



# Portable Fiber Optic Data Logger Thermometer

HHTFO-101

**\$2695**



- ✓ Battery Operated (Included)
- ✓ Data Logging on SD Cards (SD Card Sold Separately)
- ✓ -80 to 300°C (-112 to 572°F) Range
- ✓ RS232 Com Link
- ✓ Optional Windows® Software
- ✓ Large LCD Display
- ✓ No Gage Factor or Calibration
- ✓ Accuracy of  $\pm 0.5^{\circ}\text{C}$

## Applications

- ✓ High Voltage Environments
- ✓ EMI, RFI and Microwave Environments
- ✓ Microwave and Food Processing
- ✓ Hazardous Environments
- ✓ Civil Engineering and Geotechnical

The HHTFO-101 offers impressive versatility. Battery operated for maximum user freedom, this single-channel instrument allows you to freely move from one area to another to measure temperatures at various critical sensing points.

The HHTFO-101 runs on standard "AA" type alkaline or rechargeable batteries, providing power for at least 5 hours of continuous use. It also comes with a universal power supply.

The HHTFO-101 comes with a built-in flash card data logging feature allowing user to save collected data directly onto a high capacity SD flash card. SD cards of up to 1 GB capacity are supported. The data can be accessed through any PC equipped with a flash card reader. The HHTFO-101 also features the SnapLog feature which



allows recording of 1 temperature point with time stamp every time the SnapLog key is pressed.

The HHTFO-101 features a 160 x 160 pixel LCD display with a LED backlight. It provides celsius or fahrenheit temperature readings that are well contrasted in any condition.

The HHTFO-101 icon-driven user interface is built around a 6-button ruggedized keypad. All functions are accessible through the display menu, including data logging on SD card, instrument setup and configuration, and expert mode. Data logging sessions can also be viewed directly on the display.



This multi-purpose instrument comes with a built-in RS232 port for remote interfacing. The instrument is a perfect match with the optional FOB100-SOFT software. Software features include min/max alarm, full data logging functions, and bar-graph, trend-line, or statistics display. Moreover, all system features are accessible through ASCII commands, facilitating the development of custom routines or proprietary drivers by users.

The HHTFO-101 is a valuable monitoring tool for a wide range of applications in energy, industrial and research activities, such as hot spot monitoring inside power transformers during manufacturing and heat runs. It can also be used in various high voltage applications and MW/RF heating applications. Its accuracy and high degree of sensitivity to temperature changes makes it a natural choice for a wide variety of applications. The field-proven sensors are interchangeable and no calibration or inconvenient gage factors are required when changing sensors. The HHTFO-101 comes with a complete 1-year warranty.

## Specifications

### Number of Channels:

Single-channel instrument

**Resolution:** 0.1°C (0.1°F)

**Accuracy:** ±0.5°C (0.9°F) or 1% FS

**Sampling Rate:** 5 Hz

### Upgradeability—Firmware:

Flash ROM upgradeable through serial communication

**Display:** 53 x 53 mm (3" diagonal) graphic matrix display, 160 x 160 pixels, transreflective display, yellow-green LED backlight

**Units:** User selectable, metric or imperial

### Data Logging Memory:

Temperature plus time and date stamp in ASCII format on removable SD flash card

**Data Logging Rate:** Logging sessions with user selectable rate from 1 sec to 1-hr

**SnapLog™ Feature:** Save 1 data point logging and time stamp when SnapLog key is pressed

### Temperature Measurement

**Range:** -80 to 300°C (-112 to 572°F)

## Communication And I/O

**Operating Mode:** Front panel keypad, FOB100-50FT Windows software or RS232 ASCII commands

**Communication (Hardware):** RS232

**Communication protocols:** ASCII (over RS232)

## Mechanical and Environmental

### Operating Temperature:

-20 to 55°C (0 to 150°F)

**Storage Temperature:** -30 to 70°C (0 to 160°F), non-condensing

**Form Factor:** Handheld unit, anodized aluminum extrusion and heavy-duty die-cast top and bottom end caps painted with textured black powder paint (RAL 9005)

### Enclosure Protection:

IP54 standard

## Connectors:

**Optical:** 1 ST connector

**Serial:** DB-9

**Power-In:** Power jack connector

**SD Card:** Push-to-eject card slot on top panel

**Batteries:** Battery access port on bottom side

## Dimensions:

180 H x 118 W x 37 mm D (7 x 4.6 x 1.4")

**Weight:** 550 g (1.2 lb), without batteries

## Power

**Power Requirements:** 6 Vdc power-in or 4 "AA" alkaline (included) or rechargeable batteries

**Power Consumption:** 1.25 W



HHTFO-101, \$2695, with HHTFO-101-EC protective end caps and shoulder strap, \$95, shown smaller than actual size.

Recommended Reference Book: Microwave Engineering, Second Edition, **EE-2470**, \$111.  
See Section Y For Additional Books



**AVAILABLE FOR FAST DELIVERY!**

## To Order (Specify Model Number)

Model No.	Price	Description	
HHTFO-101	\$2695	Fiber optic thermometer	
FOBS-2	249	Sensor with 2 m (6.6') cable, -80 to 250°C (-112 to 482°F) range	
FOBS-10	377	Sensor with 10 m (33') cable, -80 to 250°C (-112 to 482°F) range	
FOBS-20	537	Sensor with 20 m (66') cable, -80 to 250°C (-112 to 482°F) range	
FOBS-30	697	Sensor with 30 m (98') cable, -80 to 250°C (-112 to 482°F) range	
Accessories		Price	Description
FOB100-SOFT	\$395	Windows software and RS232 cable	
HHTFO-101-WM	275	Wall mount	
HHTFO-101-EC	95	Protective end caps and shoulder strap	
1GB-SD	29	SD memory card, 1 GB	
OS-XL-FCR	39	USB flash card reader	

Higher temperature probes are available. Contact sales department and specify cable length and temperature range from -80 up to 300°C.

Comes with universal charger, 4 "AA" NiMH batteries, and operator's manual.

**Ordering Example:** HHTFO-101, 1-channel handheld fiber optic thermometer, FOBS-2, 2 m (6.6') cable temperature sensor, 1GB-SD, 1 GB SD flash card, \$2695 + 249 + 29 = \$2973.



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