

FIBER OPTIC THERMOMETER

FT-MINI

KEY FEATURES

- Simple one channel device
- 3.3V-TTL UART interface
- Small footprint
- Possible Measuring range
- 200 °C to + 300 °C
- Possible standard
deviation* +/- 0.1 K



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FT-MINI

DESCRIPTION

The thermometer FT-MINI with fiber optic sensors is ideal for the use in microwave, high frequency, high voltage and magnetic field or aggressive environments, where measurement with metal temperature sensors (RTC, TC, capillary,...) is not possible.

The measure principle use the change of the optical properties of a gallium arsenide crystal (GaAs) with the temperature. The FT-MINI contains a light source, an optical analyzer and belonging electronic with 3.3V-TTL-MCU interface.

The communication protocol is available for software development.

Depending on the measurement environment, several sensor designs are available with different ruggedisation of the fiber tube and sensor tip (see specific data sheets). Customized sensors can be offered.

The system consisting of device and matched probe can be calibrated to achieve an improved accuracy of less than 0.1 K. On request a back-tracing according ISO 17025 can be offered.

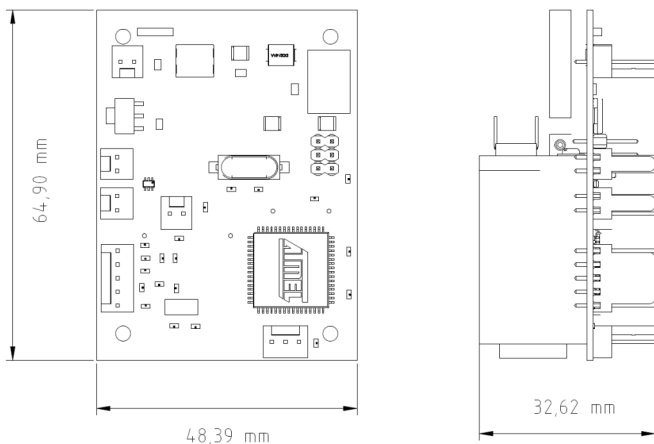
TECHNICAL SPECIFICATION

Optical Channels	1
Silica Fiber Core	200 um
Fiber Optic Connectors	ST
Fiber Protection Jackets	PTFE sheath, PTFE spiral wrap
Measuring Range	-200 to 300 °C (user configuration)
Accuracy*	Up to +/- 0.1 K
Resolution	0.1 K
Measuring Time per Channel**	250 ms
Operating Temperature	-20 to 60 °C
Storage Temperature	-20 to 70 °C
Light Source Lifetime	5 (+/- 3) years
Humidity	95% RH non-condensing
Communication Ports	3.3 V TTL UART
System Status Indicator	LED
Auto Diagnostics	Light Level, Signal Level
Power Supply	> 7 VDC (< 700mA)

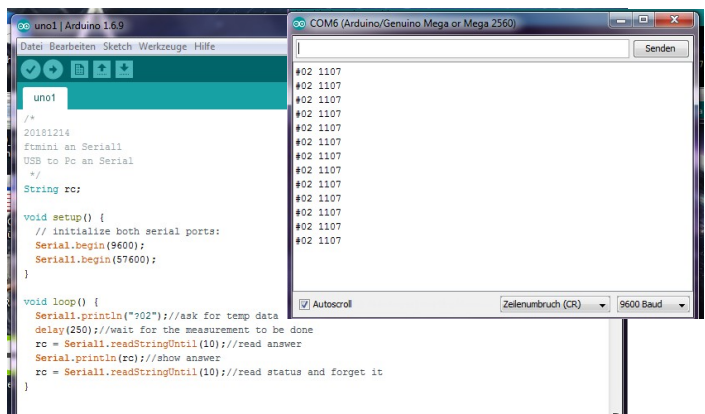
* depending on user defined measurement range.

** Mean value. This value depends on the used sensor and its environmental temperature.

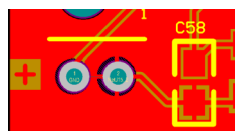
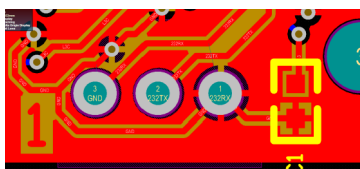
DIMENSIONS



PROGRAMMING



CONNECTIONS



UART-Pins (1-RXD, 2-TXD, 3-GND) Power Supply Pins (1-+, 2-/-)

ORDERING INFORMATION

FOTEMP1-MINI-X where X=Calibration Option
 X= A Calibration = -40°C to +200°C
 X= B Calibration = -40°C to +300°C
 X= C Calibration = -200°C to +300°C

Quick Ship Products:

FOTEMP1-MINI-A, Calibrated -40°C to +200°C