



Product for Field Test

Newsletter Date: 18.04.2025

1. Product Introduction: M200 series PLC (Basic/Standard logic controller)



HCM501S-16MT4-D-***

1 2 3 4 5 6 7 8 9 10 11

1. Product name

HC HC: HCFA

2. Product series

M5 M1: Pulse economical type
M2: Basic/standard logic type
M3: Motion control type(thin type)
M5: General-purpose motion control type

3. Number of Ethernet ports

0 0: None
1: 1 Ethernet port
2: 2 Ethernet ports
3: 3 Ethernet ports

4. Model code

1 M100/M200/M300 series M500 series
0: Type 1 products 1: 8 axes EtherCAT motion axes
1: Type 2 products 2: 16 axes EtherCAT motion axes
2: Type 3 products 3: 32 axes EtherCAT motion axes
3: Type 4 products 4: 64 axes EtherCAT motion axes

5. Function code

S None: Standard version
S: Economical version
P: PLUS version

6. Total points

16 14: 8 inputs, 6 outputs
16: 8 inputs, 8 outputs
20: 12 inputs, 8 outputs
30: 16 inputs, 14 outputs
32: 16 inputs, 16 outputs (M300/M500 series), 18 inputs, 14 outputs (M200 series)
40: 24 inputs, 16 outputs
42: 24 inputs, 18 outputs
48: 28 inputs, 20 outputs
60: 36 inputs, 24 outputs

7. Description

M M: Main unit

8. Output type

T T: NPN transistor
R: Relay
P: PNP transistor

9. Pulse output

4 3: 3-ch pulse output
4: 4-ch pulse output
6: 6-ch pulse output
8: 8-ch pulse output
10: 10-ch pulse output

10. Power type

D D: DC power
A: AC power

11. Control version numbers and non-standard specifications

Note: 1. The difference between the "Type x products" in the model code is mainly the function difference; 2. The EtherCAT motion axis in the model code is the maximum axis number.





Product for Field Test

2. Product information

Model name	HCM211-20MT4-A	HCM211-32MT6-A	HCM211-42MT8-A	HCM211-60MT10-A	HCM212-32MT4-A	HCM212-60MT8-A
Appearance						
Program capacity	512 Kbytes					
Variable capacity	256 Kbytes (The power-failure retention capacity is 32Kbytes)					
Programming	128 Bytes					
Q-area(%Q)	128 Bytes					
M-area(%M)	128 Kbytes					
Programming language	LD, ST, C/C++					
EtherCAT axis	8/PDO configuration is not required, only slave stations provided in the programming software are supported.					
Axis capacity	4-axis 200k	6-axis 200k	8-axis 200k	10-axis 200k	4-axis 200k	8-axis 200k
Number of encoder axes	2			4	2	4
Total number of axes (quadrant axis + encoder axis + imaginary axis)	≤16					
Right extension	16					
Max. number of extension modules	Built-in main unit					
RTC battery	3					
Optional card	Max. number of option cards					
I/O points for main unit	Inputs 12inputs Supports 8-ch external interrupts; 2-ch 200k high-speed pulse inputs (AB phase, pulse + direction, single pulse)	18inputs Supports 8-ch external interrupts; 2-ch 200k high-speed pulse inputs (AB phase, pulse + direction, single pulse)	24inputs Supports 8-ch external interrupts; 4-ch 200k high-speed pulse inputs (AB phase, pulse + direction, single pulse)	36inputs Supports 8-ch external interrupts; 4-ch 200k high-speed pulse inputs (AB phase, pulse + direction, single pulse)	18inputs Supports 8-ch external interrupts; 2-ch 200k high-speed pulse inputs (AB phase, pulse + direction, single pulse)	36inputs Supports 8-ch external interrupts; 4-ch 200k high-speed pulse inputs (AB phase, pulse + direction, single pulse)
Outputs (MT model is 200k output; MT model is relay output)	8outputs Supports 4-ch 200k pulse output (pulse + direction)	14outputs Supports 4-ch 200k pulse output (pulse + direction)	18outputs Supports 4-ch 200k pulse output (pulse + direction)	24outputs Supports 16-ch 200k pulse output (pulse + direction)	14outputs Supports 4-ch 200k pulse output (pulse + direction)	24outputs Supports 4-ch 200k pulse output (pulse + direction)
Number of axes	16					
Electronic cam	32					
Number of key points of a single curve	1 axis groups (max. 8-axis interpolation per axis group)					
Axis group	1					
Code Capacity	1-ch					
50 card	1-ch					
USB	1-ch USB2.0 Type-C					
Function	Program download, software monitoring and debugging, firmware upgrade					
Power supply	AC 220V					
Function	Max. 4 channels: The main unit has 2 channels, and 2 more channels can be expanded by installing the optional card HCMXB-2RS485-200-BD					
RS485	Modbus master and slave (ASCII/RTU); free protocol					
Max. number of slaves	32					
Max. number of slaves (30s)	9600, 19200, 38400, 57600, 115200					
Number of interfaces	Install optional card HCMXB-2RS232-200-BD to support 2-channel					
RS232	Modbus master and slave (ASCII/RTU); free protocol					
Max. number of slaves	1					
Max. number of slaves (30s)	9600, 19200, 38400, 57600, 115200					
CAN	1-ch					
Number of interfaces	CANopen protocol (DS201), can be used as master or slave; supports 32 slaves when used as master					
Supported protocol	CANopen protocol (DS201), can be used as master or slave; supports 16 slaves when used as master					
Number of interfaces	1-ch					
Function	Communication, program upload/download, etc.					
Ethernet	100/10Mbps					
Data transmission speed	16(ModbusTCP+Socket) + Ethernet(IP)					
Total number of TCP connections	Maximum number of connections for client (master): 16; Maximum number of connections for server (slave): 16					
Modbus TCP	Maximum number of connections: 8 (UDP+TCP)					
Socket	Standard Industrial Ethernet Communication Cable					
Cables	Maximum number of connections: 8; Maximum data volume per connection: 200bytes; Cycle interval: 5~1000ms					
EtherNet IP	CIP implicit communication					
Only slave support	CIP explicit communication					
Number of interfaces	-					
Topology	Linear					
Transmission medium	Standard EtherCAT communication cable					
Max. transmission distance (reference model)	100m					
Max. number of nodes	8 (PDO configuration is not required, only supports slaves provided in the programming software)					
Max. number of process points	1380 bytes (maximum frame number is 1)					
Communication cycle	Minimum 500μs					
Supported protocols	EtherCAT master					

*Note: Only MT models support pulse output.





Product for Field Test

3. Product Introduction: M series expansion modules



HCMX-MD16-D-****

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1. Product name

HC HC: HCFA

2. Product series

MX MX: M-series general extension
MXE: EtherCAT remote I/O
MXC: CANopen remote I/O
MXP: Profinet remote I/O

3. Extension module type

MD **OC**: Relay output
ID: Digital input
OD: Transistor output
MD: Digital I/O
AD: Analog input
DA: Analog output
EC: EtherCAT coupler

4. Number of module channels

16 **04**: 4-ch
08: 8-ch
16: 16-ch
32: 32-ch

5. Power type

D **D**: DC power

6. Control version and non-standard specifications





Product for Field Test

4. Models available for field test:

Device	Model
Expansion module	HCMX-OC08-D
	HCMX-OD08-D
	HCMX-OD08-D-PNP
	HCMX-OD16-D-PNP
	HCMX-MD16-D-PNP
	HCMX-ID32-D
	HCMX-OD32-D-PNP
	HCMX-OD32-D
	HCMX-MD32-D-PNP
	HCMX-MD32-D
	HCMXP-MD16-D





Product for Field Test

5. Module information

M-series remote expansion module

Model name	HCMXE-MD16-D	HCMXC-MD16-D	HCMXP-MD16-D
Appearance			
Product Type	EtherCAT Remote I/O	CANopen Remote I/O	Profinet Remote I/O
Number of expandable modules on the right-side	16		
Input specifications	8 input points, support NPN or PNP input		
Output specifications	8 output points, support NPN output		
Communication protocol	EtherCAT	CANopen	Profinet
Communication rate	100Mbps	Max. 1Mbps	100Mbps
Max. communication distance	100m	5000m (10Kbps)	100m
Operation mode	FreeRun、SM-Synchron、DC-Synchron	-	-
Rated voltage	DC 24V		

M-series digital input module

Model name	HCMX-ID08-D	HCMX-ID16-D	HCMX-ID32-D
Appearance			
Input points	8	16	32
Input type	NPN/PNP		
Rated power	1W		
Rated input voltage	DC24V		
Rated input current	5mA		
Input ON current	>4mA		
Input OFF current	<2.5mA		
Input ON voltage	≥DC15V		
Input OFF voltage	≤DC5V		
Hardware response time (ON/OFF)	100μs/100μs		
Software filtering	Supported		
Input resistance	2.7kΩ		
Common mode	Share one common terminal for every 8 points		





Product for Field Test

M-series digital output module

Model name	HCMX-OD08-D	HCMX-OD16-D	HCMX-OD32-D
Appearance			
Output points	8	16	32
Output type	NPN		
Rated power	1W	1W	1.5W
Control circuit voltage	DC24V		
Rated load current (resistance)	0.5A/point, 4A/common terminal		
Rated load current (inductance)	7.2W/point, 24W/common terminal		
Rated load current (lamp)	5W/point, 18W/common terminal		
Leakage current at power OFF	< 10μA		
Hardware response time (ON/OFF)	500μs/500μs		
Output frequency	Resistive load 100Hz; Inductive load 0.5Hz; Lamp load 10Hz		
Protection function	Short-circuit protection, over-current protection		
Common mode	For modules with 8 outputs, Share one common terminal for every 8 points; for modules with 16 or 32 outputs, Share one common terminal for every 16 points.		

Model name	HCMX-OD08-D-PNP	HCMX-OD16-D-PNP	HCMX-OD32-D-PNP	HCMX-OC08-D
Appearance				
Output points	8	16	32	8
Output type	PNP			Relay
Rated power	1W	1W	1.5W	1.5W
Control circuit voltage	DC24V			AC250V/DC30V
Rated load current (resistance)	0.5A/point, 2A/common terminal			2A/point, 8A/common terminal
Rated load current (inductance)	7.2W/point, 12W/common terminal			1A/point, 4A/common terminal
Rated load current (lamp)	5W/point, 10W/common terminal			30W/point, 120W/common terminal
Leakage current at power OFF	< 10μA			-
Hardware response time (ON/OFF)	500μs/500μs			10ms/10ms
Output frequency	Resistive load 100Hz Inductive load 0.5Hz Lamp load 10Hz			Resistive load 1Hz Inductive load 0.5Hz Lamp load 1Hz
Mini. number of switching times	-			100000
Protection function	Short-circuit protection, over-current protection			-
Common mode	For modules with 8 outputs, Share one common terminal for every 8 points; for modules with 16 or 32 outputs, Share one common terminal for every 16 points.			Share one common terminal for every 4 points





Product for Field Test

Digital I/O module

Model name		HCMX-MD16-D	HCMX-MD32-D	HCMX-MD16-D-PNP	HCMX-MD32-D-PNP
Appearance					
Input specifications	Input points	8	16	8	16
	Input type	NPN/PNP			
	Rated input voltage	DC24V			
	Rated input current	5mA			
	Input ON current	>4mA			
	Input OFF current	<2.5mA			
	Input ON voltage	≥DC15V			
	Input OFF voltage	≤DC5V			
	Hardware response time (ON/OFF)	100μs/100μs			
	Software filtering	Supported			
	Input resistance	2.7kΩ			
Output specifications	Output points	8	16	8	16
	Output type	NPN		PNP	
	Control circuit voltage	DC24V			
	Rated load current (resistance)	0.5A/point, 4A/common terminal		0.5A/point, 2A/common terminal	
	Rated load current (inductance)	7.2W/point, 24W/common terminal		7.2W/point, 12W/common terminal	
	Rated load current (lamp)	5W/point, 18W/common terminal		5W/point, 10W/common terminal	
	Leakage current at power OFF	< 10μA			
	Hardware response time (ON/OFF)	500μs/500μs			
	Output frequency	Resistive load 100Hz; Inductive load 0.5Hz; Lamp load 10Hz			
		Protection function	Short-circuit protection, over-current protection		
Rated power		1W	1.5W	1W	1.5W
Common mode		Share one common terminal for every 8 points	Share one common terminal for every 16 points	Share one common terminal for every 8 points	Share one common terminal for every 16 points





Product for Field Test

6. Product Introduction: M series expansion card

HCMXB-2RS232-200-BD

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1.Product name

HC

HC: HCFA controller

2.Optional card series

MXB

MXB: M-series optional expansion

3.Product series

2RS232

2RS232: 2-ch 232 serial ports
2RS485: 2-ch 485 serial ports
CAN: CANopen protocol
RTC: Perpetual calendar battery card
A B : AB-phase differential encoder optional card

4.Suffix

200

None: M300/M500S/M500 series optional card
5 0 0 : M500 series optional card
2 0 0 : M200 series optional card
1 0 0 : M100 series optional card

5.Suffix

BD

BD: BD optional card

7. Models available for field test

Device	Model
Optional card	HCMXB-2RS232-200-BD
	HCMXB-2RS485-200-BD





Product for Field Test

8. Optional Card Information

Model name	HCMXB-2RS232-BD (Applicable to M312, M500S, M500 series main units)	HCMXB-2RS232-100-BD (Applicable to M100 series main units)	HCMXB-2RS232-200-BD (Applicable to M200 series main units)
Appearance			
Specifications	2-channel RS232 communication optional card; can be used as a master or slave station, supports Modbus protocol and free protocol		
Communication mode	RTU/ASCII		
Max. supported number of slave stations	1		
Baud rate (bps)	9600, 19200, 38400, 57600, 115200		
Max. communication distance	15m (9600bps)		

Model name	HCMXB-2RS485-BD (Applicable to M312, M500S, M500 series main units)	HCMXB-2RS485-100-BD (Applicable to M100 series main units)	HCMXB-2RS485-200-BD (Applicable to M200 series main units)
Appearance			
Specifications	2-ch RS485 communication optional card; Can be used as a master station or slave station,Support Modbus protocol and free protocol		
Communication mode	RTU/ASCII		
Max. supported number of slave stations	32		
Terminating resistor	120Ω, externally connected		
Baud rate (bps)	9600, 19200, 38400, 57600, 115200		
Max. communication distance	500m (9600bps)		





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9. Release Model:

Device	Model	Max. order quantity
M200 series PLC	HCM211-20MT4-A	10
	HCM211-20MR-A	10
	HCM211-32MT6-A	10
	HCM211-32MR-A	10
	HCM211-42MT8-A	10
	HCM211-42MR-A	10
	HCM211-60MT10-A	10
	HCM211-60MR-A	10
Expansion Module (Output/Input)	HCMX-OC08-D	10
	HCMX-OD08-D	10
	HCMX-OD08-D-PNP	10
	HCMX-OD16-D-PNP	10
	HCMX-OD32-D-PNP	10
	HCMX-OD32-D	10
	HCMX-ID32-D	10
Expansion Module (Mix)	HCMX-MD16-D-PNP	10
	HCMXP-MD16-D	10
	HCMX-MD32-D-PNP	10
	HCMX-MD32-D	10
Optional Card	HCMXB-2RS232-200-BD	10
	HCMXB-2RS485-200-BD	10

