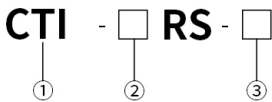




概述 Overview

- CTI系列电流监测模块是一款多路交流电流的实时监测、采集模块，通过采集高精度电流互感器的信号波形，内置32位高性能主控单元实时计算电流有效值，可根据用户设置实现多种告警逻辑。采用RS-485通讯总线，通过标准MODBUS-RTU协议进行数据传输。
- CTI series current monitoring module is a multi-channel AC current real-time monitoring and acquisition module. By collecting the signal waveform of a high-precision current transformer, the built-in 32-bit high-performance main control unit calculates the effective current value in real time, and can realize a variety of alarm logic according to user settings.Using RS-485 communication bus, data transmission is carried out through the standard MODBUS-RTU protocol.

选型说明 Model Designation



序号 No	项目 Item	代号 Code	说明 Description
①	产品名称 Product name	CTI	电流监测模块 Current monitoring module
②	通道数量 Number of channels	8	4: 四路 6: 六路 8: 八路 4: Four-way 6: Six ways 8: Eight ways
③	Measuring range	100A	量程上限 Upper range limit

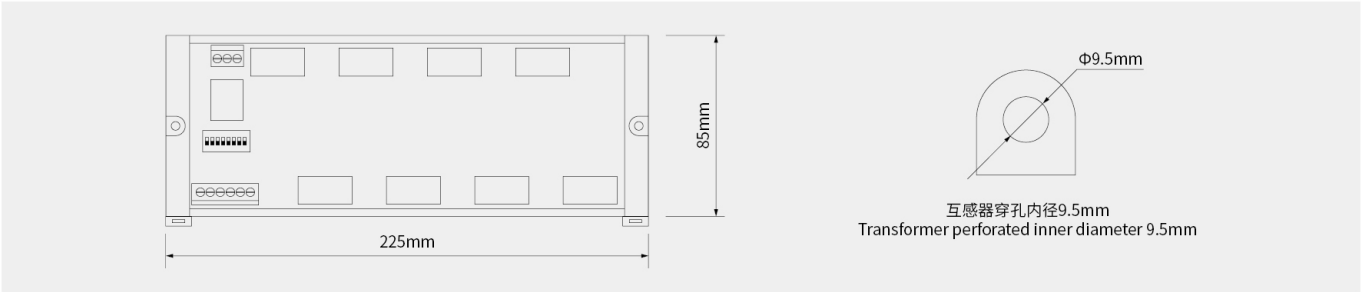
特点 Features

- 各通道独立高精度采样；
- 具有多种告警逻辑判断模式；
- 工作电压宽，兼容DC12-28V供电；
- 互感器间预留足够穿线间距，便于接线维护；
- 高稳定性设计，可长期运行无需人工干预；
- 独立一个继电器输出，可配置为多路通道共用告警。
- Independent high-precision sampling of each channel;
- Has a variety of alarm logic judgment modes;
- Wide operating voltage, compatible with DC12-28V power supply;
- Sufficient threading spacing is reserved between the transformers to facilitate wiring maintenance;
- High-stability design, long-term operation without manual intervention;
- An independent relay output can be configured to share alarms for multiple channels.

技术参数 Technical Parameters

供电电压 Supply voltage	DC12-28V
工作温度 Working temperature	-20℃~50℃
检测分辨率 Detection resolution	0.1A
采样周期 Sampling period	100ms
输入信号 Input signal	9~30V
量程范围 Range range	50A、100A
功耗 Power consumption	≤ 1.5W
工作湿度 Working humidity	15%~90% (无冷凝) (no condensation)
基本误差 Basic error	±1%FS
过流能力 Overcurrent capacity	量程 range 150%
继电器触点 Relay contact	AC220V/DC30V, 3A

外形尺寸 Dimensions



接线端子定义 Terminal Definition

说明 Description	示意图Schematic drawing
端子1：模块供电正极 Terminal 1: the positive electrode of the module' s power supply	
端子2：模块供电负极 Terminal 2: Negative electrode of module power supply	
端子3：RS485+ Terminal 3: RS485+	
端子4：RS485- Terminal 4: RS485-	
端子5：输入信号INA Terminal 5: Input signal INA	
端子6：输入信号INB Terminal 6: Input signal INB	
端子7：继电器常闭端 Terminal 7: Normally closed terminal of relay	
端子8：继电器公共端 Terminal 8: Common terminal of relay	
端子9：继电器常开端 Terminal 9: Relay normally open	

拨码设置 Dial Code Setting

电流监测模块拨码的第8位用于选择通讯参数。

当第8位拨码设为ON时，通讯波特率为9600、8N1无校验。此时通讯地址由拨码1-拨码7决定，我们将拨码ON视为数值1，拨码OFF视为数值0：

通讯地址 = 拨码1 + (拨码2 × 2) + (拨码3 × 4) + (拨码4 × 8) + (拨码5 × 16) + (拨码6 × 32) + (拨码7 × 64)

若第8位拨码设为OFF，则通讯地址、波特率、校验位等参数由寄存器202、203、204决定（详见寄存器定义）

注意：调整通讯参数后需重启模块才能生效！



The 8th bit of the dial code of the current monitoring module is used to select the communication parameters.

When the 8th dial code is set to ON, the communication baud rate is 9600, and 8N1 has no verification. At this time, the communication address is determined by dialing code 1-dialing code 7. We regard dialing code ON as a value of 1 and dialing code OFF as a value of 0.:

Mailing address = Dial code 1+ (dial code 2×2) + (dial code 3×4) + (dial code 4×8) + (dial code 5×16) + (dial code 6×32) + (dial code 7×64)

If the 8th bit dial code is set to OFF, the communication address, baud rate, parity bit and other parameters are determined by the registers 202, 203, and 204 (see register definition for details)

Note: After adjusting the communication parameters, the module needs to be restarted to take effect!

指示灯说明 Indicator Light Description

模块右方有三个指示灯用于标识工作状态。

RUN：运行状态，长亮表示允许告警，短闪烁时禁止告警判断；

COM：通讯状态，通讯时闪烁；

ALARM：告警状态，有告警时长亮；

There are three indicators on the right side of the module to identify the working status.

RUN: Running state, long light indicates that the alarm is allowed, and the alarm judgment is prohibited when the short flicker is on;

COM: Communication status, flashing during communication;

ALARM: Alarm status, there is an alarm for a long time to light up;

继电器工作方式 Relay Operating Mode

- 1、关联一个或多个通道告警信号；

2、作为输出点由通讯控制。
1. Associate one or more channel alarm signals;

2. As the output point by communication control.

使用注意事项 Using Precautions

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- 要求极高安全性的应用场合, 涉及人身安全与财产的情况。
- 苛刻条件、严酷环境的应用场合, 包括室外、存在化学污染、电磁、振动或冲击影响的环境。
- 有火灾或爆炸风险的应用场合, 包括存在易燃易爆性气体、强酸强碱化学品等物质的环境。
- 涉及军工用途、航天航空项目的应用场合。

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