

支持的设备型号
Supported Models

HCM100-14MT3-A HCM100-20MT4-A HCM100-30MT6-A HCM100-40MT6-A HCM100-48MT6-A HCM100-60MT6-A
HCM100-14MR-A HCM100-20MR-A HCM100-30MR-A HCM100-40MR-A HCM100-48MR-A HCM100-60MR-A

HPPP2090003-00B
Date 2024-04-01
CN 安装说明
EN Instruction Sheet

1. 安全注意事项 (Safety precautions)

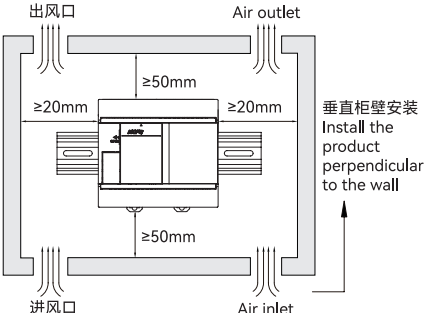
本说明书设计产品均为开放型外壳设计。要求用户使用产品时，务必将产品安装于具有防尘、防潮以及免于电击 / 冲击等意外的控制柜内，并且需要设置保护措施以防止非维护人员不当操作或意外导致设备故障或损坏，造成不可避免的人员风险和财产损失。

The products involved are all open-type housing designs. Therefore, they should be installed in a control cabinet that is free of airborne dust, humidity, electric shock, and vibration. The cabinet should prevent non-maintenance staff from operating the products or accidents from happening in case danger and damage may occur on the products.

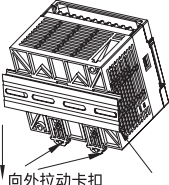
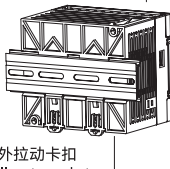
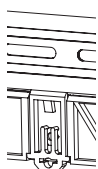
更详细的信息请参考 M 系列 CPU 单元说明书及硬件操作手册。
Please refer to the M series CPU unit instruction manual or hardware operation manual for more detailed information.

2. 安装说明 (Installation instructions)

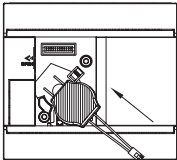
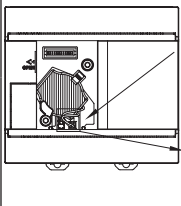
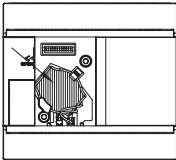
2.1 控制柜安装 (Installation within a control cabinet)

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。	
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.	

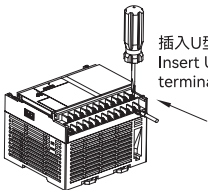
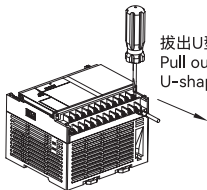
2.2 导轨拆装 (DIN rail mounting and dismounting)

CN	安装控制器时，将控制器后方卡扣往外拉直到听到“咔哒”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“咔哒”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。	把设备挂在导轨上再向内按压卡扣 Position the controller on the rail and press the latch inwards	取下设备 Detach the controller	紧锁状态 (Locked)	释放状态 (Unlocked)
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.	 向外拉动卡扣 Pull outwards to unlock the latch	 向外拉动卡扣 Pull outwards to unlock the latch		

2.3 电池拆装 (Battery disassembly and assembly)

CN	将 CR2430 带线带端子的密封电池沿箭头方向斜插进去（40 点以上机型为反向斜插），连接正负极端子即可完成安装；斜着推出电池，拆除正负极端子即可完成拆卸。	斜插电池 Insert the CR2430 battery diagonally	连接正负极 Connect the positive and negative terminals	推出电池 Push out the battery diagonally
EN	During assembly, insert the CR2430 battery, which is accompanied with wire and terminal, diagonally along the direction indicated by the arrow (reverse diagonal insertion for models with more than 40 channels). Connect the positive and negative terminals to complete the assembly. During disassembly, push out the battery diagonally and remove the positive and negative terminals.			

2.4 线缆拆装 1 (Cable connecting and disconnecting I)

CN	安装线缆时，使用十字小螺丝刀将接线螺丝处拧松，插入 U 型端子后再拧紧螺丝，轻拽线缆，线缆不松动即成功完成配线；反之即可取出线缆。	插入 U 型端子 Insert U-shaped terminal	拔出 U 型端子 Pull out the U-shaped terminal
EN	During connecting, use a small cross-point screwdriver to loosen the screws first. Insert the U-shaped terminal and then tighten the screws. Gently tug the cable, if the cable is secured firmly, then the connection is finished. The reverse is the procedure for unplugging the cable.		

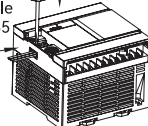
2.5 线缆拆装 2 (Cable connecting and disconnecting II)

CN

安装线缆时，使用赠送的一字螺丝刀垂直插入 RS485 端子螺丝处，拧松螺丝后，将准备好的线缆插入到设备左侧的 RS485 端子中，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。端子规格及配线示意图如右图所示。

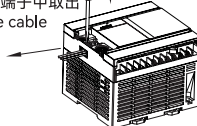
①将线缆插入到端子中
Insert the prepared cable into the RS485 terminal

②拧紧螺丝
Tighten the screw



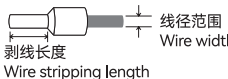
②将线缆从端子中取出
Pull out the cable

①拧松螺丝
Loosen the screw



EN

During connecting, use a slotted screwdriver to loosen the screw of the RS485 terminal first. Insert the prepared cable into the RS485 terminal and then tighten the screw. Gently tug the cable, if the cable is secured firmly, then the connection is finished. The reverse is the procedure for unplugging the cable. The terminal specifications and wiring diagram are shown in the right figure.



剥线长度
Wire stripping length

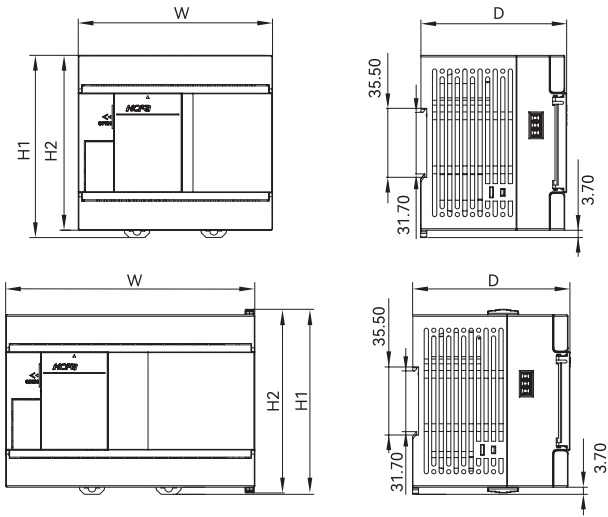
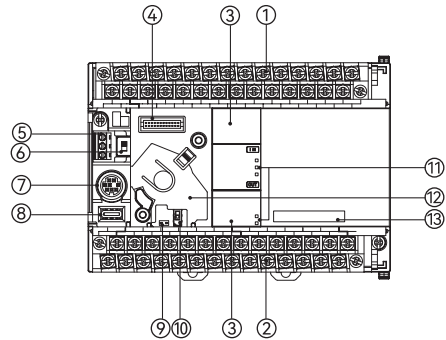
线径范围
Wire width

控制器端子 (Terminal)	线径范围 AWG (Wire width)	剥线长度: mm (Wire stripping length)
IO 端子 (IO terminal)	22~18	6~7
3Pin	30~16	5~6

3. 接口及配线说明 (Interface and wiring instructions)

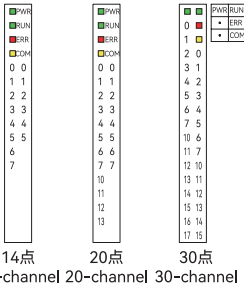
序号(No.)	项目	Item
1	输入端子	Input terminal
2	输出端子	Output terminal
3	IO指示灯	IO indicator
4	扩展接口	Extension interface
5	RS485接口	RS485 interface
6	RUN/STOP开关	RUN/STOP switch
7	RS232接口	RS232 interface
8	USB-C 接口	USB-C interface
9	烧录开关	Burn switch
10	电池接口排针	Battery interface pins
11	系统指示灯	System indicator
12	电池安装区域	Battery compartment
13	产品型号	Product model number

型号 (Model)	外形尺寸 (Dimension) : mm				重量 (Weight) : g
	W	H1	H2	D	
HCM100-14MT3-A	60.5	93.7	90.0	75.0	300
HCM100-14MR-A					320
HCM100-20MT4-A	75.5				330
HCM100-20MR-A					380
HCM100-30MT6-A	100				400
HCM100-30MR-A					430
HCM100-40MT6-A	130.0	96.5	95.82	82.1	540
HCM100-40MR-A					560
HCM100-48MT6-A	175.0				620
HCM100-48MR-A					650
HCM100-60MT6-A	175.0				650
HCM100-60MR-A					710

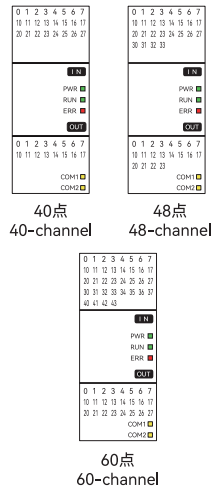


单位 (Unit) : mm

M100-14MT3/14MR/20MT4/20MR/30MT6/30MR-A								
项目(Item)		颜色	Color	状态	Status	详细说明	Description	
PWR 电源指示灯 (Power indicator)		绿色	Green		常亮	Lit	电源接通	Power ON
					熄灭	Not lit	电源未接通	Power OFF
RUN 运行指示灯 (RUN indicator)		绿色	Green		常亮	Lit	正常运行	RUN
					熄灭	Not lit	停止状态	STOP
ERR 系统故障指示灯 (System error indicator)		红色	Red		常亮	Lit	发生故障时	Error
					熄灭	Not lit	无故障发生	No error
COM 串口 (RS485 / RS232) 通讯指示灯 (Serial communication indicator)		黄色	Yellow		闪烁	Blinking	正在发送数据给其他设备	Data is being sent to other devices
					熄灭	Not lit	未发送数据	No data is being sent to other devices
IO点数 (Channel)	IN N	绿色	Green		常亮	Lit	输入通道 N 检测到输入信号	The input channel N has detected input signals
14	0~7				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
20	0~7, 10~13							
30	0~7, 10~17							
IO点数 (Channel)	OUT N	绿色	Green		常亮	Lit	输出通道 N 检测到输出信号	The output channel N has detected output signals
14	0~5				熄灭	Not lit	输出通道 N 未检测到输出信号	The output channel N has not detected output signals
20	0~7							
30	0~7, 10~15							



M100-40MT6/40MR/48MT6/48MR/60MT6/60MR-A						
项目(Item)	颜色	Color	状态	Status	详细说明	Description
PWR 电源指示灯 (Power indicator)	绿色	Green	 常亮	Lit	电源接通	Power ON
			 熄灭	Not lit	电源未接通	Power OFF
RUN 运行指示灯 (RUN indicator)	绿色	Green	 常亮	Lit	正常运行	RUN
			 熄灭	Not lit	停止状态	STOP
ERR 系统故障指示灯 (System error indicator)	红色	Red	 常亮	Lit	发生故障时	Error
			 熄灭	Not lit	无故障发生	No error
COM1 串口 (RS232) 通讯指示灯 (Serial communication indicator)	黄色	Yellow	 闪烁	Blinking	正在发送数据给其他设备	Data is being sent to other devices
COM2 串口 (RS485) 通讯指示灯 (Serial communication indicator)			 熄灭	Not lit	未发送数据	No data is being sent to other devices
IO点数 (Channel)	IN N	绿色		Lit	输入通道 N 检测到输入信号	The input channel N has detected input signals
40	0~7,10~17, 20~27					
48	0~7,10~17, 20~27,30~33					
IO点数 (Channel)	OUT N	绿色		Not lit	输入通道 N 未检测到输入信号	The input channel N has not detected input signals
40	0~7,10~17, 20~23					
48	0~7,10~17, 20~23					
IO点数 (Channel)	OUT N	绿色		Lit	输出通道 N 检测到输出信号	The output channel N has detected output signals
40	0~7,10~17, 20~23					
48	0~7,10~17, 20~23					
IO点数 (Channel)	OUT N	绿色		Not lit	输出通道 N 未检测到输出信号	The output channel N has not detected output signals
40	0~7,10~17, 20~27					
48	0~7,10~17, 20~27					



端口功能说明 (Terminal function description)							类型 (Type)	通用 IO 接线 (General IO wiring)	高速IO接线 (High-speed IO wiring)
IO功能 (IO function)	型号 (Model)	14MR/MT3	20MR/MT4	30MR/MT6	40MR/MT6	48MR/MT6	60MR/MT6		
输入 (Input)	普通输入点 (General input)	8	12	16	24	28	36	漏型输入 (NPN Input)	

端子配置IO (Terminal configuration)												
HCM100-30MT6-A	E	S/S	S/S	I1	I3	I5	I7	I11	I13	I15	I17	
	L	N	S/S	I0	I2	I4	I6	I10	I12	I14	I16	
	0V	Q0	Q1	Q2	Q4	COM3	Q7	Q11	Q12	Q14		
	24V	COM0	COM1	COM2	Q3	Q5	Q6	Q10	COM4	Q13	Q15	

端子配置IO (Terminal configuration)															
HCM100-40MR-A	E	S/S	I1	I3	I5	I7	I11	I13	I15	I17	I21	I23	I25	I27	
	L	N	I0	I2	I4	I6	I10	I12	I14	I16	I20	I22	I24	I26	
	0V	Q0	Q1	Q2		Q4	Q6		Q10	Q12		Q14	Q16		
	24V	COM0	COM1	COM2	Q3	COM3	Q5	Q7	COM4	Q11	Q13	COM5	Q15	Q17	

端子配置IO (Terminal configuration)															
HCM100-40MT6-A	E	S/S	I1	I3	I5	I7	I11	I13	I15	I17	I21	I23	I25	I27	
	L	N	I0	I2	I4	I6	I10	I12	I14	I16	I20	I22	I24	I26	
	0V	Q0	Q1	Q2		Q4	Q6		Q10	Q12		Q14	Q16		
	24V	COM0	COM1	COM2	Q3	COM3	Q5	Q7	COM4	Q11	Q13	COM5	Q15	Q17	

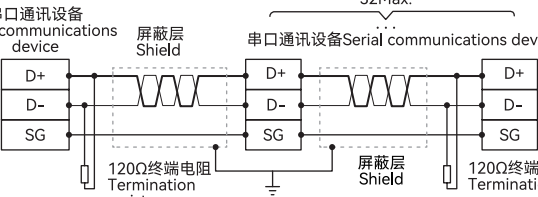
端子配置IO (Terminal configuration)																							
HCM100-48MR-A	E	S/S	I1	I3	I5	I7	I11	I13	I15	I17	I21	I23	I25	I27	I31	I33							
	L	N	I0	I2	I4	I6	I10	I12	I14	I16	I20	I22	I24	I26	I30	I32							
	0V	Q0	Q1	Q2		Q4	Q6		Q10	Q12		Q14	Q16		Q20	Q22							
	24V	COM0	COM1	COM2	Q3	COM3	Q5	Q7	COM4	Q11	Q13	COM5	Q15	Q17	COM6	Q21	Q23						

端子配置IO (Terminal configuration)																							
HCM100-48MT6-A	E	S/S	I1	I3	I5	I7	I11	I13	I15	I17	I21	I23	I25	I27	I31	I33							
	L	N	I0	I2	I4	I6	I10	I12	I14	I16	I20	I22	I24	I26	I30	I32							
	0V	Q0	Q1	Q2		Q4	Q6		Q10	Q12		Q14	Q16		Q20	Q22							
	24V	COM0	COM1	COM2	Q3	COM3	Q5	Q7	COM4	Q11	Q13	COM5	Q15	Q17	COM6	Q21	Q23						

端子配置IO (Terminal configuration)																							
HCM100-60MR-A	E	S/S	I1	I3	I5	I7	I11	I13	I15	I17	I21	I23	I25	I27	I31	I33	I35	I37	I41	I43			
	L	N	I0	I2	I4	I6	I10	I12	I14	I16	I20	I22	I24	I26	I30	I32	I34	I36	I40	I42			
	0V	Q0	Q1	Q2		Q4	Q6		Q10	Q12		Q14	Q16		Q20	Q22		Q24	Q26				
	24V	COM0	COM1	COM2	Q3	COM3	Q5	Q7	COM4	Q11	Q13	COM5	Q15	Q17	COM6	Q21	Q23	COM7	Q25	Q27			

端子配置IO (Terminal configuration)																							
HCM100-60MT6-A	E	S/S	I1	I3	I5	I7	I11	I13	I15	I17	I21	I23	I25	I27	I31	I33	I35	I37	I41	I43			
	L	N	I0	I2	I4	I6	I10	I12	I14	I16	I20	I22	I24	I26	I30	I32	I34	I36	I40	I42			
	0V	Q0	Q1	Q2		Q4	Q6		Q10	Q12		Q14	Q16		Q20	Q22		Q24	Q26				
	24V	COM0	COM1	COM2	Q3	COM3	Q5	Q7	COM4	Q11	Q13	COM5	Q15	Q17	COM6	Q21	Q23	COM7	Q25	Q27			

* 注 3: 输入端中 L 接火线, N 接零线, E 接地线, S/S 为公共端。
* Note 3: In the input terminal, L connects to the fire wire, N connects to the zero wire, E connects to the earth wire, and S/S is the common terminal.
* 注 4: 输出端中, COM 为公共端, 24V 与 0V 之间为直流输出; 粗线隔离区内为一组, 且隔离区内的 COM 相互导通。
* Note 4: In the output terminal, COM is the common terminal, and the DC output is between 24V and 0V. The thick line isolation area is a group, with the COMs in the isolation area conducting to each other.

通讯接口 (Serial communication interface)				
COM端口说明 (Terminal description)		接线 (Wiring)		
RS232				
-	-	1		
串行数据 (Serial data)	Rx	4		
	Tx	5		
-	-	6		
	-	7		
信号地 (Signal ground)	SG	8		
RS485				
串行数据 (Serial data)	D+			
	D-			
信号地 (Signal ground)	SG			

