TOSUN

TS3004

High-PerformanceThermocouple DAQ

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Classic Application:

- Industrial process monitoring
- Automotive & power electronics testing
- Laboratory & thermal validation

Feature Overview

The TS3004 is a high-performance thermocouple temperature acquisition device, featuring an integrated high-precision cold junction compensation circuit. It supports digital acquisition of up to 8 channels of K-type thermocouple signals and directly outputs temperature data in degrees Celsius (°C). The measurement range covers -200°C to 1370°C, and input terminals can withstand overvoltage transients of up to ±45V.

Application Ecosystem:

The device uses a standard D-Sub 9-pin connector and can communicate with other CAN-based devices. When used together with the TSMaster software, the TS3004 supports loading DBC database files, enabling convenient monitoring, analysis, and simulation of CAN bus data.

Characteristics

- Integrated cold junction compensation enables direct temperature output in degrees Celsius
- Supports temperature measurement from -200°C to 1370°C, with ±45V overvoltage
- Standard version supports K-type thermocouples
- Supports 50 Hz power-line filtering (60 Hz optional) and provides sensitive thermocouple fault detection
- Upon power-up, the CAN baud rate is fixed at 1 Mbps It supports configuration via communication commands; received configuration messages are stored in memory
- Upon power-up, it automatically loads the most recently stored CAN configuration parameters (e.g. , baud rate, filter settings). In this mode, configuration via communication commands is disabled

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Device Specifications

Connector	Standard D-Sub, 9-pin
Power Supply	Phoenix terminal power supply
Power Consumption	1.5 W
ESD Protection	±4 kV contact discharge, ±8 kV air discharge
Enclosure Material	Metal
Dimensions	150 x 97.6 x 72 mm
Weight	422.6 g
Operating Temperature	-40°C ~ 80°C
Operating Humidity	10% ~ 90% RH (no condensing)
Operating voltage	9 ~ 36 V

CAN Specifications (Default Mode)

Connection Standard	High-speed CAN (ISO 11898-2 compliant)
Supported Protocols	Full support for CAN (ISO 11898-1 compliant)
CAN Baud Rate	Fixed at 1 Mbps
Sample Point	82.5%
CAN Frame Data Length	Up to 8 bytes (extended data frame)
Termination Resistor	Built-in 120 Ω, configurable via hardware DIP switch

CAN Specifications (Custom Mode)

Connection Standard	High-speed CAN (ISO 11898-2 compliant)
Supported Protocols	Full support for CAN and CAN FD (ISO 11898-1 compliant)
CAN Baud Rate	125 kbps ~ 1 Mbps
CAN Frame Data Length	Up to 8 bytes
CAN FD Baud Rate	125 kbps ~ 8 Mbps
CAN FD Frame Data Length	Supports 3-byte and 16-byte frames; BRS supported
Termination Resistor	Built-in 120 Ω, configurable via hardware DIP switch
Bus-Off Auto Recovery	Disabled by default; recovery command available in Default Mode

Ordering information

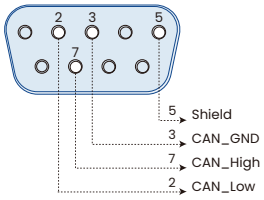
Product Name	Model Number	Function Description
Network Device	TS3004	High-Performance Thermocouple DAQ

Shipping list

- TS3004 device
- 2-Pin flange locking connector

2-Pin flange locking connector

Pin definition



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