU-DNET-5A can be supplied with power.
- If AHRTU-DNET-5A is running, changing the functions is unavailable.
- Please use a slotted screwdriver to adjust the DIP switch with care, and do not scrape them.

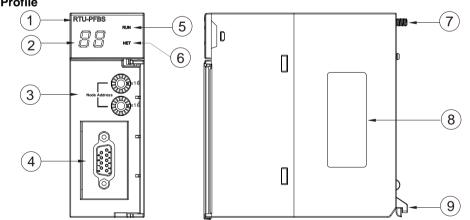
4. DeviceNet connector

Pin	Signal	Color	Description
1	V+	Red	24 V DC
2	CAN_H	White	Signal (positive pole)
3	SHIELD	-	It is connected to a shielded cable.
4	CAN_L	Blue	Signal (negative pole)
5	V-	Black	0 V DC



AHRTU-PFBS-5A

1. Profile



1. Model name	2. Seven-segment display	3. Address knobs
4. PROFIBUS-DP port	5. RUN LED indicator	6. NET LED indicator
7. Set screw	8. Label	9. Projection

PIN	PIN name	Description	
1		N/C	
2		N/C	9 9
3	RxD/TxD-P	Receiving/Sending data (P (B))	
4		N/C	
5	DGND	Data reference potential (C)	
6	VP	Supply positive voltage	
7		N/C	6
8	RxD/TxD-N	Receiving/Sending data (N (A))	
9		N/C	

2. Definitions of the pins in the PROFIBUS-DP port

2

3. Setting a PROFIBUS node address by means of the address knobs

The address knobs of AHRTU-PFBS-5A are used for setting the node address of AH10PFBS-5A on a PROFIBUS-DP network. There are two address knobs. They are a knob corresponding to $x16^{0}$, and a knob corresponding to $x16^{1}$. The range for one address knob is 0-F.

The range for setting the node address is described below.

Address	Definition	g 💭 🗐 x16 ¹
H'1~H'7D	Valid PROFIBUS address	
H'0 or H'7E~H'FF	Invalid PROFIBUS address	2 () x16°

Example: If users need to set the node address of AHRTU-PFBS-5A to 26 (decimal value), they have to turn the knob corresponding to $x16^{1}$ to "1" and the knob corresponding to $x16^{0}$ to "A".

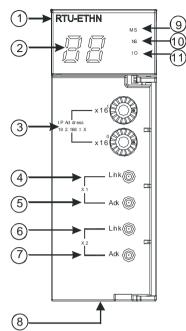
26 (decimal value)=1A (hexadecimal value)=1x16¹+Ax16⁰.

Points for attention:

- If users set the node address of AHRTU-PFBS-5A when AHRTU-PFBS-5A is not supplied with power, they have to power AHRTU-PFBS-5A after the node address of AHRTU-PFBS-5A is set.
- If users change the node address of AHRTU-PFBS-5A when AHRTU-PFBS-5A is powered, the change will not take effect immediately after the node address of AHRTU-PFBS-5A is changed, and it will take effect after the users cut off the power supplied to AHRTU-PFBS-5A and then power AHRTU-PFBS-5A again.
- To prevent the address knobs on AHRTU-PFBS-5A from being scratched, please carefully use a slotted screwdriver to rotate the address knobs on AHRTU-PFBS-5A.

• AHRTU-ETHN-5A

1. Profile



6	
72	

Number	Name
1	Model name
2	Seven-segment display
3	Address knobs
4	X1 Link indicator
5	X1 Ack indicator
6	X2 Link indicator
7	X2 Ack indicator
8	RJ45 port x1 / x2
9	MS LED indicator
10	NS LED indicator
11	I/O indicator

2. Ethernet Port

Pin definition for the Ethernet port

Pin	Signal	Description	RJ-45
1	TX+	Transmitting data (positive pole)	
2	TX-	Transmitting data (negative pole)	
3	RX+	Receiving data (positive pole)	12345678
4	-	-	
5	-	-	
6	RX-	Receiving data (negative pole)	
7	-	-	
8	-	-	

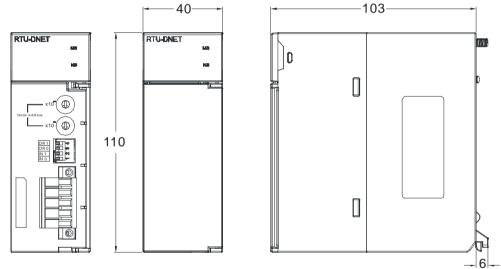
3. Address knobs

The IP address of the AHRTU-ETHN-5A series can be set via the address knobs; the default address range is 192.168.1.x and x should be set from 00 to FF.

Address	Description	. 189
00 ~ 0xFD	 Valid IP address: 192.168.1.x, x = 1 ~ FD, (1~253) 0x00: set up via EIP Builder 	S C S
0xFE	Go to the firmware update mode	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
0xFF	Restore to factory defaults and reboot to have the defaults to take effect.	×16 ************************************

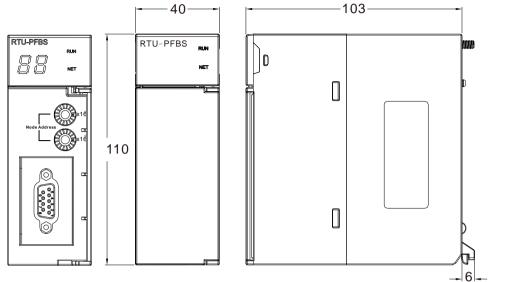
2.9.3 Dimensions

AHRTU-DNET-5A



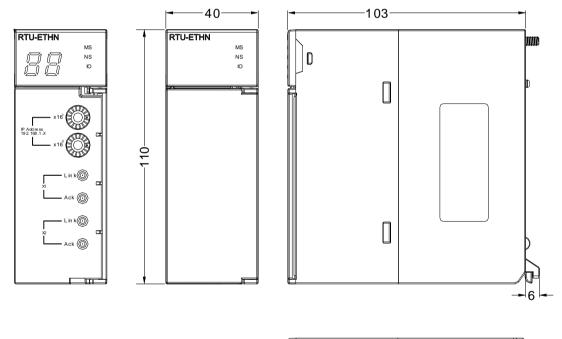
Unit: mm

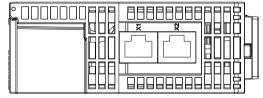
AHRTU-PFBS-5A





AHRTU-ETHN-5A





Unit: mm

2.10 Specifications for Power Supply Modules

2.10.1 General Specifications

AHPS05-5A

l t a un	ltom Specifications	
Item	Specifications	
Supply voltage	100~240 V AC (-15%~10%)	
Supply voltage	50/60 Hz±5%	
Action	If the input power supply is larger than 85 V AC, the power supply module can	
specifications	function normally.	
Allowable		
instantaneous	If the instantaneous power failure time is within ten milliseconds, the power	
power failure time	supply module keeps running.	
Fuse	4 A/250 V AC	
Inrush current	45 A within 1 millisecond at 115 V AC	
	The maximum current is 2.5 A.	
24 V DC output	It is only for a backplane.	
Dower protection	The 24 V DC output is equipped with the short circuit protection and the	
Power protection	overcurrent protection.	
Surge voltage	1,500 V AC (Primary-secondary), 1,500 V AC (Primary-PE), 500 V AC	
withstand level	(Secondary-PE)	
In a viation valte	Above 5 MΩ	
Insulation voltage	(The voltage between all inputs/outputs and the ground is 500 V DC.)	
Ground	The diameter of the ground should not be less than the diameters of the cables	
Ground	connected to the terminals L and N.	

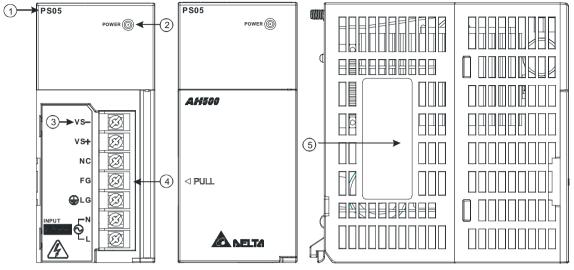
AHPS15-5A

• • •		
Item	Specifications	
Supply voltage	24 V DC (-35%, +30%)	
Allowable		
instantaneous	10 milliseconds	
power failure time		
Fuse	6.3 A/250 V AC	
Inrush current	30 A within 100 milliseconds	
24 V DC output	1.5 A	
Maximum output	36 W	
power	30 W	
Power protection	The 24 V DC output is equipped with the short circuit protection, the overcurrent protection, and the overvoltage protection.	
Surge voltage withstand level	500 V AC	
Ground	The diameter of the ground should be greater than 1.6 mm ² .	
Weight	400g	



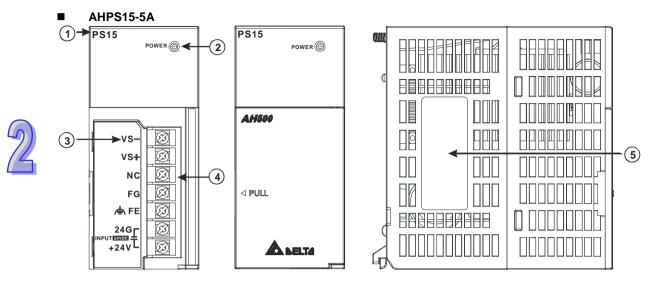
2.10.2 Profiles

AHPS05-5A



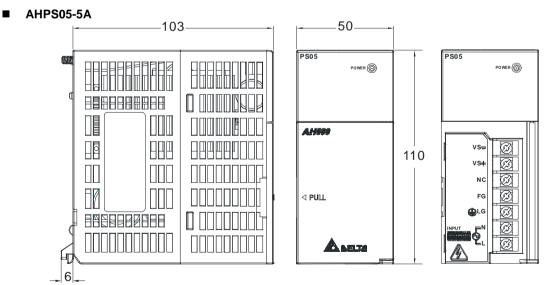
Number	Name	Description
1	Model name	Model name of the power supply module
2	POWER LED indicator (green)	Indicating the status of the power supply
3	Arrangement of the terminals	VS-: It is connected to the negative 24 V DC power supply. VS+: It is connected to the positive 24 V DC power supply. NC: No connection FG: Functional ground LG: Line ground L/N: AC power input
4	Terminal	Terminal for wiring
5	Label	Nameplate





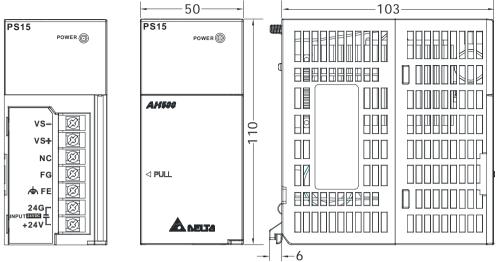
Number	Name	Description
1	Model name	Model name of the power supply module
2	POWER LED indicator (green)	Indicating the status of the power supply
3	Arrangement of the terminals	VS-: It is connected to the negative 24 V DC power supply. VS+: It is connected to the positive 24 V DC power supply. NC: No connection FG: Functional ground FE: Line ground 24G/+24V: DC power input
4	Terminal	Terminal for wiring
5	Label	Nameplate

2.10.3 Dimensions



Unit: mm

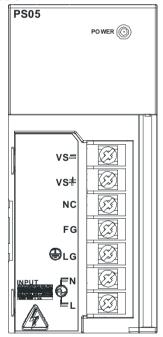
AHPS15-5A



Unit: mm

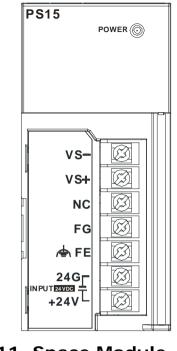
2.10.4 Arrangement of Terminals

AHPS05-5A



- VS-: It is connected to the negative 24 V DC power supply, and used to detect the external power supply.
- VS+: It is connected to the positive 24 V DC power supply, and used to detect the external power supply.
- NC: No connection
- FG: Functional ground
- LG: Line ground
- L/N: AC power input

AHPS15-5A



- VS-: It is connected to the negative 24 V DC power supply, and used to detect the external power supply.
- VS+: It is connected to the positive 24 V DC power supply, and used to detect the external power supply.
- NC: No connection
- FG: Functional ground
- FE: Line ground
- 24G/+24V: DC power input

2.11 Space Module, Backplanes, and Extension Cables

2.11.1 General Specifications

• Specifications for main backplanes

Model Item	AHBP04M1-5A	AHBP06M1-5A	AHBP08M1-5A	AHBP12M1-5A
Number of slots	4	6	8	12
Applicable power supply module	AHPS05-5A and A	HPS15-5A		
Applicable input/output module	The AH500 series	input/output module	es can be installed.	

• Specifications for extension backplanes

Model	AHBP06E1-5A	AHBP08E1-5A
Number of slots	6	8
Applicable power	AHPS05-5A and AHPS15-5A	
supply module	ARESUS-SA and ARES IS-SA	
Applicable input/output	Digital input/output modules, analog ir	nput/output modules, temperature
module	measurement module, AH10SCM-5A	and AH15SCM-5A

• AHAADP01EF-5A/AHAADP02EF-5A

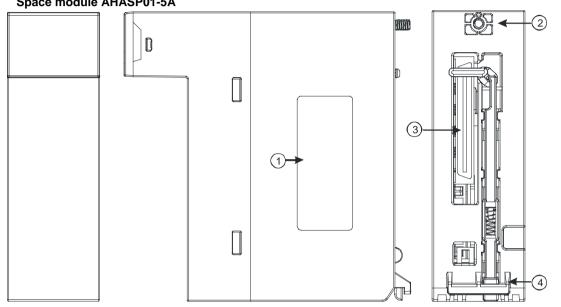
ltem	Specifications
Connector type	155 Mbps 1*9 SC full-duplex optical fiber transceiver
Transmission interface	Optical fiber
Transmission speed	100 Mbps
Transmission distance	2 KM
Electric energy consumption	1.5 W
Insulation voltage	2,500 V DC

Dust cover AHASP01-5A

ltem	Specifications
Weight	85g

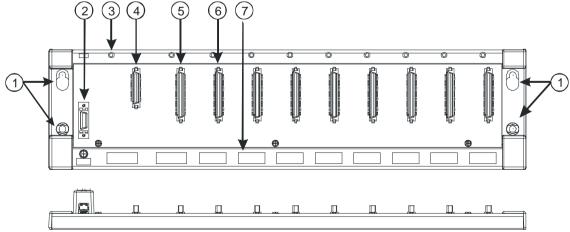
2.11.2 Profiles

Space module AHASP01-5A

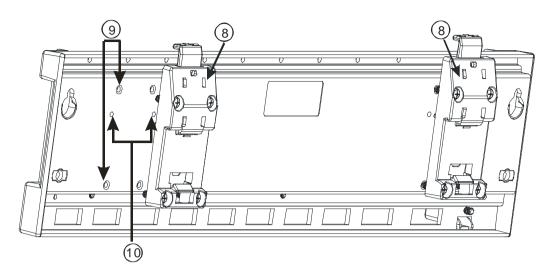


Number	Name	Description
1	Label	Nameplate
2	Set screw	Fixing the module
3	Connector	Connecting the module and a backplane
4	Projection	Fixing the module

Profile of the main backplane AHBP08M1-5A

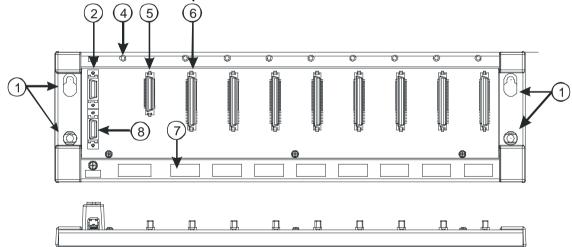




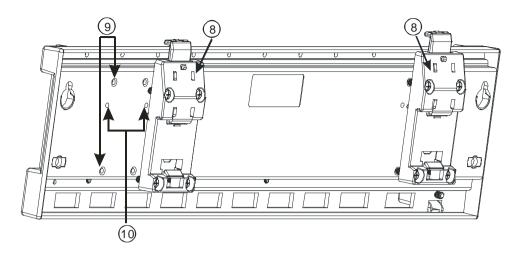


Number	Name	Description
1	Mounting hole	Fixing the backplane
2	Extension port	It is connected to an inferior backplane.
3	Mounting hole	After a module is installed, it is fixed by a screw.
4	Connector	Connecting the backplane and a power supply module
5	Connector	Connecting the backplane and a CPU module
6	Connector	Connecting the backplane and an input/output module
7	Hole	The projection under a module is inserted into this hole.
8	Mounting clip	Hanging a backplane on a DIN rail
9	Mounting hole	After a mounting clip is installed, it is fixed by screws.
10	Locating hole	A mounting clip is pressed into these locating holes.

Profile of the extension backplane AHBP08E1-5A



2



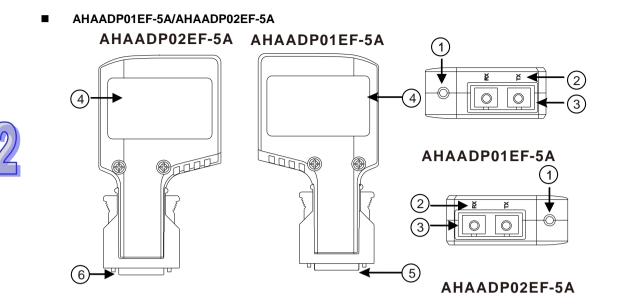
Number	Name	Description
1	Mounting hole	Fixing the backplane
2	Extension port 1	It is connected to a superior backplane.
3	Extension port 2	It is connected to an inferior backplane.
4	Connector	Connecting the backplane and a power supply module
5	Connector	Connecting the backplane and an input/output module
6	Mounting hole	After a module is installed, it is fixed by a screw.
7	Hole	The projection under a module is inserted into this hole.
8	Mounting clip	Hanging a backplane on a DIN rail
9	Mounting hole	After a mounting clip is installed, it is fixed by screws.
10	Locating hole	A mounting clip is pressed into these locating holes.

Extension cable



Number	Name	Description
		Connecting backplanes
		1. AHACAB06-5A
1	Connector	2. AHACAB10-5A
		3. AHACAB15-5A
		4. AHACAB30-5A
2	Clip	Fixing the connector

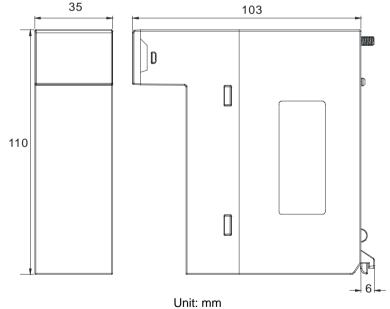




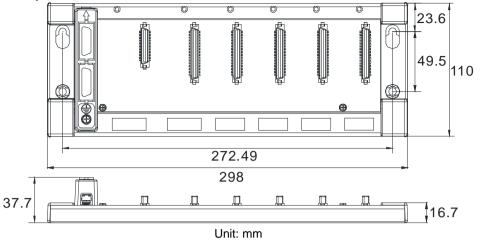
Number	Name
1	Connection/Communication LED indicator
2	Descritions of the optical fiber ports (TX/RX)
3	Optical fiber ports
4	Label
5	Connector

2.11.3 Dimensions

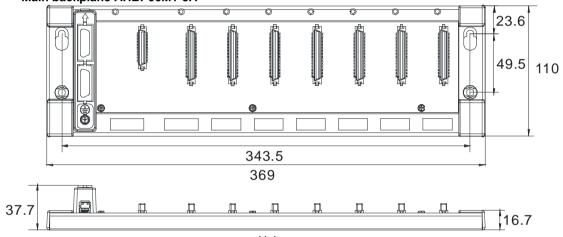
Space module AHASP01-5A



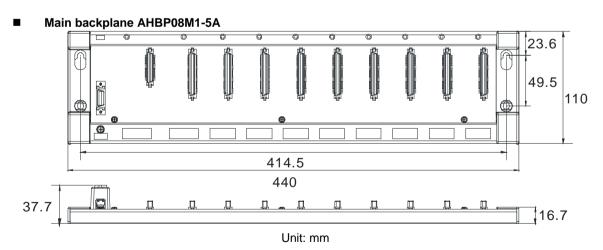
Main backplane AHBP04M1-5A



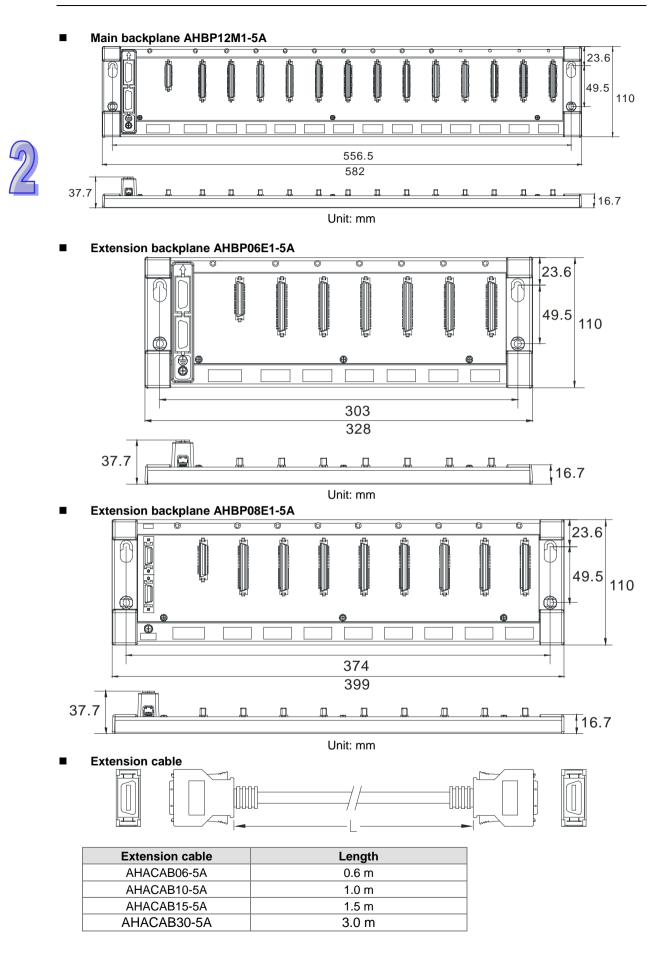


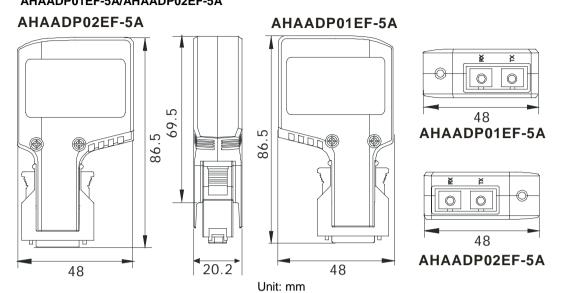












AHAADP01EF-5A/AHAADP02EF-5A