FIBER OPTIC THERMOMETER
FOTEMPMK-19" MODULAR

KEY FEATURES

→ Modular system for up to 10 modules
→ 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
→ Choice between 10 different modules
→ Relay modules & alarm LED modules
→ Customer specific, individual configuration
→ Multiple systems can be cascaded
→ 1-255 simultaneous channels, flexible, expandable
→ Choice between 0-10V or 4-20mA analog output
→ Interfaces: Ethernet, Modbus, Profibus, USB and RS-232

OPTOCON®
OPTICAL SENSORS AND SYSTEMS

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FOTEMPMK-19" MODULAR

DESCRIPTION

The new modular fiber optic thermometer FOTEMPMK-19" 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 FOTEMPMK-19" 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 FOTEMPMK-19" 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 FOTEMPMK-19" 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 guaranties fast, repeatable and reproducible measurements.
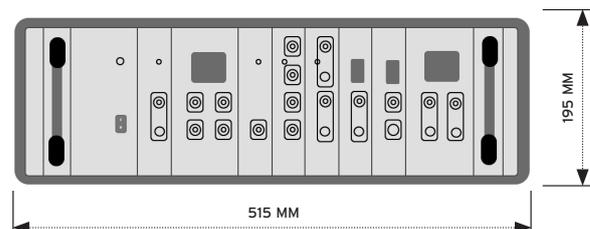
APPLICATIONS

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

TECHNICAL SPECIFICATIONS

Channels / device	1-40
Modules / device	1-10
Channel / module	1-4
Power supply	100-240VAC / 50-60Hz
Measuring range	−200°C to +300°C
Accuracy	+/− 0.2°C
Resolution	0,1°C
Sampling rate / channel	250ms, 500ms, 1sec
Analog output	0-10V or 4-20mA
Interface	RS-232 / USB / Profibus / Modbus / Ethernet
Datalogging	Log sequenz via software
Display	2,4-4,3cm (0,96"-1,7") OLED color display
Storage temperature	-20°C to +70°C
Operating temperature	0°C to +50°C
Weight	8,0kg
Dimensions	19", 3HE (132,5 x 150 x 302 mm)
Material	Aluminium casting, metallic
Software	FOTEMP-Assistent
Data export	Via interface
Warranty	2 years
Probes	All fiber optic temperature probes from Optocon AG can be connected.

DIMENSIONS

FRONT VIEW

195 MM

515 MM

AVAILABLE MODULES

NAME	PS	1K	1K	1K
Size	14TE	7TE	7TE	7TE
Number channels	---	1	1	1
Sampling rate/channel	---	250ms	250ms	250ms
Display	---	---	---	2,4cm (0,96") OLED color display
Analog output	---	---	Optional 0-10V / 4-20mA	Optional 0-10V / 4-20mA

NAME	2K	2K	4K	4K
Size	7TE	14TE	14TE	7TE
Number channels	2	2	4	4
Sampling rate/channel	500ms	500ms	1sec	1sec
Display	2,4cm (0,96") OLED color display	4,3cm (1,7") OLED color display	4,3cm (1,7") OLED color display	---
Analog output	Optional 0-10V / 4-20mA	Optional 0-10V / 4-20mA	---	---

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