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浙江禾川科技股份有限公司

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900101000409

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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 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 Q 系列扩展卡硬件手册。

Please refer to the Q series expansion card hardware manual for more detailed information.

2. 命名规则 (Model identification)

HC QXB - OD04 - BD - PNP

1 2 3 4 5

1	产品名称 (Product name)
HC	禾川 (Hechuan Technology)
2	选配卡系列 (Expansion card series)
QXB	Q系列选配扩展 (Q-Series optional expansion)

3	产品系列 (Product series)
OD04	晶体管4点输出 (Transistor 4-channel output)
OD08	晶体管8点输出 (Transistor 8-channel output)

4	后缀 (Suffix)
BD	BD选配卡 (Optional BD card)
5	软件/固件定制代码和其他标识 (Software/Firmware customized code and other identifiers)
XXXX	0~9/A~Z/空 (N/A)
PNP	源型 (Source type)

3. 适用型号 (Applicable model)

名称 (Name)	型号 (Model)	适配的主机型号* (Applicable controller model)	简要说明 (Brief description)
数字量扩展卡 Digital expansion card	HCQXB-OD08-BD	HCQ0P-1200-D4 HCQ1P-1300-D4	8点数字量输出，支持NPN型晶体管输出，最大输出频率1kHz 8-channel digital output, supports NPN transistor output; max. output frequency: 1kHz
	HCQXB-OD04-BD-PNP		4点数字量输出，支持NPN与PNP型晶体管输出，最大输出频率1kHz 4-channel digital output, supports both NPN and PNP transistor output; max. output frequency: 1kHz

*注：1. HCQXB-OD08-BD 仅支持安装于主机扩展卡槽 B。

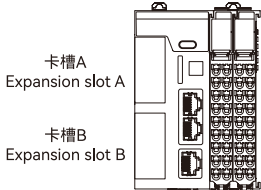
HCQXB-OD04-BD-PNP 仅支持安装于主机扩展卡槽 B。

2. 以 HCQ0P 控制器卡槽位置为例。

*Note: 1. The HCQXB-OD08-BD can only be installed in the host expansion slot B.

The HCQXB-OD04-BD-PNP can only be installed in the host expansion slot B.

2. Take the slot position of the HCQ0P controller as an example.



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

4.1 通用电气规格 (General electrical specifications)

型号 (Model)	额定电压 / 功率	Rated voltage/power	数字量输入 / 输出类型	Digital input/output type
HCQXB-OD08-BD	DC3.3V/0.25W	DC3.3V/0.25W	数字量输出：DC24V, 500mA/Ch, 4A/8Ch 负载类型：阻性/电磁/钨丝灯负载	Digital output: DC24V, 500mA/Ch, 4A/8Ch Load type: Resistive/Pilot duty/Tungsten
HCQXB-OD04-BD-PNP	DC3.3V/0.1W	DC3.3V/0.1W	数字量输出：DC24V, 500mA/Ch, 2A/4Ch 负载类型：阻性/电磁/钨丝灯负载	Digital output: DC24V, 500mA/Ch, 2A/4Ch Load type: Resistive/Pilot duty/Tungsten

4.2 环境规格 (Environmental requirements)

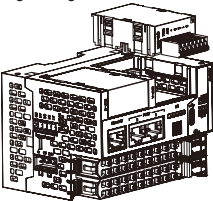
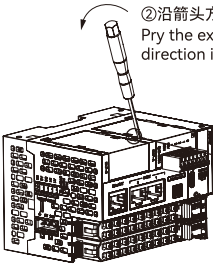
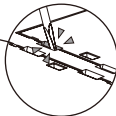
项目	Item	规格	Specifications
海拔高度	Altitude	≤2000m	≤2000m
使用环境	Operating environment	控制柜内安装，开放式及室内使用	Installation within a control cabinet, open-type and indoor use
工作温度	Operating temperature	0~55℃	0~55℃
储存温度	Storage temperature	-25~70℃	-25~70℃
环境湿度	Ambient humidity	10~95%RH (无结露)	10~95%RH (non-condensing)
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2	Level 2
冷却方式	Cooling method	自然冷却	Natural 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。

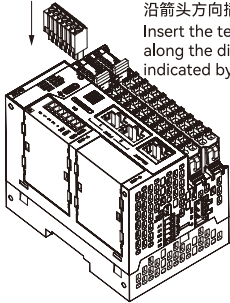
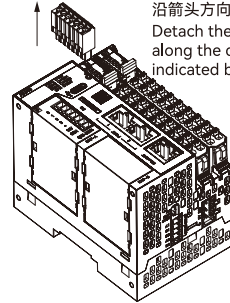
*Note: If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

5. 安装说明 (Installation instructions)

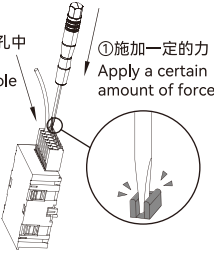
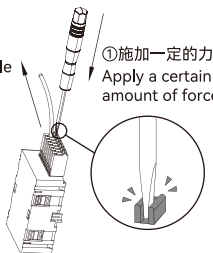
5.1 扩展卡拆装 (Expansion card mounting and dismounting)

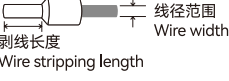
CN	将扩展卡沿卡槽放入水平放置控制器卡槽中，并向下按压扩展卡，听到“咔哒”声后确认表面平齐即完成安装；将一字螺丝刀插入卡扣处，按箭头方向撬动扩展卡使其控制器脱离，将扩展卡垂直取出即可完成拆卸。	①对准卡槽 Align the groove	②向下按压 Press downwards	②沿箭头方向撬动扩展卡 Pry the expansion card along the direction indicated by the arrow	①插入卡扣 Insert into the snap
EN	During mounting, place the controller horizontally, then align the groove of the expansion card with that of the controller and press the expansion card downwards. After hearing the "click" sound, check whether the junction surface is flush, if it is then the installation is completed. During dismounting, insert a screwdriver into the card snap, pry the expansion card along the direction indicated by the arrow to disengage it from the controller, and then remove the expansion card vertically to complete the dismounting process.				

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

CN	可拆卸端子拆装如右图所示。	沿箭头方向插入端子 Insert the terminal block along the direction indicated by the arrow	沿箭头方向拔出端子 Detach the terminal block along the direction indicated by the arrow
EN	The mounting and dismounting of the removable terminal block are shown in the figures on the right side.		

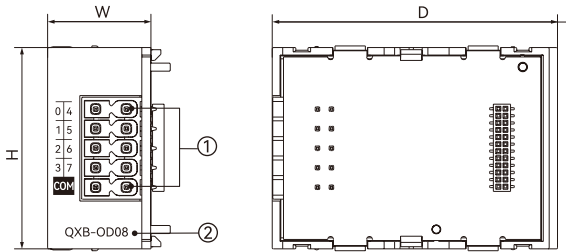
5.3 线缆拆装 (Cable connecting and disconnecting)

CN	安装线缆时，将一字螺丝刀垂直插入可拆卸端子压块内，施加一定的力，此时圆孔打开，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。	②将线缆插入到圆孔中 Insert the cable into the circular hole	①施加一定的力 Apply a certain amount of force	②将线缆拔出 Unplug the cable	①施加一定的力 Apply a certain amount of force
EN	During connecting, insert the flat-blade screwdriver into the unlocking tab of the terminal with a certain amount of force. 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.				

IO 端子 (IO terminal)	线径范围: AWG (Wire width)	剥线长度: mm (Wire stripping length)	按压力: N (Pressure)	
7Pin IO端子 (7Pin IO terminal)	28~16	8~9	50	
10Pin IO端子 (10Pin IO terminal)				

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)



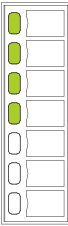
型号 (Model)	外形尺寸 (Dimension) : mm			重量 (Weight) : g
	W	H	D	
HCQXB-OD08-BD	18.6	36.1	51.1	20 approx.
HCQXB-OD04-BD-PNP				19 approx.

序号 (No.)	名称	Name	功能	Function
1	IO端子	IO terminal	数字量输出信号接口	Digital output signal interface
2	产品型号	Product model	显示扩展卡型号	Display expansion card model

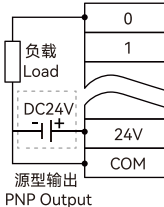
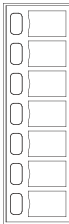
7. 指示灯说明 (Indicator description)

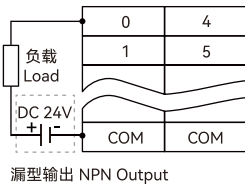
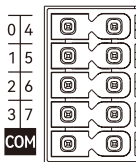
丝印 (Screen printing)	指示灯含义 (Indicator meaning)	颜色 (Color)	状态	Status	说明	Description
HCQXB-OD04-BD-PNP						
N (0~3)	输出 (Output)	黄绿色 (Yellow-Green)	 熄灭	Not lit	输出通道 N 无信号输出	There is no output signal for this channel
			 常亮	Lit	输出通道 N 有信号输出	There are output signals for this channel

0
1
2
3
■
24V
COM



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

7Pin IO 端子说明 (Terminal description)			 源型输出 PNP Output
丝印 (Screen printing)	说明 (Description)		
0	数字量输出通道0 (Digital output channel 0)		
1	数字量输出通道1 (Digital output channel 1)		
2	数字量输出通道2 (Digital output channel 2)		
3	数字量输出通道3 (Digital output channel 3)		
■	预留 (Reserved)		
24V	DC24V		
COM	公共端 (Common terminal)		

10Pin IO 端子说明 (Terminal description)				 漏型输出 NPN Output	
丝印 (Screen printing)	说明 (Description)		丝印 (Screen printing)		说明 (Description)
0	数字量输出通道0 (Digital output channel 0)		4		数字量输出通道4 (Digital output channel 4)
1	数字量输出通道1 (Digital output channel 1)		5		数字量输出通道5 (Digital output channel 5)
2	数字量输出通道2 (Digital output channel 2)		6		数字量输出通道6 (Digital output channel 6)
3	数字量输出通道3 (Digital output channel 3)		7		数字量输出通道7 (Digital output channel 7)
COM*	公共端 (Common terminal)		COM*		公共端 (Common terminal)

* 注：每 4 点使用一个输出公共端，输出公共端 COM 内部导通。
*Note: One common output terminal for every 4 channels;The output terminals COM are internally conductive.