

支持的设备型号
Supported Models

HCQX-ID16-D4 HCQX-OD16-D4 HCQX-OD16-D4-PNP HCQX-MD16-D4 HCQX-MD16-D4-PNP
HCQX-ID32-D4 HCQX-OD32-D4 HCQX-OD32-D4-PNP HCQX-MD32-D4 HCQX-MD32-D4-PNP
HCQX-OC08-D4



禾川科技官方网站

HPPP2080000-00C
Date 2024-06-03
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危险和财产损失。

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 QX 系列硬件手册。

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

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

2.1 通用电气规格 (General electrical specifications)

型号 (Model)	额定功率: W	Rated power: W	额定电压	Rated voltage
HCQX-ID16-D4	1.0	1.0	DC24V, 电压范围: DC20.4~28.8V	DC24V, voltage range: DC20.4~28.8V
HCQX-ID32-D4				
HCQX-MD16-D4				
HCQX-MD16-D4-PNP				
HCQX-MD32-D4				
HCQX-MD32-D4-PNP	1.2	1.2		
HCQX-OD16-D4				
HCQX-OD16-D4-PNP				
HCQX-OD32-D4				
HCQX-OD32-D4-PNP				
HCQX-OC08-D4	1.2	1.2		

*注: 所有型号均为安全特低电压输入产品。

*Note: All models are featured by the SELV input type.

2.2 环境规格 (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	-10~55°C	-10~55°C
储存温度	Storage temperature	-40~75°C	-40~75°C
环境湿度	Ambient humidity	10~95%RH (无结露)	10~95%RH (non-condensation)
振动耐受	Vibration resistance	5~150Hz (X/Y/Z方向, 1g/3.5mm位移)	5~150Hz (X/Y/Z direction, 1g /3.5mm displacement)
污染等级	Pollution degree	污染度II	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: 如果以制造商未规定的方式使用设备, 可能会损坏设备。

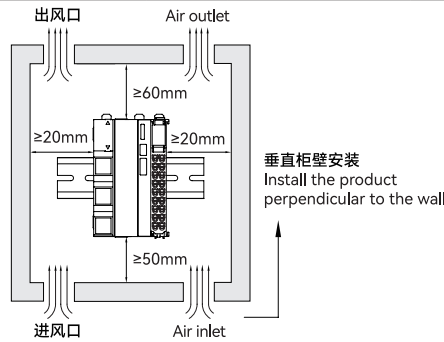
*Note: The equipment may be damaged if used in a manner not specified by the manufacturer.

3. 安装说明 (Installation instructions)

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

CN 设备冷却方式为自然冷却或通过加装风扇进行冷却, 请保证安装方向与柜壁垂直;
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。

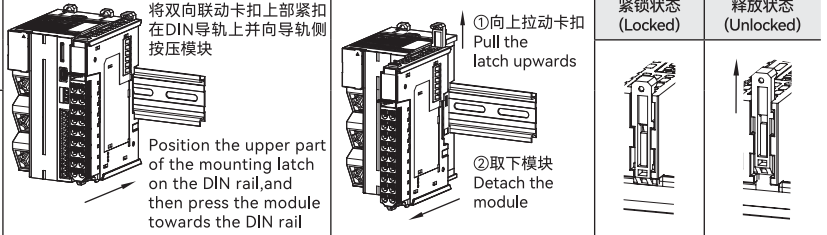
EN Please install the product perpendicular to the wall and ensure a sufficient cooling effect via natural air or a cooling fan. Please leave enough clearance around the product as shown in the right figure. During a side-by-side installation, please leave a horizontal clearance of more than 20 mm on both sides.



3.2 导轨拆装 (DIN rail mounting and dismounting)

CN 安装模块时, 将模块侧面导槽对准 Q 系列控制器导槽后, 向内按压模块, 听到“咔哒”声, 模块成功安装于 DIN 导轨上 (安装前保证双向联动卡扣处于紧锁状态, 否则可能导致安装故障); 拆卸模块时, 将卡扣向上拉动一定距离, 听到“咔哒”声后, 取下模块即可。

EN Before installation, check that the DIN rail mounting latch is in a locked state. During mounting, align the groove of the module to that of the Q series controller to engage them together, and then press the module towards the DIN rail until a clear click is heard (which indicates the latch is momentarily opened and locked onto the rail). During dismounting, pull the latch upwards until a clear click is heard (which indicates the latch is unlocked), and then directly remove the module.



3.3 可拆卸端子拆装 (Removable terminal block mounting and dismounting)

CN 安装可拆卸端子时, 将端子底部对准模块底部凹槽并紧扣, 上部对齐模块, 当听到“咔哒”声即完成了端子的组装; 拆卸端子时, 向下按压端子顶部卡扣, 使其脱离模块本体并以底部卡扣呈圆弧状斜向下施力, 将端子取下。

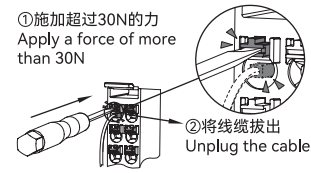
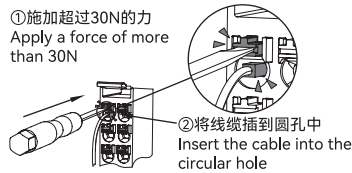
EN During mounting, align the mounting hook at the bottom of the terminal block to the guide of the module and press inwards on the terminal block until a clear click is heard (which indicates the terminal block has been locked to the module). During dismounting, press the lock lever on the terminal block and then detach it from the module.



3.4 线缆拆装 (Cable connecting and disconnecting)

CN 安装线缆时，将赠送的一字螺丝刀垂直插入可拆卸端子压块内，施加超过 30N 的力，将准备好的线缆插入到圆孔中，拔出一字螺丝刀，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。

EN During connecting, insert the flat-blade screwdriver into the unlocking tab with a force of more than 30 N. Then insert a cable into the circular hole. 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. The terminal specifications and wiring diagram are shown in the right figure.



模块端子 (Terminal)	线径范围: AWG (Wire width)	剥线长度: mm (Wire stripping length)	按压力: N (Pressure)	拔线力: N (Wire pulling force)	线径范围 (Wire width)
18Pin	24~17	8~9	30	50	剥线长度 (Wire stripping length)

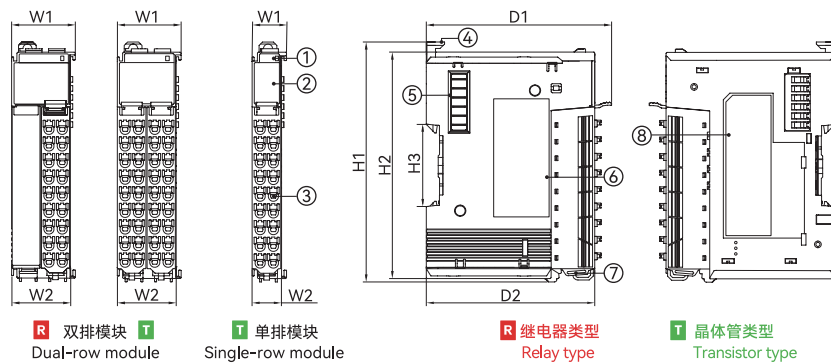
警告：仅使用铜导线。

Warning: Use copper conductors only.

Attention: Utilisez uniquement des conducteurs en cuivre.

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

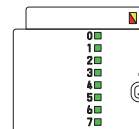
序号(No.)	项目	Item
1	产品型号	Product model
2	模块状态指示灯	Module status indicator
3	18Pin IO端子	18Pin IO terminal
4	双向联动卡扣	DIN rail mounting latch
5	扩展模块通讯接口	Expansion module communication interface
6	侧边丝印	Side silk screen printing
7	集线结构	Cable collector
8	标签	Label



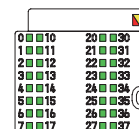
型号 (Model)		外形尺寸 (Dimension) : mm							重量 (Weight) : g
		W1	W2	H1	H2	H3	D1	D2	
单排模块 (Single-row module)	HCQX-ID16-D4	15.20	13.00	106.00	100.00	35.40	81.90	74.50	70 approx.
	HCQX-OD16-D4								
	HCQX-MD16-D4								
	HCQX-OD16-D4-PNP								
	HCQX-MD16-D4-PNP								
双排模块 (Dual-row module)	HCQX-ID32-D4	28.20	26.00	106.00	100.00	35.40	81.90	74.50	
	HCQX-OD32-D4								
	HCQX-MD32-D4								
	HCQX-OD32-D4-PNP								
	HCQX-MD32-D4-PNP								
	HCQX-OC08-D4								120 approx.

5. 指示灯说明 (Indicator description)

指示灯含义 (Indicator meaning)	颜色 (Color)	状态	Status	说明	Description	
模块状态 (Module status)	黄色 (Yellow)		熄灭	Not lit	Init (初始化状态)	Initialization
			快闪	Fast blinking	Preop (预操作状态)	Pre Operational
			慢闪	Slow blinking	Safeop (安全操作状态)	Safe Operational
			常亮	Lit	OP (可操作状态)	Operational
			双闪	Double blinking	Boot (引导程序状态)	Bootstrap
	红色 (Red)		慢闪	Slow blinking	总线信号输入状态异常	The module is in an abnormal state

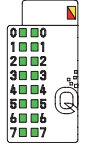


丝印 (Screen printing)	指示灯含义 (Indicator meaning)	颜色 (Color)	状态	Status	说明	Description	
ID16/OD16/OD16-PNP							
I N (0~7,10~17)	输入 (Input)	绿色 (Green)		熄灭	Not lit	输入通道 N 未检测到输入信号	The input channel N has not detected input signals
				常亮	Lit	输入通道 N 检测到输入信号	The input channel N has detected input signals
Q N (0~7,10~17)	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 for this channel
				常亮	Lit	输出通道 N 有信号输出	There are output signals for this channel
ID32/OD32/OD32-PNP							
I N (0~7,10~17, 20~27,30~37)	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
Q N (0~7,10~17, 20~27,30~37)	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 for this channel
				常亮	Lit	输出通道 N 有信号输出	There are output signals for this channel
OC08							
Q N (0~7)	输出 (Output)	绿色 (Green)		熄灭	Not lit	继电器断开	Relay is open
				常亮	Lit	继电器闭合	Relay is closed



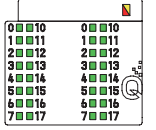
MD16/MD16-PNP

I N (0~7)	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
Q 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 for this channel
			常亮	Lit	输出通道 N 有信号输出	There are output signals for this channel



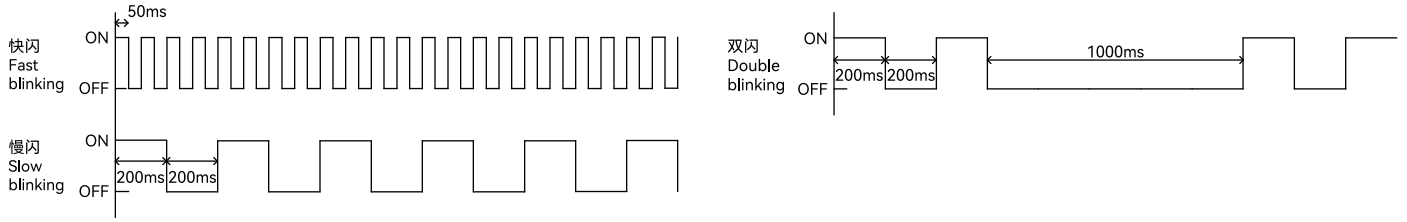
MD32/MD32-PNP

I N (0~7,10~17)	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
Q N (0~7,10~17)	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 for this channel
			常亮	Lit	输出通道 N 有信号输出	There are output signals for this channel



指示灯闪烁频率如下图所示:

The indicator blinking frequency is shown below.



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

类型(Type)		型号(Model)	ID16	ID32	OD16	OD16-PNP	OD32	OD32-PNP	MD16	MD16-PNP	MD32	MD32-PNP
输入 (Input)	NPN		○	○	-	-	-	-	○	○	○	○
	PNP		○	○	-	-	-	-	○	○	○	○
输出 (Output)	NPN		-	-	○	○	○	○	-	-	○	-
	PNP		-	-	-	○	-	○	-	○	-	○

*注: ○: 代表支持该类型; -: 代表不支持该类型。

*Note: The symbol "○" indicates that the type is supported. The symbol "-" indicates that the type is not supported.

端子说明 (Terminal description)		ID16							ID32							接线 (Wiring)			
0		10	I0	I10	I0	I10	I20	I30											
1		11	I1	I11	I1	I11	I21	I31											
2		12	I2	I12	I2	I12	I22	I32											
3		13	I3	I13	I3	I13	I23	I33											
4		14	I4	I14	I4	I14	I24	I34											
5		15	I5	I15	I5	I15	I25	I35											
6		16	I6	I16	I6	I16	I26	I36											
7		17	I7	I17	I7	I17	I27	I37											
8		18	SS	SS	SS	SS	SS	SS											

端子说明 (Terminal description)		OD16/OD16-PNP				OD32/OD32-PNP				接线 (Wiring)			
0		10	Q0	Q10	Q0	Q10	Q20	Q30					
1		11	Q1	Q11	Q1	Q11	Q21	Q31					
2		12	Q2	Q12	Q2	Q12	Q22	Q32					
3		13	Q3	Q13	Q3	Q13	Q23	Q33					
4		14	Q4	Q14	Q4	Q14	Q24	Q34					
5		15	Q5	Q15	Q5	Q15	Q25	Q35					
6		16	Q6	Q16	Q6	Q16	Q26	Q36					
7		17	Q7	Q17	Q7	Q17	Q27	Q37					
8		18	COM	COM	COM	COM	COM	COM					

端子说明 (Terminal description)		MD16/ MD16-PNP		接线 (Wiring)	
0		10	I0	Q0	<p>源型输入 PNP Input 漏型输入 NPN Input 漏型输出 NPN Output</p>
1		11	I1	Q1	
2		12	I2	Q2	
3		13	I3	Q3	
4		14	I4	Q4	
5		15	I5	Q5	
6		16	I6	Q6	
7		17	I7	Q7	
8		18	SS	COM	

端子说明 (Terminal description)		MD32/MD32-PNP				接线 (Wiring)	
0		10	I0	I10	Q0	Q10	<p>源型输入 PNP Input 漏型输入 NPN Input 漏型输出 NPN Output</p>
1		11	I1	I11	Q1	Q11	
2		12	I2	I12	Q2	Q12	
3		13	I3	I13	Q3	Q13	
4		14	I4	I14	Q4	Q14	
5		15	I5	I15	Q5	Q15	
6		16	I6	I16	Q6	Q16	
7		17	I7	I17	Q7	Q17	
8		18	SS	SS	COM	COM	

端子说明 (Terminal description)		OC08		接线 (Wiring)	
0		10	Q0	Q2	<p>漏型输出 NPN Output 源型输出 PNP Output</p>
1		11	Q1	Q3	
2		12	COM0	COM0	
3		13	NC	NC	
4		14	Q4	Q6	
5		15	Q5	Q7	
6		16	COM1	COM1	
7		17	NC	NC	
8		18	24V	0V	