www.hcfa.cn

支持的设备型号
Supported Models

HCNXE-ID32-D HCNXE-OD32-D HCNXE-MD1616-D HCNXE-MD2408-D
HCNXE-PRO32

禾川科技官方网站

HPPP2090026-00A	
Date	2024-07-16
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 NXE 系列硬件手册。

Please refer to the NXE 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
HCNXE-ID32-D	1.2	1.2	DC24V，电压范围：DC20.4~28.8V	DC24V, voltage range: DC20.4~28.8V
HCNXE-OD32-D				
HCNXE-MD1616-D				
HCNXE-MD2408-D				

* 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 specifications）

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℃	-10~55℃
储存温度	Storage temperature	-40~75℃	-40~75℃
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II	Level 2
冷却方式	Cooling method	自然冷却	Natural air cooling
防护等级	IP rating	IP40（配合防护罩）	IP 40 (use with a guard)
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。

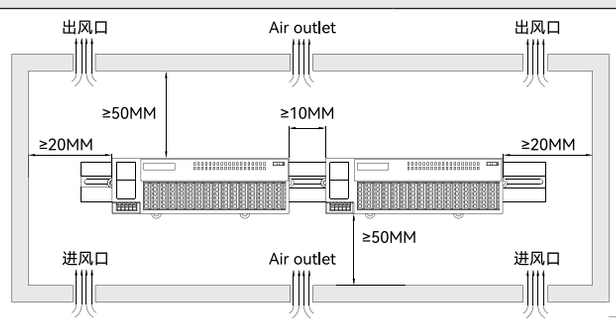
*Note: The equipment may be damaged if used in a manner not specified by the manufacturer.

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。

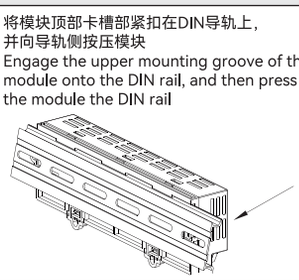
EN Please install the product perpendicular to the wall and ensure a sufficient cooling effect via natural air or a cooling fan. Please leave enough clearance around the product as shown in the right figure. During a side-by-side installation, please leave a horizontal clearance of more than 20 mm on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

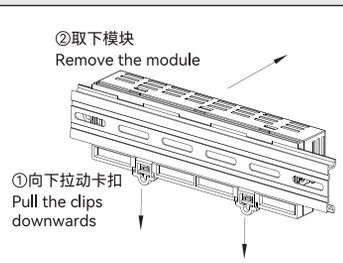


3.2 导轨拆装（DIN rail mounting and dismounting）

CN 安装模块时，将模块顶部卡槽紧扣在 DIN 导轨上，并用力按压模块下部，听到“咔哒”声，模块即成功安装于 DIN 导轨上（安装前应保证卡扣处于紧锁状态，否则可能导致安装故障）；拆卸模块时，将卡扣向下拉动一定距离， 听到“咔哒”声后，取下模块即可。

EN Before installation, check that the DIN rail mounting clips are in a locked state. During mounting, engage the upper mounting groove of the module onto the DIN rail, and then press the module towards the DIN rail until a clear click is heard (which indicates the clips are momentarily opened and locked onto the rail). During dismounting, pull the clips downwards until a clear click is heard (which indicates the clips are unlocked), and then directly remove the module.

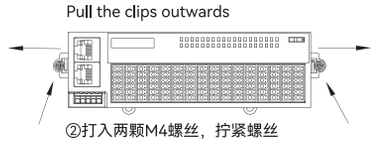


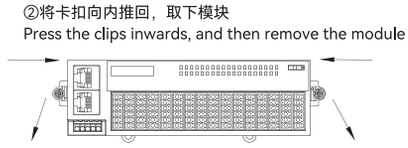


3.3 整机拆装（Module mounting and dismounting）

CN 安装模块时，将两侧的卡扣向外侧拉动，听到“咔哒”声后，在两侧的卡扣内放入两颗 M4 螺丝，然后拧紧螺丝。拆卸模块时，拧松螺丝，卸下两侧的 M4 螺丝，随后将卡扣复原，即可完成拆卸。

EN During mounting, pull the clips outwards until a clear click is heard. Punch in two M4 screws and then tighten them. During dismounting, unscrew the two M4 screws and remove them. Press the clips inwards, and then remove the module.

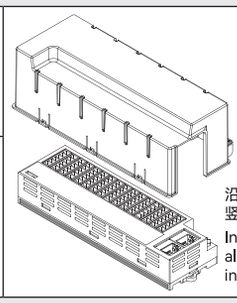


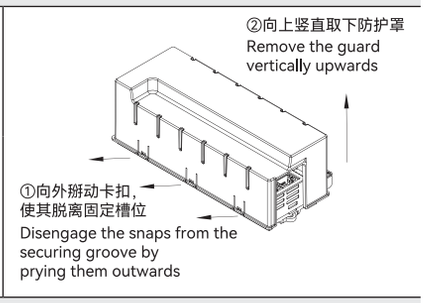


3.4 防护罩拆装（Guard mounting and dismounting）

CN 防护罩拆装如右图所示。

EN The mounting and dismounting of the guard are shown in the figures on the right side.

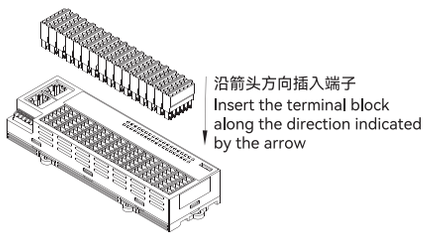


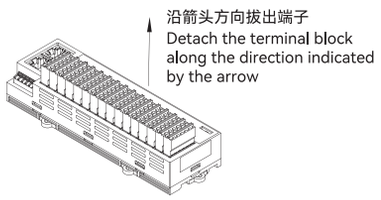


3.5 可拆卸端子拆装 (Removable terminal block mounting and dismounting)

CN 可拆卸端子拆装如右图所示。

EN The mounting and dismounting of the removable terminal block are shown in the figures on the right side.

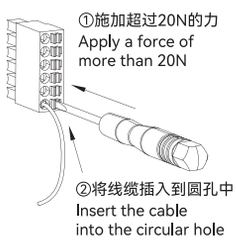


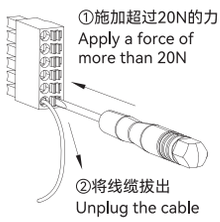


⚠ 3.6 线缆拆装（Cable connecting and disconnecting）

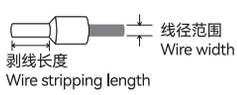
CN 安装线缆时，将赠送的一字螺丝刀垂直插入可拆卸端子压块内，施加超过 20N 的力， 将准备好的线缆插入到圆孔中，拔出一字螺丝刀，轻拽线缆，线缆不松动即成功完成配线；反之即可取出线缆。端子规格及配线示意图如右图所示

EN During connecting, insert the flat-blade screwdriver into the unlocking tab with a force of more than 20 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.





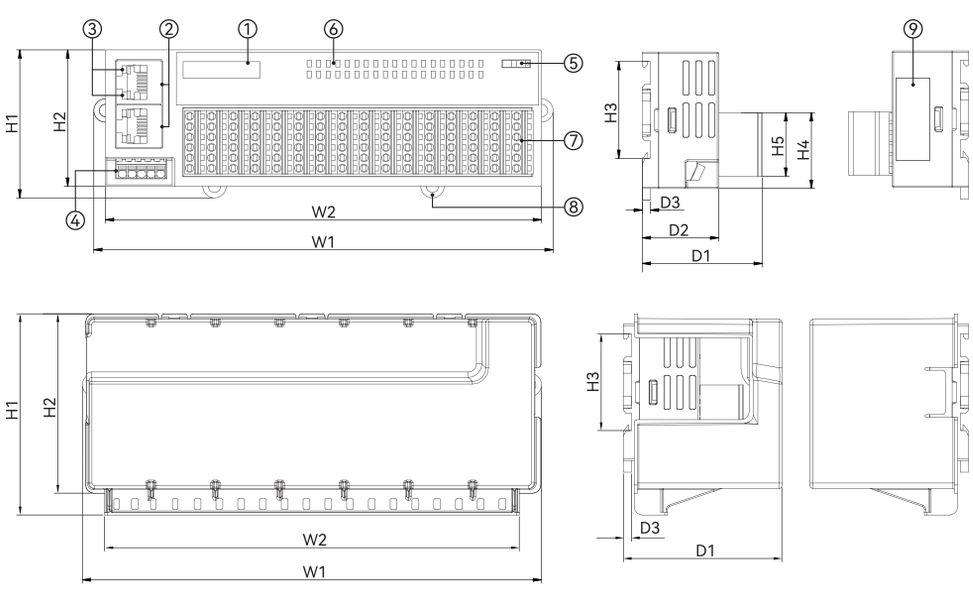
模块端子 (Terminal)	线径范围：AWG (Wire width)	剥线长度：mm (Wire stripping length)	按压力：N (Pressure)	拔线力：N (Wire pulling force)
DC24V 电源端子 (DC24V power supply terminal)	24~16	9~10	20	80
IO 端子 (IO terminal)	26-16	8-9	20	50



⚠ 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）

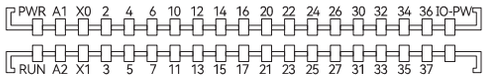
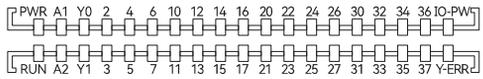
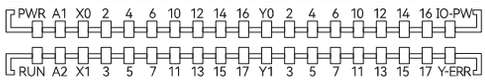
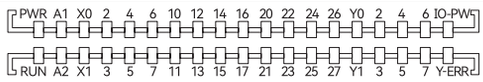
序号（No.）	项目	Item
1	产品型号	Product model
2	EtherCAT 通讯接口	EtherCAT communication interface
3	通讯指示灯	Communication indicator
4	DC24V 电源端子	DC24V power supply terminal
5	NPN/PNP 切换开关 *	NPN/PNP DIP switch*
6	模块状态指示灯	Module status indicator
7	IO 端子	IO terminal
8	卡扣	Clip
9	标签	Label



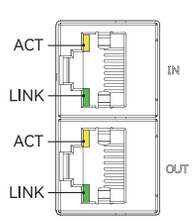
* 注：HCNXE-OD32-D 无此接口。
*Note: HCNXE-OD32-D is not equipped with this interface.

型号（Model）	外形尺寸（Dimension）：mm									重量（Weight）：g
	W1	W2	H1	H2	H3	H4	H5	D1	D2	D3	
HCNXE-ID32-D	168.60	160.00	54.30	50.00	35.50	27.75	23.25	44.00	28.00	3.00	210 approx.
HCNXE-OD32-D											
HCNXE-MD1616-D											
HCNXE-MD2408-D											
HCNXE-PRO32	168.60	152.30	73.85	65.85		-	-	58.20	-		73 approx.

5. 指示灯说明（Indicator description）

HCNXE-ID32-D	HCNXE-OD32-D
	
HCNXE-MD1616-D	**HCNXE-MD2408-D**
	

丝印 (Screen printing)	指示灯含义 (Indicator meaning)	颜色 (Color)	状态	Status	说明	Description
ID32 / OD32 / MD1616 / MD2408						
PWR	电源 (Power supply)	绿色 (Green)	熄灭	Not lit	模块供电电压不足或未供电	Insufficient power supply voltage or no power supply
			常亮	Lit	模块供电正常	Normal power supply
RUN	运行 (Run)	红色 (Red)	熄灭	Not lit	正常运行	Run
			常亮	Lit	停止	Stop
IO-PW	IO端子电源 (IO terminal power supply)	红色 (Red)	熄灭	Not lit	对外供电电压不足或未供电	Insufficient power supply voltage or no power supply
			常亮	Lit	对外供电正常	Normal power supply
A1/A2	保留 (Reserved)	-	-	-	-	-
OD32 / MD1616 / MD2408						
Y-ERR	输出通道故障 (Output channel error)	红色 (Red)	熄灭	Not lit	无故障发生	No error occurred
			常亮	Lit	过流或短路或过温报警 （硬件报错）	Over-current/short-circuit/over-temperature alarm (hardware error)
ID32						
X N (0~7,10~17, 20~27,30~37)	输入 (Input)	红色 (Red)	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
OD32						
Y N (0~7,10~17, 20~27,30~37)	输出 (Output)	红色 (Red)	熄灭	Not lit	输出通道 N 无输出信号	There is no output signal in this channel
			常亮	Lit	输出通道 N 有输出信号	There are output signals in this channel
MD1616						
X N **(0~7,10~17)**	输入 (Input)	红色 (Red)	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
Y N **(0~7,10~17)**	输出 (Output)	红色 (Red)	熄灭	Not lit	输出通道 N 无输出信号	There is no output signal in this channel
			常亮	Lit	输出通道 N 有输出信号	There are output signals in this channel
MD2408						
X N **(0~7,10~17,20~27)**	输入 (Input)	红色 (Red)	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
Y N **(0~7)**	输出 (Output)	红色 (Red)	熄灭	Not lit	输出通道 N 无输出信号	There is no output signal in this channel
			常亮	Lit	输出通道 N 有输出信号	There are output signals in this channel
ID32 / OD32 / MD1616						
IN ACT	EtherCAT IN 通讯 (EtherCAT IN communication)	黄色 (Yellow)	熄灭	Not lit	控制器与 EtherCAT 从站无数据交互	No data exchange between the controller and the EtherCAT slave
			常亮	Lit	控制器与 EtherCAT 从站存在数据交互	There is a data exchange between the controller and the EtherCAT slave
IN LINK	EtheCAT IN 连接 (EtherCAT IN connection)	绿色 (Green)	熄灭	Not lit	控制器与 EtherCAT 从站无物理连接	No physical connection between the controller and the EtherCAT slave
			常亮	Lit	控制器与 EtherCAT 从站存在物理连接	There is a physical connection between the controller and the EtherCAT slave
OUT ACT	EtherCAT OUT 通讯 (EtherCAT OUT communication)	黄色 (Yellow)	熄灭	Not lit	模块与 EtherCAT 从站无数据交互	No data exchange between the module and the EtherCAT slave
			常亮	Lit	模块与 EtherCAT 从站存在数据交互	There is a data exchange between the module and the EtherCAT slave
OUT LINK	EtherCAT OUT 连接 (EtherCAT OUT connection)	绿色 (Green)	熄灭	Not lit	模块与 EtherCAT 从站无物理连接	No physical connection between the module and the EtherCAT slave
			常亮	Lit	模块与 EtherCAT 从站存在物理连接	There is a physical connection between the module and the EtherCAT slave

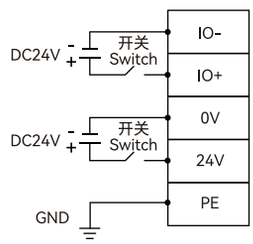


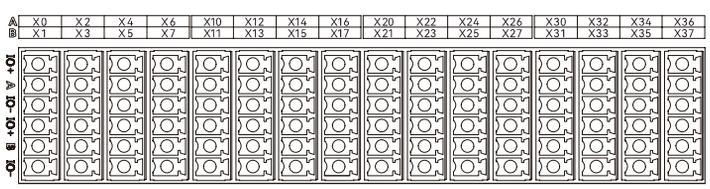
6. 端子及配线说明（Terminal and wiring description）

型号(Model) / 类型(Type)	输入（Input）		输出（Output）	
	PNP	NPN	PNP	NPN
HCNXE-ID32-D	○	○	-	-
HCNXE-OD32-D	-	-	-	○
HCNXE-MD1616-D	○	○	-	○
HCNXE-MD2408-D	○	○	-	○

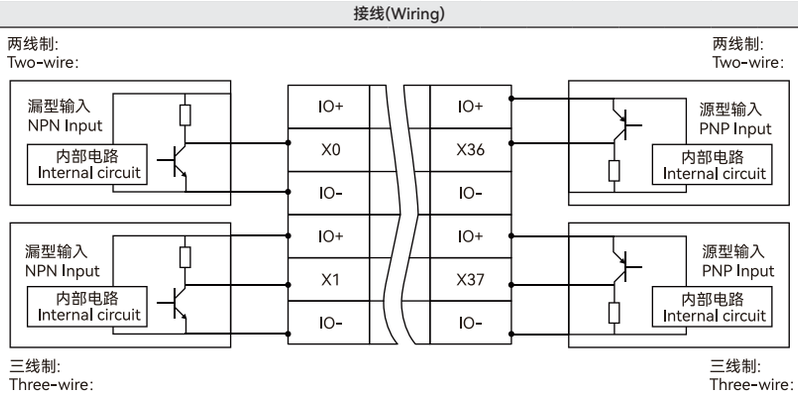
* 注：○：代表支持该类型；-：代表不支持该类型。

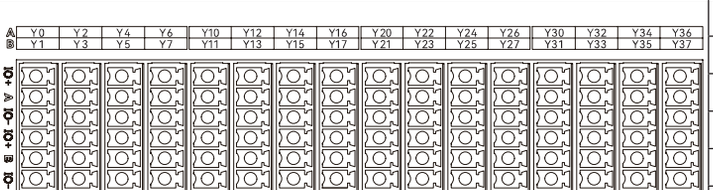
*Note: The symbol " ○ " indicates that the type is supported. The symbol "-" indicates that the type is not supported.

DC24V电源端子说明(DC24V power supply terminal description)		接线(Wiring)
IO-		
IO+		
0V		
24V		
PE		

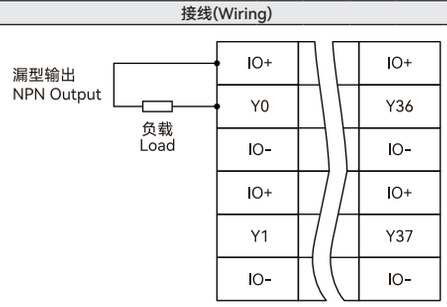
端子说明(Terminal description)	HCNXE-ID32-D															
	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+
	X0	X2	X4	X6	X10	X12	X14	X16	X20	X22	X24	X26	X30	X32	X34	X36
	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-
	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+
	X1	X3	X5	X7	X11	X13	X15	X17	X21	X23	X25	X27	X31	X33	X35	X37
	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-

接线(Wiring)

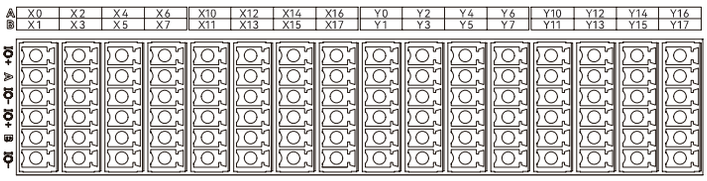


端子说明(Terminal description)	HCNXE-OD32-D															
	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+
	Y0	Y2	Y4	Y6	Y10	Y12	Y14	Y16	Y20	Y22	Y24	Y26	Y30	Y32	Y34	Y36
	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-
	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+
	Y1	Y3	Y5	Y7	Y11	Y13	Y15	Y17	Y21	Y23	Y25	Y27	Y31	Y33	Y35	Y37
	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-

接线(Wiring)



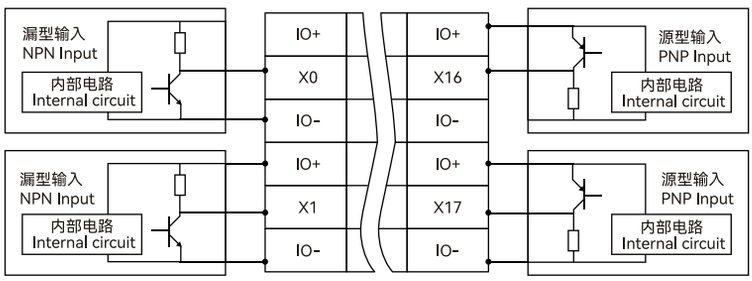
端子说明(Terminal description)



HCNXE-MD1616-D															
IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+
X0	X2	X4	X6	X10	X12	X14	X16	Y0	Y2	Y4	Y6	Y10	Y12	Y14	Y16
IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-
IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+
X1	X3	X5	X7	X11	X13	X15	X17	Y1	Y3	Y5	Y7	Y11	Y13	Y15	Y17
IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-

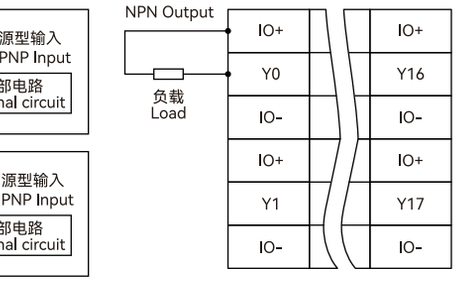
接线(Wiring)

两线制:
Two-wire:



三线制:
Three-wire:

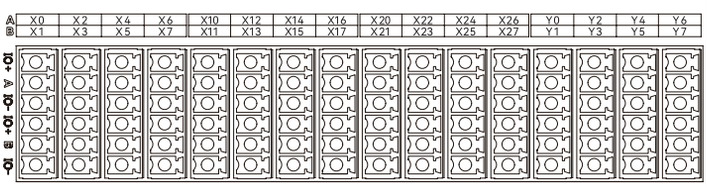
两线制:
Two-wire:



三线制:
Three-wire:

漏型输出
NPN Output

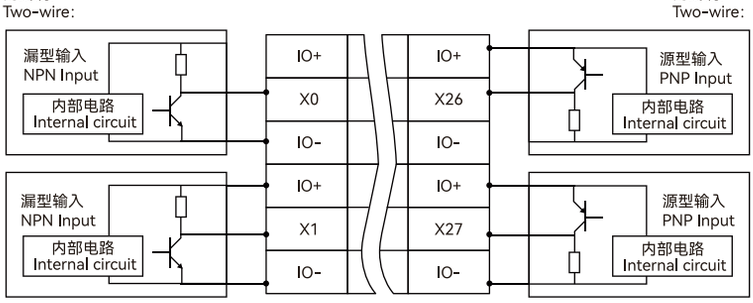
端子说明(Terminal description)



HCNXE-MD2408-D															
IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+
X0	X2	X4	X6	X10	X12	X14	X16	X20	X22	X24	X26	Y0	Y2	Y4	Y6
IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-
IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+	IO+
X1	X3	X5	X7	X11	X13	X15	X17	X21	X23	X25	X27	Y1	Y3	Y5	Y7
IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-	IO-

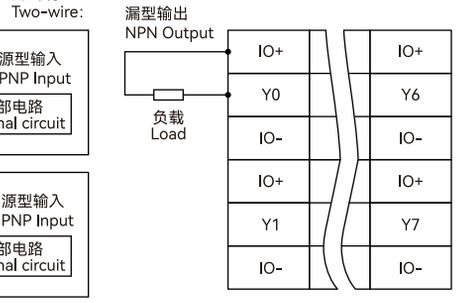
接线(Wiring)

两线制:
Two-wire:



三线制:
Three-wire:

两线制:
Two-wire:



三线制:
Three-wire:

漏型输出
NPN Output