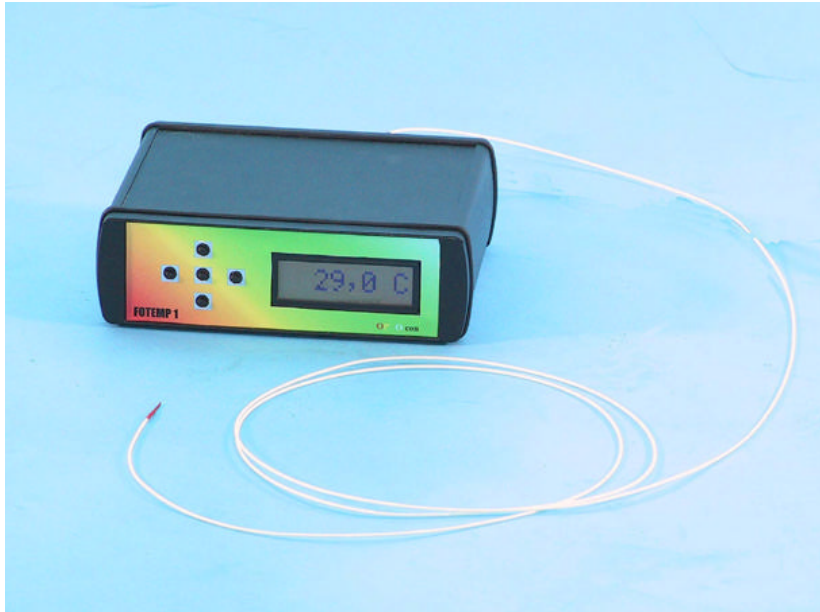


Fiberoptical Thermometer FoTemp 1



Fotemp 1, Is an fiberoptical thermometer used for temperature measurement in high electromagnetic interfered environment, in microwave fields and places where measurement with electric temperature probes is not possible.

Fotemp 1 is an user-friendly, easy operating and compact measurement instrument for different fields of application. Fotemp 1 will be adjusted to your special requirements (interfaces, probe length).

Measuring method

The fiber optic temperature sensor consists of a fiber optic probe with a GaAs (gallium arsenide) probe tip. The probe consists completely of non metallic material.

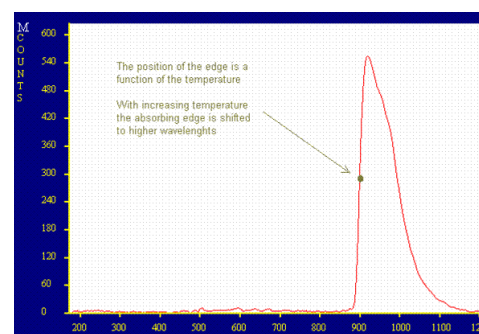
Having a wave length of 850 nm and more GaAs becomes optical transmission. This is due to the position of the band edge in the material. The position of the band edge is dependent to temperature and shifts about 0.4 nm per Kelvin.

The measurement instrument contains a light source and a device which is used for the spectral detection of the band edge's position. From this the temperature is calculated.

The probe consists completely of non metallic material.

Application fields

- Medical Engineering (nuclear spin tomography)
- Microwave - and high frequency applications
- Processmonitoring
- Generator -and transformer techniques
- Electric motors
- Application in aeronautics
- Chemistry and petrochemistry



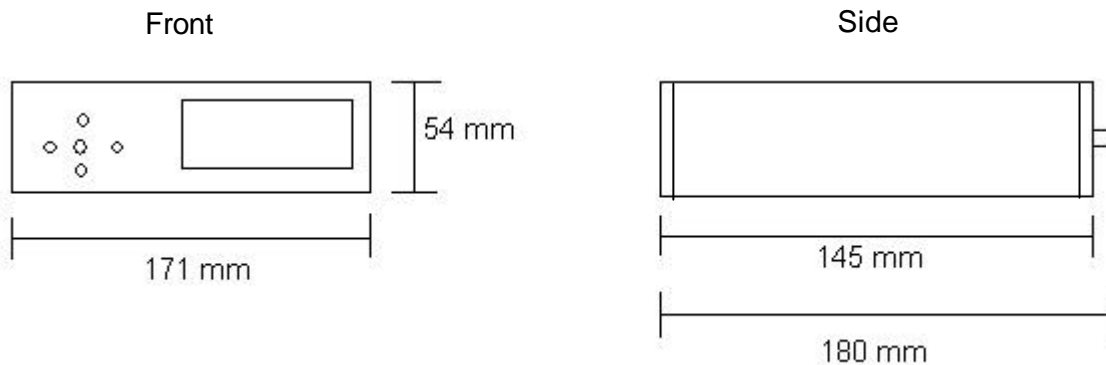
Technical data

Instrument:

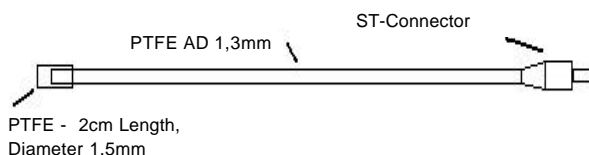
Number of channels: 1
Power Requirements: 9VDC, plug-in power supply inclusive
Power input: 350 mA
Display range: 0 to 300°C
Accuracy: +/- 1°C
Resolution: 0,1°C
Analog output: 0-10V or 4-20mA, BNC
Communication: RS-232
Calibration: One-point calibration feasible by user
Display: LCD display 1x8 digits, background lighting
Storage temperature: -20°C to +50°C
Operating temperature: 0°C to +50°C
Instrument: weight 900 g
dimensions 230 x 171 x 54 mm
Material: aluminium and plastic

Probe:

Length: 2m, 5m or 10 m, different probe lengths and configurations on request
Diameter: 1,3 mm (probe tip 2cm, AD 1,5mm), completely consisting of nonmetallic material
Temperature range (probe): 0°C to 300°C
Connector: ST-Connector
System-accuracy: ± 2°C in the temperature range 0°C - 300°C
(Instrument and probe)



Probe construction



Contact

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