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07060201-0832-001
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CN 安装说明
EN Instruction Sheet

1. 安全注意事项 (Safety precautions)

本说明书涉及产品为工业产品，并且均为开放式外壳设计。要求用户使用产品时，务必将产品安装于具有防尘、防潮以及免于电击/冲击等意外的控制柜内，并且需要设置保护措施以防止非维护人员不当操作或意外导致设备故障或损坏，造成不可避免的人员危险和财产损失。

The products in this manual are industrial products and are all open-type housing designs. It is essential to install these products within a control cabinet that is safeguarded against dust, moisture, and accidents such as electric shocks or physical impacts. Additionally, protective measures must be taken to prevent malfunctions or damage caused by improper operation or accidents involving non-maintenance personnel. Failure to do so may lead to serious risks to personnel safety and potential loss of property.

更详细的信息请参考 M 系列硬件手册。

Please refer to the M series hardware operation manual for more detailed information.

⚠ 电池 Battery	M200 系列 CPU 内置 CR-2032L/BN 的电池，更换的电池需从禾川购买，由专业的电气工程师佩戴绝缘手套在断电情况下参考 5.3 小节描述进行电池更换。
	The M200 series CPUs are equipped with built-in CR-2032L/BN batteries. Replacement batteries must be purchased from HCFA. A professional electrical engineer, wearing insulated gloves and with power turned off, should replace them as described in Section 5.3.
	Les CPU de la série M200 sont équipés de batteries CR-2032L/BN intégrées. Les batteries de remplacement doivent être achetées auprès de HCFA. Un ingénieur électrique professionnel, portant des gants isolants et avec le courant coupé, devrait les remplacer comme décrit dans la section 5.3.

2. 命名规则 (Model identification)

HC M2 1 1 _ - 20 M T 4 - A - XXXX

1 2 3 4 5 6 7 8 9 10 11

1	产品名称 (Product name)
HC	禾川 (Hechuan Technology)
2	产品系列 (Product series)
M2	基本/标准逻辑型控制器 (Basic/standard logic controller)
3	以太网数量 (Number of Ethernet ports)
1	1个以太网接口 (1)
4	型号代码 (Model code)*
0	第1类型产品 (Type 1 product)
1	第2类型产品 (Type 2 product)
2	第3类型产品 (Type 3 product)
3	第4类型产品 (Type 4 product)

5	功能代码 (Function code)
空 (N/A)	标准版 (Standard version)
6	总点数 (Total I/O channels)
20	12输入8输出 (12 inputs/8 outputs)
32	18输入14输出 (18 inputs/14 outputs)
42	24输入18输出 (24 inputs/18 outputs)
60	36输入24输出 (36 inputs/24 outputs)
7	说明 (Description)
M	主控单元 (Main control unit)
8	输出类型 (Output type)
T	NPN型晶体管 (NPN transistor)
R	继电器 (Relay)

9	脉冲输出 (Pulse output)
4	4通道脉冲输出 (4-channel pulse output)
6	6通道脉冲输出 (6-channel pulse output)
8	8通道脉冲输出 (8-channel pulse output)
10	10通道脉冲输出 (10-channel pulse output)
10	电源类型 (Power supply type)
A	交流电源 (AC power supply)
11	软件/固件定制代码 (Customized software/firmware code)
X	0-9/A-Z/空 (N/A)

*注：第 × 类型产品间主要是功能区别。

*Note: The main difference between Type × Product lies in functionality.

3. 适用型号 (Applicable model)

名称 (Name)	型号 (Model)	适配的扩展卡型号 (Applicable expansion card model)	适配的 IO 型号 * (Applicable IO model)	简要说明 (Brief description)
CPU单元 CPU unit	HCM211-20MR-A			继电器输出, 200k 高速计数 *2, 12 输入 8 输出, EtherNet*1, CAN*1, RS485*2, USB*1, 1 个选配卡, SD 卡 *1, 支持 16 个右侧扩展 Relay output, 200k high-speed counter*2, 12 inputs 8 outputs, EtherNet*1, CAN*1, RS485*2, USB*1, 1 optional card, SD card*1, supports 16 right-side expansions
	HCM211-20MT4-A			200k 脉冲轴 *4, 200k 高速计数 *2, 12 输入 8 输出, EtherNet*1, CAN*1, RS485*2, USB*1, 1 个选配卡, SD 卡 *1, 支持 16 个右侧扩展 200k pulse axis*4, 200k high-speed counter*2, 12 inputs 8 outputs, EtherNet*1, CAN*1, RS485*2, USB*1, 1 optional card, SD card*1, supports 16 right-side expansions
	HCM211-32MR-A			继电器输出, 200k 高速计数 *2, 18 输入 14 输出, EtherNet*1, CAN*1, RS485*2, USB*1, 1 个选配卡, SD 卡 *1, 支持 16 个右侧扩展 Relay output, 200k high-speed counter*2, 18 inputs 14 outputs, EtherNet*1, CAN*1, RS485*2, USB*1, 1 optional card, SD card*1, supports 16 right-side expansions
	HCM211-32MT6-A			200k 脉冲轴 *6, 200k 高速计数 *2, 18 输入 14 输出, EtherNet*1, CAN*1, RS485*2, USB*1, 1 个选配卡, SD 卡 *1, 支持 16 个右侧扩展 200k pulse axis*6, 200k high-speed counter*2, 18 inputs 14 outputs, EtherNet*1, CAN*1, RS485*2, USB*1, 1 optional card, SD card*1, supports 16 right-side expansions
	HCM212-32MT4-A	HCMXB-2RS232-200-BD HCMXB-2RS485-200-BD HCMXB-MA03-200-BD	HCMX-ID08-D HCMX-ID16-D HCMX-OD08-D HCMX-OD08-D-PNP HCMX-OD16-D HCMX-OD16-D-PNP HCMX-MD16-D HCMX-MD16-D-PNP	200k 脉冲轴 *4, 200k 高速计数 *2, EtherCAT 总线轴 *8, 18 输入 14 输出, EtherNet*1, CAN*1, RS485*2, USB*1, 1 个选配卡, SD 卡 *1, 支持 16 个右侧扩展 200k pulse axis*4, 200k high-speed counter*2, EtherCAT bus axis*8, 18 inputs 14 outputs, EtherNet*1, CAN*1, RS485*2, USB*1, 1 optional card, SD card*1, supports 16 right-side expansions
	HCM211-42MR-A	HCMXB-ID04-200-BD HCMXB-OD04-200-BD HCMXB-OD04-200-BD-PNP	HCMX-OD32-D HCMX-OD32-D-PNP HCMX-MD32-D HCMX-MD32-D-PNP	继电器输出, 200k 高速计数 *4, 24 输入 18 输出, EtherNet*1, CAN*1, RS485*2, USB*1, 1 个选配卡, SD 卡 *1, 支持 16 个右侧扩展 Relay output, 200k high-speed counter*4, 24 inputs 18 outputs, EtherNet*1, CAN*1, RS485*2, USB*1, 1 optional card, SD card*1, supports 16 right-side expansions
	HCM211-42MT8-A			200k 脉冲轴 *8, 200k 高速计数 *4, 24 输入 18 输出, EtherNet*1, CAN*1, RS485*2, USB*1, 1 个选配卡, SD 卡 *1, 支持 16 个右侧扩展 200k pulse axis*8, 200k high-speed counter*4, 24 inputs 18 outputs, EtherNet*1, CAN*1, RS485*2, USB*1, 1 optional card, SD card*1, supports 16 right-side expansions
	HCM211-60MR-A			继电器输出, 200k 高速计数 *4, 36 输入 24 输出, EtherNet*1, CAN*1, RS485*2, USB*1, 1 个选配卡, SD 卡 *1, 支持 16 个右侧扩展 Relay output, 200k high-speed counter*4, 36 inputs 24 outputs, EtherNet*1, CAN*1, RS485*2, USB*1, 1 optional card, SD card*1, supports 16 right-side expansions
	HCM211-60MT10-A			200k 脉冲轴 *10, 200k 高速计数 *4, 36 输入 24 输出, EtherNet*1, CAN*1, RS485*2, USB*1, 1 个选配卡, SD 卡 *1, 支持 16 个右侧扩展 200k pulse axis*10, 200k high-speed counter*4, 36 inputs 24 outputs, EtherNet*1, CAN*1, RS485*2, USB*1, 1 optional card, SD card*1, supports 16 right-side expansions
	HCM212-60MT8-A			200k 脉冲轴 *8, 200k 高速计数 *4, EtherCAT 总线轴 *8, 36 输入 24 输出, EtherNet*1, CAN*1, RS485*2, USB*1, 1 个选配卡, SD 卡 *1, 支持 16 个右侧扩展 200k pulse axis*8, 200k high-speed counter*4, EtherCAT bus axis*8, 36 inputs 24 outputs, EtherNet*1, CAN*1, RS485*2, USB*1, 1 optional card, SD card*1, supports 16 right-side expansions

*注：CPU 单元本体右侧最多可以挂载 16 个 IO 模块。

*Note: Up to 16 IO modules can be mounted to the right side of a CPU unit.

4. 通用电气及环境规格 (General electrical and environmental specifications)

4.1 电气规范 (Electrical specification)

型号 (Model)* ¹	额定电压/功率 (Rated voltage/power)* ²	输出电压/功率 (Output voltage/power)	数字量输入/输出类型	Digital input/Output type
HCM211-20MR-A	AC100~240V(-15%~10%),50/60Hz±5%/8W	DC24V(-10%~+10%)/12W	数字量输入: DC24V(DC20.4~28.8V,5mA/Ch) 数字量输出: DC24V,2A/Ch,8A/4Ch* ³ 负载类型: 电阻/电感/电灯负载	Digital input: DC24V(DC20.4~28.8V),5mA/Ch Digital output: DC24V,2A/Ch,8A/4Ch* ³ Load type: Resistive/Pilot duty/Tungsten
HCM211-20MT4-A	AC100~240V(-15%~10%),50/60Hz±5%/7W	DC24V(-10%~+10%)/12W	数字量输入: DC24V(DC20.4~28.8V),5mA/Ch 数字量输出: DC24V,500mA/Ch,4A/8Ch* ³ 负载类型: 电阻/电感/电灯负载	Digital input: DC24V(DC20.4~28.8V),5mA/Ch Digital output: DC24V,500mA/Ch,4A/8Ch* ³ Load type: Resistive/Pilot duty/Tungsten
HCM211-32MR-A	AC100~240V(-15%~10%),50/60Hz±5%/10W	DC24V(-10%~+10%)/12W	数字量输入: DC24V(DC20.4~28.8V,5mA/Ch) 数字量输出: DC24V,2A/Ch,8A/4Ch* ³ 负载类型: 电阻/电感/电灯负载	Digital input: DC24V(DC20.4~28.8V),5mA/Ch Digital output: DC24V,2A/Ch,8A/4Ch* ³ Load type: Resistive/Pilot duty/Tungsten
HCM211-32MT6-A	AC100~240V(-15%~10%),50/60Hz±5%/8W	DC24V(-10%~+10%)/12W	数字量输入: DC24V(DC20.4~28.8V),5mA/Ch 数字量输出: DC24V,500mA/Ch,4A/8Ch* ³ 负载类型: 电阻/电感/电灯负载	Digital input: DC24V(DC20.4~28.8V),5mA/Ch Digital output: DC24V,500mA/Ch,4A/8Ch* ³ Load type: Resistive/Pilot duty/Tungsten
HCM212-32MT4-A	AC100~240V(-15%~10%),50/60Hz±5%/8W	DC24V(-10%~+10%)/12W	数字量输入: DC24V(DC20.4~28.8V),5mA/Ch 数字量输出: DC24V,500mA/Ch,4A/8Ch* ³ 负载类型: 电阻/电感/电灯负载	Digital input: DC24V(DC20.4~28.8V),5mA/Ch Digital output: DC24V,500mA/Ch,4A/8Ch* ³ Load type: Resistive/Pilot duty/Tungsten
HCM211-42MR-A	AC100~240V(-15%~10%),50/60Hz±5%/13W	DC24V(-10%~+10%)/12W	数字量输入: DC24V(DC20.4~28.8V,5mA/Ch) 数字量输出: DC24V,500mA/Ch,4A/8Ch* ³ 负载类型: 电阻/电感/电灯负载	Digital input: DC24V(DC20.4~28.8V),5mA/Ch Digital output: DC24V,500mA/Ch,4A/8Ch* ³ Load type: Resistive/Pilot duty/Tungsten
HCM211-42MT8-A	AC100~240V(-15%~10%),50/60Hz±5%/12W	DC24V(-10%~+10%)/12W	数字量输入: DC24V(DC20.4~28.8V),5mA/Ch 数字量输出: DC24V,500mA/Ch,4A/8Ch* ³ 负载类型: 电阻/电感/电灯负载	Digital input: DC24V(DC20.4~28.8V),5mA/Ch Digital output: DC24V,500mA/Ch,4A/8Ch* ³ Load type: Resistive/Pilot duty/Tungsten
HCM211-60MR-A	AC100~240V(-15%~10%),50/60Hz±5%/16W	DC24V(-10%~+10%)/12W	数字量输入: DC24V(DC20.4~28.8V,5mA/Ch) 数字量输出: DC24V,2A/Ch,8A/4Ch* ³ 负载类型: 电阻/电感/电灯负载	Digital input: DC24V(DC20.4~28.8V),5mA/Ch Digital output: DC24V,2A/Ch,8A/4Ch* ³ Load type: Resistive/Pilot duty/Tungsten
HCM211-60MT10-A	AC100~240V(-15%~10%),50/60Hz±5%/13W	DC24V(-10%~+10%)/12W	数字量输入: DC24V(DC20.4~28.8V),5mA/Ch 数字量输出: DC24V,500mA/Ch,4A/8Ch* ³ 负载类型: 电阻/电感/电灯负载	Digital input: DC24V(DC20.4~28.8V),5mA/Ch Digital output: DC24V,500mA/Ch,4A/8Ch* ³ Load type: Resistive/Pilot duty/Tungsten
HCM212-60MT8-A	AC100~240V(-15%~10%),50/60Hz±5%/13W	DC24V(-10%~+10%)/12W	数字量输入: DC24V(DC20.4~28.8V),5mA/Ch 数字量输出: DC24V,500mA/Ch,4A/8Ch* ³ 负载类型: 电阻/电感/电灯负载	Digital input: DC24V(DC20.4~28.8V),5mA/Ch Digital output: DC24V,500mA/Ch,4A/8Ch* ³ Load type: Resistive/Pilot duty/Tungsten

*注: 1. 所有型号仅能在由有限功率电源 (LPS) 提供的安全特低电压 (SELV) 下运行。

2. 此处标识的额定功率为满负载运行时的最大功率。

3. 考虑温升影响, 降额使用。

*Note: 1. All models can only operate under the safety extra low voltage (SELV) provided by a limited power source (LPS).

2. The power rating indicated here is the maximum power under full-load operation.

3. Consider the effect of temperature rise and derate during using.

4.2 环境要求 (Environmental requirements)

项目	Item	规格	Specifications
海拔高度	Altitude	≤2000m	≤2000m
使用环境	Operating environment	控制柜内安装, 开放式及室内使用	Installation within a control cabinet, open-type and indoor use
工作温度	Operating temperature	0~55°C	0~55°C
储存温度	Storage temperature	-25~70°C	-25~70°C
环境湿度	Ambient humidity	10~95%RH (无结露)	10~95%RH (non-condensation)
振动耐受	Vibration resistance	10~150Hz (X/Y/Z方向, 1g/3.5mm位移)	10~150Hz (X/Y/Z direction, 1g/3.5mm displacement)
污染等级	Pollution degree	污染度2	Level 2
冷却方式	Cooling method	自然冷却	Natural air cooling
防护等级	IP rating	IP20	IP20
外壳材质	Enclosure material	阻燃材料	Self-extinguishable

*注: 若设备未依制造商指定方式使用, 设备所提供的保护可能会被减弱。

*Note: If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

5. 安装说明 (Installation instructions)

5.1 控制柜安装 (Installation within a control cabinet)

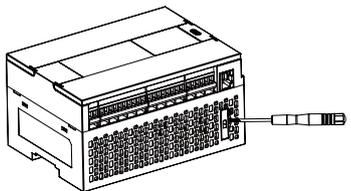
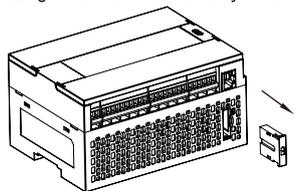
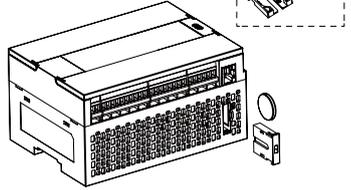
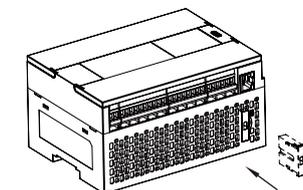
<p>CN 设备冷却方式为自然冷却, 请保证安装方向与墙壁垂直; 请参考右侧示意图, 在设备的周围留有足够的空间。并排安装时, 建议横向两侧预留 20mm 以上间距。</p>	<p style="text-align: center;">垂直柜壁安装 Install the product perpendicular to the wall</p>
<p>EN Please install the product perpendicular to the wall and ensure a sufficient cooling effect via natural air. Please leave enough clearance around the product as shown in the right figure. During a side-by-side installation, please leave a horizontal clearance of more than 20 mm on both sides.</p>	

*注: 无线缆状态下建议最小间距。
*Note: Recommended minimum clearance in cableless state.

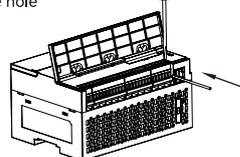
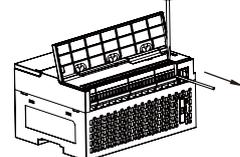
5.2 导轨拆装 (DIN rail mounting and dismounting)

<p>CN 安装控制器时, 将控制器后方卡扣往外拉直到听到咔嚓声后停止, 然后把设备挂在 DIN 导轨上, 并向内按压控制器后方卡扣, 听到咔嚓声, 控制器即成功安装于 DIN 导轨上; 拆卸控制器时, 将卡扣向下拉动一定距离, 取下控制器即可。</p>	<p>①向外拉动卡扣 Pull outwards to unlock the latch</p>	<p>①向外拉动卡扣 Pull outwards to unlock the latch</p>	<p>紧锁状态 (Locked)</p>	<p>释放状态 (Unlocked)</p>
<p>EN Before mounting, unlock the DIN rail mounting latch at the back of the controller. During mounting, position the upper part of the mounting latch on the DIN rail, and then press the controller against the DIN rail until a clear click is heard. During dismounting, pull the latch downwards and then directly remove the controller.</p>	<p>②将双向联动卡扣上部紧扣在DIN导轨上, 并向导轨侧按压控制器 Position the upper part of the mounting latch on the DIN rail, and then press the controller towards the DIN rail</p>	<p>②取下控制器 Detach the controller</p>		

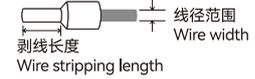
5.3 电池拆装 (Battery mounting and dismounting)

<p>CN 将一字螺丝刀插入电池仓右侧的半圆孔中，向外撬动，沿箭头方向取出电池仓以及仓内的纽扣电池即可完成拆卸；将电池的正极对准电池仓内+号后装入仓中，沿箭头方向推入设备中，即可完成安装。</p>	<p>①向外撬动电池仓 Pry the compartment outwards</p> 	<p>②沿箭头方向取出电池仓及仓内的纽扣电池 Remove the compartment and the button battery along the direction indicated by the arrow.</p> 
<p>EN During dismounting, insert a screwdriver into the half-circle hole on the right side of the battery compartment to pry the compartment outwards, and remove the compartment and the button battery along the direction indicated by the arrow. During mounting, align the positive polarity of the battery with the + sign inside the compartment and install it into the compartment, then push the compartment into the device along the direction indicated by the arrow.</p>	<p>③电池正极对准“+”号 Align the positive polarity of the battery with the “+” sign.</p> 	<p>④沿箭头方向推入电池仓 Push the compartment into the device along the direction indicated by the arrow</p> 

5.4 线缆拆装 (Cable connecting and disconnecting)

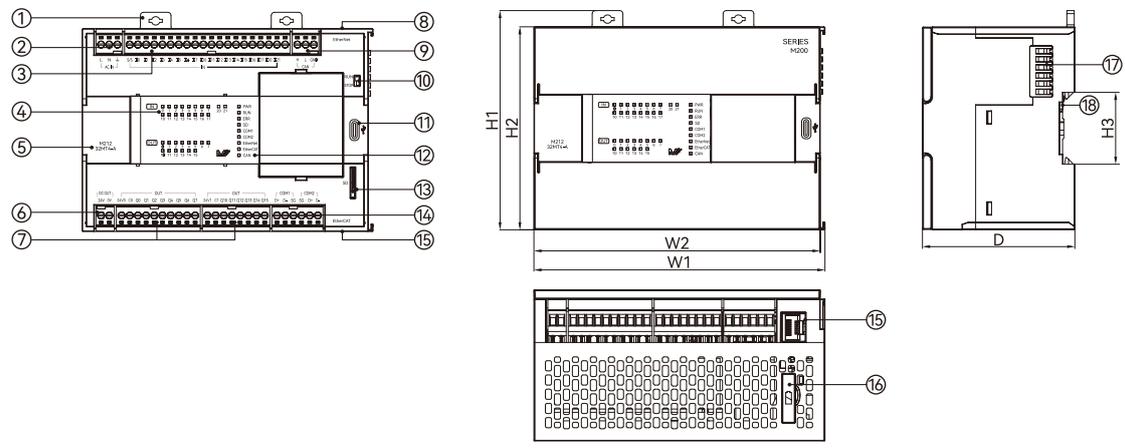
<p>CN 安装线缆时，使用十字小螺丝刀将接线螺丝处拧松，将准备好的线缆插入到方孔中后再拧紧螺丝，轻拽线缆，线缆不松动即成功完成配线；反之即可取出线缆。</p>	<p>将线缆插到方孔中 Insert the cable into the square hole</p> 	<p>将线缆拔出 Unplug the cable</p> 
<p>EN During connecting, use a small cross screwdriver to loosen the wiring screw, insert the prepared cable into the square hole, and then tighten the screw. Gently tug the cable after pulling out the screwdriver. If the cable is secured firmly, then the connection is finished. The reverse is the procedure for unplugging the cable.</p>		

控制器端子 (Terminal)	线径范围: AWG (Wire width)	剥线长度: mm (Wire stripping length)	扭矩: N.m (Torsion)
IO端子 (IO terminal)	24~14	6~7	0.45
CAN通讯端子 (CAN communication terminal)	24~14	6~7	0.45
RS485通讯端子 (RS485 communication terminal)	24~14	6~7	0.45



警告：只能使用 75°C铜导线。
Warning: Use only a copper conductor that is 75° C.
Attention: Utilisez uniquement un conducteur en cuivre à 75° C.

6. 接口和尺寸说明 (Interface and dimension description)



序号 (No.)	名称	Name	功能	Function
1	双向联动卡扣	DIN rail mounting latch	固定控制器在DIN导轨上	Mounts the controller onto a DIN rail
2	交流电源输入端子	AC power supply input terminal	供电电源端子	Power supply terminal
3	输入端子	Input terminal	数字量输入点及公共端端子	Digital input channels and common terminals
4	通道状态指示灯	Channel status indicator	指示当前通道状态	Indicates the current channel status
5	产品名称	Product name	产品型号	Product model
6	直流24V电源输出端子	DC 24V power supply output terminal	DC24V供电接口	DC24V power supply interface
7	输出端子	Output terminal	数字量输出点及公共端端子	Digital output channels and common terminals
8	EtherNet通讯接口*	EtherNet communication interface*	百兆以太网口，支持Modbus TCP、EtherNet/IP、Socket自由协议 默认IPV4: 192.168.1.8 子网掩码: 255.255.255.0	100Mbps Ethernet port, supports Modbus TCP, EtherNet/IP, Socket free protocol Default IPV4: 192.168.1.8 Subnet mask: 255.255.255.0
9	CAN通讯接口	CAN communication interface	支持做CANopen主站或从站	Supports CANopen master or slave
10	RUN/STOP开关	RUN/STOP DIP switch	启动或停止控制器各程序运行，拨向RUN为启动，拨向STOP为停止	Starts/stops the operation of each controller program; toggle the switch to RUN to start and to STOP to stop
11	Type-C接口	Type-C interface	USB 2.0接口，支持连接上位机后进行用户程序上下下载、固件升级等	USB 2.0 interface, supports user program upload/download, firmware upgrade, etc., when connected to a host computer
12	系统状态指示灯	System status indicator	显示控制器系统运行状态	Displays the operating status of the controller system
13	SD卡卡槽	SD card slot	装载SD卡 (SD卡需要客户自行选购)	Holds SD card (SD card needs to be purchased by the customer separately)
14	RS485通讯接口	RS485 communication interface	支持做 Modbus主站或从站，支持自定义通讯协议	Supports Modbus master or slave, and custom communication protocols

15	M211 EtherNet通讯接口	M211 EtherNet communication interface	百兆以太网口, 支持Modbus TCP、EtherNet/IP、Socket自由协议 默认IPV4: 192.168.1.8 子网掩码: 255.255.255.0	100Mbps Ethernet port, supports Modbus TCP, EtherNet/IP, Socket free protocol Default IPV4: 192.168.1.8 Subnet mask: 255.255.255.0
	M212 EtherCAT通讯接口	M212 EtherCAT communication interface	百兆以太网口, 支持EtherCAT主站	100Mbps Ethernet port, supports EtherCAT master
16	电池仓	Battery compartment	存放RTC (万年历) 电池	Stores RTC (Real-time Clock) battery
17	扩展模块连接接口	Expansion module connection interface	主机和IO模块通讯及供电接口, 不支持热插拔	The interface for the communication and power supply of the host and IO modules, does not support hot-swapping
18	接地弹片	Grounding spring	功能性接地 (FE)	Functional grounding (FE)

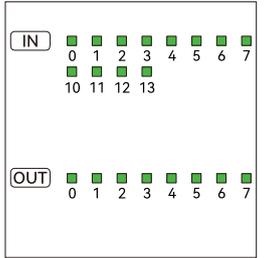
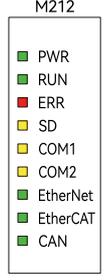
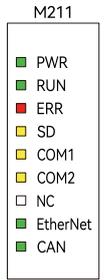
*注: 仅 M212 具有该接口。

*Note: Only M212 is equipped with this interface.

型号 (Model)	外形尺寸 (Dimension) :mm						重量 (Weight) :g
	W1	W2	H1	H2	H3	D	
HCM211-20MR-A	122.30	120.00	108.00	100.00	35.40	74.50	436.8
HCM211-20MT4-A							404.0
HCM211-32MR-A	142.30	140.00					513.6
HCM211-32MT6-A							470.6
HCM212-32MT4-A							590.8
HCM211-42MR-A	172.30	170.00					525.1
HCM211-42MT8-A							711.2
HCM211-60MR-A	214.30	212.00					646.6
HCM211-60MT10-A							
HCM212-60MT8-A	214.30	212.00					

7. 指示灯说明 (Indicator description)

丝印 (Screen printing)	指示灯含义 (Indicator meaning)	颜色 (Color)	状态 (Status)	说明 (Description)
PWR	电源 (Power)	绿色 (Green)	熄灭 Not lit	电源未接通 Power off
			常亮 Lit	电源接通 Power on
RUN	运行 (Run)	绿色 (Green)	熄灭 Not lit	停止状态 Stop
			常亮 Lit	正常运行 Run
ERR	系统故障 (System error)	红色 (Red)	熄灭 Not lit	无故障发生 No error
			常亮 Lit	发生故障 Error
SD	SD 卡状态 (SD card status)	黄色 (Yellow)	熄灭 Not lit	未插入 SD 卡 SD card is not inserted
			闪烁 Blinking	正在读写 SD 卡 SD card is being read/written
			常亮 Lit	已插入 SD 卡但未进行读写 SD card is inserted but is not being read/written
COM1	RS485 通讯 (RS485 communication)	黄色 (Yellow)	熄灭 Not lit	未发送数据 No data is being sent to other devices
COM2	RS485 通讯 (RS485 communication)	黄色 (Yellow)	闪烁 Blinking	正在发送数据给其他设备 Data is being sent to other devices
NC	-	-	-	-
EtherNet	通讯 (Communication)	绿色 (Green)	熄灭 Not lit	未建立物理连接 No physical connection
			闪烁 Blinking	建立物理连接且有通讯数据 Physical connection with communication data
EtherCAT			常亮 Lit	建立物理连接但无通讯数据 Physical connection without communication data
CAN	通讯 (Communication)	绿色 (Green)	单闪 Single blinking	CAN 总线处于停止状态 CAN bus is in a stopped state
			闪烁 Blinking	CAN 总线处于预运行状态 CAN bus is in a pre-operational state
			常亮 Lit	与其他 CAN 站点通讯正常, 处于运行状态 Communication with other CAN stations is normal and is in an operational state
			熄灭 Not Lit	CAN 总线无错误 No error in the CAN bus
			单闪 Single blinking	CAN 总线错误超出警戒值 CAN bus error messages exceed the alarm limit
			双闪 Double blinking	从站掉线 The slave is disconnected
			常亮 Lit	CAN 总线错误过多, 无法通讯 Failed communication due to CAN bus errors
20MR/20MT4				
IN N (0~7,10~13)	输入 (Input)	绿色 (Green)	熄灭 Not lit	输入通道 N 未检测到输入信号 The input channel N has not detected input signals
			常亮 Lit	输入通道 N 检测到输入信号 The input channel N has detected input signals
OUT N (0~7)	输出 (Output)	绿色 (Green)	熄灭 Not lit	输出通道 N 无信号输出 There is no output signal in this channel
			常亮 Lit	输出通道 N 有信号输出 There are output signals in this channel
32MR/32MT6/32MT4				
IN N (0~7,10~17,20~21)	输入 (Input)	绿色 (Green)	熄灭 Not lit	输入通道 N 未检测到输入信号 The input channel N has not detected input signals
			常亮 Lit	输入通道 N 检测到输入信号 The input channel N has detected input signals
OUT N (0~7, 10~15)	输出 (Output)	绿色 (Green)	熄灭 Not lit	输出通道 N 无信号输出 There is no output signal in this channel
			常亮 Lit	输出通道 N 有信号输出 There are output signals in this channel



42MR/42MT8

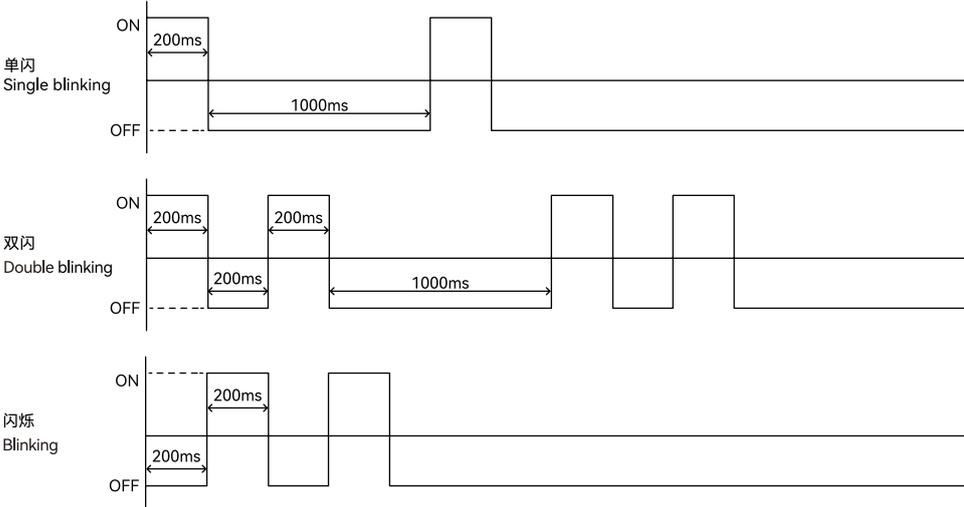
IN N (0~7, 10~17, 20~27)	输入 (Input)	绿色 (Green)	 熄灭 Not lit	输入通道 N 未检测到输入信号	The input channel N has not detected input signals
			 常亮 Lit	输入通道 N 检测到输入信号	The input channel N has detected input signals
OUT N (0~7, 10~17, 20~21)	输出 (Output)	绿色 (Green)	 熄灭 Not lit	输出通道 N 无信号输出	There is no output signal in this channel
			 常亮 Lit	输出通道 N 有信号输出	There are output signals in this channel

60MR/60MT10/60MT8

IN N (0~7,10~17,20~27, 30~37,40~43)	输入 (Input)	绿色 (Green)	 熄灭 Not lit	输入通道 N 未检测到输入信号	The input channel N has not detected input signals
			 常亮 Lit	输入通道 N 检测到输入信号	The input channel N has detected input signals
OUT N (0~7, 10~17, 20~27)	输出 (Output)	绿色 (Green)	 熄灭 Not lit	输出通道 N 无信号输出	There is no output signal in this channel
			 常亮 Lit	输出通道 N 有信号输出	There are output signals in this channel

CAN 通讯指示灯闪烁频率如下图所示:

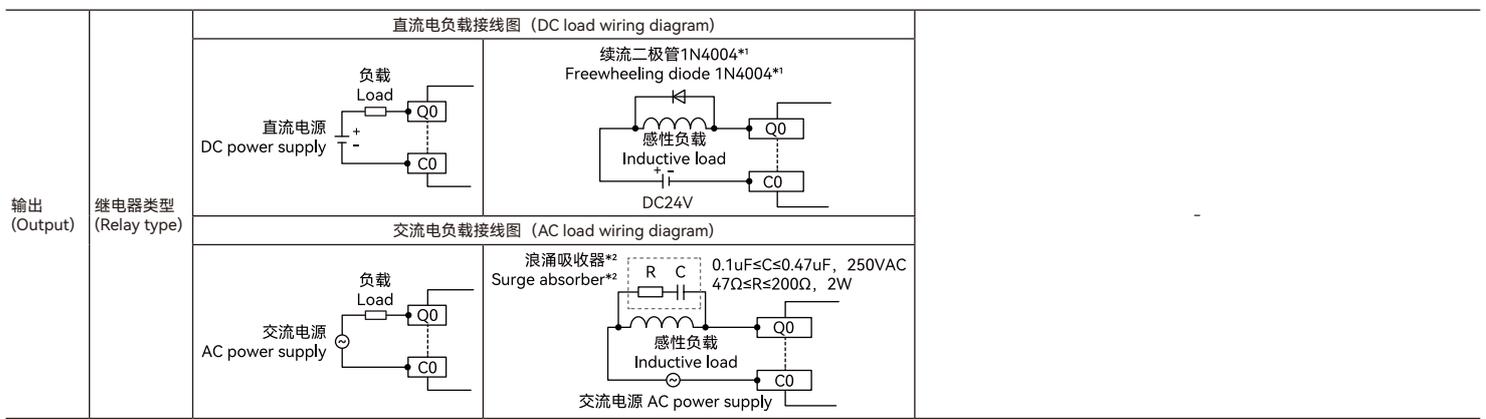
The CAN communication indicator blinking frequency is shown in the following figure.



8. 端子及配线说明 (Terminal and wiring description)

IO端子说明 (IO terminal description)		型号 (Model)									
IO功能 (IO function)		M211-20MR	M211-20MT4	M211-32MR	M211-32MT6	M212-32MT4	M211-42MR	M211-42MT8	M211-60MR	M211-60MT10	M212-60MT8
输入 (Input)	普通输入点 (General input)	12		18			24		36		
	高速输入通道 (High-speed input channels)	2 (I0~I3)			4 (Q0~Q7)		8 (Q0~Q7) (Q10~Q17)		10 (Q0~Q7) (Q10~Q17) (Q20~Q23)		
输出 (Output)	普通输出点 (General output)	8		14			18		24		
	高速输出通道 (High-speed output channels)	0	4 (Q0~Q7)	0	6 (Q0~Q7) (Q10~Q13)	4 (Q0~Q7)	0	8 (Q0~Q7) (Q10~Q17)	0	10 (Q0~Q7) (Q10~Q17) (Q20~Q23)	8 (Q0~Q7) (Q14~Q17) (Q20~Q23)

类型 (Type)		通用IO接线 (General IO wiring)		高速IO接线 (High-speed IO wiring)	
输入 (Input)	漏型输入 (NPN input)				
	源型输入 (PNP input)				
输出 (Output)	晶体管类型 (Transistor type)				



*注 1: 晶体管型或继电器类型输出接直流回路的电感性负载时, 建议外部增加并联续流二极管; 如果不并联续流二极管, 继电器使用寿命会明显降低。续流二极管推荐使用 1N4004。

2: 继电器类型输出接交流回路的电感性负载时, 建议外部增加 RC 电路吸收负载关断时的尖波电压, 如此可增加继电器的使用寿命。

3: 输出点作为高速输出时, 建议在输出点和 24V 之间接入约 500Ω 的电阻。

*Note 1: When connecting transistor or relay-type outputs to inductive loads in DC circuits, it is recommended to add a parallel freewheeling diode externally; otherwise, the relay's service life will be significantly reduced. The recommended freewheeling diode is the 1N4004.

2: When connecting relay-type outputs to inductive loads in AC circuits, it is recommended to add an external RC circuit to absorb surge voltage when the load is turned off, thereby extending the relay's service life.

3: When the output channel is used for high-speed output, it is recommended that a resistor of about 500Ω be connected between the output channel and 24V.

端子配置 (Terminal configuration)

M211-20MR-A																M211-32MR-A																																																																					
L	N	⊥	S/S	I0	I1	I2	I3	I4	I5	I6	I7	I10	I11	I12	I13	H	L	GND	L	N	⊥	S/S	I0	I1	I2	I3	I4	I5	I6	I7	I10	I11	I12	I13	I14	I15	I16	I17	I20	I21	H	L	GND																																										
24V	0V	C0	Q0	Q1	Q2	Q3	C1	Q4	Q5	Q6	Q7	D+	D-	SG	SG	D+	D-	24V	0V	C0	Q0	Q1	Q2	Q3	C1	Q4	Q5	Q6	Q7	C2	Q10	Q11	Q12	Q13	C3	Q14	Q15	D+	D-	SG	SG	D+	D-																																										
M211-20MT4-A																M211-32MT6-A/M212-32MT4-A																																																																					
L	N	⊥	S/S	I0	I1	I2	I3	I4	I5	I6	I7	I10	I11	I12	I13	H	L	GND	L	N	⊥	S/S	I0	I1	I2	I3	I4	I5	I6	I7	I10	I11	I12	I13	I14	I15	I16	I17	I20	I21	H	L	GND																																										
24V	0V	24V0	C0	Q0	Q1	Q2	Q3	Q4	Q5	Q6	Q7	D+	D-	SG	SG	D+	D-	24V	0V	24V0	C0	Q0	Q1	Q2	Q3	Q4	Q5	Q6	Q7	24V1	C1	Q10	Q11	Q12	Q13	Q14	Q15	D+	D-	SG	SG	D+	D-																																										
M211-42MR-A																M211-42MT8-A																																																																					
L	N	⊥	S/S	I0	I1	I2	I3	I4	I5	I6	I7	I10	I11	I12	I13	I14	I15	I16	I17	I20	I21	I22	I23	I24	I25	I26	I27	H	L	GND	L	N	⊥	S/S	I0	I1	I2	I3	I4	I5	I6	I7	I10	I11	I12	I13	I14	I15	I16	I17	I20	I21	I22	I23	I24	I25	I26	I27	H	L	GND																								
24V	0V	C0	Q0	Q1	Q2	Q3	C1	Q4	Q5	Q6	Q7	C2	Q10	Q11	Q12	Q13	C3	Q14	Q15	Q16	Q17	C4	Q20	Q21	-	D+	D-	SG	SG	D+	D-	24V	0V	24V0	C0	Q0	Q1	Q2	Q3	Q4	Q5	Q6	Q7	24V1	C1	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	24V2	C2	Q20	Q21	D+	D-	SG	SG	D+	D-																						
M211-60MR-A																M211-60MT10-A/M212-60MT8-A																																																																					
L	N	⊥	S/S	I0	I1	I2	I3	I4	I5	I6	I7	I10	I11	I12	I13	I14	I15	I16	I17	I20	I21	I22	I23	I24	I25	I26	I27	I30	I31	I32	I33	I34	I35	I36	I37	I40	I41	I42	I43	H	L	GND	L	N	⊥	S/S	I0	I1	I2	I3	I4	I5	I6	I7	I10	I11	I12	I13	I14	I15	I16	I17	I20	I21	I22	I23	I24	I25	I26	I27	I30	I31	I32	I33	I34	I35	I36	I37	I40	I41	I42	I43	H	L	GND
24V	0V	C0	Q0	Q1	Q2	Q3	C1	Q4	Q5	Q6	Q7	C2	Q10	Q11	Q12	Q13	C3	Q14	Q15	Q16	Q17	C4	Q20	Q21	Q22	Q23	C5	Q24	Q25	Q26	Q27	D+	D-	SG	SG	D+	D-	24V	0V	24V0	C0	Q0	Q1	Q2	Q3	Q4	Q5	Q6	Q7	24V1	C1	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	24V2	C2	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	D+	D-	SG	SG	D+	D-										

通讯端子说明 (Communication terminal description)

