HCFa
禾川科技

M

动控制器

件手册

2025 1 V1.10
:ATC/MM312411

M300

M300 M300

PLC 6

2 16 IO

		IO	
M CPU	HCM301-16MT4-D	8 8	CPU

RUN STOP

-
-
-
- 5.2

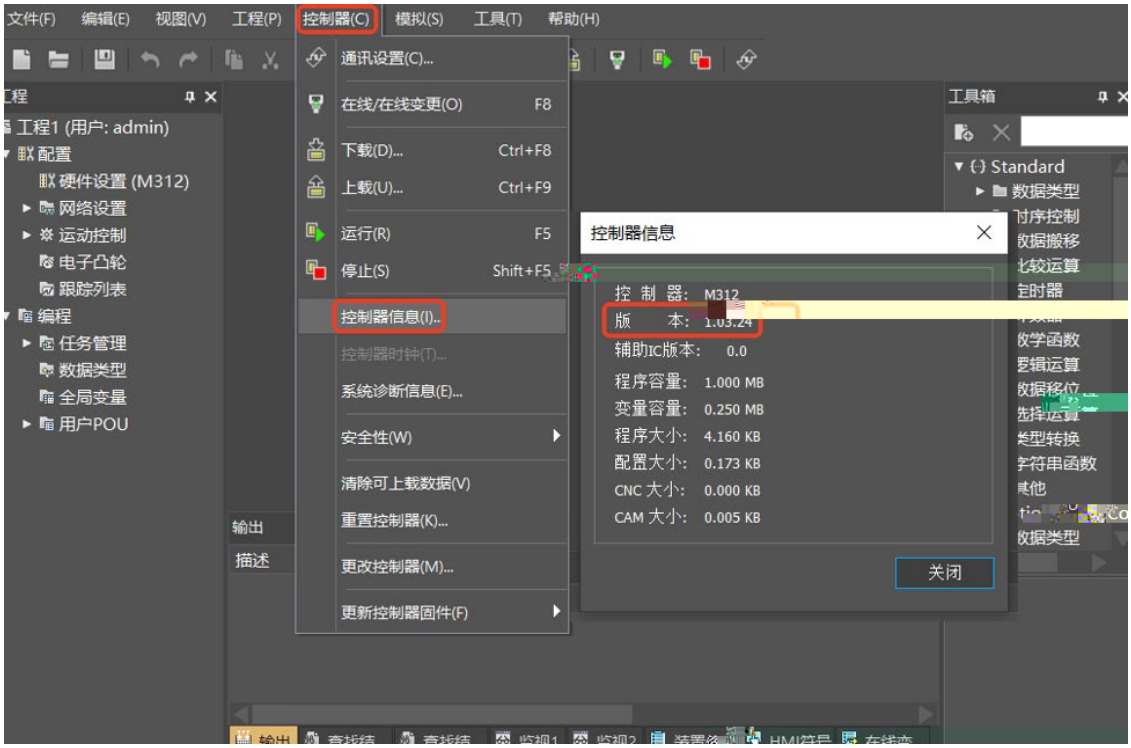
-
- IO
-
-
-
-

M300

M300 CPU HCM3 □□ - □□□□ - □

	POWER INPUT
	DI x16 16 24V DC Sink/Source 24V
	DO x16 16 Sink 24V 24V DC 0.5A 0.5A/
	P/N S/N

→



V1.0	

CPU	I/O M300 HCM3 □ □ - □ □ □ □ - □
	Sysctrl Studio
	Sysctrl Studio
	PLCopen

-
-
- 400@hcfa.cn

前

安全　意事

信息

明

声明

录

M　列控制器

1.1　M300

1.1.1

1.2　M

1.3

1.3.1

1.3.2

CPU单元型号及　件　明

2.1

2.2

2.2.1　CPU

2.2.2

2.2.3

2.2.4

2.2.5　USB/Type-C

2.2.6　SD

2.2.7

产品　介

3.1

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3.3

3.4 IO

3.4.1 IO

3.4.2

3.5

3.5.1

3.5.2 RS485

3.5.3 CAN

件　及使

4.1

安 和

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5.1.2

5.1.3

5.1.4

5.1.5

5.1.6 RTC

5.2

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5.2.2 IO

5.2.3

5.2.4

5.3

5.3.1 CPU

5.3.2

6.1 Modbus

6.1.1

6.1.2 Modbus

6.2 EtherNet

6.2.1 EtherNet

6.2.2 EtherNet

6.2.3 EtherNet Modbus TCP

6.2.4 EtherNet

6.3 CAN

6.3.1 CAN

6.3.2 CANopen PDO

6.3.3 CANopen

6.3.4 CANopen

6.3.5 CANopen

6.4 RS485

6.4.1 RS485

6.4.2 RS485

6.4.3 RS485

6.4.4 RS485

6.4.5 RS485

6.5 RS232

6.5.1 RS232

6.5.2 RS232

6.5.3 RS232

6.5.4 RS232

6.5.5 RS232

1 M

1.1 M300

1.1.1

1.2 M

1.3

1.3.1

1.3.2

1.1 M300

1.1.1

	IO				
					USB
M301	8 8	4	-	1*RS485 1*RS232	1
M302					
M310			1		
M311					
M312	16 16	6		2*RS485	

- M

M M312 CAN CAN IO

- USB/Type-C

PC Sysctrl Studio USB/Type-C CPU

- EtherNet

PC Sysctrl Studio

modbus TCP

- RS485/RS232 ₃ S485 S

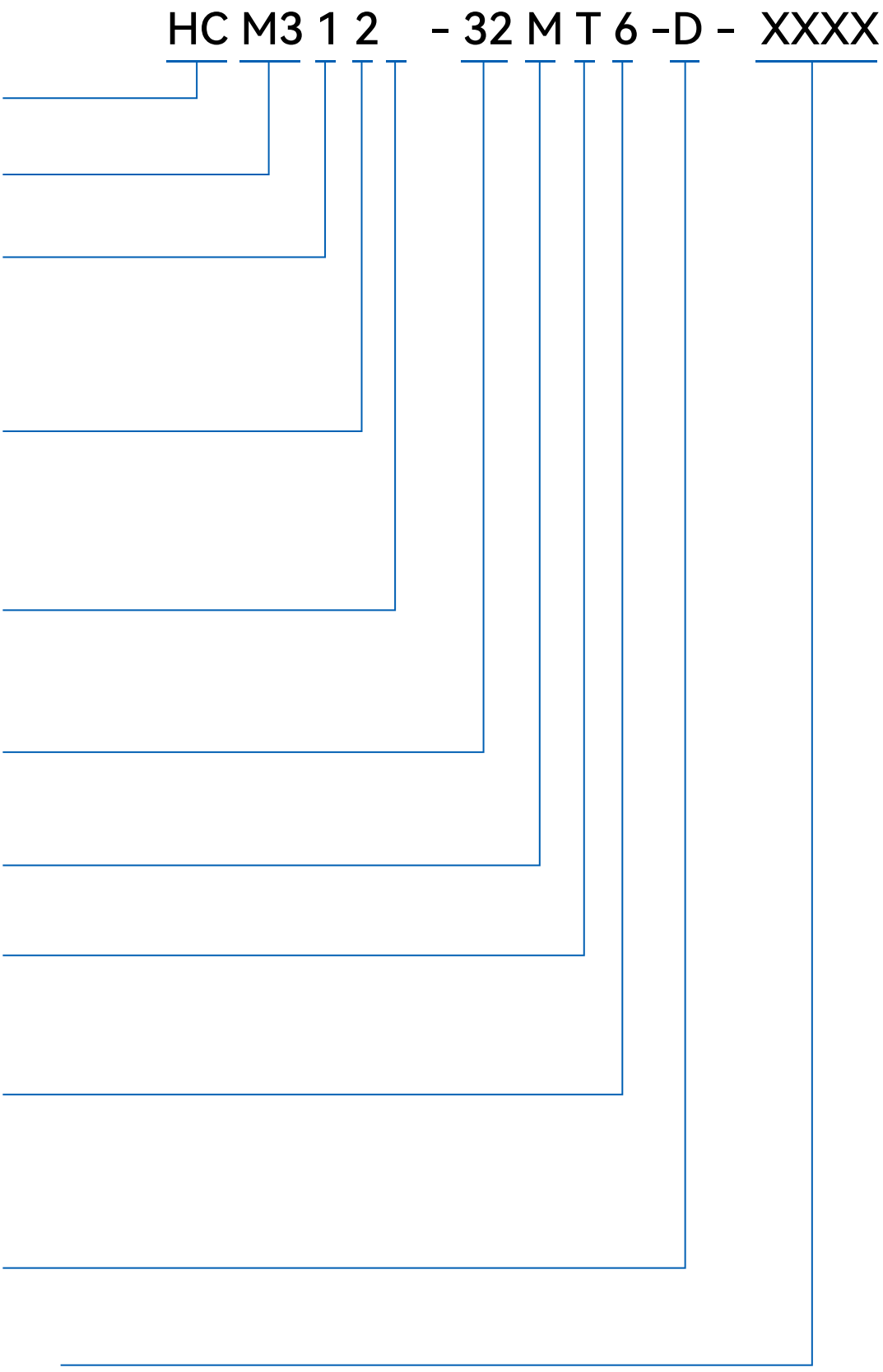
1.3

1.3.1

M300

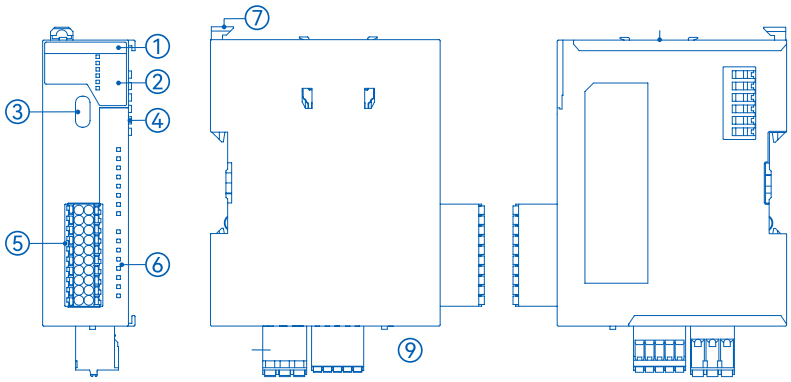
https://www.hcfa.cn →

→ M →


HC M3 1 2 - 32 M T 6 -D - XXXX

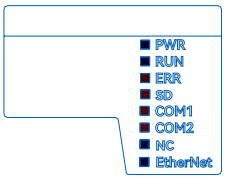
1		
2		CPU
3	Type-C	PLC
4		
5	RJ45	EtherNet
6	20Pin IO	
7		2.2.2
8		DIN
9	DC24V	CPU DC24V
10	5Pin	5.2.3
11	RTC	-
12		
13	RUN/STOP	CPU

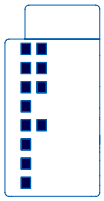
M301/ M302 CPU



2.2.2

M312 CPU

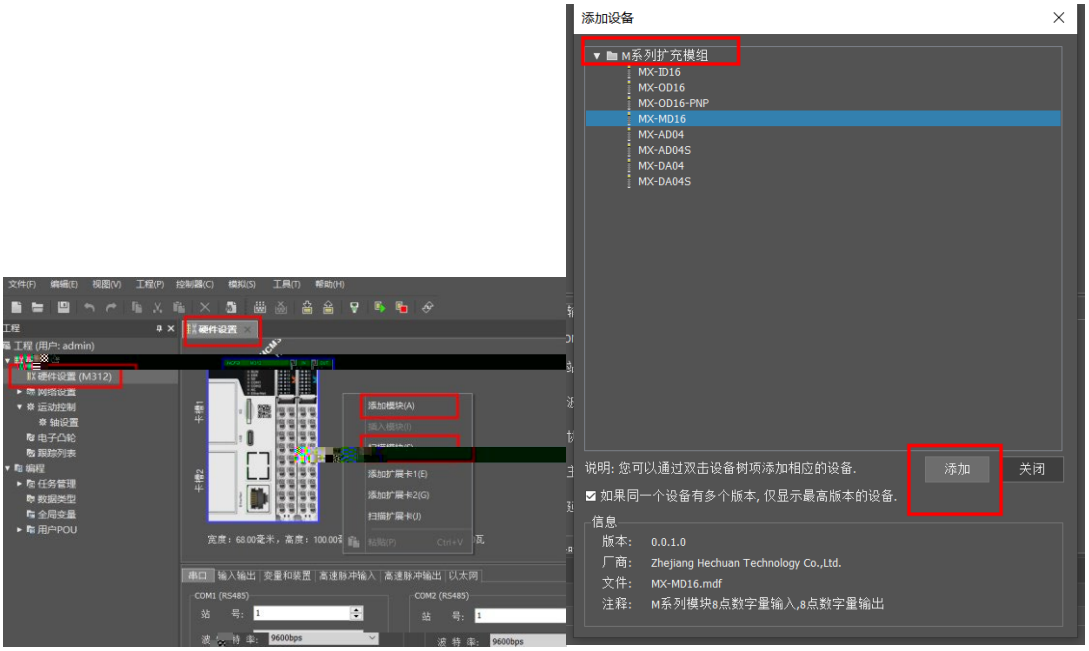




2.2.5 USB/Type-C

CPU sysctrl studio →

M



IO

3

3.1
3.2
3.3
3.4 IO
3.4.1 IO
3.4.2
3.5
3.5.1
3.5.2 RS485
3.5.3 CAN

3.1

		M312 235g M300 M312 145g
		M312 70.3 mm(W) *104.5 mm(H)*80.2 mm(D) M300 M312) 32.3 mm(W) *104.5 mm(H)*80.2 mm(D)
		0~55
		-25~70
		10 ~95%
	/	2000 m (80kPa)
		1500Vp-p 1μs 50ms IEC IEC61000-4-2/3/4/6
		Hz / m/s² / mm; DIN: 10~57 / 0.035; 57~150 / 4.9; X Y Z 10 80
		150m/s² 11ms X Y Z 2
		IP20
		PPE
		CE

3.2

	DC20.4V~28.8V -15%~+20%
	5W
	500V 1min 10mA

3.3

			256KBytes			512KBytes			
			256KBytes (16KBytes)			256KBytes (32KBytes)			
	I %I		128Bytes						
	Q %Q		128Bytes						
	M %M		128KBytes						
			LD ST C/C++						
			4 100K			4 200K			6 200K
			2						
			≤ 16						
			≤ 16						
			+ +	≤ 16					
				16					
RTC									HCMXB-RTC-BD
			-						2
IO			8						16
			8 2 100K (AB +)			8 2 200K (AB +)			
			8						16
			4 100K (+ +)			4 200K (+)			6 200K (+)
			-	16		-	16		16
			-	32		-	32		32
			-	1 (8)		-	1 (8)		1 (8)
SD			-						1
USB			1 USB2.0 Type-C						
	RS485		1						4 2 HCMXB-2RS485-BD 2
			Modbus (ASCII/RTU)						
			32						
		bps	9600 19200 38400 57600 115200						
	RS232		1						HCMXB-2RS232-BD 2
			Modbus (ASCII/RTU)						
			1						
		bps	9600 19200 38400 57600 115200						

CAN		-	HCMXB-CAN-BD 1
		-	CANopen DS301 32
EtherNet		-	1
		-	
		-	100/10Mbps
	TCP	-	16(ModbusTCP+Socket + EtherNet/IP)
	Modbus TCP	-	(Client) (Se r er) 16 (Client) 16 (Se r er) 16
	Socket	-	:8, TCP/UDP
		-	

IO

		M311/M310	M301/M302
	16		
	16 / 16 COM	8 / 8	COM
OFF	<10μA		
	0.5A/ 4A/		
	7.2W/ 24W/		
	5W/ 18W/		
	1mA / 5V		
OFF -> ON	< 2.5μs		
ON -> OFF	< 2.5μs		
	3.75kV		
	QX0.0~ QX0.7 QX1.0~ QX1.7	QX0.0~ QX0.7	

3.4.2

3.5

3.5.1

	RJ45
	100/10Mbps
	100m
	Modbus TCP EtherNet/IP Socket
IP	192.168.1.8

3.5.2 RS485

	5Pin
	9600 19200 38400 57600 115200bps
	500m 9600bps
	Modbus ASCII/RTU
	120Ω
	32

3.5.3 CAN

	RJ45
	1Mbps
	2500m 20kbit/s
	CANOpen
	120Ω
	32

4

4.1

5

5.1

5.1.1

5.1.2

5.1.3

5.1.4

5.1.5

5.1.6 RTC

5.2

5.2.1

5.2.2 IO

5.2.3

5.2.4

5.3

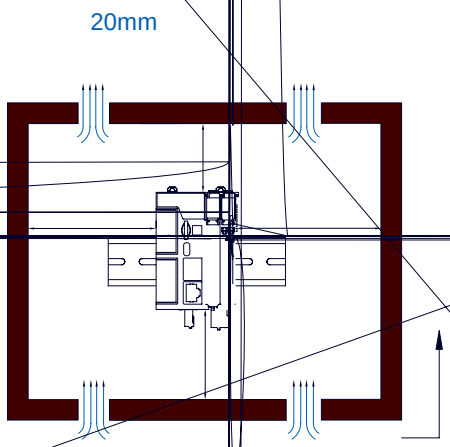
5.3.1 CPU

5.3.2

5.1

5.1.1

M312 CPU



5.1.2

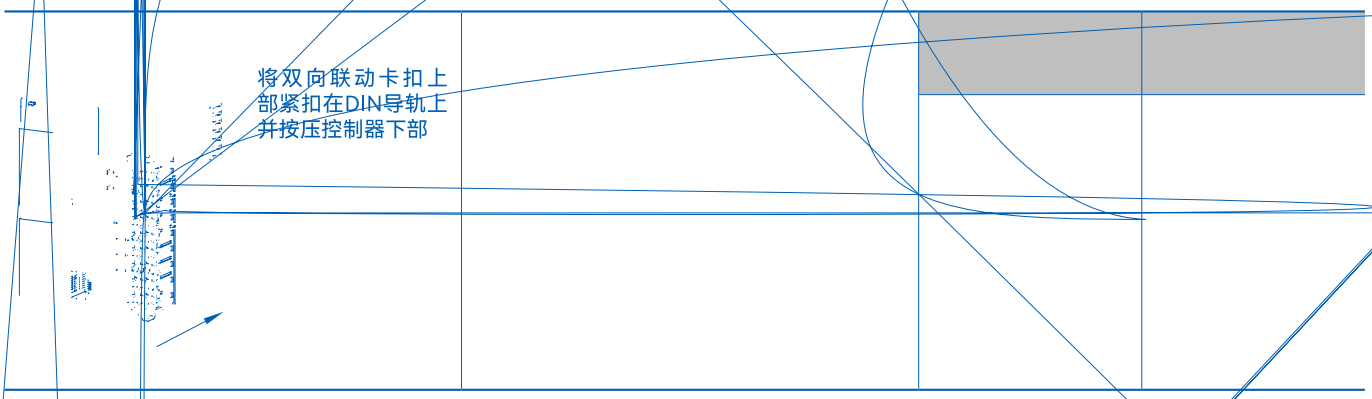
M312 CPU

DIN

“ ”

DIN

“ ”



5.1.3

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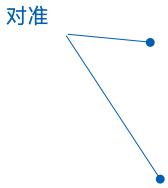


- 2

5.1.6 RTC

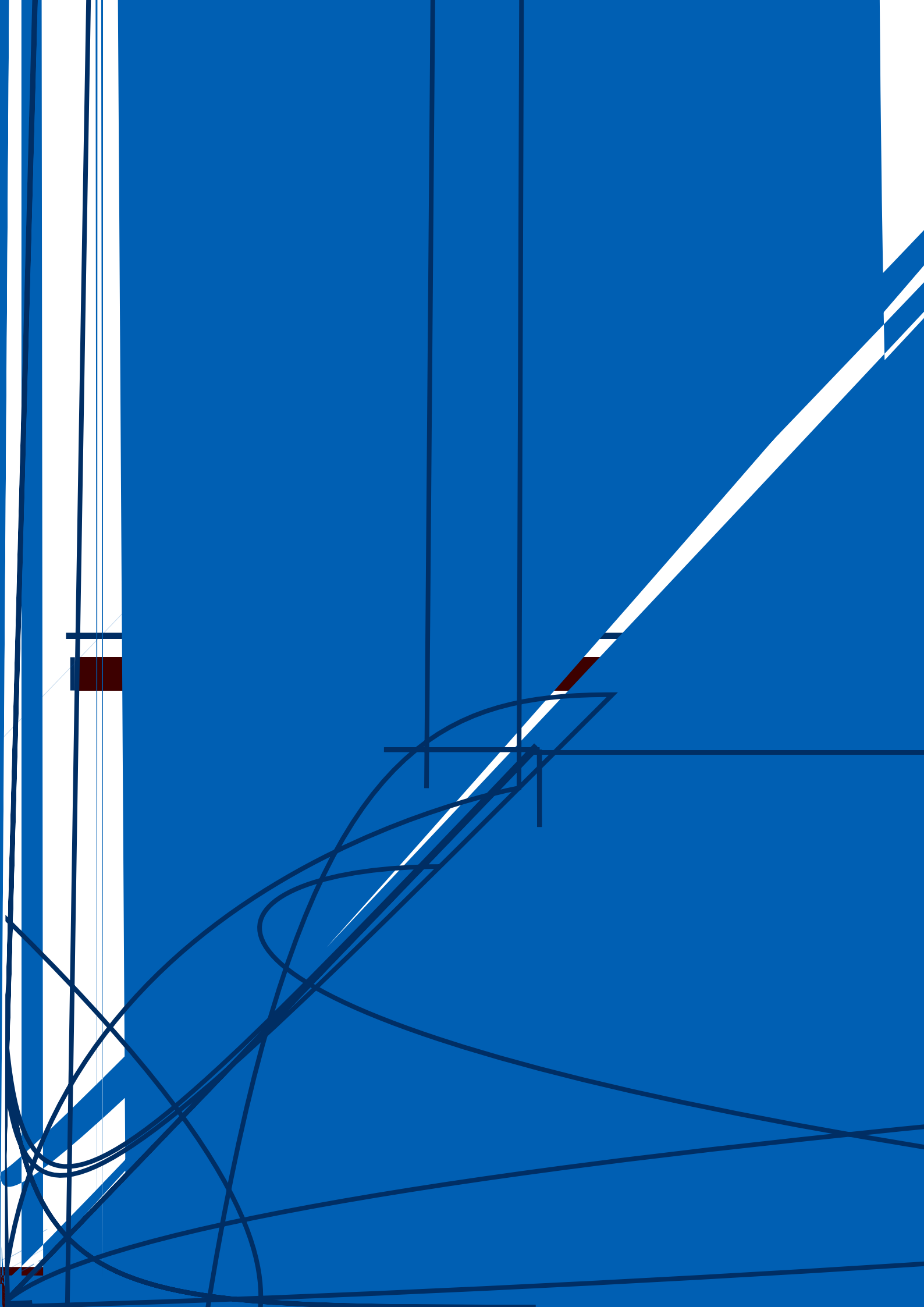
M312 CPU

-

RTC

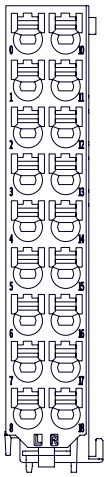
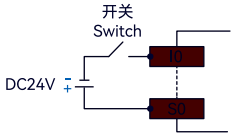
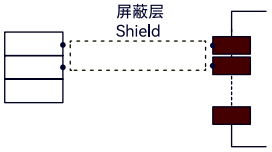
RTC

对准卡槽

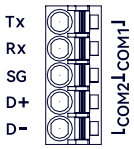
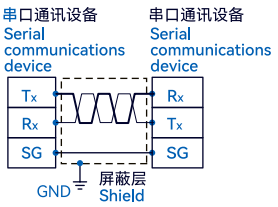
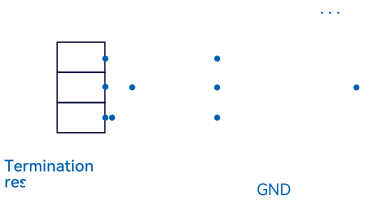


5.2.2 IO

M312 CPU

			IN		OUT			IO	IO
0		10	I0	I10	Q0	Q10			

M300 CPU M312

5Pin			RS232	RS485
COM1 RS232	Tx			

5.2.4

M312 CPU

6

6.1 Modbus

6.1.1

6.1.2 Modbus

6.2 EtherNet

6.2.1 EtherNet

6.2.2 EtherNet

6.2.3 EtherNet Modbus TCP

6.2.4 EtherNet

6.3 CAN

6.3.1 CAN

6.3.2 CANopen PDO

6.3.3 CANopen

6.3.4 CANopen

6.3.5 CANopen

6.4 RS485

6.4.1 RS485

6.4.2 RS485

6.4.3 RS485

6.4.4 RS485

6.4.5 RS485

6.5 RS232

6.5.1 RS232

6.5.2 RS232

6.5.3 RS232

6.5.4 RS232

6.5.5 RS232

6.1 Modbus

6.1.1

% M X 0.0

装置编号

装置

6.1.2 Modbus

MODBUS 03/06/10/01/02/05/0F RS232 RS485

%QX50.0~%QX127.7

			Modbus
I	bit	%IX0.0~%IX0.7	0x6000~0x6007
		%IX1.0~%IX1.7	0x6008~0x600F
		%IX127.0~%IX127.7	0x63F8~0x63FF
	word	%IW0~%IW63	0x8000~0x803F
Q	bit	%QX0.0~%QX0.7	0xA000~0xA007
		%QX1.0~%QX1.7	0xA008~0xA00F
		%QX127.0~%QX127.7	0xA3F8~0xA3FF
	word	%QW0~%QW63	0xA000~0xA03F
M	word	%MW0~%MW32767	0x0000~0x7FFF

QX MODBUS :

QXA.B A*8+B 16 +16#A000

%QX50.1 Modbus 0xA191 50*8+1=401=16#191

16#191+16#A0000=0xA191

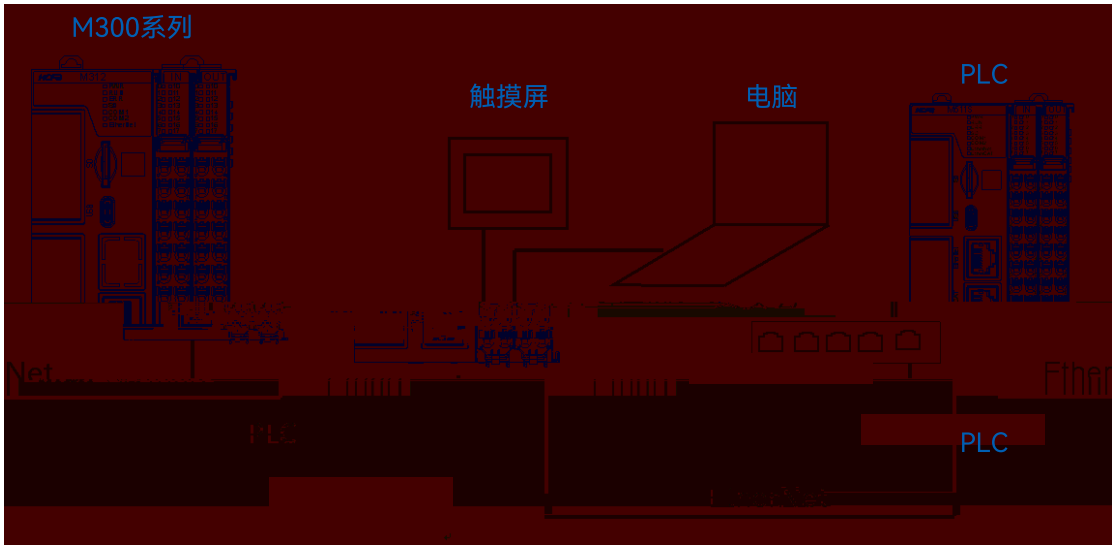
6.2 EtherNet

6.2.1 EtherNet

Ethernet IP 192.168.1.8

				Modbus TCP EtherNet/IP Socket
				100
Modbus TCP EtherNet/IP Socket				16
Modbus TCP	Client Se r er			16
Socket	TCP UDP			

6.2.4 EtherNet



* PDO PDO 8

SDO

PDO SDO

8	SINT USINT BYTE
16	INT UINT WORD
32	DINT UDINT REAL DWORD

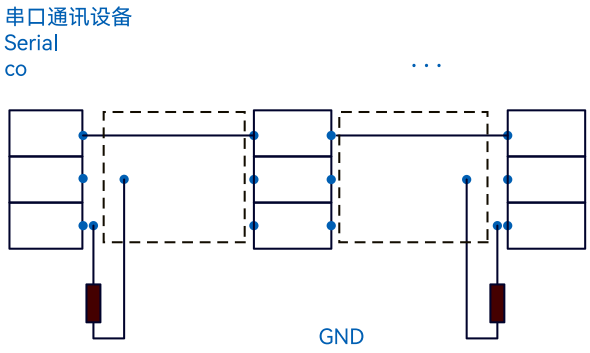
1-65535ms

6.3.4 CANopen

6.4.2 RS485

M300 RS485 Modbus Modbus
PLC Modbus M300 RS485
32 RS485 1~255

6.4.3 RS485



	0x03			100	%MW,%QW,%IW
	0x04	M 04		100	%MW,%QW,%IW
	0x06			1	%MW,%QW
	0x10			100	%MW,%QW
	0x17			100	%MW,%QW, %IW

M300 RS485

1		
2	Modbus	Modbus
3		WORD 100 WORD bit 256
7		

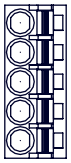
6.5 RS232

6.5.1 RS232

M312 RS232 1 RS232 RS232
1 RS232 HCMXB-2RS232-BD RS232

RS232			RS232 1	RS232 2
RS232 1	Tx1	Tx1 Rx1 SG SG Tx2 Rx2	串口通讯	

M300 RS232 RS485 RS232

		RS232
Tx		串口通讯设备 Seri

6.5.5 RS232

M300 RS232

				/	
	0x01	M 01		256	%IX,%QX
	0x02	M 02		256	%IX,%QX
	0x05			1	%QX
	0x0F			256	%QX
	0x03			100	%MW,%QW,%IW
	0x04	M 04		100	%MW,%QW,%IW
	0x06			1	%MW,%QW
	0x10			100	%MW,%QW
	0x17			100	%MW,%QW, %IW

M300 RS232

1		
2	Modbus	Modbus
3		WORD 100 WORD bit 256
7		

HCFA