

Kinco-K6 series PLC

1、Product Description

Kinco-K6 series PLC is a small PLC product. It is a high-performance standard PLC launched by Kinco. It adopts a brand-new technology platform. Under the premise of ensuring high performance and high reliability, it provides Ethernet, CAN bus, and expansion module. BD board and other functions that are closer to user needs, and have obvious advantages such as faster running speed, larger storage space, and significantly improved performance, which can meet the diverse needs of users.

2、Product appearance



CPU606



CPU606EA/CPU608

3、Product List

CPU	Model	Specification
CPU606	K606-24DT	DC24V, DI 14*DC24V, DO 10*DC24V Communication port: 2*RS485, 1*Ethernet 1 expansion BD board can be connected 14 expansion modules can be connected
	K606-24AT	AC100-240V, DI 14*DC24V, DO 10*DC24V Communication port: 2*RS485, 1*Ethernet 1 expansion BD board can be connected 14 expansion modules can be connected
	K606-24DR	DC24V, DI 14*DC24V, DO 10*Relay Communication port: 2*RS485, 1*Ethernet 1 expansion BD board can be connected 14 expansion modules can be connected
	K606-24AR	AC100-240V, DI 14*DC24V, DO 10*Relay Communication port: 2*RS485, 1*Ethernet 1 expansion BD board can be connected 14 expansion modules can be connected
CPU606EA	K606EA-30DT	DC24V, DI 14*DC24V, DO 10*DC24V, AI 4*IV, AO 2*IV Communication port: 2*RS485, 1*Ethernet 2 expansion BD board can be connected 14 expansion modules can be connected
	K606EA-30AT	AC100-240V, DI 14*DC24V, DO 10*DC24V, AI 4*IV, AO 2*IV Communication port: 2*RS485, 1*Ethernet 2 expansion BD board can be connected 14 expansion modules can be connected
CPU608	K608-40DT	DC24V, DI 24*DC24V, DO 16*DC24V Communication port: 2*RS485, 1*Ethernet 2 expansion BD board can be connected 14 expansion modules can be connected
	K608-40AT	AC100-240V, DI 24*DC24V, DO 16*DC24V Communication port: 2*RS485, 1*Ethernet 2 expansion BD board can be connected 14 expansion modules can be connected

	K608-40DR	DC24V, DI 24*DC24V, DO 16*Relay Communication port: 2*RS485, 1*Ethernet 2 expansion BD board can be connected 14 expansion modules can be connected
	K608-40AR	AC100-240V, DI 24*DC24V, DO 16*Relay Communication port: 2*RS485, 1*Ethernet 2 expansion BD board can be connected 14 expansion modules can be connected
BD board	KB6-CAN	1*CAN (CAN2)
	KB6-2COM	1*RS232(Port0) + 1*RS485(Port3)
	KB6-4DI	DI 4*DC24V
	KB6-4DO	DO 4*DC24V

4、Technical Specification

Parameter		CPU606	CPU606EA	CPU608
I/O and communication port				
Digital IO		14*DI/10*DO		24*DI/16*DO
Analog IO		--	4*AI / 2*AO	--
Connect expansion BD board		1	2	
Connect expansion module		14		
Communication port	Serial port	Body: 2*RS485; BD board: 1*RS232 + 1*RS485		
	CAN	Body: none; BD board: 1*CAN		
	Ethernet	Body: 1*Ethernet		
High-speed counter single-phase double-phase		4 HSC0 and HSC1: Up to 200KHz; HSC2 and HSC3: Up to 20KHz HSC0 and HSC1: Up to 200KHz; HSC2 and HSC3: Up to 10KHz		
High-speed output		4 PTO0--PTO2: Up to 200KHz PTO3: Up to 10KHz（Each channel requires load resistance not exceed 1.5K Ω , otherwise the maximum output frequency will not be reached）		
Edge interrupt		4, I0.0-I0.3 can be on/off interrupt.		

Memory area	
User programme	Maximum. 8K instructions supported
User data memory	M area 4K bytes; V area 16K bytes.
Timer	256 1ms time base: 4 10ms time base: 16 100ms time base: 236
Counter	256
Data back up memory	EEPROM, Maximum. 1K bytes supported.
Retentive memory range	V area (16K bytes) + C area(Counter, 512 bytes). Lithium battery, 3 year lifetime at room temperature.
Others	
Interrupt	2, 0.1ms time base.
Realtime Clock	built-in, time deviation is less than 5min/month at 25°C.
DC24V output power	300mA, Short circuit protection.

5、Main Advantages

➤ Ethernet

Standard 10/100M Ethernet port, support TCP Server, TCP Client, UDP and other communication protocols, support Modbus TCP Client/Server industrial bus protocol, easy to use and powerful, suitable for application requirements in more occasions.

➤ Expansion Unit

Support expansion BD board and expansion module.

Expansion Modules are used to expand the functions of the CPU body. The expansion modules are rich in types and have a large number of points. The K6 series CPU can connect up to 14 expansion modules to form a larger-scale control system.

The expansion BD(Basic Unit Expansion Board) provides a small number of IO channels and communication ports, which can be directly plugged into the CPU module for use. Compared with the expansion module module, the BD board has fewer points but lower cost, which can further enrich the functions of the CPU module.

➤ Faster calculation speed and more powerful functions

The scan cycle of 1000 common instructions is 0.3ms, which provides 8K instructions of program storage space and 20K bytes (V area + M area) of data storage space.

Support the array function, support up to 16 arrays, each array allows up to 1024 elements (the elements can be any data type supported by KPLC). Users can use

the array function to find the maximum value, minimum value, average value, sorting and other functions.

Support stack function, support up to 2 stacks, each stack allows up to 1024 elements (element can be any data type supported by K6PLC). Users can use the stack function to achieve the corresponding requirements, and can also use the stack to further expand the data storage space.

➤ **CAN bus interface**

K606 can add 1 CAN bus interface through BD board.

The CAN interface supports the CANOpen master station function, allowing a maximum of 64 slave stations to be connected, and each slave station allows a maximum of 8 TPDO and 8 RPDO, and supports error control methods such as node protection and heartbeat.

The CAN interface supports the Kinco motion control protocol and provides easy-to-use positioning control commands. Users can easily connect Kinco's servo and stepper drives through the CAN bus. The Kinco motion control protocol supports up to 16 nodes.

➤ **High-speed pulse counter and high-speed pulse output**

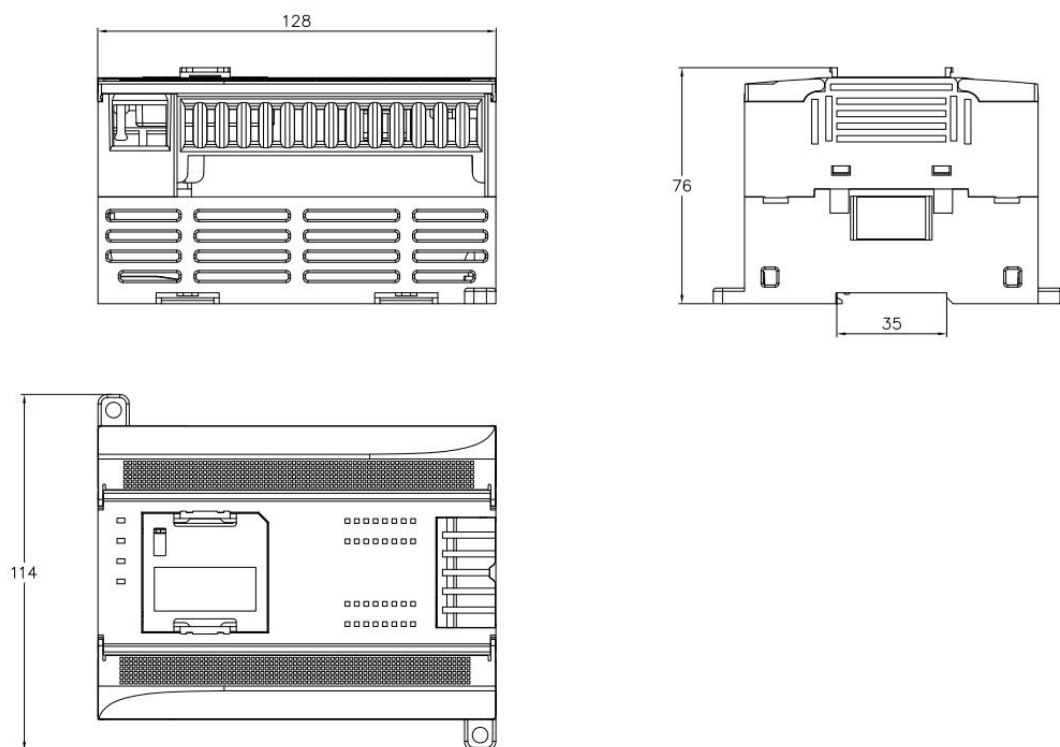
K606 provides 4 high-speed pulse counters that support multiple modes of counting, the highest counting frequency of HSC0 and HSC1 is 200KHz, and the highest counting frequency of HSC2 and HSC3 is single-phase 20KHz and double-phase 10KHz.

K606 provides 4 high-speed pulse output channels, the highest output frequency of channel 0-2 is 200KHz, and the highest output frequency of channel 3 is 10KHz. All channels support PTO (pulse train, pulse + direction) and PWM (pulse width modulation) output, and the software provides PLS (PWM or PTO), positioning control instruction group, PFLO_F (follow instruction), etc.

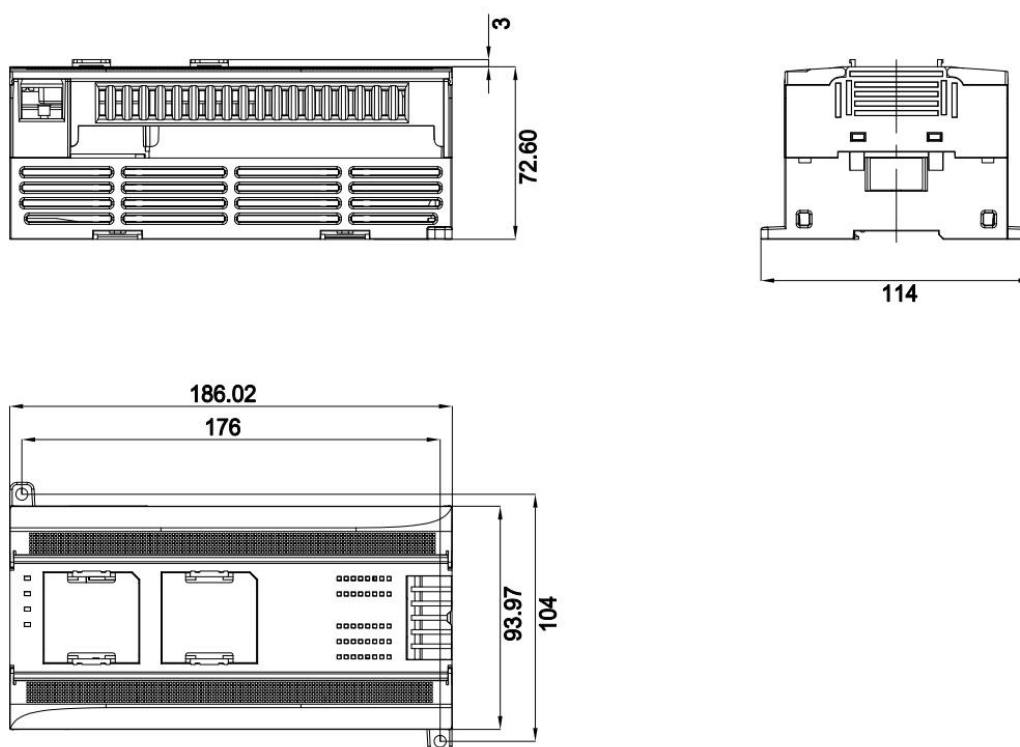
➤ **Compatible with K5 series PLC**

K6 series PLCs are fully compatible with K5 functions: IO channels and power supply connections are completely consistent; K5 programs can be run directly; K5 series expansion modules can be directly connected.

6、Dimension diagram

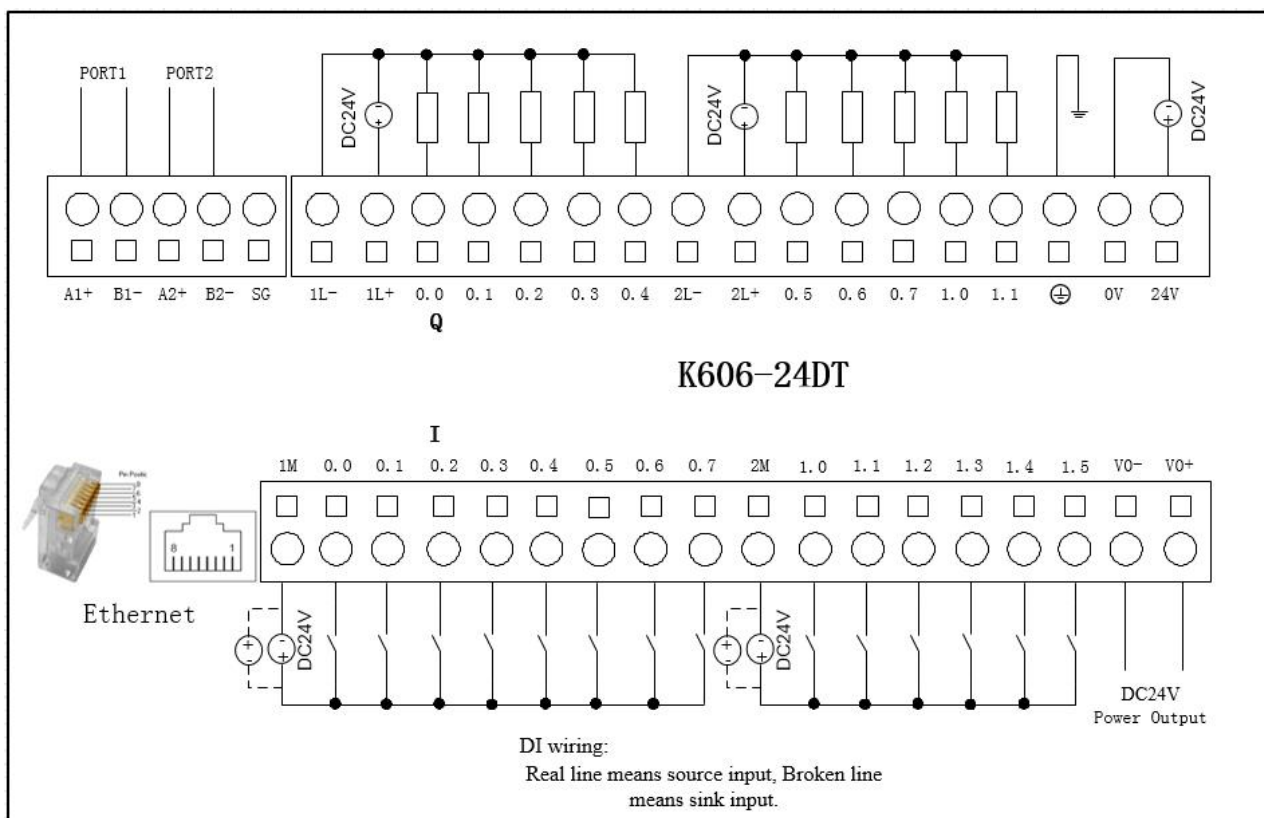


CPU606 dimension drawing

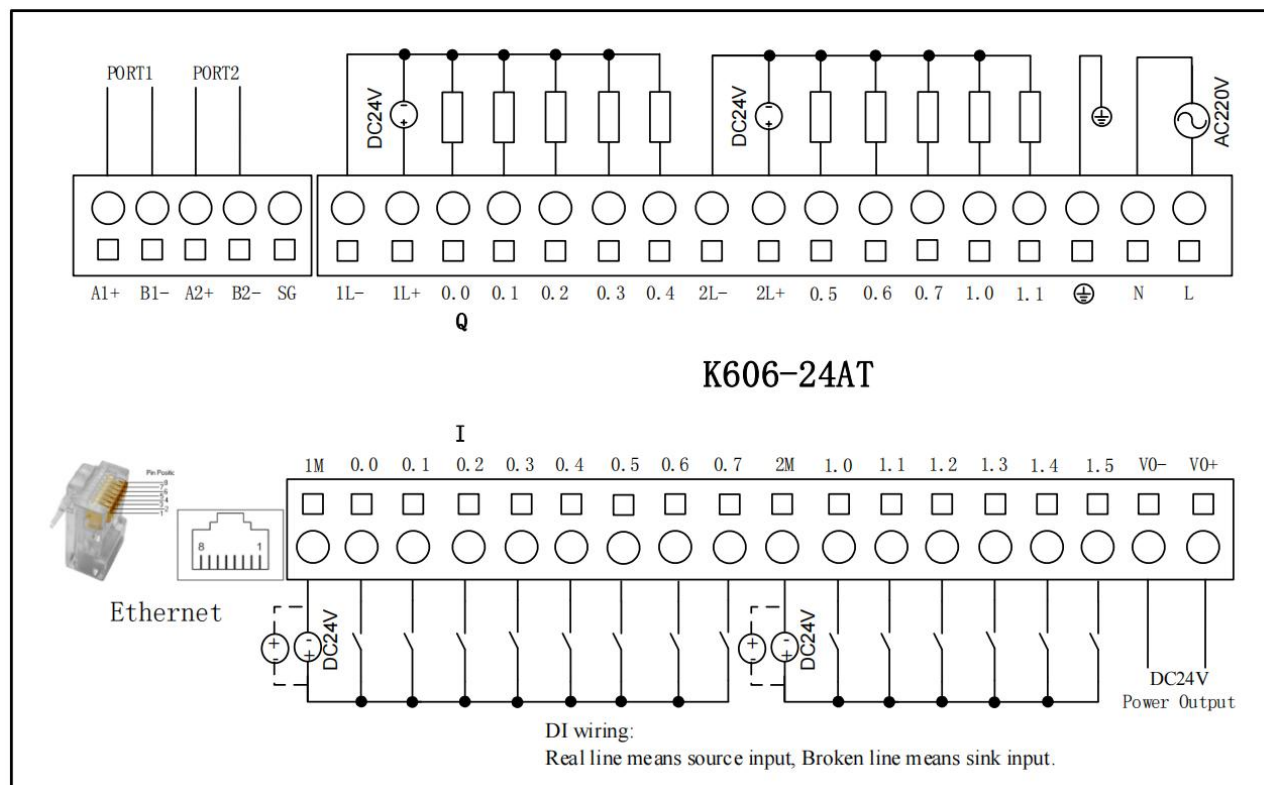


CPU606EA/CPU608 dimension drawing

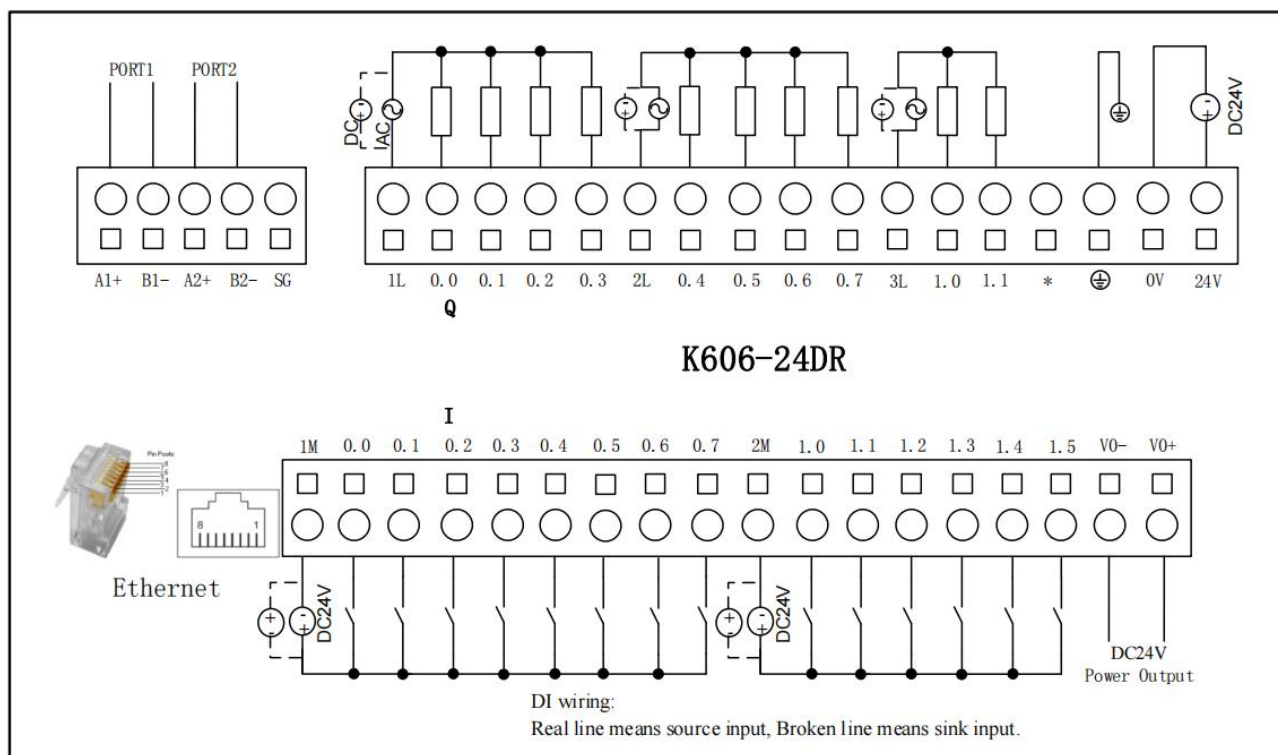
7、Hardware wiring diagram



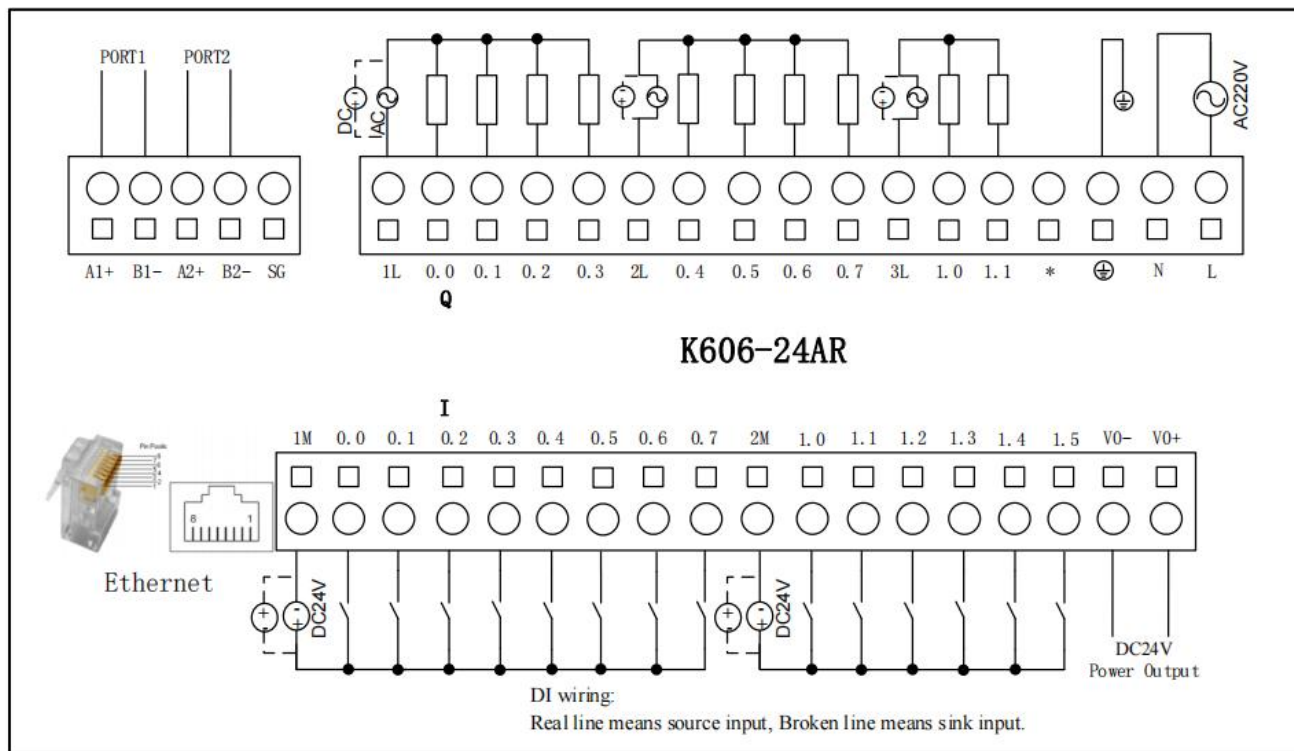
K606-24DT wiring diagram



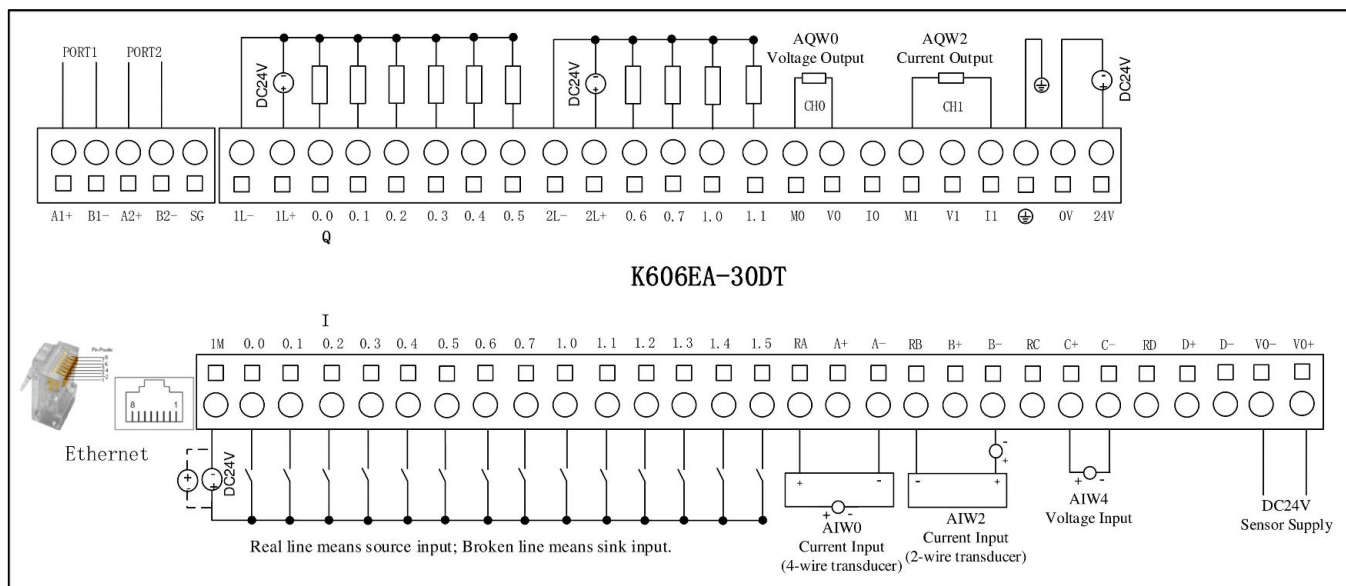
K606-24AT wiring diagram



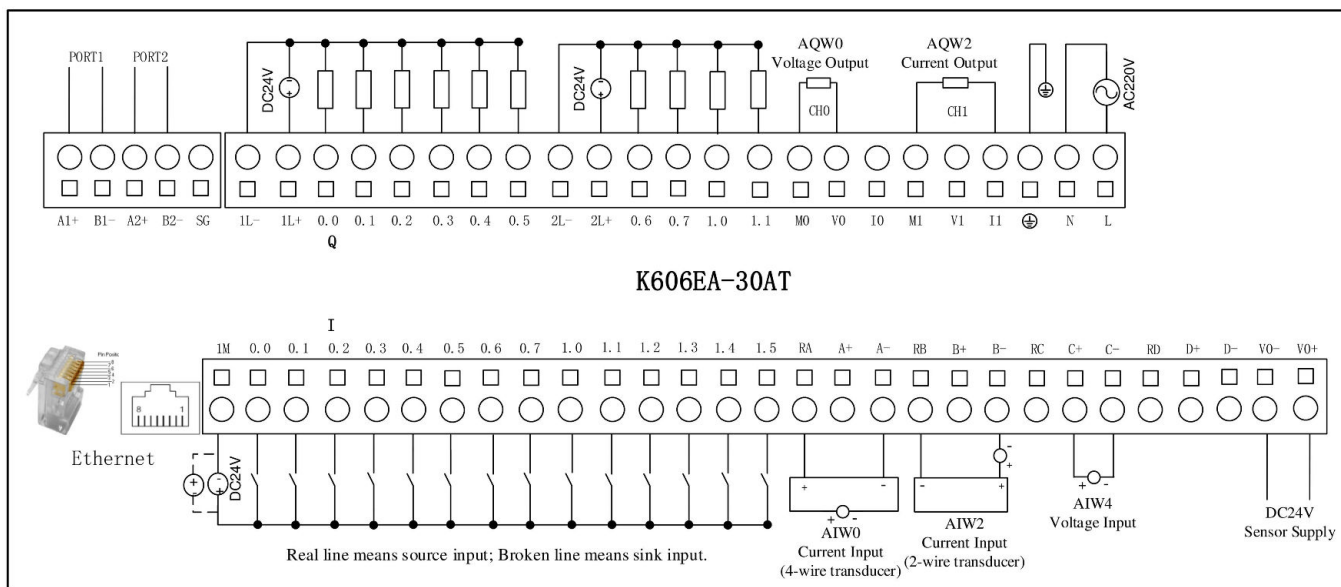
K606-24DR wiring diagram



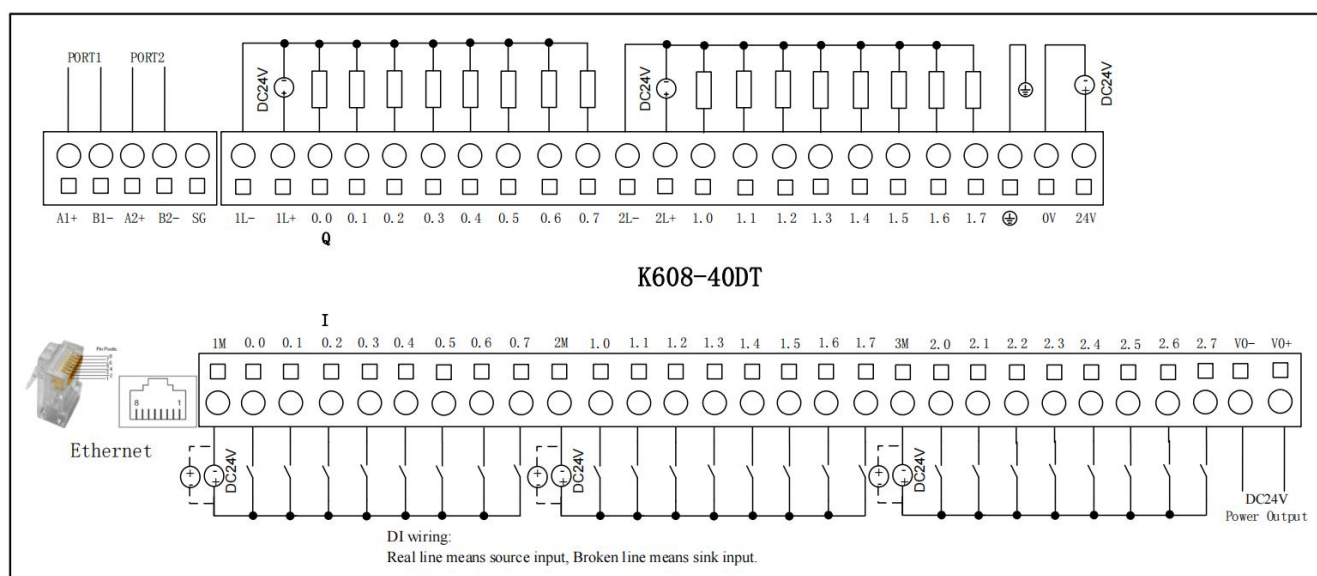
K606-24AR wiring diagram



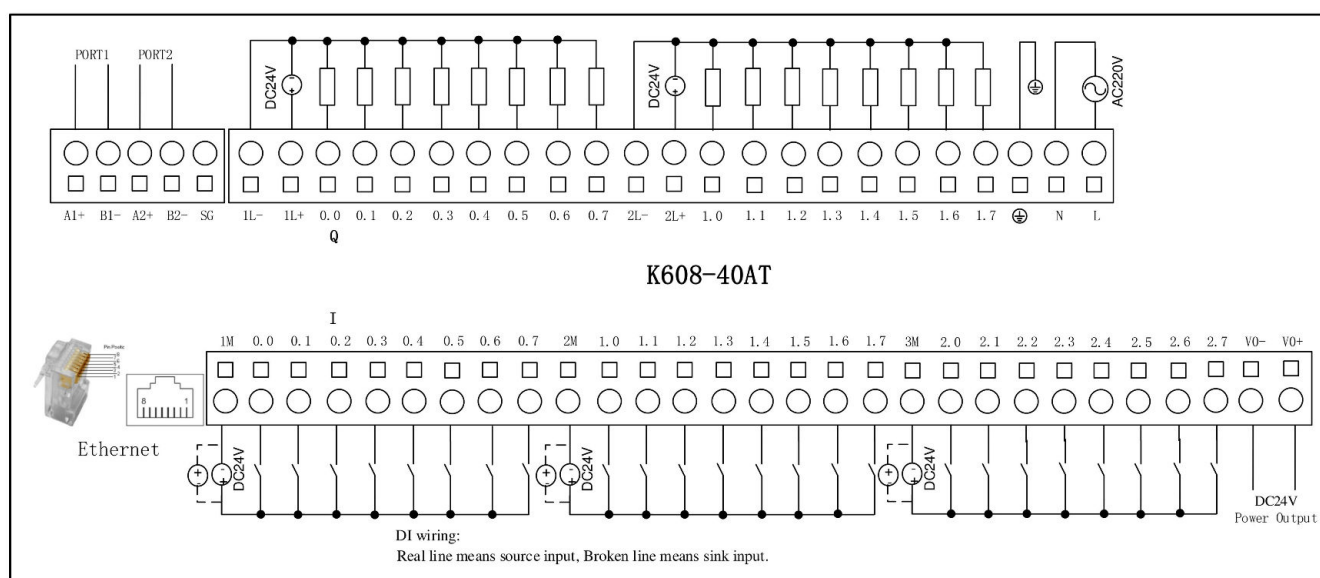
K606EA-30DT wiring diagram



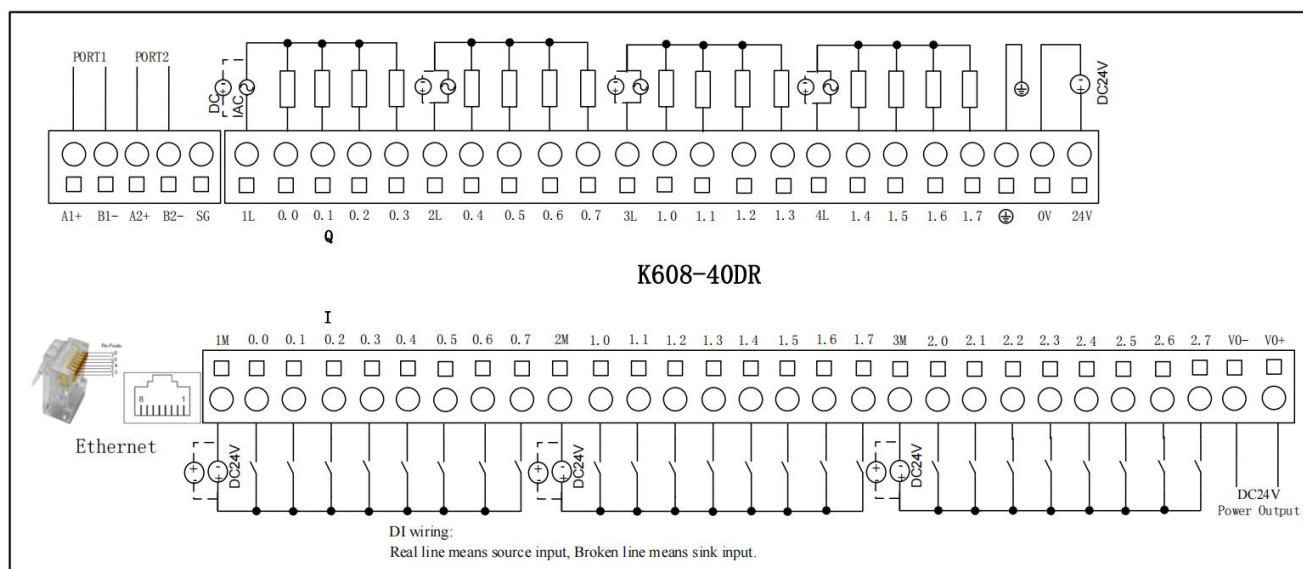
K606EA-30AT wiring diagram



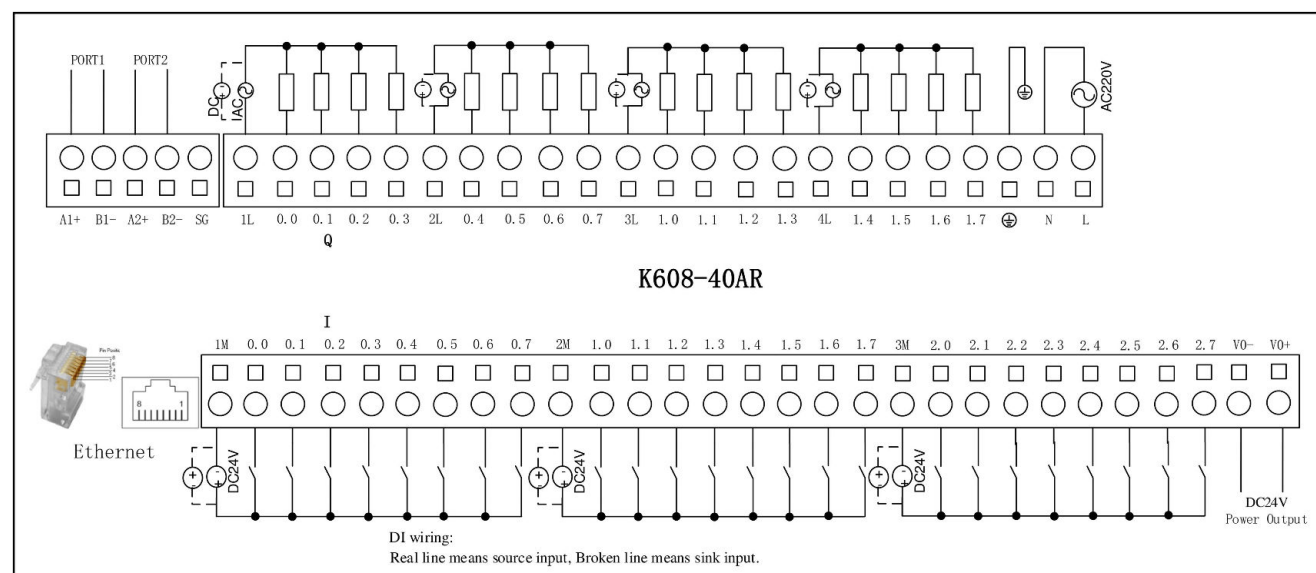
K608-40DT wiring diagram



K608-40AT wiring diagram



K608-40DR wiring diagram



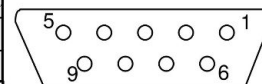
K608-40AR wiring diagram

CAN2 (Located in RJ45)

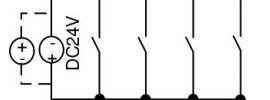
RJ45

	Pin	Definition	Description
PORT0 (RS232)	2	RxD	Receive data
	3	TxD	Send data
	5	GND	GND
PORT3 (RS485)	1	B	RS485-
	6	A	RS485+

PORT0/PORT3

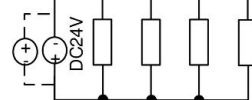


	1M	0.0	0.1	0.2	0.3
I					



Real line means source input;
Broken line means sink input.

	1M	0.0	0.1	0.2	0.3
Q	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐



BD Board wiring diagram