

Product for Field Test

Newsletter Date: 24.12.2025

1. Product Introduction: M series Temperature measurement modules.

1.1 Naming rules:

HC MX - TC 04 □ - D - XXXX

1	产品名称 (Product name)
HC	禾川 (Hechuan Technology)
2	产品系列 (Product series)
MX	M系列通用扩展 (M-series general-purpose expansion)
3	功能模块 (Function module)
TC	温度测量 (热电偶) (Temperature measurement (Thermocouple))
PT	温度测量 (热电阻) (Temperature measurement (Resistance Temperature Detector))

4	通道数量 (Number of channels)
04	4通道 (4 channels)
5	端子类型 (Terminal type)
空 (N/A)	标准端子 (Standard terminal)

6	电源类型 (Power supply type)
D	直流电源 (DC power supply)
7	软件/固件定制代码 (Customized software/ firmware Code)
X	0~9/A~Z/空 (N/A)

3. 适用型号 (Applicable model)

名称 (Name)	型号 (Model)*	模块简要说明	Brief description
温度测量模块 Temperature measurement module	HCMX-TC04-D	4通道温度测量模块, 支持K、B、R、N、J、T、E、S等多种热电偶传感器	4-channel temperature measurement module, supporting a variety of thermocouple sensors, including K, J, E, T, N, B, R, and S
	HCMX-PT04-D	4通道温度测量模块, 支持Pt100、Pt500、Pt1000、Cu100、KTY84、NTC5K_B:2000、NTC5K_B:3950、NTC5K_B:6000、NTC10K_B:2000、NTC10K_B:3950、和NTC10K_B:6000等多种热电阻传感器	4-channel temperature measurement module, supporting a variety of resistance temperature detector sensors, including Pt100, Pt500, Pt1000, Cu100, KTY84, NTC5K_B:2000, NTC5K_B:3950, NTC5K_B:6000, NTC10K_B:2000, NTC10K_B:3950, and NTC10K_B:6000

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

*Note: Only operate under the safety extra low voltage (SELV) provided by a limited power source (LPS).

1.2 Product specifications:

项目 (Item)	规格 (Specifications)	
	HCMX-TC04-D	HCMX-PT04-D
电压 (Voltage)	DC24V (DC20.4~28.8V)	
功率 (Power)*	1W	
输入类型 (Input type)	热电偶 (Thermocouple)	热电阻 (2线/3线) (Resistance Temperature Detector (RTD) (2-wire/3-wire))
传感器类型及测量范围 (Sensor type & Measurement range)	K: -270.0°C ~ 1370.0°C, -454.0°F ~ 2498.0°F B: 200.0°C ~ 1800.0°C, 392.0°F ~ 3272.0°F R: -50.0°C ~ 1765.0°C, -58.0°F ~ 3209.0°F N: -200.0°C ~ 1300.0°C, -328.0°F ~ 2372.0°F J: -210.0°C ~ 1200.0°C, -346.0°F ~ 2192.0°F T: -270.0°C ~ 400.0°C, -454.0°F ~ 752.0°F E: -270.0°C ~ 1000.0°C, -454.0°F ~ 1832.0°F S: -50.0°C ~ 1765.0°C, -58.0°F ~ 3209.0°F	Pt100: -200.0°C ~ 850.0°C, -328.0°F ~ 1562.0°F Pt500: -200.0°C ~ 850.0°C, -328.0°F ~ 1562.0°F Pt1000: -200.0°C ~ 850.0°C, -328.0°F ~ 1562.0°F Cu100: -50.0°C ~ 150.0°C, -58.0°F ~ 302.0°F KTY84: 0.0°C ~ 200.0°C, 32.0°F ~ 392.0°F NTC5K_B:2000: -30.0°C ~ 200.0°C, -22.0°F ~ 392.0°F NTC5K_B:3950: -15.0°C ~ 100.0°C, 5.0°F ~ 212.0°F NTC5K_B:6000: 0.0°C ~ 100.0°C, 32.0°F ~ 212.0°F NTC10K_B:2000: -25.0°C ~ 200.0°C, -13.0°F ~ 392.0°F NTC10K_B:3950: 0.0°C ~ 150.0°C, 32.0°F ~ 302.0°F NTC10K_B:6000: 6.0°C ~ 100.0°C, 42.8°F ~ 212.0°F
温度单位 (Temperature unit)	摄氏°C/华氏°F (°C/°F (Celsius/Fahrenheit))	
补偿方式 (Compensation method)	外部冷端补偿 (External cold junction compensation)	-
转换时间 (Conversion time)	120ms/通道 (120ms/channel)	90ms/通道 (90ms/channel)
精度 (25°C) (Accuracy (25°C))	±0.1% (全量程) + 冷端补偿误差 (±0.1% (full scale) + cold junction compensation error)	±0.1% (全量程) (±0.1% (full scale))
精度 (0~55°C) (Accuracy (0~55°C))	±0.3% (全量程) + 冷端补偿误差 (±0.3% (full scale) + cold junction compensation error)	±0.3% (全量程) (±0.3% (full scale))
分辨率 (Resolution)	24bit	
灵敏度 (Sensitivity)	0.1°C / 0.1°F	
通道开启与关闭 (Channel on/off)	支持 (Supported)	
滤波功能 (Filtering function)	均值滤波 (mean filter)	
输入断线检测 (Input open circuit detection)	支持 (Supported)	
超限检查 (Overlimit check)	支持 (Supported)	
隔离方式 (Isolation method)	I/O端子与电源之间隔离, 通道之间不隔离 (I/O terminals isolated from power supply; no isolation between channels)	

* 注: 此处标识的额定功率为满负载运行时的最大功率。

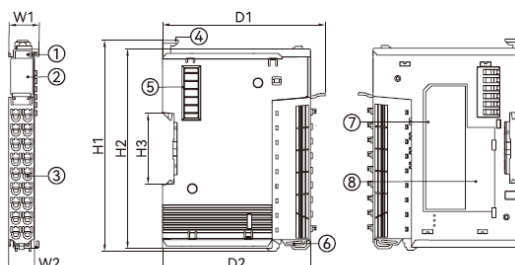
*Note: The power rating indicated here is the maximum power under full-load operation.





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1.3 Interface and dimension:



序号(No.)	名称	Name	功能	Function
1	产品型号	Product model	模块型号	Module model numbers
2	模块状态指示灯	Module status indicator	显示模块与通道状态	Display module and channel status
3	18Pin IO端子	18Pin IO terminal	输入信号接口	Input signal interface
4	双向联动卡扣	DIN rail mounting latch	固定模块在DIN导轨上	Mount the module onto a DIN rail
5	扩展模块通讯接口	Expansion module communication interface	主机和IO模块或IO模块间通讯及供电接口，不支持热插拔	The interface for the communication and power supply between the host and the IO module or between IO modules, does not support hot-swapping
6	集线结构	Cable collector	收纳IO线缆	Organize IO cables
7	标签	Label	显示模块型号、规格参数、内部序列号等基本信息	Display the basic information including module model, specification parameters, and internal serial number
8	侧边丝印	Side silk screen printing	模块端子说明	Module terminal description

2. Release Model:

PLC	Model	Max. order quantity
M series Temperature measurement module	HCMX-TC04-D	10
	HCMX-PT04-D	10

