

FIBER OPTIC THERMOMETER FOTEMP MODULAR

KEY FEATURES

- Modular system for up to 255 channels
- Up to 4 channels per module
- Measuring range: -200°C to +300°C
- High accuracy: +/-0.2°C
- Easy to upgrade by adding modules
- Easy interchangeability of modules
- Each module with status LED
- Multiple systems can be cascaded
- Analog output options: 0-10V or 4-20mA
- Digital Interface options: RS232, USB, RS485, RS485/Modbus RTU, Ethernet/Modbus TCP

FIBER OPTIC SIGNAL CONDITIONER FOTEMP MODULAR

DESCRIPTION

The new modular fiber optic thermometer FOTEMP Modular system offers maximum flexibility for all of your measurement projects and is suitable for applications which require a simultaneous readout of the measurement channels with high speed. The fiber optic thermometer consists of a 19" case which provides place for up to 40 simultaneous channels in a total of 10 modules. Each module can be easily removed or replaced. One simply needs to remove the old module from the slot and insert the new one. We offer a variety of features e.g. 1-4 channels per module, additional analog outputs and display versions.

The FOTEMP Modular system can be connected to the computer via a serial interface. Via the software Fotemp-Assistent all measurement results can be easily controlled and monitored via computer. The software features direct data logging and data saving to a Microsoft Excel spreadsheet.

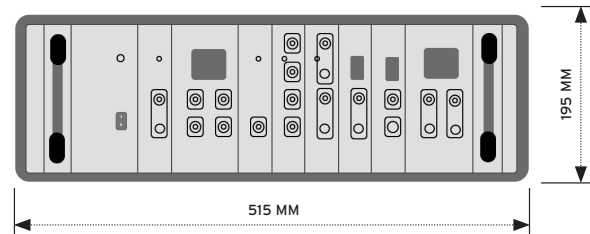
The fiber optic thermometer FOTEMP Modular system is especially adapted for industrial needs: among other things this includes low maintenance, robust components and the ability to withstand the toughest conditions, the system adapts perfectly to the most stringent environmental conditions with regard to shock, vibration, moisture and variations in pressure and temperature.

All components of the fiber optic thermometer, such as the light source guarantee a long service life. The FOTEMP Modular system is compatible with all our fiber optic probes. The outer jacket of the fiber optic temperature sensors is made out of teflon, at the sensor tip a GaAs crystal (gallium arsenide) is attached. The probe sensor is completely non-conductive. Optocon's fiber optic sensors offer complete immunity to RF and microwave radiation with high temperature operating capability, intrinsic safety, and non-invasive use. The probes are also designed to withstand harsh and corrosive environments.

Starting at a light wave length of 850nm GaAs becomes optical translucent. Since the position of the band gap is temperature dependent, it shifts about 0.4nm/Kelvin. The measurement device contains a light source and a device for the spectral detection of the band gap. This guarantees fast, repeatable and reproducible measurements.

DIMENSIONS-

FRONT VIEW



APPLICATIONS

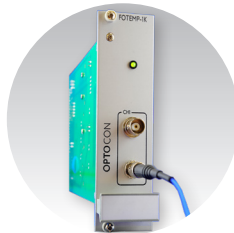
- EMI, RFI and microwave environments
- High voltage environments
- Harsh and hazardous environments
- Process monitoring
- Medical applications (MRT)

TECHNICAL SPECIFICATIONS

Channels/system	1-40 (Primary chassis), 1-255 (Fully expanded system)
Modules/device	Full Size (84TE): 12x 7TE or 6x 14TE Half Width (42TE) : 6x 7TE or 3x 14TE Note: Controller/PowerSupply=14TE
Channels/module	1, 2 or 4
Power supply	100-240VAC / 50-60Hz
Measuring range	-200°C to +300°C, depending CAL option
Accuracy	+/- 0.2°C (1 sigma)
Resolution	0.1°C
Sampling/Update Rate	250ms for 1 channel module 500ms for 2 channel module 1000ms (1sec) for 4 channel module
Analog output	Option: 0-10V or 4-20mA
Digital interface and Protocols	Standard: RS-232/ASCII and USB/ASCII Options: RS485/ASCII, RS485/Modbus, RTU or Ethernet/Modbus TCP Note: For custom programming applications, contact for ASCII, Modbus and N.I. Labview support.
Optical interface	ST, compatible with all TS series sensors
Data logging	Supplied with FOTEMP-Assistent data logging software for RS232/USB/RS485 ASCII interfaces. Excel compatible output files.
Display	OLED color display for modules specified with display option
Temperature	Storage: -20°C to +70°C Operating: 0°C to +50°C
Weight	8.0 kg (basic system)
Dimensions	Full Size Table Model, 515x195x350mm
Material	Aluminium casting, metallic
Warranty	2 years
Calibrations	CAL_A = -40°C to +200°C CAL_B = -40°C to +300°C CAL_C = -200°C to +300°C
Calibration Intervals	Under normal use, the instrument does not require recalibration. When sensors and cables are changed, a One-Point Calibration is required. Recommended cal interval is 12 months for ISO systems.

Specifications subject to change without notice

AVAILABLE MODULES



MODEL	PS	1K (No Display)	1KAV (0-10V) 1KAC (4-20mA)	1KD (No analog) 1KACD (0-10V) 1KACD (4-20mA)
Size	14TE	7TE	7TE	7TE
Number channels	---	1	1	1
Sampling rate/channel	---	250ms	250ms	250ms
Display	---	---	---	2.4cm OLED color display
Analog output	---	---	Optional 0-10V/4-20mA	Optional 0-10/4-20mA



NAME	2K (No Display, No Analog) 2KD (Display, No Analog) 2K2AV (No Display, 0-10V) 2K2AC (No Display, 4-20mA)	2K2AVD (Display, 0-10V) 2K2ACD (Display, 4-20mA)
Size	7TE	14TE
Number channels	2	2
Sampling rate/channel	500ms	500ms
Display	2.4cm OLED color display	4.3cm OLED color display
Analog output	Optional 0-10/4-20mA	Optional 0-10/4-20mA

AVAILABLE MODULES



NAME	4KD (Display, No Analog)	4K (No Display)
Size	14TE	7TE
Number channels	4	4
Sampling rate/channel	1s	1s
Display	4.3cm OLED color display	---
Analog output	---	---

Ordering Info

Contact Micronor to discuss your multichannel system requirements.

Please specify rackmount or table top housing option.

Table top model available in either Half Width (42TE) or Full Size (84TE)



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