

# Cryogenic Temperature Controller Monitor



*Our Solution for Cryogenic Instrumentation*



Excerpt from the ZSP Company Temperature controller Catalog  
Product Section Model: CTCM-N  
Edition 2019

# Cryogenic Temperature Controller Monitor

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## Features:

- Excitation current reversal eliminates thermal EMF errors for RTD sensors
- Thermocouple Cold Junction Compensation
- Measures Negative Thermocouple Voltages
- Auto Short-Circuit Detection
- 3 24-bit ADCs
- 50Hz/60Hz noise Rejection
- 15ppm/°C Temperature Coefficient

## Specification:

Power Input:	220 V AC
Number of Cryogenic Channels:	3 Input
Number of High Temperature Channels:	1 Input
Computer Interface:	USB
Graphical touchscreen display:	LCD(7 inch IPS)
Control loops:	1 PID Feedback Control
4 Analog outputs:	4-20 mA
Heater Power:	100 W (at 50V)
Input Sensor types:	diode, RTD, and thermocouple
RAM:	4GB

## Applications:

- Cryogen-Free systems
- Superconducting Magnets
- Ultra Low Temperature Research
- Materials Research
- Quantum Technology Research
- Aerospace Simulation

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CTCM-N Cryogenic Temperature Controller Monitor is a high performance instrument that can monitor and control temperatures with high resolution. The CTCM-N offers three temperature inputs for cryogenic applications that can read RTDs, thermistors, and diodes. Each temperature input channel has its own 24-bit ADC with eleven input ranges, and is equipped with its own independent excitation current source. One temperature inputs for high temperature applications that can read all types of thermocouples.

## CTCM-N rear panel:



- |                           |                        |
|---------------------------|------------------------|
| 1 Sensor input connectors | 5 GND connector        |
| 2 relays                  | 6 Heater output        |
| 3 Analog output (4-20 mA) | 7 Heater fuse          |
| 4 USB interface           | 8 Power input assembly |



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In many applications, the unparalleled feature set of the CTCM-N allows you to replace several instruments with one, saving time, money and valuable laboratory space. Delivering more feedback, tighter control, and faster cycle times, the CTCM-N keeps up with increasingly complex temperature measurement and control applications. It is the ideal solution for general purpose to advanced laboratory applications. Put the CTCM-N temperature controller to use in your lab and let it take control of your measurement environment.

ZSP is a manufacturer of cryogenic equipments for both laboratory and industrial process and cryotronics device for monitoring and control. Our mission is to provide the cryogenic industry with high quality, innovative, and technologically superior instrumentation.

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